Tourism, territory and sustainability: a statistical insight at subnational levels

Toward a Set of UNWTO Guidelines

(Version 1)

November 2016
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The present document builds on statistical international standards (tourism and environment statistics as well as the corresponding macroeconomic accounting frameworks –Tourism Satellite Account –TSA- and the System of Environmental and Economic Accounting –SEEA–); it also provides guidelines in order to set up a particular type of statistical initiative: a Regional Tourism Information System (R-TIS) conceived for the purpose of linking tourism, territory and sustainability in the perspective of the UN 2030 Agenda for Sustainable Development and the setting up of Sustainable Development Goals (SDGs) indicators (three of which refer to tourism).

Linking tourism (operationally defined in the tourism statistics international standards) and sustainable development (a policy oriented concept without any universally accepted operational definition for its measurement) is a complex and challenging task; this document provides a statistical insight in such connection between tourism as an economic sector that impacts the socio-economic and the environmental components of sustainability due to tourism infrastructure and the activity of visitors.

Such insight is in line with the work undertaken during these last two years by UNWTO and UN Statistics Division: the Measuring Sustainable Tourism (MST) initiative. As for the documents already available for such initiative, this document focuses on describing what should be measured and the relevant context and framework rather than considering how measurement should be undertaken and related issues of implementation. This is not to say that issues of implementation are unimportant, indeed they are significant. It is envisaged that, subject to progress on describing a statistical framework, complementary documents focused on implementation would be developed, again building on existing resources as relevant.

The central focus of this document is about the setting up of the recommended R-TIS as a necessary pre-requisite for comparing nationally and internationally main tourism destinations and cities where tourism is significant, as well as to rigorously measure territorial, environmental and other economic and social impacts of tourism activity.

In fact, such a system requires three sets of information:
- the statistical information obtainable as a disaggregation of operations carried out with a national coverage and in an official capacity mainly by National Statistical Offices and National Tourism Administrations on economic, environmental and socio-cultural dimensions of sustainability;
- official statistical operations carried out by regional bodies (such as Regional Statistical Offices, Regional Tourism Administrations, Regional public institutes and agencies for tourism development and management, and other official bodies);
- a third dataset not necessarily of official and/or of statistical nature (such as electricity consumption by households, credit card expenditure records, transport authorities control, business cycle indicators, early warning indicators, other indicators regarding tourism and sustainable development, etc.), considered to be relevant at regional and sub-regional levels not only for the measurement/monitoring of tourism (carried out by the regional tourism authority or other regional entities, other entities of supra-regional scope or even by national bodies), for analytical purposes (such as analysis of the performance of certain subsectors and foresee their evolution, the perceptions of the demand of a certain destination, etc.) and for gathering data requirement for providing answers to policy questions related with tourism itself or in relation with sustainable development issues. The expansion of big data and open datasets will certainly spread the content of this third set of information.
It is recommended that the basic core of the proposed R-TIS refers to basic statistical data and indicators, most of them derived from official statistical surveys at the national level. In that regard, six main sources have been identified (Border survey - Domestic tourism household survey - Accommodation survey - Statistical business register - Structural business survey - Population census).

Such sources are available in practically all EU member countries as well as in non-European countries pertaining to the G.20 international community and should be supplemented, if available, with other national sources focusing on environmental and socio-cultural dimensions of sustainability.

Other countries without such an advanced level might find inspiring this document and might also request UNWTO for technical assistance in order to set up a planning work schedule for those subnational regions where tourism is particularly significant, to be in line with the recommended guidelines proposed. This is of particular interest for those countries that have decided to renew their national tourism information system as the first phase of a Project that also includes the subnational measurement as a second priority.

By so doing, UNWTO understands that tourism measurement at subnational levels might act as a catalyst for expanding national SDG’s indicators at other spatial scales, in line with UN guidelines “to encourage all Member States to develop as soon as possible ambitious national responses to the overall implementation of this Agenda” and “to conduct regular and inclusive reviews of progress at the national and subnational levels which are country-led and country-driven”(UN, 2015, Transforming our world: the 2030 Agenda for Sustainable Development, paras. 78 and 79).
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Acknowledgements

The International Network on Regional Economics, Mobility and Tourism (INRouTe) is an initiative promoted by the World Tourism Organization (UNWTO) and formally established as a non-profit association by UNWTO Affiliate Member Instituto Movatur, a statistical consulting firm, two senior experts and formerly by the Cooperative Research Centre in Tourism CICtourGUNE. Currently IN2DESTINATION research and consultancy firm hosts INRouTe Technical Secretariat. Moreover, INRouTe counts with more than 60 international experts as individual members from all world regions whose profiles vary from tourism statistics experts of national and regional statistical official bodies, to academics, government representatives and consultants. This network is dedicated to advancing policy-oriented measurement and analysis of tourism in order to provide operational guidance to entities and practitioners involved with regional and sub-regional entities; it also works around a number of well-defined research areas (—tourism as an economic sector, —tourism and sustainable development, —tourism development and territorial cohesion and finally, —supporting tourism destination key stakeholders).

UNWTO, a United Nations specialized agency, is the leading international organization with the decisive and central role in promoting the development of responsible, sustainable and universally accessible tourism. It serves as a global forum for tourism policy issues and a practical source of tourism know-how. UNWTO counts with Affiliate Members based across more than 80 countries, representing more than 1 million employees, 70% of them operate in more than one country and among the more than 400 Affiliate Members, over 100 are universities, research centres and training schools advancing on research in tourism.

During 2012/2016 INRouTe organized four international events seeking for a light level of consensus both on the overall target of such initiative (the methodological background for the conceptual design of the proposed R-TIS and the setting up of a system that should guarantee the production of a basic core of statistical data and indicators at sub-national levels on those research areas and topics considered particularly relevant (see Chapter 1, Box 2).

This document represents a significant advancement from the first document published by UNWTO /INRouTe in 2012 after the celebration of the First International Seminar held in Venice (“A Closer Look at Tourism: Sub-national Measurement and Analysis: Towards a Set of UNWTO Guidelines”). Such initiative had two main objectives:

- presenting the INRouTe project to our target audience: tourism practitioners – including tourism officials who commission surveys and research, and those who undertake such surveys – and different key stakeholders at regional and sub-regional levels –including governments, public institutes and agencies, universities, research centres, industry associations, trade bodies, and specialized firms, tourism destination managers, tourism development authorities, tourism businesses, etc.;
- we also conceived that the celebration of such a Seminar could help us determine whether the INRouTe network and other interested colleagues could agree with the proposed focus. This was done by presenting a first version of —Towards a Set of UNWTO General Guidelines for the Measurement and Analysis of Tourism from a Sub-National Perspective to the INRouTe First Seminar on Regional Tourism: setting the focus.

Since 2008 INRouTe has been organizing a series of international events, catalysts of progress, and the organizations making them possible deserve a warm thank you:

Tourism, territory and sustainability: a statistical insight at subnational levels

1st International Conference on the Measurement and Economic Analysis of Regional Tourism, San Sebastián (Spain) in collaboration with UNWTO, the Ministry of Commerce, Industry and Tourism of Spain, Tourspain, IET, Government of the Basque Country, Basquetour and CICtourGUNE;

MOVE2011 2nd International Conference on the Measurement and Economic Analysis of Regional Tourism, Bilbao (Spain) November 2011 in collaboration with UNWTO, the Ministry of Commerce, Industry and Tourism of Spain, Tourspain, IET, Government of the Basque Country, Basquetour and CICtourGUNE;

INRouTe First International Seminar on Regional Tourism: Setting the Focus, Venice (Italy) 5-6th July 2012 organized in collaboration with UNWTO, CISET, Università Ca’Foscari Venezia, CICtourGUNE and Regione Veneto;

MOVE 2013 3rd International Conference on the Measurement and Economic Analysis of Regional Tourism American Chapter, Medellin (Colombia) 6-7th November 2013, organized in collaboration with UNWTO, Ministry of Commerce, Industry and Tourism of the Colombian Republic, Government of Antioquia, City of Medellin, CICtourGUNE, University EAFIT, SITUR Antioquia, Medellin Convention & Visitors Bureau, DANE and Antioquia University;

INRouTe II International Seminar on Regional Tourism: Moving towards a Regional TSA approach, Venice (Italy) 9-10th October 2014 in collaboration with UNWTO, CISET, Università Ca’Foscari Venezia, CICtourGUNE and Regione Veneto;

MOVE 2015 4th International Conference on Sub-National Measurement and Economic Analysis of Tourism: Towards a Set of UNWTO Guidelines, Puerto Rico (USA) 18-20th November 2015 organized in collaboration with Puerto Rico Tourism Company, UNWTO and IN2DESTINATION.

For INRouTe to grow from an idea in 2009 to becoming an entity, an initiative, a working project, producing documents as the present one, it needed and is deeply grateful to its creators and daily-basis supporters: Alfredo García (Instituto Movatur), Ana Moniche (Spain), Aukre Alzua (CICtourGUNE), Clara Van der Pol (UNWTO), Doug Frechtling (USA), Inmaculada Gallego (Spain), Jon Kepa Gerrikagoitia (Ideko), Kepa Aramburu (Instituto Movatur), Mara Manente (CISET), Marcio Favilla (UNWTO), Nagore Espinosa (in2destination), Oliver Herrmann (UNWTO), Pedro Aranzabal (Instituto Movatur) and Jose Quevedo (UNWTO consultant).

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List of abbreviations

EC – European Commission
EU – European Union
Eurostat – Statistical Office of the European Union
DMO – Destination Management Company
FDES – Framework for the Development of Environment Statistics
IMF – International Monetary Fund
INRouTe – International Network on Regional Economics, Mobility and Tourism
IRTS 2008 – International Recommendations on Tourism Statistics 2008 issued by UNWTO.
NSO – National Statistical Office
R-TIS – Regional Tourism Information System
R-TSA – Regional Tourism Satellite Account
RIN – Regional Inter-institutional Network
RTA – Regional Tourism Authority
SDG – Sustainable Development Goals
SEEA – System of Environment-Economic Accounts
SNA – System of National Accounts
TSA-R – Regionalized Tourism Satellite Account
TSA – National Tourism Satellite Account
UN – United Nations
UNSC – United Nations Statistics Commission
UNSD – United Nations Statistics Division
UNWTO – World Tourism Organization
WB – World Bank

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Overview

Foreword

This chapter is an overview for most key tourism stakeholders at regional and sub-regional levels, in order for them to have a basic understanding about the content and scope of this document. The target audience of this document refers to tourism practitioners -including tourism officials who commission surveys and research, and those who undertake such surveys- and different key stakeholders at regional and sub-regional levels -including governments, public institutes and agencies, universities, research centers, industry associations, trade bodies, consulting firms, tourism destination managers, tourism development authorities, tourism businesses, etc.

Given the statistical nature of the document, many readers might only read those sections of the document they are most interested in. Hence, the present chapter explains key concepts that are the backbone of the present publication at the same time that describes the content of each chapter and how they are interconnected for readers to be able to choose and deepen into the different concepts.

0.1. This document represents the first time that UNWTO addresses the measurement of tourism at subnational levels from a statistical perspective (meaning the use of concepts, definitions, classifications, accounting procedures and principles of recording, all of them necessary for gathering a set of basic statistical data and indicators for measuring tourism at subnational levels).

0.2. The setting up of a Regional Tourism Information System (R-TIS) is central to this objective given that it is meant for providing information for policy purposes and monitoring tourism development at subnational levels. Addressing its setting up process, stakeholders’ collaboration needed and other elements are not statistical in nature. This is an example on how this document, mainly of statistical nature, also includes governance elements where judged necessary.

0.3. Measuring tourism at subnational levels necessarily requires paying special attention to the relation of tourism and sustainable development. Given that, it is precisely at such territorial levels where there is a need to avoid the negative impacts of tourism, not just on the environment, but also on the economic and socio-cultural dimension of sustainability.

0.4. The present document builds on UN statistical international standards- the International Recommendations for Tourism Statistics (IRTS 2008) and the Framework for the Development of Environmental Statistics (FDES 2013), as well as the corresponding macroeconomic accounting frameworks – the Tourism Satellite Account (TSA:RMF 2008) and the System of Environmental-Economic Accounting (SEEA_CF 2012)-.

The main objective is to set up a particular type of statistical initiative: a Regional Tourism Information System (R-TIS) conceived as a strategic project for the purpose of linking tourism, territory and sustainability in the perspective of the UN 2030 Agenda for Sustainable Development.

0.5. In order to develop the basic set of variables of such a system it is required, first of all, adapting those concepts, definitions, classifications, accounting procedures and principles of recording included in the IRTS 2008 official document, and supplementing
them when necessary; additionally, it is also required to design a proper articulation of available tourism statistical data between the nation and the regions (see paras. 3.19 to 3.26).\footnote{There are three elements that make the difference between statistical data and non-statistical data:  
- The existence of a Frame or Universe (a list with the total population of the observation unit of reference – productive establishments, population, overnights, arrivals, etc.)  
- The selection of a random sample of such Frame using statistical techniques so that the data obtained can be representative of such Frame  
- How the data obtained is upgraded to the total population of such Frame}

Such set of information should be seen as a first priority for the setting up of the proposed R-TIS; in a second step, an articulation of regional/sub-regional levels should be foreseen including geo-referenced data (and this is basically feasible in statistically developed countries).

Other statistical and non-statistical data will be required in order to provide support to key tourism stakeholders, for monitoring and comparability purposes (on tourism destinations within a given country as well as internationally) regarding some key areas of measurement and analysis.

0.6. For the R-TIS be operational, the following box include the most relevant conceptual "extensions" developed for drafting this document; all of them should be understood as supplementary to those included in the IRTS-2008 (such as "visitor", "usual environment", "tourism trip", "purpose of the trip", etc. – see Annex 17-).

**Box 1. Conceptual extensions**

<table>
<thead>
<tr>
<th>CONCEPTS AND OPERATIONAL DEFINITIONS</th>
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<tr>
<td>- Significance (economic) (2.28 and 2.29)</td>
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<td>- Tourism population (see Glossary)</td>
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<td>- Travel party (6.21 to 6.27, Annex 18)</td>
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<td>- Regional tourism (visitors and related expenditures) (6.16, 6.39 to 6.41)</td>
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<td>- Mobility and Tourism connections (propensity to travel, main and secondary purpose of the trip, travel behavior of visitors at destination, itineraries and other topics) (3.37, Chapter 2/C2)</td>
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<td>- Territorial planning and Tourism connections (Chapter 2/A)</td>
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<td>- Carrying capacity (see Glossary)</td>
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<td>- Regional Tourism Information System (1.1 to 1.5, see Glossary)</td>
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<td>- Tourism destination (Chapter 2/C)</td>
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<td>- Governance network (3.4, Annex 36)</td>
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<th>CLASSIFICATIONS</th>
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<td>- Classification of territorial entities (2.25 and 2.26)</td>
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<th>ACCOUNTING PROCEDURES</th>
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<td>- Statistical information (layers) (5.2, 5.3, 3.15, 3.22)</td>
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<tr>
<td>- Scalability (5.2, 5.3, 3.15, 3.22)</td>
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<th>PRINCIPLES OF RECORDING</th>
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<tr>
<td>- Geo-referenced data bases (1.2, 3.22, 5.41 to 5.48)</td>
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"sustainable tourism" or "tourism destination", and uses statistical definitions for the other terms unless explicitly indicated:\(^2\)

- There is no international standard about what a Regional Statistical System should be; the only exception refers to European Union countries – see Annex 21. In fact, the System of National Accounts 2008 official document includes just nine paragraphs when addressing Regional Accounts (SNA2008/18.E) and refers to Eurostat documents for further insight on this topic.

0.8. Due to this lack of a robust Regional Statistical System conceptual framework, the proposed design for the setting up of the R-TIS has no proper recommended UNWTO Compilation Guide as is the case for the National Tourism Statistical System (see UNWTO IRTS 2008 Compilation Guide, Madrid 2012). Consequently, this document is a first step in the process of taking tourism measurement at sub-national levels seriously.

Additional work will need to be done in the coming years in order to address key topics such as:

- Identifying other applications of an R-TIS – see chapter 4/B4 “Operationalizing the measurement of tourism destinations for comparability purposes”;
- Studying how an R-TSA logic might relate to the design of the R-TIS;
- Checking the feasibility of the recommended operationalization of "travel party" and how such a concept might defer from "household" – see Annex 18;
- Adoption of other R-TSA accounting principles to underpin the selection of areas of measurement focused at small spatial scales;
- Identifying main externalities caused by tourism and addressing its measurement – see para. 4.13;
- Etc.

0.9. More precisely, the conceptual framework used for the design of the R-TIS, as well as recommended guidelines for the setting up of such a system, will become more robust as an increasing number of subnational entities decide to improve the measurement of tourism in line with the different type of recommendations proposed all along this document’s seven chapters. In order to foster such a process UNWTO will cooperate in launching case studies in the coming years.

Therefore, it is foreseen as a medium-long term initiative and consequently, the recommendations about the operationalization of those topics included in the previous box will quite probably need, most of them, to be redrafted in due time.

0.10. It is important to clarify that such recommendations are not conceived as international statistical standards; while standards may be desirable, they cannot be instituted without a body that should continually update them and ensure that they are being followed.

Nevertheless, standardization procedures represent procedures that, if practitioners voluntarily adopt them, it will improve (a) the consistency of the instruments to which they apply (surveys or other measuring tools); (b) the quality of such instruments; (c) the comparability of results; (d) the reliability of the data resulting from such instruments, and (e) the accuracy of the measurements.

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\(^2\) For instance, along the document the term “tourism product” should not be confused with “tourism characteristic consumption products” defined as those goods and services whose expenditure represents a significant share of total tourism expenditure (for a more precise quotation see Regional Tourism: Glossary, “Tourism industries”)
Chapter 1 Contextualizing UNWTO approach to sub-national tourism

0.11. The setting up of a R-TIS is not just a technical challenge associated to the creation of a database, it also entails providing guidance on how to define and develop measurement of those concepts that are crucial for tourism analysis and comparability. Chapter 1 focuses on contextualizing UNWTO approach to the measurement of tourism at subnational levels.

0.12. This document proposes the design of the R-TIS including not only official and statistical data obtained at the national and regional level, but also a third dataset not necessarily of official and/or of statistical nature (such as electricity consumption by households, credit card expenditure records, transport authorities control, business cycle indicators, early warning indicators, other indicators regarding tourism and sustainable development, etc.). This third set is considered to be relevant at regional and subregional levels, not only for the measurement/monitoring of tourism (carried out by the regional tourism authority or other regional entities, other entities of supra-regional scope or even by national bodies), but also for analytical purposes (such as analysis of the performance of certain subsectors and foresee their evolution, the perceptions of the demand of a certain destination, etc.) and for gathering data requirements for providing answers to policy questions related with tourism itself or in relation with sustainable development issues.

0.13. Given that the proposed system is an adaptation of the national System of Tourism Statistics referred in the international standard (IRTS 2008), such adaptation needs to take into account the need for including a consideration of both the territory and sustainability. At the regional and other sub-national levels there is strong evidence that tourism is not only a relevant economic driver but also a significant contributor to undesirable and irreversible environmental, economic and social changes.

In fact, in many tourism destinations, a divide between the tourism and the land planning authorities has resulted in a significant issue in terms of sustainable development (a policy oriented concept without any universally accepted operational definition for its measurement). Consequently, the development of new concepts, definitions and insights that connect tourism with territory are part of the challenge to strengthen the credibility of tourism at the different territorial levels.

0.14. The design of a R-TIS (see para. 1.23) has taken advantage of national case studies (Brazil, Ireland and New Zealand) as well as regional ones (Andalusia, Canary Islands, Comunidad de Madrid and Palma de Mallorca in Spain, as well as Wales in England). The national studies highlight that it is possible to structure an articulation between national/regional levels that generates a sufficient set of basic statistical data and indicators both for the demand and supply side of tourism. (This is the case for overnights/ establishments of tourism industries/ employment associated with such industries).

0.15. Finally, Chapter 1 highlights the following recommendations:

- It is recommended that the basic core of the R-TIS refer to basic statistical data and indicators; most of them should be derived from official statistical surveys at the national level (six main sources have been identified in statistical developed countries although other regional official statistical data might be also included. While three of them are demand side surveys (border surveys, 3

3 See the definition in Glossary
domestic tourism household survey and population census), the other three are supply side surveys (Statistical business register, Structural business survey and Accommodation survey);

- Such sources should be supplemented, if available, with other national ones focusing on environmental and socio-cultural dimensions of sustainability;
- The setting up of the R-TIS requires a particular type of governance structure (see Annex 35): a regional inter-institutional network integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institutions;
- Other countries (particularly those that have decided to renew their national tourism information system) might find this document inspiring.

Chapter 2 Tourism and Territory: taking sub-national tourism seriously

0.16. Tourism is a geographical phenomenon, highly sensitive to location, that requires a planning process for its development; it also has an impact on the economy, the natural and built environment, the local population at the place visited and the visitors themselves.

Owing to this range of impacts and the wide spectrum of stakeholders involved, there is a need for a global approach to tourism development, management and monitoring. This approach is supported by the World Tourism Organization in order to formulate and implement national and local tourism policies and is also the focus of Chapter 2 in which the following three main topics are addressed:

- Tourism and territorial planning: identifying the mutual contents (see section B);
- The need for a classification of territorial entities (see section C);
- Fostering subnational analysis and measurement of visitors behaviour: learn about what visitors do once at destination (see section D).

0.17. UNWTO is convinced that such an approach can contribute to the objectives of the UN 2030 Agenda for Sustainable Development in the understanding that tourism measurement at subnational levels might act as a catalyst for expanding, in due time, Sustainable Development Goals indicators where tourism is explicitly mentioned at other spatial scales, in line with UN guidelines “to encourage all Member States to develop as soon as possible ambitious national responses to the overall implementation of this Agenda” and “to conduct regular and inclusive reviews of progress at the national and subnational levels which are country-led and country-driven” (UN, 2015, Transforming our world: the 2030 Agenda for Sustainable Development, paras. 78 and 79).

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4. Goal 8, on the promotion of “sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all” includes as Target 8.9 “By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products”.

-Goal 12 aimed to “ensure sustainable consumption and production patterns” includes as Target 12.b to “Develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products”.

-Goal 14 set to “Conserve and sustainably use the oceans, seas and marine resources for sustainable development” includes as target 14.7 “by 2030 increase the economic benefits of SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism”.

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0.18. As highlighted in Chapter 2, the mutual relationship between Territorial Planning and Tourism Planning requires a proper classification of territorial entities in order to be precise with the scale of measurement and analysis; such a classification does not exist in the UN statistical standards regarding the System of Environmental Economic Accounting Central Framework and related documents, nor in UN Recommendations for Tourism Statistics.

Nevertheless, the adaptation of IRTS 2008 to sub-national levels implies the need for a classification of territorial entities. Such classification is proposed in this document because the IRTS 2008 does not use precise criteria but rather suggests that in the case of considering a territory other than a nation, the concepts as well as all the corresponding definitions, classifications and relevant statistical data should be the same as those in the national case, with the only difference being the substitution of the term "country" with "place" (either a region, municipality or other sub-national geographic location).

0.19. The present document uses as reference the following hierarchical classification of territorial entities integrated by both administrative and analytical units at two basic subnational territorial levels:

**REGIONAL**
- Region
- Multi-regional (supra-national)
- Multi-regional (intra-national)
- Other administrative units
- Analytical units

**LOCAL**
- Municipality
- Multi-local
- Other administrative units
- Analytical units

The classification is proposed in order to operationalize the implementation of the conceptual framework proposed and more specifically, to allow for the setting up of the R-TIS; consequently, it should be adapted to any of such territorial levels in different countries, and other extensions could also be envisaged for tourism purposes.

The terms region, multi-regional and sub-regional used refers to subnational entities. Consequently, such terms and classification used in this document should not be understood as the same terms used by UNWTO in its capacity of UN Specialized Agency for Tourism (where region and regional refers to a pluri-national or international framework).

0.20. Starting from the classification of those basic entities, it is feasible to establish combinations per each different type of analysis. For this purpose, the criteria to be used should be defined, such as market segments (responding to different forms of tourism, and different characteristics of visitors and trips), availability of tourism infrastructure and facilities, territory physical characteristics, territorial planning requirements, etc. One of the possible examples is "tourism spatial area" (identified as

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5 In the document, the administrative unit corresponding to the first level of territorial disaggregation of a country in terms of its political and administrative organization; for instance, NUTS 2 level in the EU, provinces in Canada and China, states in Brazil and Mexico, etc.(see Glossary)
small spatial scales where tourism is significant) which might be applicable in its entirety to a certain regional and/or sub-regional administrative entity, but more often it is likely that it might not cover a single municipality, neither an entire region. Such term is often used by territorial planners in order to bring tourism content into focus.

Such term is also implicitly identified in the *System of Environmental-Economic Accounting 2012 /Applications and Extensions* document (see Chapter IV "Extensions of the SEEA)*6.

Such units would qualify as analytical units and could generically be labeled as "small tourism destination areas" (STDA).

0.21. Any of those unit/s of the proposed classification (either at the regional or local level) where tourism is economically significant (according to the criteria proposed in the Glossary (see *Significance*)), should be the focus of tourism measurement and could be labeled as a “tourism destination/s”.

0.22. **Chapter 2** also highlights some remarks on three topics that illustrate the complexity of such relationship between tourism and territory and how relevant might be for the target audience of this document:

- Understanding when a territorial entity becomes a tourism destination;
- Exploring the connection between mobility and tourism as research areas particularly for the design and measurement of tourism itineraries as well as for selecting the criteria for defining types of tourism and types of visitors;
- Looking for consistency between tourism destination and tourism statistics conceptual frameworks because in addition to the concepts of usual environment, visitor, tourism trip and tourism visit, special attention should be given to:
  - The new concept of "travel party" and its operationalization;
  - The enlargement of the list of "purpose of the trip" (and the association between purpose and activities carried on by visitors at destination);
  - About the use of "tourism products" as the criteria for market segmentation;
  - Operationalizing the measurement of travel behaviour of visitors at destination;
  - UNWTO experience using "type of tourism" definitions;
  - The new concept of "regional tourism" and "regional tourism expenditure".

For more details, interested readers can find operational recommendations on these demand side topics in **Chapter 4** "Operationalizing the measurement of visitors (including related characteristics of visitors and trips) as well as travel behavior at destination".

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*6 4.1* "The focus in this chapter is the potential of data from the accounts of the SEEA Central Framework to be extended and integrated with other information. The potential to connect SEEA accounts to a range of existing information sources can be of direct assistance in better understanding multi-faced issues, such as sustainable development. It also recognises that responses to environmental pressures will usually rely on understanding connections between the environment, the economy and individuals. In this context the SEEA accounts do not provide a complete information set but can provide an important part of the information and SEEA is a framework that supports and encourages the integration of data".

*4.2* "There are two main approaches to considering extensions of the SEEA. The first approach involves a decomposition of existing SEEA accounts using additional information, for instance through linking to specific spatial areas, through further breakdown of the household sector, or through a focus on certain themes where there is an interaction between human activity and the environment, such as tourism or health…… The focus of this chapter is on the first approach".
Chapter 3 The proposed Regional Tourism Information System (R-TIS): conceptual design and institutional background

0.23. **Chapter 3** presents the conceptual design of the proposed R-TIS built on the 2008 two international statistical standards on tourism statistics, as well as on different type of case studies identified in **Chapter 1** (see para. 1.23); for such design to be properly operationalized, this chapter addresses the setting up of a regional inter-institutional network integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institutions.

0.24. This complexity of actors, public bodies and authorities deserve special attention due to their implication and responsibility on the visitors' final satisfaction as they are involved in a wide and varied range of functions and investments (infrastructure provision and management of access and various services - such as public safety, preservation of natural and cultural resources, territorial planning, etc.). In addition, public authorities might condition the install of tourism enterprises located in their respective territories.

0.25. The International Recommendations for Tourism Statistics 2008 (IRTS 2008) as well as the Compilation Guidelines developed by the UNWTO for their application, should constitute the basic reference for the design of a Tourism Information System at both the national and subnational levels (as described in paras. 07 to 09). This has been precisely the starting point of the INRouTe initiative 7, with a very clear message: the design of a proper Regional Tourism Information System (R-TIS) would be justified under two circumstances:

- the significance of tourism in a given region; and
- the availability of a basic set of national statistical sources. This pre-condition highlights that the setting up of the R-TIS, as recommended in the document, is very data demanding.

0.26. In order to permit the measurement, analysis and comparability of regions (both intra-national and international), those three sets of information proposed to be included in the R-TIS (as described in para. 1.2) should address a list of topics for a reasonable number of areas (see para. 1.7, Box 2).

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7 Regional Tourism is defined as following (see Glossary):

*In order to separate visitors who have their place of usual residence within the region of interest from those who come from other regions or countries, it is recommended that three subsets of visitors to or in this region be identified:

- Residents from countries other than the country of reference (inbound visitors to the country as a whole)
- Residents from another regions of the country of reference
- Residents in the region of interest

Such definitions are consistent with those addressed in IRTS 2008 under “forms of tourism” (see Forms of Tourism).

It should be noticed that inbound regional tourism would include the first two subsets while the third one includes both domestic and outbound regional tourism (those who travel for tourism purposes within the region of interest or those who travel outside such region but either remain in the country of reference or travel outside the country of reference, correspondingly).

Regional tourism is a particular type of form of tourism to be used at the subnational-regional level which comprises the activities of these three subsets of visitors and it might be the case that the identification of outbound regional tourism (in either of the two cases already mentioned) is not a priority in most regions; if that would be the case, the third subset will refer exclusively to domestic regional tourism.

If deemed appropriate and feasible, additional subsets could also be identified for analytical purposes (in terms of tourists or same-day visitors).*
It should be highlighted that such a list is not meant for gathering basic statistical data and indicators for all of those topics, but just to be used as reference by those regional authorities and tourism officials that have competences in the measurement and analysis of tourism in their region.

It would seem obvious that, depending on the level of development of the region concerned, different sets of information would be available and desirable. Besides being statistically founded, the goal of the generated dataset should be to have a tool for management purposes that comply with some technical requisites to be identified.

0.27. The adaptation of such conceptual framework to sub-national levels cannot totally respect the same variables and characteristics identified for the national level. And consequently it was decided that at subnational levels, in addition to measure tourism as an economic sector, it is also necessary to address the consequences of the flow of visitors on the sustainable development of the territory of reference, its potential impact on the territorial cohesion of the destination itself, and in other adjacent territories (see Glossary/Territorial cohesion), and the identification of a basic set of initiatives required for supporting destination key stakeholders in relation to tourism information and analysis.

0.28. It is recommended for those regions, where tourism is significant, to focus on an incremental approach that involves, first of all, the development of a limited set of statistical basic data and indicators at the national/regional levels (the term “articulation”-see para. 3.4- implies linking with statistical rigor national and regional data used to measure the same variables.); such possibility should be checked by a statistical insight regarding its feasibility. Such an articulation nation/regions will produce a conceptual and data framework for analyzing inter-regional tourism within a harmonized framework; and by so doing, will also contribute to international comparability between regions.

In a second step an articulation of regional / sub-regional levels should be foreseen (and this is basically feasible in statistically developed countries) including geo-referenced data (see also Chapter 6, section C).

0.29. With this background and clarifications, it is recommended as a first step in the set-up of a R-TIS to focus on tourists (overnight visitors) and on a limited number of the areas previously identified (for which there is more international experience than in the remainder areas where a more precise conceptual framework is needed). Nevertheless, in those destinations where same-day visitors or visitors arriving with cruises are relevant, the focus should give priority to these visitors.

0.30. As mentioned in Chapter 1 UNWTO STATS Unit will start asking by 2017, on a voluntary basis, for subnational statistical indicators (no more than 15) for a selected number of countries with a developed national statistical system: each of such countries will select one or more regions where tourism is particularly significant. For each of those regions (within a country) as identified in the classification of territorial entities used in this document (see Glossary), the following sub-regional breakdown would apply: other sub-regional administrative or analytical units, municipalities, multi-local (more than one municipality), other local administrative or analytical units. Such breakdown implies that some of such territorial entities could be labeled as tourism destinations. Such proposal has the potential of enlarging economic analysis as well as foster international and intra-national comparability.
Such an initiative should be understood as developing a sustainable network of countries that should identify the required data and determine the best way of collecting it on a regular basis; it should also include UNSD in order to allow for its expansion in due time, as a global initiative aligned with the UN 2030 Sustainable Development Agenda.

0.31. Chapter 3, section C deals with the content of the basic core of the proposed R-TIS (the statistical component), while section 0 focuses on some particular measurement issues about both statistical and non-statistical data (such as employment, tourism trip Origin/Destination matrix, prices and the use of administrative data) and provide a basic set of recommendations in order to move the supply side statistical agenda forwards (which might be a greater challenge that in the case of demand side – such recommendations will be addressed in Chapter 4-).

0.32. Finally, Chapter 3, section E refers to the UN recommended guidelines on regional statistical development, as well as on the design and setting up of a recommended institutional tool named as the Regional Inter-institutional Network; such a proposal is conceived as the key initiative to support the sustainability of the R-TIS project.

Chapter 4 Operationalizing the measurement of visitors (including related characteristics of visitors and trips) as well as travel behavior at destination.

0.33. As already mentioned in paragraph 0.25 “the International Recommendations for Tourism Statistics 2008 (IRTS 2008) as well as the Compilation Guidelines developed by the UNWTO for their application, should constitute the basic reference for the design and the setting up of a Tourism Information System at both the national and subnational levels”.

Chapter 4 refers to such Guide for all those topics that could also apply at subnational levels (for the operationalization of “visitor”, “tourism trip”, “usual environment”, “purpose of the trip”, etc.); other supplementary recommendations for some specific topics (as described in paras. 0.6 to 0.8) are also proposed in order to improve the present measurement of regional tourism demand:
- The new concept of “regional tourism” and “regional tourism expenditure”;
- The operationalization of the new concept of “travel party”;
- The enlargement of the list of “purpose of the trip” (and the association between purpose and activities carried on by visitors at destination);
- Considering the potential to improve the use of “tourism products” as the criteria for market segmentation;
- Operationalizing the measurement of travel behavior of visitors at destination;
- Selection of the appropriate tools for measuring tourism flows of the resident population when travelling for tourism purpose within the country of reference;
- Etc.

0.34. Sections B and C attempt to provide clarification regarding two topics that clearly highlight the fact that when the focus changes from the national to the sub-national level, the measurement instruments might be adapted or substituted:
- A first and major issue (see section B) is about grouping visitors according to some characteristics either of the visitor himself/herself, the trip undertaken, or some other type of components. In fact, setting up a cluster of characteristics of visitors useful for different key stakeholders might require both sets of characteristics as well as other analytical components that have not been identified in the IRTS 2008;
A second issue (see section C) which has not usually deserved particular attention by tourism statisticians is that potential regional household surveys, accommodation surveys and other surveys should share with the corresponding national surveys not just a common methodological framework, but also a set of information items (as well as the basic elements of the methodological approach) that ideally should be obtained posing similar questions in their respective questionnaires.

More specifically, given that at the subnational level a key issue for analytical purposes is to deconstruct the arrivals universe in accordance with a set of characteristics of the trip and the visitor as well as other type of components (such as travel party size and composition, origin and destination of the trip, availability of travel mode/s, attractions visited, activities undertaken, etc.), the surveys providing such basic data and indicators should be as homogeneous as possible.

When using household and other demand side surveys for regional tourism measurement, tourism practitioners and researchers should be aware of experiences at the national level from National Statistical Offices and other government and non-government as agencies regarding household as well as passenger transportation surveys.

As described in paragraph 0.8, also in this area both the conceptual framework and the operationalization of main variables using surveys and other statistical tools “will quite probably need to be redrafted in due time”.

Chapter 5. Linking the R-TIS with the TSA as the foundation for a Regional TSA (R-TSA)

0.36. The following four paragraphs of the two international standards on tourism statistics, clearly refer to the harmonized set of recommendations regarding the fundamental elements of the conceptual framework supporting both the IRTS 2008 and the TSA:RMF 2008.

0.37. “Concepts, definitions, classifications and indicators presented in International Recommendations 2008 should be viewed as an important foundation of the system of tourism statistics. As such, they should be used as a reference for coordination, reconciliation and interpretation of the information in the area of tourism, although this information might extend beyond the still restricted domain these Recommendations touch upon”. (IRTS 2008, para. 1.36).

0.38. “The development of a system of tourism statistics is closely linked to the implementation of the second international recommendations approved by the United Nations Statistical Commission for use in the compilation of tourism satellite accounts, an approach that is briefly introduced in chapter 8. In fact, the Tourism Satellite Account provides the conceptual framework and the organizational structure for the reconciliation of most tourism statistics internally within the sector, as well as with other economic statistics. From this perspective, it should be seen as an instrument to assist countries in the identification of data gaps and to guide them during the revision of existing data sources, as well as in the development of new sources.” (IRTS, para. 1.37).

0.39. “Because the International Recommendations for Tourism Statistics 2008 already provides basic conceptual consistency with other statistical frameworks (IRTS 2008, para. 1.31) such as the System of National Accounts 2008 (SNA 2008) and the Balance of Payments and International Investment Position Manual (BPM6), the Tourism
Satellite Account: Recommended Methodological Framework 2008 (TSA: RMF 2008) builds upon this consistency and provides an additional resource to link tourism statistics to the standard tables of the SNA 2008. As this instrument requires consistency among the different data sources that are used and imposes more stringent conditions on them, in particular, reconciliation between the different data, it becomes possible to estimate internally consistent variables that more accurately represent the direct economic contribution of tourism and its interdependence with the rest of a national economy." (TSA:RMF 2008, para. 1.13).

0.40. “This link between both International Recommendations for Tourism Statistics 2008 and the Tourism Satellite Account: Recommended Methodological Framework 2008 and the source data used in their compilation, provides the foundations for the establishment and maintenance of improved national systems of tourism statistics (see IRTS 2008, paras. 1.36 and 1.37)”. (TSA:RMF 2008, para. 1.14).

0.41. The adaptation of such international standards to the subnational level implies the respect to such integrated and harmonized link; because there is no international standard about what a Regional Statistical System should be, as explained earlier –in paras. 0.8 and 0.9-, the conceptual framework described in the document as well as the recommendations proposed "will quite probably need to be redrafted in due time".

0.42. The term Regional Tourism Satellite Account (R-TSA) has been used by UNWTO in the last ten years referring to the regional adaptation of the TSA accounting framework, designed for the national level (see Chapter 5, section B); the document respects such term and explain the difference with TSA-R meaning the regionalization of a national TSA.

0.43. Nevertheless, given that most regional case studies presently available could be properly be labeled as "exercises", it could be argued that other terms would be more appropriate for them; for instance, "Regional extended TSA exercise". In fact, most of them do not build on the statistical rigor of a proper TSA (a very data demanding initiative) and therefore, it should be seen as useful exercises in order to foster economic analysis.

0.44. All along the document it is mentioned that in order to take regional tourism seriously, the first priority should be the setting up of a R-TIS; such recommendation imply that this initiative is a prerequisite for developing a Regional extended TSA exercise. Different sections of chapter 5 addresses and provide insight on the complexity of the necessary link between the R-TIS and the R-TSA.

This chapter also provide clarification on what a R-TSA really is and guidance about addressing such an objective; it also highlights how the R-TIS should support such initiative in a given region8.

In line with such focus, three issues are addressed in different sections:

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8 Section C addresses the issue of linking national and Regional Tourism Information Systems and warns about its complexity. It might be appropriate to remember that IRTS 2008 suggest, as a first approach, “that national statistical offices, tourism authorities and/or other organizations with direct responsibility for tourism statistics promote the use of national instruments to collect tourism data at the regional and local levels using a common set of definitions, based on the present IRTS 2008, para. 8.29); if “this first approach is not feasible or is not considered completely satisfactory, especially in those regions where tourism is particularly relevant, the regional tourism authorities might wish to complement national data with other data in order to design policies and foster economic analysis tailored specifically to their own regions. In this case it is recommended that these new data follow international and national statistical standards and recommendations”. (IRTS 2008, para. 8.31)
Why promoting a regional TSA?
Could a feasibility study help to evaluate the requirements needed?
What can a region where tourism is significant really do when the feasibility study reveals that there are no data and resources enough to support the development of a proper R-TSA?

0.45. It should be possible that TSAs, and any extension to encompass environmental data, could be seen as flexible in the sense of applying accounting principles to the policy questions at hand and, from this point, the data requirements can be established. How these data are then found, whether via collections by official statisticians, via big data, or via modeling is a second step that will be tackled appropriately in different ways in different countries/regions.

Chapter 6. Measuring Tourism and Sustainable Development at subnational levels: setting the focus

0.46. The conceptual design developed for setting up the R-TIS (as explained in Chapter 3) is supported by the understanding that the central core of such a system should allow for scalability of particular sets of layers of information; such concepts should be properly understood:

- **Scalability**: Refers to the integration of information across different spatial scales with the aim of developing information sets for particular type of analysis at a level suitable for public policy purposes as well as for key tourism stakeholders interest.

  In this document, scalability is associated to the geo-reference of basic data and indicators at the sub-regional level.

- **Statistical information** (layers): It is proposed that the articulation of a basic core of national / regional layers of statistical data derived from available national statistical sources on economic, environmental and socio-cultural dimensions of sustainability is the main priority in the setting up of a R-TIS.

0.47. The operationalization of such concepts allow to set up an integrated information system with three basic axes: activity of individuals (being tourism the main focus), territory (using different scale of analysis) and sustainability (including the three dimension: economic, environmental and sociocultural). Such a system implies the coherence of data used in terms of international statistical standards.

0.48. Because the design of such a system refers to the adaptation of the IRTS 2008 to subnational levels (which focuses on the behavior of those travellers that qualify as visitors and on the economic dimension of such activity), the following paragraphs should be understood as basic references regarding the measurement of tourism and sustainability:

“The issue of tourism and sustainability is an increasingly important one and any measurement of tourism and its effect on an economy must take into account the social, economic and environmental impacts. Links with the latter component should be a high priority”. (IRTS 2008, para. 8.33).

“Both approaches (macro-accounting and indicators) have their potential and challenges for measuring at different territorial levels the links between tourism and

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For a more detailed definition see Glossary
Tourism, territory and sustainability: a statistical insight at subnational levels

the environment and thus are recommended as the first priority regarding tourism sustainability issues”. (IRTS 2008, para. 8.39).

“The second approach is more empirical and might be more appealing to countries in which existing tourism regions and destinations would be interested in the design of concrete and geographically-oriented goals and policies in terms of developing a more environmentally-friendly tourism with which all stakeholders might be associated, including visitors”. (IRTS 2008, para. 8.33).

“In this case, the focus would be to develop a set of indicators to highlight an interface between tourism and environmental issues that might identify phenomena or changes that require further analysis and possible action. Like other indicators, these indicators are only tools for evaluation and have to be interpreted in context to acquire their full meaning. They might need to be supplemented by other qualitative and scientific information, notably to explain driving forces behind indicator changes, which form the basis for an assessment”. (IRTS 2008, para. 8.43).

0.49. The subnational approach as referred in the IRTS 2008 is not linked to the TSA (which focuses on tourism as an economic sector) but just to “indicators” and has been preferred not only by countries but also by International Organizations such as UNEP, UNWTO, European Energy Agency, European Commission and others. In most cases the approach for such link between tourism and sustainability has not been statistics oriented and have been developed before the new international standards on tourism statistics (IRTS 2008 and TSA:RMF 2008) were approved by the UN Statistical Commission. Nevertheless, it would seem obvious that the adaptation of such standard to subnational levels should imply not just the measurement of the consequences of the flow of visitors on the sustainable development of the territory of reference but also the identification of tourism as an economic sector and its proper statistical measurement (which is a clear recommendation of IRTS 2008).

0.50. At present, there is no agreed definition of sustainable tourism that might be directly amenable to measurement. At this time, it may be premature to spend significant resources to determine a singular definition; however, it is likely to be necessary to be able to describe the elements and perspectives relevant to sustainable tourism such that the work on developing the statistical framework is scoped appropriately. The description of sustainable tourism will reflect a combination of the user requirements and a general understanding of sustainable development as encompassing economic, environmental and social dimensions.

0.51. With such a focus, this document identifies three main priorities as strategic policy issues regarding the measurement and analysis of tourism at subnational levels:
- In order to bring credibility to regional tourism as a key driver of economic development there is a need for developing a proper conceptual design of a Regional Tourism Information System (R-TIS);
- For comparability purposes (which is UNWTO responsibility as UN specialized agency for tourism) such R-TIS should have as its basic core official statistics;
- Tourism activity impact environmental sustainability and consequently, those basic statistical data and indicators derived from such R-TIS should be applicable first of all to a regional level but also, in due time, to a regional/ sub-regional breakdown such as tourism destinations / cities.

0.52. The connection of such priorities should be based not only on the statistical framework of tourism statistics international standards (IRTS 2008 and TSA:RMF 2008) but also on other statistical standards related to environment statistics and the system of
environmental economic accounting (UNSD et al., 2014: SEEA_CF 2012). The link of all these UN international standards has been supported by a common approach labeled as a “systems approach”, meaning that in any particular thematic area the application of concepts, definitions, classifications, accounting procedures and principle of recording must be consistent with those of the System of National Accounts (SNA 2008).

0.53. The focus used in chapter 5 is consistent with the recommendations referred in the Framework for the Development of Environmental Statistics (FDES 2013) (see Annex 39) and identify ecosystem accounting as the natural connection with tourism at subnational levels (SEEA Experimental Ecosystem Accounting 2014).

0.54. More specifically, focusing on the identification of measures of economic activity for those industries and activities for which a clear link can be established between an ecosystem and the location of the production (which is precisely the case of tourism), would allow for considering integrating information on a range of other transactions that may take place in relation to the economic activity. Readers should be aware that all these UN statistical international standards and complementary documents on environmental accounting insist once and again on the need for developing integrated information systems; consequently, terms as “integrated data”, “multi-dimensional”, “cross-cutting issues”, etc. appear systematically all along this chapter.

For that to happen it is crucial that tourism datasets at subnational levels be geo-referenced including not just tourism data but also supplementary data in order to allow for linking measurement and analysis between tourism and ecosystems in specific territorial entities. Such geo-referenced databases would allow for scalability of the information needed in different sub-regional territorial levels.

In order to operationalize such connection between the three priorities already mentioned, this document refers to statistical concepts and definitions as in the 2008 standard and proposes new ones as explained in the paragraph 0.6. The following concepts have been particularly crucial:

- Articulation of national/regional/sub-regional basic statistical data and indicators;
- Statistical information (layers);
- Territorial entities (hierarchical classification for a subnational breakdown);
- Scalability;
- Significance (economic importance);
- Statistical information (layers);
- Geo-referenced data bases;
- Tourism population;
- Regional tourism.

0.55. In addition to economic and environmental sustainability, the sociocultural dimension is crucial for tourism planning and management: poverty, employment, education, skills, crime, changes in host populations, living conditions, etc. are relevant issues for tourism key stakeholders. This document does not address detailed analysis regarding sub-regional levels on this third dimension of sustainable development although the conceptual framework developed for the design of the R-TIS certainly allow for its measurement.

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10 All of them can be found in the Glossary
Chapter 1. Contextualizing UNWTO approach to sub-national tourism

A. Introduction

1.1. The present document builds on statistical international standards (tourism and environment statistics, as well as the corresponding macroeconomic accounting frameworks –TSA and SEEA-) and provides guidelines in order to set up a particular type of statistical initiative: a Regional Tourism Information System conceived for the purpose of linking tourism, territory and sustainability in the perspective of the UN 2030 Agenda for Sustainable Development. By so doing, UNWTO understands that tourism measurement at subnational levels might act as a catalyst for expanding Sustainable Development Goals’ indicators at other spatial scales, in line with UN guidelines “to encourage all Member States to develop as soon as possible ambitious national responses to the overall implementation of this Agenda” and “to conduct regular and inclusive reviews of progress at the national and subnational levels which are country-led and country-driven” (UN, 2015, Transforming our world: the 2030 Agenda for Sustainable Development, paras. 78 and 79).

Linking tourism (operationally defined in the tourism statistics international standards) and sustainable development (a policy oriented concept without any universally accepted operational definition for its measurement) is a complex and challenging task; this document provides a statistical insight in such connection between tourism as an economic sector that impact the socio-economic components of sustainability and the environmental impact due to tourism infrastructure and the activity of visitors.

More specifically, this document will contribute to the transformative agenda for official statistics by highlighting the need for integrated social, economic and environmental information and call for holistic and integrated approaches to sustainable development for decision-making at the national, subnational and local levels (UNSC, 2015). In fact, this is fully in line with UN Statistics Division calling for "integrated statistics to address multidimensional phenomena such as poverty, sustainable production and consumption, climate change and globalization" as UNSC considers them “indispensable for the new post-2015 development agenda” (UNSC, 2015).

Furthermore, the present document fully supports UNSC’s request that “traditional statistical processes will need to be redesigned to become more integrated and efficient and to yield data that is more timely, and better and differently disaggregated”; disaggregation meaning characteristics of the individual and household, economic activity, and spatial dimensions (e.g. by metropolitan areas, urban and rural, or districts). (Transformative agenda for official statistics, UN Statistical Commission forty-sixth session, E/CN.3/2015/5 paras. 10. /13. and 14.)

1.2. To properly understand the nature of such a system (the R-TIS), the following remarks are highlighted all along this document in order to provide proactive arguments to support such medium-long term initiative:

- This initiative has been conceived and developed as the adaptation of 2008 international standards for tourism statistics (the International Recommendations for Tourism Statistics –IRTS 2008- and the Tourism Satellite Account: Recommended Conceptual Framework –TSA 2008-) to subnational levels;
It is recommended that the basic core of such system refers to basic statistical data and indicators most of them derived from official statistical surveys at the national level (six main sources have been identified). Other regional official statistical data might be also included;

Such national sources are available in practically all EU member countries as well as in non-European countries pertaining to the G20 international community;

The conceptual design of the R-TIS uses a set of concepts, operational definitions, accounting rules and principles of recording and classifications consistent with those of the System of National Accounts. Also other statistically supplementary concepts have been included (the INRouTe initiative has developed around 15 new concepts such as tourism population, significance-economic importance of tourism at territorial levels-, scalability, regional tourism, etc.) and it has moved away from the statistically vague term of destination, to a precise hierarchical classification of territorial entities;

The setting up of the R-TIS requires also a particular type of governance structure: a regional inter-institutional network integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institutions;

The R-TIS database is recommended to be geo-referenced (not only for rearrangement of data but also for mapping purposes) and prioritize an articulated set of basic data at the national/regional levels;

The initiative of setting up a R-TIS is recommended as a necessary pre-requisite for comparing nationally and internationally main tourism destinations and cities where tourism is significant, as well as to rigorously measure territorial, environmental and other economic and social impacts of tourism activity;

This document might be inspiring for countries without such an advanced level statistical development. UNWTO will also be available to provide technical assistance in order to set up a planning work schedule for those regions where tourism is particularly significant, to be in line with the recommended guidelines proposed. This is of particular interest for those countries that have decided to renew their national tourism information system as the first phase of a project that also includes the subnational measurement as a second priority.

The conceptual design of the R-TIS should also be understood as the “umbrella” for implementing those guidelines proposed in this document in order to develop a robust set of basic statistical data and indicators for sub-national regions and other subnational territorial entities.

In this sense, it responds to UNWTO’s aspiration to support National Tourism Administrations as they work towards an improved formulation of national policies that take into account such territorial entities where tourism is significant. This perspective is crucial for a better understanding of the spatial distribution of domestic tourism (both in terms of flows and in terms of its economic contribution), an issue recurrently highlighted by several UNWTO Member States as being of the utmost importance for the national level.

The target audience of this document refers to tourism practitioners -including tourism officials who commission surveys and research, and those who undertake such surveys- and different key stakeholders at regional and sub-regional levels -including
governments, public institutes and agencies, universities, research centres, industry associations, trade bodies, consulting firms, tourism destination managers, tourism development authorities, tourism businesses, etc.

1.5. Focusing on some key areas of the measurement and analysis of tourism at the sub-national level (see Box 2), the development of an R-TIS would enable collecting a reasonable number of statistical information items for monitoring and comparability purposes (both internationally and intra-nationally).

1.6. The R-TIS should include not only official and statistical data obtained at the national and regional level, but also a third dataset not necessarily of official and/or of statistical nature (such as electricity consumption by households, credit card expenditure records, information obtain via transport authorities control, business cycle indicators, early warning indicators, other indicators regarding tourism and sustainable development, etc.), considered to be relevant at regional and sub-regional levels not only for the measurement/monitoring of tourism (carried out by the regional tourism authority or other regional entities, other entities of supra-regional scope or even by national bodies), for analytical purposes (such as analysis of the performance of certain subsectors and foresee their evolution, the perceptions of the demand of a certain destination, etc.) and for gathering data, requirement for providing answers to policy questions related with tourism itself or in relation with sustainable development issues.

1.7. During the period 2012-2016, the work carried on has focused on 4 areas and almost 20 topics as listed in Box2 A proposed set of general guidance and standardized procedures (also referred as recommendations) have been drafted for each of them and are included in this document.\(^{11}\)

\[Box 2. \text{List of Areas and Topics}\]

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\(^{11}\) For a more complete view of main topics addressed in this document please see the Subject Index
1.8. Obviously, there are many other areas that could have been included if the required resources (both financial and human) would had been available; for instance, areas related to general infrastructure, accessibility, marketing and promotion of destinations, business capacity, destination commercialization and marketing, competitiveness, technological innovation, just to name a few of them.

1.9. In addition to such strategic objective other complementary ones have been identified all along this initiative:

- Empowering tourism entrepreneurs and other key stakeholders of the tourism sector;
- Avoiding information overlapping between national and regional levels; and
- Fostering the dissemination and use of data and analysis.

1.10. The setting up of a R-TIS is not just a technical challenge associated to the creation of a database using available data derived from national as well as regional sources: it goes well beyond that issue. It seems quite obvious that guidance on how to define and develop measurement related to tourism destinations, “tourism products”\(^1\), types of tourism and types of visitors are crucial for tourism comparability.

In fact, this document also explains why the proposed design of the R-TIS (Regional Tourism Information System) should be extended beyond the regional level to allow for integrating data at sub-regional levels. Moreover, an operative articulation of a national/regional tourism statistics’ dataset is also a key objective and should be seen as a first priority, also including a supplementary articulation of regional/sub-regional basic statistical data and indicators.

1.11. Tourism is a relevant economic driver in most countries and might significantly impact the national sustainable development agenda. At the regional and other sub-national levels there is strong evidence (Gössling, Hall, Lane & Weaver, 2008) that tourism is also a significant contributor to undesirable and irreversible environmental, economic and social changes.

1.12. The credibility of the measurement of regional tourism requires setting up basic information as a prerequisite for measuring, analyzing and monitoring economic consequences. The basic core of such information should be statistically-founded. Yet other types of non-statistical or non-official data are also needed, for different purposes, by key stakeholders.

Out of all data, only statistical data allow for a robust type of comparability, both between regions in a given country as well as between regions of different countries. However, not all territorial entities have the same type and amount of statistical data. This is not a question of size (the smaller the unit, the lower is the amount of available data), but relates rather to the fact that national statistical sources do not usually include all levels of territorial administrative units and/or that the sample sizes involved in surveys do not allow for uniform reliability of data at different territorial scales (both regional and sub-regional).

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\(^1\) All along this document the term “tourism product” should not be confused with “tourism characteristic consumption products” defined as those goods and services whose expenditure represents a significant share of total tourism expenditure (for a more precise quotation see Regional Tourism: Glossary, “Tourism industries”)
B. The motivation and role of UNWTO in promoting this document

1.13. The rationale for better understanding and analyzing of tourism at different territorial levels lies in the fact that tourism is strongly territory-contingent, with flows of visitors occurring unevenly across countries, regions, municipalities, or any other territorial entity. Tourism and territory are narrowly intertwined not only because the natural or built territory is often the main tourism attraction (e.g., an exotic beach, a vibrant city), but also because the territory, and movements across it, largely condition tourism trips and itineraries, the nature of the supply that caters to visitor consumption, the capacity to modulate by means of policy and, consequently, the relationship to potential welfare.

1.14. There is an increasing understanding that tourism is a driving force for economic growth especially in those sub-national territories (both at the regional and local levels) where tourism has become a relevant activity vis-à-vis other sectors. Nevertheless, for many entities and professionals in tourism, as well as for a good number of governing bodies, tourism is seen as a disrupting force not contributing to sustainable development and territorial cohesion.

1.15. The UN-approved International Recommendations for Tourism Statistics 2008 (IRTS 2008) and Tourism Satellite Account: Recommended Methodological Framework 2008 (TSA: RMF 2008), developed under the leadership of UNWTO, support the conceptual framework for the measurement of tourism activity and its economic dimension at the national level. As such, they are also the cornerstones for designing measurement guidelines of tourism at sub-national regional and local levels. This is particularly the case for the regional adaptation of the proposed national system of tourism statistics and the Tourism Satellite Account (TSA):

- the IRTS 2008 notes that “increasingly, regional tourism authorities are interested in regional statistics and possibly some form of TSA at regional level as a means of providing useful indicators for tourism enterprises and organizations in identifying possible business opportunities, assessing the volume and intensity of tourism business and determining the extent to which private and public regional tourism networks and clusters are interconnected”;
- the TSA: RMF 2008 notes that “there are various reasons for encouraging discussion on how the TSA can be adapted to the sub-national level”.

1.16. Thanks to the 2008 UN international standards on tourism statistics, countries around the world are able to compile basic statistical data and indicators which are comparable across countries and over time, and at the same time comparable to other economic statistics. The UNWTO Compendium of Tourism Statistics, comprehensively expanded from 2011 onwards, reflects the IRTS 2008 concepts, definitions and classifications to provide information for over 200 countries on inbound, domestic and outbound tourism, as well as on the number and types of tourism industries, the number of employees by tourism industries, and macroeconomic indicators related to international tourism.

In addition, UNWTO releases regular updates of its World Tourism Barometer, providing up-to-date statistics and short-term trends analysis, and its Tourism Highlights, presenting a concise overview of international tourism trends over the year, such as results by (sub)region and country of destination, top tourism destinations, outbound tourism by region and top spenders, and long-term forecasts.

1.17. UNWTO has been aware for a couple of years of the need to provide countries, particularly its Member States, with guidance in the area of adequately measuring and analyzing tourism at the sub-national level. This would be an important step beyond
the work currently carried out by UNWTO at the national level and is seen to be the way towards tailoring policy to those areas where tourism does or could contribute to generate national welfare.

Indeed, the sixth International Forum for Parliamentarians and Local Authorities (Cebu/Philippines, 22-24 October 2008), organized by UNWTO and the Philippines National Tourism Administration, formally requested UNWTO to—deliver guidelines on measuring tourism at the regional and local levels regarding basic statistics, the Tourism Satellite Account and the economic analysis of the contribution that tourism makes at those levels (see Annex 1).

UNWTO has been insistent (throughout the process of drafting the UN International Recommendations, from 2004 to 2008) on the notion that the development of a Tourism Information System (TIS) should be understood not as an end in itself but rather as an initiative that, aside from allowing a credible analysis of tourism activity and its economic consequences, should also support the institutional reinforcement of National Tourism Administrations (NTAs) in their responsibilities both at the national and sub-national levels.

1.18. The central reason for having underscored the development of the Regional Tourism Information System (R-TIS) as a strategic objective stems from a conviction—unless you measure tourism, you will never manage it properly or improve it. Two facts should be mentioned in this context:
- Strictly speaking, tourism officials alone cannot develop a R-TIS (both for reasons of lack of institutional legitimacy, as well as due to the lack, in the vast majority of cases, of the necessary infrastructure for such an endeavour, where the qualification and amount of required human resources constitute a principal limitation). Tourism officials require the cooperation of, at least, the statistical authorities and specialized private sector contributions. This is not merely an issue of the division of competencies or of complementarities between the relevant entities; it also relates to the fact that each entity has its own legitimacy and credibility vis-à-vis third parties and, especially, the users of the information generated;
- In order to make the effort sustainable over time (and not just in monetary terms), the measurement and analysis of tourism need to pay special attention to the inevitable nexus between the different layers of territorial aggregation: between national and (sub-national) regions, and between such regions and corresponding municipalities and tourism destinations, where tourism is significant. The term significant at the regional level implies the territorial scale under consideration, the number of establishments in the tourism industries—and, consequently, also the number of associated jobs - and the value added generated by them in relation to the economy in the corresponding territory as well as the number of visitors.

1.19. The present document attempts to explain to a wide audience of tourism practitioners and subnational key stakeholders the importance of considering tourism at subnational levels, as well as to provide guidelines for its proper measurement.

C. Singularity of this initiative

1.20. The distinctive features of this initiative (which in fact has been developed as a medium term project) vis-à-vis other projects or initiatives regarding tourism at sub-national levels, are its link to the aforementioned UN international recommendations of 2008
Chapter 1. Contextualizing UNWTO approach to sub-national tourism

(i.e. the IRTS 2008 and the TSA: RMF 2008) and the cooperation agreement by UNWTO and INRouTe signed in July 2011.

The following paragraphs provide some more clarifications to better highlight the singularity of the initiative presented in this document.

1.21. Such initiative has developed a proper conceptual framework by adapting the UN 2008 international standards for the measurement and analysis of tourism at national level to sub-national levels. Such adaptation is not a mere question of semantics (changing the term nation "to region or tourism destination", for example). It is a challenging issue that requires interdisciplinary research in order to overcome what Professor Jafar Jafari 13 formulated as tourism's detrimental tendency to isolate itself, as is the case for instance, in relation to sustainability: "In the name of sustainability, we now have many models of 'sustainable tourism development'. These boosterism molds often suggest that this [sector] in and by itself can become sustainable. However, tourism cannot be isolated from the larger contexts which structure and explain it, as many do."

1.22. Such adaptation has taken into account the need for including a consideration of both the territory and sustainability. In fact, in many tourism destinations, a divide between the tourism and the land planning authorities has resulted in a significant issue in terms of sustainable development. Consequently, the development of new concepts, definitions and insights that connect tourism with territory are part of the challenge to strengthen the credibility of tourism at the different territorial levels; and for such purpose a classification of territorial entities has been developed.

1.23. The design of a R-TIS has taken advantage of national case studies (Brazil, Ireland and New Zealand) as well as regional ones (Andalusia, Canary Islands, Comunidad de Madrid and Palma de Mallorca in Spain, as well as Wales in the UK). The national studies highlight that it is possible to structure an articulation between national/regional levels that generates a sufficient set of basic statistical data and indicators both for the demand and supply side of tourism. (This is the case for overnights/establishments of tourism industries/employment associated with such industries.) As already mentioned (see para. 1.2), the necessary information does exist in countries with a higher level of statistical development.

While the case of Andalusia (a very particular one in terms of its institutionalization, consolidated staff for more than 15 years, continuity of the work carried out during such a long period of time, etc.) has been used as the main reference for setting up the proposed R-TIS, the case of the Canary Island and Palma de Mallorca have been used as reference for expanding such a system to sub-regional levels.

Please see below Box 3 containing all the references to the different case studies highlighted in the present document.

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### Box 3. References of Case Studies highlighted in the present document

#### National Case Studies

**Brazil**


**Ireland**

4. MacFeely S., Delaney J. and O'Donoghue F. (2012), Using Business Registers to conduct a regional analysis of Enterprise Demography and Employment in the Tourism Industries: Learning from the Irish Experience (Document presented at the INRouTe 1st Seminar on Regional Tourism: setting the focus (Venice, Italy, 5-6 July 2012))

**New Zealand**


#### Regional Case Studies

**Andalusia (Spain)**


**Canary Islands (Spain)**

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1.24. All along this initiative a special commitment was looking for a light level of consensus (meaning that the guidelines now proposed by UNWTO in this document will not require formal UN approval) based on the work carried out by INRouTe partners, through international Conferences and Seminars, and last but not least, with the support of UNWTO.

1.25. Such consensus refers to UNWTO proposed guidelines on measurement and basic research, as well as on suggested standardization procedures basically on different aspects of surveys and on a limited number of measuring tools or recommended practices on specific items.

1.26. It is important to clarify that UNWTO Guidelines are not conceived as standards, which would imply requirements, certification and similar attributes. While standards may be desirable, they cannot be instituted without a body that should continually update them and ensure that they are being followed.

1.27. Nevertheless, standardization procedures represent procedures that, if practitioners voluntarily adopt them, it will improve (a) the consistency of the instruments to which they apply (surveys or other measuring tools); (b) the quality of such instruments; (c) the comparability of results; (d) the reliability of the data resulting from such instruments; and (e) the accuracy of the measurements.
D. Policy relevance and uses of this document

1.28. The following paragraphs provide some examples of some policy implications linked to the setting up of the recommended Regional Tourism Information System.

1. Provide leadership to NTAs
- As clearly explained by UNWTO in the White Paper (article 36) –see Annex 2-, there are two areas that warrant special attention, both because they have not been included in UNWTO’s general activities to date and because they are currently in great demand by the member States;
- Domestic tourism (at the national level), which in many developed countries is more meaningful for economic growth and job creation than inbound tourism, has an especially important role to play in times of crisis, and also helps to extend the benefits of tourism to rural or depressed areas in many countries;
- Tourism governance, including the various levels of public administration and their relations with the private sector and other parties, at national as well as local destinations. This area also covers matters pertaining to overall tourism policies and institutional and legislative aspects;
- Design subnational case studies that could provide evidence for a better understanding of national visitors tourism behavior at destination in order to assist national policy design for such form of tourism;
- Tourism Sub-National Governing Bodies should require to be consulted by Governing departments on territorial planning, when concerning initiatives that may impact the sub-national tourism space in relation with transport infrastructure and collective equipment.

2. Provide services to members and affiliates
- UNWTO Statistics and Tourism Satellite Account programme will start asking by 2017, on a voluntary basis, for subnational statistical indicators (no more than 15) for a selected number of countries with a developed national statistical system: each of such countries will select one or more regions where tourism is particularly significant. For each of those regions (within a country) as identified in the classification of territorial entities used in this document (see Glossary), the following sub-regional breakdown would apply: other sub-regional administrative or analytical units, municipalities, multi-local (more than one municipality), other local administrative or analytical units. Such breakdown implies that some of such territorial entities could be labeled as tourism destinations. Such proposal has the potential of enlarging economic analysis as well as foster international and intra-national comparability.

Such an initiative (see also Chapter 3, section B) should be understood as developing a network of countries that should identify the required data and determine the best way of collecting it on a regular basis; it should also include United Nations Statistics Division (UNSD) in order to allow for its expansion in due time, as a global initiative aligned with the UN 2030 Sustainable Development Agenda.

- Provide guidance about the setting up of a regional inter-institutional network for the design of a R-TIS as recommended in this document; such network should be integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts.

Such a network should be understood as the support for a proper governance structure decided by those stakeholders in order to guarantee the sustainability of such medium-long term initiative.
- Provide technical assistance in order to bring consistency between tourism destination’s and tourism statistics’ conceptual framework in line with the recommended principles in this document.

3. Extending UNWTO Program of Work
- Foster the application of these recommendations in order to take regional tourism seriously because tourism is unevenly distributed across the national territory; a better measurement and understanding of tourism activity in subnational territories will be instrumental for a more efficient design of national policies (particularly regarding national domestic tourism);
- Support case studies in relation with Regional TSA exercises and development of regional measurement of Tourism capital and Collective consumption aggregates for analytical purposes.
Chapter 2. Tourism and territory: taking sub-national tourism seriously

A. Introduction

2.1. Tourism is a geographical phenomenon, an economic activity highly sensitive to location, involving movement among locations and within locations, that requires a planning process for its development. It also has an impact on the economy, the natural and built environment, the local population at the place visited and the visitors themselves.

2.2. Tourism embodies many industries, and as a consequence a high level of coordination is needed. In a given territory, the relationship between tourism and territorial planning should involve, necessarily, at least the following set of topics:
- Reaching a consensus and prioritizing among key stakeholders the actions to be undertaken in various areas of economic activity in the tourism sector to boost its development in the medium / long term;
- Identifying in relation to the principal existing tourism products (and eventually in the design of new products), those elements related to infrastructure and facilities planning (which would in principle be infrastructures that may influence the development of significantly more tourism in the territory);
- Evaluating the advisability of establishing limits to the growth of tourism, most notably to various forms of accommodation for visitors (including vacation homes for tourism use);
- Tourism development should be understood as a process respectful with territorial assets in order to reconcile the desire to develop a place in an economic sense and to preserve certain territorial characteristics;
- Measuring the corresponding pressure on the territory and those territorial infrastructures that support this flow of visitors and overnight stays and determine the desirable level of visitors and overnights in the medium term;
- Measuring the consumption of energy and water, the collection of waste associated with tourism and evaluating the impact of these on those natural resources that are considered most relevant to the territorial entity, in terms of environmental sustainability. Other factors if deemed relevant should also be measured, e.g. social and culture impact of tourism on the communities in destinations.

2.3. The assessment of the sustainability of a territorial entity where tourism already is or can potentially be significant14 should be done from a holistic perspective; considering large-scale impact factors (climate change, possible depletion of basic resources-including soil, and water, etc.) and others linked to the relationship between consumption by and activities of visitors in that territory.

2.4. Owing to this range of impacts and the wide spectrum of stakeholders involved, there is a need for a global approach to tourism development, management and monitoring. This approach is supported by the World Tourism Organization in order to formulate and implement national and local tourism policies and is also the focus of this chapter in which the following three main topics are addressed:
- Tourism and territorial planning: identifying the mutual contents (see section B);
- The need for a classification of territorial entities (see section C);

14 In the first case such territory could be referred as a tourism destination while the second case would qualify as a potential tourism destination in a medium term process.
Fostering subnational analysis and measurement of visitors' behaviour: learn about what visitors do once at destination (see section D).

The proper treatment of each of them is crucial in order to take regional tourism seriously.

2.5. In operational terms, it should be highlighted that the need for equipping tourism destinations with basic infrastructures and services (e.g. utilities, transport...etc.) requires a holistic and a multi-sectorial vision of the territory, where territorial planning embodies tourism population needs without damaging the quality/volume of the supply of basic services for the host population. There is evidence of such governance being difficult in operational terms. The absence of data on tourism activity at sub-national level, often does not allow to accurately forecast a demand increase, and on many other occasions tourism is not considered when calculating the needs of basic services. Tourism activity is highly linked with services, infrastructures, and facilities that very often are not under the control of the tourism authorities, rather under other sections of the government. Hence, there can easily exist relevant deviations that block or make it impossible for an adequate measurement of needed investments for the development of a tourism activity that ensures sustainability. Therefore, governance and coordination is needed, it is necessary to identify aspects (or perhaps overall sectors) overlapping with other sides of the government and to collect multi-sectorial information on them.

2.6. Linking tourism and territory implies necessarily drawing attention to sustainability as illustrated in the previous paragraphs. Therefore, it would be right to say that looking at tourism at subnational levels would allow extending tourism basic statistical data and indicators in line with UN Agenda 2030.

The UN Agenda 2030 for Sustainable Development, along with its set of 17 Sustainable Development Goals (SDGs) and corresponding 169 targets, is intended to be a universal, integrated, and transformative path for sustainable human development. The SDGs are a plan of action for people, the planet and prosperity for all countries and require all stakeholders to act in collaborative partnerships. Tourism is explicitly mentioned in the SDGs in three targets:

- Goal 8, on the promotion of "sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all" includes as Target 8.9 "By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products";
- Goal 12 aimed to "ensure sustainable consumption and production patterns" includes as Target 12.b to "Develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products";
- Goal 14 set to "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" includes as target 14.7 "by 2030 increase the economic benefits of SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism".

UNWTO is convinced that this document can contribute to the objectives of the 2030 Agenda for Sustainable Development in the understanding that tourism measurement at subnational levels might be useful to implement SDG’s indicators at other spatial scales.
2.7. For instance, it could be envisaged that tourism can be present at least in other Sustainable Development Goals (SDGs) apart from those three already mentioned; that could be the case of:

- End of poverty: tourism can certainly contribute;
- Health and well-being: The presence of tourism population on the territory may steer a capacity increase of health and well-being facilities. Tourism could be a catalyst of system improvements;
- Quality Education. Concerning tourism education and training;
- Gender equality. The information system needs to be capable of assess gender participation in productive processes and within the tourism population;
- Water and Sanitation for all. Tourism urbanized spaces need drinkable water and sanitation, which should impact on a well-being improvement for the host population;
- Affordable, reliable, sustainable and modern energy for all. Within a sustainable development context, a position in favor of renewable and affordable energy is needed. Thus, energy consumption data by different sources and their relation to different forms of tourism activities is also needed;
- Industry, innovation, infrastructure. This topic is integrated within the forecasts of information. However, tourism innovation information requires a better treatment;
- Reduce Inequality. This objective implies the introduction of information concerning tourism contribution to inequality reduction within and among countries;
- Inclusive, safe, resilient and sustainable cities and human settlements. Here, the challenge is breaking down the information related to tourism urban space.

B. Territorial Planning and Tourism

2.8. The identification and accurate assessment of tourism in the territorial planning has not always received due attention and is a particularly important issue for measurement in relation to sustainability. In addition to the small number of basic statistical data and indicators associated to tourism at sub-national levels in most regions where tourism is significant (or can potentially be in a medium term process), the lack of a conceptual framework of tourism as an economic activity might also be responsible for such divide between territorial planning departments and regional and sub-regional tourism authorities.

2.9. In any case, it is also pertinent to take into account that territorial analysis of tourism must have a specific focus. It implies that tourism processes do not have a universal validity, on the contrary, they need to be addressed on a case by case basis. Data, indicators, they should count with normalized definitions and meet solvency and consistency requirements pertinent to statistical operations, but analysis performed needs to count with a specific focus, adapted to territorial singularities of each given case.

2.10. Given the importance of territorial planning for tourism development, the concept of “tourism spatial areas” (identified as that part of the regional territory where tourism is significant) is frequently used by territorial planners; it may be that the concept is applicable in its entirety with a certain territorial subnational administrative entity, but more often it is likely that it might not cover a single municipality, neither an entire region.
2.11. It is therefore a concept that responds to the need of territorial planners to bring tourism into focus, as there is a whole set of elements related to the inflow and activity of the (actual or potential) visitors, which should be identified and also be measured properly. This is the case of:
- potentially tourism resources (such as landscape, protected areas, cultural and historical heritage, etc.);
- transport networks, specially passenger and cargo with tourism impact (urban and rural) and its use;
- Facilities and public utilities needed by host population;
- Facilities and establishments that produce goods and services demanded by visitors.

2.12. It might be relevant to point out within the case of establishments that offer accommodation to visitors, that there could also be an additional supply of vacation homes used by tourists that compete with those establishments, e.g. buildings operated under a time sharing, housing property used by temporary residents of foreign nationality and possibly also other buildings used by visitors. (see Annex 30).

This refers to establishments explicitly mentioned as part of the category: “Accommodation for visitors” of ISIC Rev.4 category (see Annex 3), which includes the following types:

- 5510 Short term accommodation activities;
- 5520 Camping grounds, recreational vehicle parks and trailers parks;
- 6810 Real estate activities with own or leased property;
- 620 Real estate activities on a fee or contract basis.

On the one hand, this whole set of four types of complementary services can be a significant source of funding for local governments (especially in the short term). On the other hand, these services represent an intensive use of environmental resources. It might be reasonable to foresee that these may originate difficulties for proper consolidation of tourism destinations in the medium term, particularly in terms of environmental sustainability.

(For more details, interested readers should see later on in this chapter D.1 Understanding how a territorial entity becomes a tourism destination)

2.13. While infrastructure related to transport (airport, road and maritime) condition both passengers and goods accessibility, and their domestic travel, tourism development on its own right also requires other infrastructure and services (energy, both water and sanitation, and waste management).

It should be noted that these needs are not necessarily homogeneous in a “tourism spatial area”, since the usual case implies the existence of different zones - coastal, inland, mountain, etc.- and a diverse concentration of tourism population in part(s) of its territory.

A “tourism spatial area” (identified as small spatial scales where tourism is significant) might be applicable in its entirety to a certain regional and/or sub-regional administrative entity, but more often it is likely that it might not cover a single municipality, neither an entire region. Such term is often used by territorial planners in order to bring tourism content into focus.
2.14. This relationship between tourism and adequate territorial infrastructure demands necessarily public intervention, and in particular, the desirability of a framework of governance between regional tourism administration and other administrations (which can also be national and local) with a say in other sectorial policies that directly or indirectly impact on that area.

2.15. Key tourism stakeholders promote and develop tourism plans. These tourism plans should include an analysis of the territory, and a sustainable development approach. However, in reality most of the tourism plans, are not as much focused on territorial planning as they are on promoting the territory.

2.16. Tourism planning needs to find a balance between its production objectives and minimizing the impacts and pressure on ecosystems, landscape and cultural identity and optimizing the use of territorial factors. The analysis should address resources with tourism potential, hosting capacity, and development of the production dimension within a context defined by the territorial borders and its planning forecasts (when these exist). The following Box tries to summarize such mutual relations between territorial planning and tourism planning and provides the background for a strategic environmental evaluation with the following targets:

- Assurance that the metabolic systems of the territory are not altered by the impact and pressure of the tourism activity;
- Energy optimization of the tourism activity at a territorial scale;
- Establishing mechanisms for preserving the landscape and cultural identity of the territory.

**Box 4. Mutual relation between territorial planning and tourism planning**

Territorial planning should take into account the tourism activity in order to organize the infrastructure and facilities for basic services (utilities, transport, etc.). These basic services are useful to both the host community and visitors.

For tourism activity planning it is needed a territorial planning tool protecting resources, regulating tourism usage, recognizing its specificities, and designing and measuring the use of infrastructure and facilities for basic services.

This mutual relation between territorial planning and tourism planning should be specified in terms of overlapping elements. These elements should be integrated in a geo-referenced (GIS) information system with UTM coordinates, variables and indicators, with the aim of being able to obtain average values for that territorial reference.

<table>
<thead>
<tr>
<th>Tourism contents for territorial planning</th>
<th>Territorial contents for tourism planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Protection and regulation of tourism resources</td>
<td>✓ Current and Potential Tourism resources identification</td>
</tr>
<tr>
<td>✓ General measuring of typologies of forms of tourism and of desired capacity horizons. Strategy by destinations and segments.</td>
<td>✓ Strategy by segments and destinations</td>
</tr>
<tr>
<td>✓ Tourism areas definition. Those where tourism usage is significantly present and establishes specificities in its regulation.</td>
<td>✓ Territorial dimension of the design and programming of the product lines</td>
</tr>
<tr>
<td>✓ Designing and measuring territorial networks, taking into account tourism flows.</td>
<td>✓ General measuring of tourism typologies and of desired capacity horizons</td>
</tr>
<tr>
<td>✓ Standard definition for facilities for public services provision to tourism population.</td>
<td>✓ Tourism areas definition compatible with territorial planning. Those where tourism usage is significantly present and establishes specificities in its regulation.</td>
</tr>
</tbody>
</table>

As a starting point the following territorial categories and their corresponding variables are proposed:

- Tourism attractiveness components within a territory:
  - Natural resources
  - Cultural resources
  - Landscape resources
  - Tourism Facilities

Tourism plans and territorial plans hold a reciprocal interdependence. Both need to take into account several elements from each other. The categories of territorial content required to be taken into account within a tourism plan are, on the one hand, the same three categories needed for the tourism contents of territorial planning and on the other hand, the following:

- Socio-economic dimension:
2.17. As already mentioned, (see paras. 2.9 and 2.12), a “tourism spatial area” usually (as already mentioned, is a term frequently used by territorial planners) it is not a homogenous territory in terms of administrative units (such as region or municipality) for the purpose of analyzing the relationship between tourism and territory. For the purposes of tourism territorial and economic analysis, the breakdown of such analytical unit would require identifying "tourism zones". This articulation between "tourism spatial area" / "tourism zones" can be very useful; one example is the work done by the National Institute of Statistics and Geography of Mexico on the occasion of the 2004 Economic Census (Durán, 2008).

2.18. It should be noted that addressing this breaking down into zones would almost certainly require more than one criterion because different needs may require different models. Consequently, any of the approaches that are considered suitable should be subject to pilot exercises before tackling its generalization to the whole "spatial area" of reference.

2.19. One possibility would be to define such “areas” based on municipalities that meet at least the following three conditions:
- The characteristics necessary to be considered as tourism destinations (see Glossary);
- Which also have a geographic continuity between them;
- A similar population structure regarding the tourist population (see the Glossary) and the types of establishments offering accommodation services.

Tourism population is a statistical term that forms part of Glossary. It is defined as a subset of visitors, and for the measurement and analytical purposes linked to concentration / diffusion of tourism activity indexes as well as for setting up tourism environmental indicators. Equivalent Tourism Population figures should be included in different type of indicators measuring tourism impacts on the environment such as
- natural protected areas
- land
- needs for waste management facilities
- water cycle
- energy flows
- etc.

Tourism Population should be estimated (see Glossary, Full-time equivalent) using overnights figures associated to inbound visitors (including those staying in vacation homes); consequently, Accommodation Surveys are crucial for such purpose. In the case of local tourism destinations, such estimate of Tourism Population figures should allow for a correction factor due to the fact that not all such overnights type of figures are available at the local level. For the concept of inbound visitors see Regional Tourism (see also Glossary); it should be highlighted that in the case of local tourism destinations, the definition of the “residents subset” of such inbound visitors must be adapted.

Another possibility, by far more complex, would be to define those areas based upon the identification of different types of behavioural patterns; this would require linking each of them with supply side indicators related to the corresponding tourism resources.
As mentioned later on (section C), it should be noted that if these types of tourism behavioral patterns are identified with the main purpose of the trip; those typologies will not be homogeneous as an overlap between them is unavoidable.

2.20. There is an increasing understanding that the unstoppable advance of the use of administrative records accessible for research purposes can change this situation soon. Regional tourism analysis should make (more) use of administrative records. “The promise of open data and statistics for sharing and integrating data from multiple sources is great. It is especially hopeful for combining data from different disciplines to explore the interaction of human activity and the environment. However, there are issues of harmonization and integration that are difficult and expensive to do.” (Thomas & Kugler, 2013, p. 2701).

“Clear valid data linkage requires commonality on two of three dimensions: spatial, temporal and topical. To compare or contrast two spatial areas requires data for the same time periods on comparable topics expressed in similar ways. To look at change in an area over time, there needs to be consistency in the spatial area and topical comparability. To link and analyze data from different sources and topical coverage, the temporal and spatial coverage need to be comparable” (Thomas & Kugler, 2013, p. 2701).

C. UNWTO Moving the Statistical Agenda Forward

2.21. In 2008, the United Nations endorsed a significant overhaul of the international standards that underpin the foundations of economic statistics: specifically, those instruments that constitute the basis of macroeconomic measurement (i.e. the System of National Accounts and the Balance of Payments) together with their corresponding classification systems (the classifications of economic activities and of products). 15

2.22. In 2004 UNWTO decided to take advantage of this collective effort (led by the UN Statistics Division in close cooperation with other international agencies, notably IMF, OECD, Eurostat, WB, UN Regional Commissions, etc.). The aim was not so much to revise the conceptual framework of the Tourism Satellite Account (TSA) approved in 2000, but rather to revise the recommendations for tourism statistics dating back to 1993, whose conceptual framework was not consistent with that of the TSA.

2.23. The international consensus achieved during 2004–2008 resulted in a substantial modification to the basic core of what have come to be the set of concepts, definitions, classifications and data (understood to include not only basic data but also indicators and accounting aggregates) used for the measurement of tourism and the corresponding analysis.

<table>
<thead>
<tr>
<th>Topics</th>
<th>1993 RTS</th>
<th>IRTS 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction of definition of tourism trips and visits</td>
<td>Trips and visits are not defined.</td>
<td>A trip is made up of visits to different places. The term “tourism visit” refers to a stay in a place visited during a tourism trip. The stay does not need to be overnight to qualify as a</td>
</tr>
</tbody>
</table>

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6Central Product Classification (CPC) Ver.2.
## Topics

<table>
<thead>
<tr>
<th>Topics</th>
<th>1993 RTS</th>
<th>IRTS 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>tourism visit. Nevertheless, the notion of stay supposes that there is a stop. Entering a geographical area without stopping there does not qualify as a visit to that area.</td>
</tr>
</tbody>
</table>

2. Travel party/group

| 2.     | Not mentioned | New observation unit/s |

3. Revision of the classification of tourism related purposes of trips

| 3.     | Classification of tourism trips according to purpose: | Classification of tourism trips according to the main purpose: |
|        | 1. Leisure, recreation and holidays | 1. Personal |
|        | 2. Visiting friends and relatives | 1.1. Holidays, leisure and recreation |
|        | 3. Business and professional | 1.2. Visiting friends and relatives |
|        | 4. Health treatment | 1.3. Education and training |
|        | 5. Religion/pilgrimages | 1.4. Health and medical care |
|        | 6. Other | 1.5. Religion/pilgrimages |
|        |          | 1.6. Shopping |
|        |          | 1.7. Transit |
|        |          | 1.8. Other |
|        |          | 2. Business and professional |

4. Revision of the classifications of products and productive activities

| 4.     | No product classification SICTA for activities, defined from ISIC using a sub-classification from the 4-digit ISIC, (Rev. 3) | Tourism characteristic and tourism connected products are defined in terms of the 5-digit CPC, (Rev. 2) category to which they belong; goods can be included; strict relationship with acquisition by visitors. Establishments whose principal output is tourism characteristic (tourism industries) are defined on the basis of the 4-digit ISIC (Rev. 4) category to which they belong; no production of goods is included, only their retail trade as tourism industries must directly serve visitors. |
|        | Loose relationship with the consumption by visitors | |

5. Employment in the tourism industries

| 5.     | Not mentioned. | Special chap. 7 |

### 2.24

Among other consequences of this renewed approach, it is worth highlighting the following aspects:

- the foundations were laid down for the development of a more comprehensive set of internationally comparable tourism statistics;
- the concept of a “tourism sector” has been defined as a cluster of production units in different industries that provide consumption goods and services demanded by visitors. Such industries are called tourism industries;
- for the first time, guidelines were provided for the measurement of employment in the tourism sector thanks to the cooperation of the International Labour Organization (ILO) with UNWTO;
- a consensus was established in the International Recommendations for Tourism Statistics 2008 (IRTS 2008) calling for its adaptation to sub-national levels.

### 2.25

The last reference is particularly relevant and requires a more detailed clarification. Indeed, UNWTO has expressed on earlier occasions (such as the T.20 Tourism Minister’s Meeting in Korea on 11-13 October 2010) that it is important to start considering the measurement of tourism also from the sub-national perspective, for a number of reasons:

- Tourism activity is unevenly distributed across the national territory and consequently, the inputs for designing national policies require a rigorous understanding of tourism activity in such sub-national territory beyond being a fractal of national tourism;
- Policy that is oriented at the management of tourism destinations, and its relationships with the rest of the national economy, require a sub-national
measurement and analysis of tourism in these territories in order to be able to
directly monitor progress;
- The articulation of national / sub-national initiatives require a consistent and
coherent set of basic data and indicators as well as a shared conceptual
framework about what tourism is and how to measure and analyse its
contributions to overall sustainable development;
- The transposition of national data to regions hides particularities of tourism
activity in these regions. For example, it does not allow for a proper identification
of the (disaggregated) structure of tourism from both the demand (visitor
activities) and supply side (the activities catering to visitors). Consequently,
analysis and focused policy, is handicapped due to such constraints.

2.26. The adaptation of IRTS 2008 conceptual background to sub-national levels implies the
need for a classification of territorial entities. This document will use as reference the
following hierarchical classification of territorial entities integrated by both
administrative and analytical units at two basic subnational territorial levels:

**REGIONAL**
- Region
- Multi-regional (supra-national)
- Multi-regional (intra-national)
- Other administrative units
- Analytical units

**LOCAL**
- Municipality
- Multi-local
- Other administrative units
- Analytical units

The classification is proposed in order to operationalize the implementation of the
conceptual framework proposed and more specifically, to allow for the setting up of the
R-TIS; consequently, it should be adapted to any of such territorial levels in different
countries, and other extensions could also be envisaged for tourism purposes.

The terms region, multi-regional and sub-regional used refers to subnational entities16.
Consequently, such terms and classification used in this document should not be
understood as the same terms used by UNWTO in its capacity of UN Specialized Agency
for Tourism (where region and regional refers to a pluri-national or international
framework).

Starting from the classification of those basic entities, it is feasible to establish
combinations per each different type of analysis. For this purpose, the criteria to be
used should be defined, such as market segments (responding to different forms of
tourism, and different characteristics of visitors and trips), availability of tourism
infrastructure and facilities, territory physical characteristics, territorial planning
requirements, etc. One of the possible examples is “tourism spatial area” (identified as
small spatial scales where tourism is significant) which might be applicable in its

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16 In the document, the administrative unit corresponding to the first level of territorial disaggregation of a country in
terms of its political and administrative organization; for instance, NUTS 2 level in the EU, provinces in Canada and China,
states in Brazil and Mexico, etc. (see Glossary)
entirety to a certain regional and/or sub-regional administrative entity, but more often it is likely that it might not cover a single municipality, neither an entire region. Such term is often used by territorial planners in order to bring tourism content into focus.

Such term is also implicitly identified in the System of Environmental-Economic Accounting 2012 /Applications and Extensions document (see Chapter IV “Extensions of the SEEA”).

Such units would qualify as analytical units and could generically be labeled as “small tourism destination areas” (STDA) – see Chapter 6, section C.2.

2.27. Any of those unit/s of the proposed classification (either at the regional or local level) where tourism is economically significant (according to the criteria proposed in this Glossary (see Significance), should be the focus of tourism measurement and could be labeled as a “tourism destination/s”.

2.28. The classification should be adapted to any country and other extensions could also be envisaged for tourism purposes (for more details, interested readers should see Glossary/Territorial entities).

Such classification is proposed because the IRTS 2008 does not use precise criteria but rather suggests that in the case of considering a territory other than a nation, the concepts as well as all the corresponding definitions, classifications and relevant statistical data should be the same as those in the national case, with the only difference being the substitution of the term "country" with "place" (either a region, municipality or other sub-national geographic location).

2.29. It should be expressly noted that the measurement of tourism at sub-national levels cannot be based on using the existing concepts for national level measurement. This transposition of terms is not so simple since there are many aspects of the measurement of tourism at the national level that are quite different when compared to cases of sub-national scope. For example:
- the connection between tourism and the mobility of the resident population has greater importance;
- the concept of –tourism sector – is not always appropriate at subnational levels due to the fact that a cluster of a significant number of production units in different tourism industries might not be significant;
- the identification of tourism industries at the regional level would justify the consideration of, for example, the producers of souvenirs as a tourism characteristic industry, while this would not necessarily be the case at the national level (in the case that the associated expenditure were marginal or scarcely significant);

17The focus in this chapter is the potential of data from the accounts of the SEEA Central Framework to be extended and integrated with other information. The potential to connect SEEA accounts to a range of existing information sources can be of direct assistance in better understanding multi-faceted issues, such as sustainable development. It also recognises that responses to environmental pressures will usually rely on understanding connections between the environment, the economy and individuals. In this context the SEEA accounts do not provide a complete information set but can provide an important part of the information and SEEA is a framework that supports and encourages the integration of data” (4.1).

“There are two main approaches to considering extensions of the SEEA. The first approach involves a decomposition of existing SEEA accounts using additional information, for instance through linking to specific spatial areas, through further breakdown of the household sector, or through a focus on certain themes where there is an interaction between human activity and the environment, such as tourism or health....... The focus of this chapter is on the first approach” (4.2).
the measurement of passenger transport is almost impossible to approach exclusively from the regional perspective (as it is normally necessary for the national information to be disaggregated using some kind of ad hoc indicators or parameters);

- while at the national level it would be possible to justify not prioritizing certain issues (like the measurement of the tourism contribution of special events, the Meetings Industry, the expenditure associated with the number and maintenance expenditure of vacation homes, the phenomenon of same-day visits, etc. (see Annex 30), these could be priority interests for certain regions;

- tourism as a service in terms of international trade only makes sense at the national level (as it is a subject that is directly related to the Balance of Payments).

2.30. As already mentioned (see para. 2.26), the adaptation of IRTS 2008 to sub-national levels implies the need for a classification of territorial entities; supplementary, the concept of “significance” must be defined in order to operationalize the measurement of a tourism destination which is a basic unit of analysis of tourism (see section D).

The concept of significance refers to the economic importance of tourism in any territorial entity; this concept, used in the IRTS 2008 (para. 5.10) as the criteria for defining a tourism characteristic product, should also be used in a sub-national approach in order to identify if and when a territorial entity can be labelled as a tourism destination.

In order to promote not just intra-national but also international comparability, the application of such concept of significance on its own is misleading; as official statisticians know very well, there is also the need for a supplementary set of concepts, definitions and classifications that should be internally consistent, so as to facilitate the link between the conceptual frameworks of the Tourism Satellite Account, the System of National Accounts and Labor Statistics.

2.31. For the operationalization of “significance”, it is recommended to use a limited number of indicators (both from the supply and demand side); each country should complement them and fix the threshold for its application in absolute terms, if deemed appropriate and feasible. Different key tourism stakeholders could also launch such proposal; in any case, the initiative should be subject to a formal requisite: the agreement of key stakeholders in such territory.

The present document proposes the following criteria in order to support intra-national and inter-national comparability:

- From the Supply side, the use of employment figures associated with part of the Accommodation for visitors industry: hotels as well as other activities such as motels, guesthouse, pensions, bed and breakfast, time share units, etc. Complementary criteria could be based in other accommodation services for visitors, number of establishments in the tourism industries, value added by the tourism industries, basic infrastructure and tourism equipment, etc.;

- From the Demand side, the use of overnight figures; complementary criteria could be number of visitors –including same-day visitors-.

(For more details regarding the application of both criteria, interested readers should Glossary/Significance).
2.32. In addition to the use of “significance” and the design of the classification of territorial entities, the conceptual design of the R-TIS has followed as much as possible the 2008 standards on tourism statistics (meaning that it has used a set of concepts, operational definitions, accounting rules and principles of recording and classifications consistent with those of the System of National Accounts); such an approach is labelled as a “systems approach”.

D. Tourism Destination

2.33. As already mentioned, a territorial entity where tourism is significant (either at the regional or local levels included in the proposed hierarchical classification could be labeled as a tourism destination. In the case that a tourism destination is associated with more than one “tourism product”\(^{18}\), such territorial entity should be split for analytical purposes in smaller units ("small tourism destination areas"). In any case, the physical space of a tourism destination must be clearly identified.

The need to measure more accurately the "activity" undertaken by visitors once at destination is an issue of enormous complexity that will be addressed from different perspectives. This will be the focus of the sections D.1 to D.2.

2.34. A first confirmation of such complexity is that it is not so uncommon that a tourism destination includes various "tourism products". If this were the case, it would be useful to identify different segments of visitors (current and potential) for the purpose of designing policy measures in terms of marketing and products. It would be advisable to enable market analysis tools and instruments to determine effectiveness of the marketing budget spent.

2.35. Market analysis is highly relevant, specially deepening on patterns of behaviour and visitors’ expectations as well as the possibilities of attracting new segments. In this perspective, it has been shown that the tourism potential of a given region is not fully expressed in terms of arrivals, night spends and expenditure but also in terms of different forms of tourism flows (Alivernini, 2014).

(It is important to clearly understand the concept of regional tourism which adapts the different forms of tourism as in the IRTS 2008 to the sub-national level -see Glossary-)

2.36. Such discussion on taking the different types of forms of tourism into account is considered useful for the target audience of this document. These audience is form of tourism practitioners -including tourism officials who commission surveys and research, and those who undertake such surveys- and key stakeholders in relevant tourism destinations -including governments, public institutes and agencies, universities, research centres, industry associations, trade bodies and specialized firms-. The discussion would be primarily based on:

- what visitors really do while at destination and for that purpose should refer both to the demand and supply side information and to new information tools. That is to say that travel behaviour is of particular relevance;

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\(^{18}\) All along this document the term “tourism product” should not be confused with “tourism characteristic consumption products” defined as those goods and services whose expenditure represents a significant share of total tourism expenditure (for a more precise quotation see Regional Tourism: Glossary, "Tourism industries")
Consistency between statistical and marketing frameworks addressing the proper measurement of tourism for marketing type of analysis; the visitor identified as a particular type of consumer, requires to focus on consumption patterns and destination marketing.

2.37. The following two topics might illustrate the complexity of the discussion and how relevant this might be for the target audience of this document:
- Understanding how a territorial entity becomes a tourism destination;
- Exploring the connection between mobility and tourism as research areas particularly for the design and measurement of tourism itineraries as well as for selecting the criteria for defining types of tourism and types of visitors.

D.1. Understanding how a territorial entity becomes a tourism destination

2.38. This is a key topic because tourism destination is a relevant unit. As already explained (see para. 2.26), these units might refer to regional or local levels.

Any of those unit/s of the proposed classification where tourism is significant could be labelled as a tourism destination according to the criteria proposed in Glossary (see Significance).

2.39. It should be feasible to achieve some degree of consensus regarding some comparability framework among destinations. Ideally a statistical framework that enables the comparison between destinations. If that could be acceptable, destinations with similar products could benchmark against themselves, via demand and supply side information (where the most reasonable proxy for that purpose could be arrivals and overnight data, as well as hotel room capacity and occupation, employment linked to tourism industries and some other supplementary indicators).

2.40. A tourism destination implicitly presupposes the existence of a set of built or natural resources that serve visitors, a set of potential activities to be carried out by visitors (some of them for free), a number of establishments pertaining to the tourism industries, tourism stakeholders (public and private), etc. The concept of “tourism product” refers to a bundle of goods and services available for a visitor (a particular type of consumer) to acquire some of them while visiting such territory. Any destination has at least one tourism product.

2.41. The approach followed in this document is not the one recommended previously by UNWTO. In fact, in 2004 UNWTO published the Guidebook for Indicators of Sustainable Development for Tourism Destinations which contains the following definition of tourism destination: “a local tourism destination is a physical space in which a visitor spends at least an overnight. It includes types of tourism such as support services and attractions, and tourism resources within one day’s return travel time. It has physical and administrative boundaries defining its management, and images and perceptions defining its market competitiveness. Local destinations incorporate various stakeholders often including a host community, and can nest and network to form larger destinations”.

2.42. Readers should be warned that the basic difference of the focus of this document and the focus of UNWTO 2004 Guidebook for Indicators of Sustainable Development for Tourism Destinations refers to:
- the nature of the basic data and indicators proposed (statistics vs. any type of information);
- the precise definition of tourism destination (based on a hierarchical classification of territorial entities vs. almost any kind of local tourism destination units); and also in
- the main purpose of the respective initiatives (robust measurement allowing for intranational/international comparability) vs. assisting destination management organization at the local authority level).

D.2. Tourism and Mobility as research areas

2.43. The second topic addresses the connection between mobility and tourism research particularly regarding the concepts of “itineraries” and “travel behaviour” because they are key in order to measure and understand what visitors do while at destination.

IRTS 2008 identifies “trip” and “visit” as units related to the displacements of visitors: such trips qualify as “round trip”. From an analytical perspective the concept of itinerary (closer to the mobility research community – see Glossary/tourism trip and tourism visit-) allows for deeper understanding of the movement of visitors in space and time while at destination.

From a measurement perspective an itinerary can be defined as a systematization of an alignment of potential points of interest to be visited: in the case of tourism, such alignment is usually defined and structured for planning, promotion and commercial purposes.

The measurement of itineraries should incorporate, in addition to a reference to the corresponding administrative and analytical territorial entities and characteristics of visitor (obtained from local surveys) other set of information as well, such as:
- Geo-referenced information, which includes number of stops and points of interest visited (visited spots);
- length of time;
- distance covered.

2.44. The measurement and analysis of mobility and tourism have their own conceptual background, expertise and focus. Nevertheless, some guidelines referred in this document are built on the expertise in the area of mobility

Also, mobility research expertise in areas such as number plate recognition in road transportation, deriving transport data from cell phones, using Global Positioning System (GPS), sub-samples in household surveys, and possibly others, would be crucial for expanding the measurement and analysis of resident and non-resident visitors activity. Some of these areas could also involve surveying visitors in order to identify their itineraries, a description of trips, obtain special insight in short trips, etc.

2.45. It seems obvious that the development of new technologies related to the growing registry of different types of digital footprints left behind by tourism movements, will increase our information background about what visitors do while at destination. In fact, mobility research has already acquired a critical mass of knowledge about the design of new tools and empirical analysis about travel behaviour and consumption patterns in particular. It presupposes that researchers share a culture of reporting data in a format that allows other stakeholders to use the data for further analysis.
The adaptation of such areas of expertise and research to the case of tourism should give priority to the design of surveys focusing on activity-based travel behavior of visitors at destinations.

2.46. **Household surveys as a privileged source of statistical information.** Tourism research is beginning to have these sources on a periodic basis (the model case is that of Europe, where the European Parliament legally requires all member countries of the European Union to report quarterly statistics, for example, on domestic tourism) while mobility research has a long tradition in this respect. It could be appropriate to discuss whether it would be beneficial to pool efforts with regard to the conduct of high-powered surveys every 5/8 years. Certain countries have already been conducting Household Travel Surveys for some time. Although it would seem obvious that in the case of tourism, it would be necessary to have additional household surveys with greater periodicity. The articulation of the aforementioned surveys would constitute an issue that would have to be defined. On the other hand, there is growing evidence with respect to the enormous complexity of household surveys for the case of tourism, and especially so, with regard to the efficiency of the sample (many households do not undertake tourism trips), as well as the underestimation of the number of trips (especially those of short duration).

2.47. **Statistical and other types of errors.** Tourism and travel / mobility statisticians share the concern that in the case of the measurement of traveler flows, errors unrelated to sampling could be of capital importance when assessing the robustness of the data generated by the surveys. (see Chapter 4, section C.1).

2.48. **In-depth studies of outbound-tourism markets.** The strong orientation of Tourism Administrations (both national and sub-national) with respect to tourism promotion campaigns, explains that the necessary tourism information (both statistical and non-statistical) must make reference to the degree of satisfaction in destinations and to an entire set of characteristics associated with both the visitor and the trip. These types of studies necessarily do not tend to have a precise periodicity (due to their high cost as these are studies with large samples and due to the complexity of the questionnaires normally used).

2.49. **Linking survey data and administrative records.** In tourism there is an increasingly widespread culture with respect to the importance of using statistics based on administrative records (e.g. immigration authorities data) in terms of both integrating this data with survey data, as well as for completing the information of National Systems of Tourism Statistics (STS).

2.50. **The development of tourism statistics at sub-national levels.** The experience of research studies on travel and mobility and the use of new technologies in a good many of them is especially valuable for the development of tourism statistics at sub-national levels.

2.51. **The local tourism destination as a framework of analysis.** One fairly obvious possibility of a joint venture between tourism and travel / mobility in sub-national domains is the case of local tourism destinations as the central focus of many research studies: besides measuring the trips to these territories there is also the need to measure the visits through them. From the perspective of tourism, aside from the need for a definition of a local tourism destination, there is also the need to have precise information on the corresponding routes carried out by visitors.

2.52. **International comparability.** With the adoption of the IRTS 2008, the international tourism community consolidated out an enormous effort to update the concepts,
definitions and classifications used over the past 15 years in order to obtain tourism statistics that are comparable and which make it possible to better identify and measure the tourism reality. This effort is something that the community of travel and mobility researchers could take advantage of as an element of reflection.

2.53. **On the possible institutional support by tourism administrations.** Tourism administrations (especially at the national level) are assuming leadership, in an increasingly determined manner, regarding the development of national STSs with a growing participation from National Statistical Offices with respect to boosting household and border surveys for the measurement of the different forms of tourism. Consequently, it is feasible to propose to National Tourism Administrations, and possibly to certain Regional Tourism Administrations in regions where tourism is especially significant, to provide institutional support to initiatives shared between statisticians and researchers of tourism and travel/mobility.

2.54. The collection of data on employment in the tourism industries should be integrated in the regular national statistical system. By its nature, employment in the tourism industries can be undertaken either in paid employment or self-employment. It is unlikely that a complete picture of employment in the tourism industries can be obtained from a single statistical source. In order to achieve a better coverage and get more detailed characteristics of persons employed, countries should, as far as possible, use the following major sources of data collection: (a) household-based sample surveys; (b) establishment-based sample surveys; and (c) administrative records.

2.55. Household labour force surveys are an important data source that can in principle cover the entire population of a country, all industries and all categories of workers, including the self-employed and casual workers. They can also capture economic activity in both formal and informal sectors, as well as informal employment.

2.56. Importantly, household labour force surveys collect data from individuals and thus provide information on persons who may be employed in more than one job (multiple-job holders) and different industries (tourism or non-tourism).
Chapter 3. The proposed Regional Tourism Information System (R-TIS): conceptual design and institutional background

A. Introduction

3.1. Chapter 3 presents the conceptual design of the proposed R-TIS built on the 2008 two international statistical standards on tourism statistics, as well as on different type of case studies identified in chapter 1 (see para. 1.23); for such design to be properly operationalize, this chapter address the setting up a regional inter-institutional network integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institutions.

3.2. This complexity of actors, public bodies and authorities deserve special attention due to their implication and responsibility on the visitors' final satisfaction as they are involved in a wide and varied range of functions and investments (infrastructure provision and management of access and various services - such as public safety, preservation of natural and cultural resources, territorial planning, etc). In addition, public authorities might condition the install of tourism enterprises located in their respective territories.

3.3. The International Recommendations for Tourism Statistics 2008 (IRTS 2008) as well as the Compilation Guidelines developed by the UNWTO for their application, should constitute the basic reference for the design of a Tourism Information System at both the national and subnational levels (as described in paras. 0.7 to 0.9). This has been precisely the starting point of the INRouTe initiative, with a very clear message: the design of a proper Regional Tourism Information System (R-TIS) would be justified under two circumstances:
- the significance of tourism in a given region; and
- the availability of a basic set of national statistical sources. This pre-condition highlights that the setting up of the R-TIS, as recommended in the document, is very data demanding.

19 Regional Tourism is defined as following (see Glossary):

*In order to separate visitors who have their place of usual residence within the region of interest from those who come from other regions or countries, it is recommended that three subsets of visitors to or in this region be identified:
- Residents from countries other than the country of reference (inbound visitors to the country as a whole)
- Residents from another regions of the country of reference
- Residents in the region of interest

Such definitions are consistent with those addressed in IRTS 2008 under “forms of tourism” (see Forms of Tourism).

It should be noticed that inbound regional tourism would include the first two subsets while the third one includes both domestic and outbound regional tourism (those who travel for tourism purposes within the region of interest or those who travel outside such region but either remain in the country of reference or travel outside the country of reference, correspondingly)

Regional tourism is a particular type of form of tourism to be used at the subnational-regional level which comprises the activities of these three subsets of visitors and it might be the case that the identification of outbound regional tourism (in either of the two cases already mentioned) is not a priority in most regions; if that would be the case, the third subset will refer exclusively to domestic regional tourism.

If deemed appropriate and feasible, additional subsets could also be identified for analytical purposes (in terms of tourists or same-day visitors)*.
3.4. As will be explained in chapter 6, this document focuses on statistical international standards (tourism and environment statistics, as well as the corresponding macroeconomic accounting frameworks –TSA and SEEA-) and provides recommendations in order to set up a particular type of statistical initiative: a Regional Tourism Information System conceived for the purpose of linking tourism, territory and sustainability in the perspective of the UN 2030 Agenda for Sustainable Development. By so doing, UNWTO understands that tourism measurement at subnational levels might act as a catalyst for expanding SDG’s indicators at other spatial scales, in line with UN guidelines “to encourage all Member States to develop as soon as possible ambitious national responses to the overall implementation of this Agenda” and “to conduct regular and inclusive reviews of progress at the national and subnational levels which are country-led and country-driven” (UN, 2015, Transforming our world: the 2030 Agenda for Sustainable Development, paras. 78 and 79).

3.5. Linking tourism (operationally defined in the UNWTO International Recommendations for Tourism Statistics: Compilation Guide 20) and sustainable development (a policy oriented concept without any universally accepted operational definition for its measurement) is a complex and challenging task; this chapter provides a statistical insight in such a connection between tourism as an economic sector that impact the socio-economic components of sustainability and the environmental impact due to tourism infrastructure and the activity of visitors.

3.6. More specifically, this chapter highlights a first contribution from a tourism statistical background to the transformative agenda for official statistics regarding “the need for integrated social, economic and environmental information and call for holistic and integrated approaches to sustainable development for decision-making at the national, subnational and local levels” (UNSC, 2015). In fact, this is fully in line with UN Statistics Division calling for “integrated statistics to address multidimensional phenomena such as poverty, sustainable production and consumption, climate change and globalization” as UNSC considers them “indispensable for the new post-2015 development agenda” (UNSC, 2015).

3.7. Furthermore, the present document agrees with UNSC when saying: “traditional statistical processes will need to be redesigned to become more integrated and efficient and to yield data that is more timely, and better and differently disaggregated”; disaggregation meaning “including characteristics of the individual and household, economic activity, and spatial dimensions (e.g. by metropolitan areas, urban and rural, or districts”). (Transformative agenda for official statistics, UN Statistical Commission forty-sixth session, E/CN.3/2015/5 paras. 10. /13. and 14.).

B. The conceptual design of the proposed Regional Tourism Information System (R-TIS): Overview

3.8. Since the 2008 ratification of the UN international recommendations for tourism statistics, it became possible to define what a System of Tourism Statistics (STS) is and, equally important, how this connects to other sets of information that National Tourism Administrations consider relevant for the design of tourism policies (and which are not necessarily of a statistical nature). Such an expanded system is known as the Tourism Information System (TIS).

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3.9. The International Recommendations for Tourism Statistics 2008 (IRTS 2008) as well as the Compilation Guide developed by the UNWTO for their application, should constitute the basic reference for the design of a TIS at both the national and subnational levels.

3.10. In fact, such a system requires three sets of information:

- the statistical information obtainable as a disaggregation of operations carried out with a national coverage and in an official capacity mainly by National Statistical Offices and National Tourism Administrations on economic, environmental and socio-cultural dimensions of sustainability;
- official statistical operations carried out by regional bodies (such as Regional Statistical Offices, Regional Tourism Administrations, Regional public institutes and agencies for tourism development and management, and other official bodies);
- These operations are sought to be supplementary to the first set in order to avoid information overlapping between national and regional levels. Exceptionally, some countries might have institutionalized bottom-up methods of collection for national data purposes (basically for the National Statistical Offices);
- a third dataset not necessarily of official and/or of statistical nature. This data set could include electricity consumption by households, credit card expenditure records, transport authorities control, business cycle indicators, early warning indicators, other indicators regarding tourism and sustainable development, etc. These are considered to be relevant at regional and sub-regional levels not only for the measurement/monitoring of tourism (carried out by the regional tourism authority or other regional bodies, other entities of supra-regional scope or even by national bodies), but also for analytical purposes (such as analysis of the performance of certain subsectors and foresee their evolution, the perceptions of the demand of a certain destination, etc.). Moreover, these data might be required in order to provide answers to policy questions related with tourism itself or in relation with sustainable development issues.

The expansion of big data\(^2\) and open datasets will certainly spread the content of this third set of information. Because these data do not meet statistical pre-requisites (such as representativeness in many cases), they cannot be published in UNWTO statistical publications, but they might be included in other UNWTO publications, as it is for the interest of DMOs and of the key stakeholders of regional tourism.

(For more details, interested readers should see Glossary/Regional Tourism Information System).

3.11. To properly understand the nature of a R-TIS, the following remarks are highlighted all along this document in order to provide proactive arguments to support such medium-long term initiative:

- This initiative has been conceived and developed as the adaptation of 2008 international standards for tourism statistics (the International Recommendations for Tourism Statistics –IRTS 2008- and the Tourism Satellite Account: Recommended Conceptual Framework –TSA 2008-) to subnational levels;

\(^2\) According to Laney (2001) and its 3V understanding of the term big data, it refers to large volume of data, its variety (both structured and unstructured) and its velocity. Moreover the importance is given to the act of gathering and storing this big data for eventual analysis.
- It is recommended that the basic core of such system refers to basic statistical data and indicators; most of them should be derived from official statistical surveys at the national level; six main sources have been identified (Border survey - Domestic tourism household survey - Accommodation survey - Statistical business register - Structural business survey - Population census);
- Such sources are available in practically all EU member countries as well as in non-European countries pertaining to the G.20 international community and should be supplemented, if available, with other national sources focusing on environmental and socio-cultural dimensions of sustainability. Other regional official statistical data should be also included;
- Such set of information would allow for a proper articulation of national/regional basic set of data and indicators which should be seen as a first priority for the setting up of the R-TIS (see also paras. 3.12 to 3.19);
- The conceptual design of the R-TIS uses a set of concepts, operational definitions, accounting rules and principles of recording and classifications consistent with those of the System of National Accounts. Also other statistically supplementary concepts have been included (the INRouTe initiative has developed around 15 new concepts – see para. 2.31 - such as tourism population, significance -economic importance of tourism at territorial levels-, scalability, regional tourism, etc.) and it has moved away from the statistically vague term of tourism destination, to a precise hierarchical classification of territorial entities (see para. 2.26). Nonetheless, the tourism destination term is being used in this document (see Glossary);
- The setting up of the R-TIS (as well as the potential design of a R-TSA) requires a medium or long term process. Its success depends greatly on the initiatives taken in order to set up the particular type of governance structure, which should be embodying a potentially complex network of stakeholders involved (see Annex 35);
- Other countries with a lower level of statistical development might find inspiring this document and might also request UNWTO for technical assistance in order to set up a planning work schedule for those regions where tourism is particularly significant, to be in line with the recommended guidelines proposed. Particularly those countries that have decided to renew their national tourism information system as the first phase of a Project that also includes the subnational measurement as a second priority;
- The R-TIS database is recommended to be geo-referenced (not only for rearrangement of data but also for mapping\textsuperscript{22} purposes) and prioritize an articulated set of basic data at the national/ regional levels;
- The initiative of setting up a R-TIS is recommended as a necessary pre-requisite for comparing nationally and internationally main tourism destinations and cities where tourism is significant, as well as to rigorously measure territorial, environmental and other economic and social impacts of tourism activity.

3.12. The rationale regarding the measurement of tourism at the subnational levels is explicitly mentioned in six paragraphs of the IRTS 2008 inserted in the following box:

\begin{itemize}
\item[\textsuperscript{22}] Mapping is used as drawing a map where indicators can be visualized as a layer over the map
\end{itemize}
Chapter 3. The proposed Regional Tourism Information System (R-TIS): conceptual design and institutional background

Box 5. IRTS 2008 “Measuring tourism at sub-national levels”

8.26. “Increasingly regional tourism authorities are interested in regional statistics and possibly some form of Tourism Satellite Account at regional level as a means of providing useful indicators for tourism enterprises and organizations in identifying possible business opportunities, assessing the volume and intensity of tourism business and determining the extent to which private and public regional tourism networks and clusters are interconnected.”

8.27. “This interest stems from the specific features of tourism across the regions of a country, as well as different needs of regional tourism authorities, including, among others:
- The need to highlight or emphasize the importance of specific features of regions as tourism destinations;
- The fact that characteristics and expenditure patterns of visitors can vary markedly across regions;
- The need to design policies to attract visitors (such as the type of demand that needs to be met) and make investments (such as the infrastructure that needs to be put in place) that are specific to regional objectives;
- The need to adapt classifications of tourism characteristic products and of tourism industries by adding more details where relevant, while preserving the overall structure of the classification;
- The need to be able to make comparisons of tourism, in terms of visitor numbers, characteristics and expenditure, across regions and between the regional and national levels;
- The desire to foster areas of analysis such as identification of seasonality patterns, recognition of main types of tourism, segmentation of tourism demand, early warning indicators about potential decline of a tourism destination, etc.”

8.28. “Nevertheless, there are some statistical limitations in producing regional data, especially in the absence of a national collection framework for tourism statistics: defining survey frames for tourism sample surveys conducted at the sub-national level is particularly difficult due to the lack of control at the corresponding administrative borders. In addition, regional estimates of tourism might not be compatible with those for other regions, therefore undermining the credibility of tourism estimates both for the regions and for the country as a whole.”

8.29. “Consequently, it is recommended that, as a first approach, National Statistical Offices, tourism authorities and/or other organizations with direct responsibility for tourism statistics promote the use of national instruments to collect tourism data at the regional and local levels using a common set of definitions, based on the IRTS 2008, that would permit national tourism statistics to be —built up— from data at the regional and local levels.”

8.30. “There are often differences in the density of population, transportation accessibility, cultural behaviours, proximity to administrative borders, etc., within a given country. Thus, it is crucial that the operational definition of usual environment be reviewed and discussed among regional and national entities. It is recommended that a consensus be forged around a common definition that satisfies previous recommendations (see IRTS 2008 Chapter 2/Section E —Measuring flows of visitors)/Subsection E.1. —The usual environment: suggested criteria] and takes into account these regional differences.”

8.31. “If this first approach is not feasible or is not considered completely satisfactory, especially in those regions where tourism is particularly relevant, the regional tourism authorities might wish to complement national data with other data in order to design policies and foster economic analysis tailored specifically to their own regions. In this case it is recommended that these new data follow international and national statistical standards and recommendations.”

3.13. Thanks to the IRTS 2008 conceptual framework, countries around the world are able to compile statistical tourism data and indicators that are comparable across countries and over time, and at the same time also comparable to other (economic) statistics. The UNWTO Compendium of Tourism Statistics, comprehensively expanded from 2011 onwards, reflects the IRTS 2008 concepts, definitions and classifications to provide information for over 200 countries on inbound, domestic and outbound tourism, as well as on the number and types of tourism industries, the number of employees by each of such industries, etc.

3.14. The adaptation of the IRTS 2008 conceptual framework to sub-national levels, as well as the request for such data published in the Compendium, cannot respect all those variables and characteristics as at the national level, due to two main reasons:
- as explained earlier (see para. 0.6), there are a number of conceptual extensions requested in order to adapt the IRTS 2008 to subnational levels; most of the new proposed terms are not related to the measurement of tourism as an economic sector- which is the focus of the UNWTO Compendium;
besides the measurement of tourism as an economic sector, it is also necessary to address the consequences of the flow of visitors on the sustainable development of the territory of reference as well as its potential impact on the territorial cohesion of the destination itself, and in other adjacent territories (see Glossary/Territorial cohesion).

The proper understanding of the complexity of such adaptation greatly explains the singularity of the initiative presented in this document.

3.15. In addition to these three areas of particular interest (tourism as an economic sector, the consequences of tourism on the sustainable development of the territory of reference and the territorial cohesion that tourism should preserve or promote), a fourth one should be added: the identification of a basic set of initiatives required for supporting destinations key stakeholders in relation to tourism information and analysis.

3.16. All the above-mentioned references (particularly paras. 3.2 and 3.3) should allow for setting up a framework for the measurement and analysis of tourism from a subnational perspective aligned with the list of research areas and topics reproduced in Box 2 of para. 1.7). The list of topics is presented to be used as reference by those regional authorities and tourism officials that have competences in the measurement and analysis of tourism in their region.23

3.17. Ideally, available information should respond to the following purposes:
- To highlight the importance of tourism at the regional level and foster the credibility of its measurement;
- To provide a basis for a more detailed analysis of issues identified as especially relevant for key tourism destinations;
- To warn about vulnerability of tourism destinations regarding the different components of sustainable development;
- To promote a consistent coverage and quality of a basic set of data in order to allow intra-national and international comparability between regions; and
- To make sure that such information is provided regularly.

3.18. The goal of the generated dataset should be having a tool for management purposes that comply with some technical requisites and being statistically founded:
- It should guarantee the characteristics of collectability, simplicity and efficiency. Besides using up to now available data sources, implementing technical innovations and methods should allow incorporating new data sources;
- In addition to being easy to understand, it should be credible. The goal must be to provide credible information to tourism managers as well as to other key tourism stakeholders;
- The available (or desirable) periodicity for each kind of basic data and indicators should be specified, since the temporal length of the data is a determining factor of the data’s use and usefulness;

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23 Because such list refers to four main grouping, being “Tourism and sustainable development” one of them, readers should be warned that the basic difference of the focus of this document and the focus of UNWTO 2004 Guidebook for Indicators of Sustainable Development for Tourism Destinations refers to:
(a) the nature of the basic data and indicators proposed (statistics vs. any type of information);
(b) the precise definition of tourism destination (based on a hierarchical classification of territorial entities vs. almost any kind of local tourism destination units); and also in
(c) the main purpose of the respective initiatives (robust measurement allowing for intranational/international comparability) vs. assisting destination management organization at the local authority level).
The development of quantitative indicators should be prioritized because, when compared to qualitative ones, they are more objective and allow a better comparison of cases. However, they are often conditioned by lack of data; in such cases, oftentimes qualitative estimates are the only available solution;
- Duplication of data for each information item should be avoided; and for that to happen, basic national tourism surveys should be properly designed and stratified in order to provide efficient estimates by regions;
- The important data / indicators of the database should be geo-referenced due to relevance of “scalability” for the measurement and analysis of tourism at subnational levels.

3.19. It is recommended for those regions where tourism is significant, to focus on an incremental approach that involves, first of all, the development of a limited set of statistical basic data and indicators at the national/regional levels. The term “articulation” implies linking, with statistical rigor, available national and regional data used to measure the same variables on economic, environmental and socio-cultural dimensions of sustainability – see para. 3.4-. Such possibility should be checked by a statistical insight regarding its feasibility. Such an articulation nation-region will allow for interregional tourism analysis within a harmonized framework; and by so doing, will also contribute to international comparability between regions. (para. 5.12 of UNWTO and INRouTe, 2012).

3.20. In a second step an articulation of regional / sub-regional levels should be foreseen (and this is basically feasible in statistically developed countries) including geo-referenced data (see also Chapter 6, section C).

3.21. With this background and clarifications, it is recommended as a first step in the set-up of a R-TIS to focus on tourists (overnight visitors) and on a limited number of the research areas (for which there is more international experience than in the remainder areas where a more precise conceptual framework is needed).

3.22. The following basic statistical data and indicators, each with different periodicity (Monthly-M- / Quarterly-Q- / Annual –A-), should allow for intra-national and international comparability and might be released regularly in statistically developed countries (see para. 1.28/2) 25.

A. Tourism as an economic sector:
A.1 Demand
For each of the following set of tourists (residents from other countries, residents from another part of the country of reference, residents in the region of reference):
- number of tourists (Q)
- number of tourists classified by key characteristics of the trip (Q)
- numbers of overnights (inbound tourists should further be classified by main countries of residence) (M)
- average length of stay of tourists (M)

24 Nevertheless, in those destinations where same-day visitors or visitors arriving with cruises are relevant, the focus should give priority to these visitors.

25 Although each of such data and indicators might be obtained on a monthly basis, the proposed periodicity for each of them might be reasonable regarding both efforts: its compilation and the use of them for analysis (once a year could be an option).
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A.2 Supply:
A.2.1 Tourism industries - number of enterprises/establishments (classified according to size, i.e. numbers of employees) for - Accommodation as well as for - Other tourism industries (A)
A.2.2 Accommodation for visitors - number of bed places by type of accommodation, including vacation homes (A)
A.2.3 Employment in tourism industries - number of jobs for - Accommodation as well as for - Other tourism industries (M)

B. Tourism and sustainable development:
B.1. Tourism and environmental sustainability
B.1.1 Urban drinking water consumption due to tourism (m³) (M)
B.1.2 Tourist pressure - visitor load - ratio of tourism population to total resident population (Q)

B.2. Tourism and its impact on the social and cultural dimensions of the resident population:
B.2.1 Job creation - rate of change in the ratio of tourism related jobs to total jobs (A)

B.3. Tourism economic contribution and impact:
B.3.1 Economic performance - daily average expenditure by tourists (A)
- corresponding average wages and salary income (A)
- rate of change in the number of tourists (M)
B.3.2 Business demography
- birth rate of enterprises/establishments (A)
- rate of change in overall income of establishments (A)

3.23. Leaving aside the comparability purpose, this list also implies that instead of one composite indicator to monitor "sustainable tourism", this document proposes a set of indicators linked to the different dimensions of sustainability.

3.24. The list of 15 basic statistical data and indicators above (3.22) is considered to be the minimum required input for modelling exercises. Data modelling techniques are used extensively to derive synthetic estimates when the cost of obtaining small area statistics is too great to obtain them from a survey. The Australian Bureau of Tourism Research has been one of the pioneers in modelling inbound tourism data derived from national surveys; the first data referred to 1997 International Visitor Survey and the modelling approach provided estimates of expenditure by international visitors at the State/Territory and regional level. The model used survey data on total trip expenditure in a randomly selected region. In very general terms, this modelling approach allocates foreign visitor expenditure to regions on the basis of where each night was spent and relative costs in the region (Bureau of Tourism Research Australia, Occasional Paper No.32 "Tourism Expenditure by International Visitors in Regional Australia, 1998").

3.25. Both A. Tourism as an economic sector and B. Tourism and sustainable development sets of information would allow to advance both in a descriptive type of economic analysis of tourism and in more powerful analysis using instruments such as the regional TSA, social accounting matrices, general computable equilibrium models, etc. Even for statistical developed countries, only a limited number of them could provide at present these sets of information at the regional level.
3.26. As mentioned in Chapter 1 (para. 1.28/2) UNWTO Statistics and TSA programme will start asking by 2017, on a voluntary basis, for subnational statistical indicators (no more than 15) for a selected number of countries with a developed national statistical system: each country will select one or more regions where tourism is particularly significant. For each of those regions (within a country) as identified in the classification of territorial entities used in this document (see Glossary), the following sub-regional breakdown would apply: other sub-regional administrative or analytical units, municipalities, multi-local (more than one municipality), other local administrative or analytical units. The sub-national breakdown implies that some of those territorial entities could be labeled as tourism destinations. This initiative has the potential of enlarging economic analysis as well as foster international and intra-national comparability.

This initiative should be understood as developing a sustainable network of countries that should identify the required data and determine the best way of collecting it on a regular basis; it should also include UNSD in order to allow for its expansion in due time, as a global initiative aligned with the UN 2030 Sustainable Development Agenda.

3.27. The conceptual design developed for setting up the R-TIS as proposed in this document and explained earlier in this section B of this chapter is supported by the understanding that the central core of such a system should allow for rearrangement of data and scalability of particular sets of layers of information; such concepts should be properly understood:

- **Scalability**: Refers to the integration of information across different spatial scales with the aim of developing information sets for particular type of analysis at a level suitable for public policy purposes as well as for key tourism stakeholders interest;

- Indicators, aggregates and totals may serve many purposes depending on the scale at which they are applied, on the audience to be reached, and on the quality of the underlying data;

- Scalability is specially relevant in the case of INRouTe’s proposed set up of a R-TIS, given that a set of statistical data should be generated by articulating different type of information layers (see Statistical information-layers-). Moreover, in the particular case of INRouTe’s Project, scalability is associated to the geo-reference of basic data and indicators at the sub-national level, rearrangement implies using own classification categories for each territorial level in order to use such information for analysis purposes;

- In the particular case of linking tourism and environmental sustainability, scalability should require the use of GIS at the level of cadastral units in order to integrate in such scale resident population, visitors, accommodation establishments and use-activity of visitors, as the main set of data; supplementary data such as other establishment in other tourism industries, tourism natural and build resources, etc, should also be geo-referenced in due time;

- **Statistical information (layers)**: It is proposed that the articulation of a basic core of national / regional layers of statistical data derived from national statistical sources on economic, environmental and socio-cultural dimensions of sustainability is the main priority in the setting up of a R-TIS. In due time, a second type of layers are also suggested by extending such link to sub-national levels such as other sub-regional administrative or analytical units, municipalities, multi-local (more than one municipality), other local administrative or analytical units. For such purpose it might be necessary to develop sub-national statistics for any of such dimensions.
3.28. The operationalization of the described three sets of information (see para 3.10) allows to set up an integrated information system with three basic dimensions: activity of individuals (being tourism the main focus), territory (using different scale of analysis) and sustainability (including the three dimension: economic, environmental and sociocultural); Chapter 6 will focus on measuring tourism and sustainability at subnational levels in line with the conceptual design of the R-TIS as explained in this section.

C. The basic core of R-TIS and data coherence

3.29. This section refers to the first two sets of R-TIS data derived from official national and potentially also regional statistics (see para. 3.10); both of them constitute the basic core of such an information system.

3.30. Statistical data derived from different statistical procedures, administrative sources or obtained using different methodologies cannot usually be directly integrated into a system of information. Instead, it requires the use of additional statistical techniques (adjustments, confrontations, reconciliations, validations, etc.) that are common practices for National Statistical Offices. NTAs and RTAs should also do so when in charge of the statistical production if tourism statistics are to be viewed as an information system.

Some examples are: cross-checking of data referring to the same variables but obtained from different sources, consistency verification between demand-side and supply-side data referring to one or more products (as is the case of accommodation services), validation regarding the representativeness and reliability of data, etc. An examination of the coherence of basic data is a prerequisite for mapping and visualizing tourism activity, which in turn is fundamental for lobbying purposes (e.g. about the relevance of regional tourism, the existence of data establishing tourism as an economic sector, etc.), and for the sake of regional analysis and policy design.

Coherence is defined in the Glossary as the adequacy of statistics to be combined in different ways and for various uses.

When originating from different sources, and in particular from statistics surveys using different methodology, statistics are often not completely identical, but show differences in results due to different approaches, classifications and methodological standards. There are several areas where the assessment of coherence is regularly conducted: between provisional and final statistics, between annual and short-term statistics, between survey statistics and national accounts, between statistics from the same socio-economic domain, and between survey statistics and national accounts.

The concept of coherence is closely related to the concept of comparability between statistical domains. Both coherence and comparability refer to a data set with respect to another. The difference between the two is that comparability refers to comparisons between statistics based on usually unrelated statistical populations and coherence refers to comparisons between statistics for the same or largely similar populations.

3.31. UNWTO has stressed that the verification of coherence leads to identifying and explaining differences and doubts that may be found in the data, and also to justifying and documenting any statistical adjustments used—the ultimate objective being that of avoiding any misunderstandings on the part of the user when interpreting the significance of the data.
3.32. As part of its work on providing compilation guidance to countries willing to implement the International Recommendations for Tourism Statistics 2008 (IRTS 2008), UNWTO has devoted special attention to providing guidelines on coherence of tourism statistics in two very concrete topics:
- within the set of data obtained from the demand side (paras. 3.33 to 3.38); and
- between demand-side statistics and GIS-based data collection (paras. 3.39 to 3.44).

3.33. A case of special interest at the sub-national level is presented by the identification of flows of visitors. Besides the particular case of origin-destination matrices that can be obtained from household surveys, the following paragraphs apply to a more general context.26

3.34. "Interregional origin/destination flows constitute a set of data (normally represented in a matrix) that makes it possible to understand, in general, the distribution of trips made by members of households residing in one region (origin) to other places in the country of reference (destination) and to estimate the average length of those trips. This information is vital for establishing the propensity to travel of residents of regions of origin, the demographic and behavioural factors associated with the tourists generated in these regions, their average daily expenditure, and relating this to other relevant parameters for tourism analysis. It should be noted that an origin / destination association is incomplete in the sense that travel from one region to another may require crossing the territory of other areas”.

3.35. “The data gathered, as well as the corresponding estimate of overnight stays, should be checked against data obtained from accommodation surveys and from other administrative records available, like those of traffic management bodies, motorway concession holders, or even credit and debit cards. This internal reconciliation between sources is crucial for ensuring the credibility of data supporting origin / destination matrices”.

3.36. “In order to estimate itineraries it is necessary to identify the origin and final destination of the trip, as well as the parts (visits) that constitute it. Consequently, and in order to enable comparability, all the surveys used for this should approximate these itineraries in a similar manner. Given that in order to obtain these matrices it is indispensable to ask a set of questions, UNWTO suggests that a model module be designed to record trips for tourism purposes in both household surveys at the origin of the visitors and in visitor surveys at the destination (as is done by many Tourism Information Centres)”.

3.37. Household surveys are the preferred source for this type of information, but it is essential to ensure that the survey design and sample size are fit for this purpose. This is pointed out in the IRTS 2008, stating that for sub-national analysis of domestic tourism, it is also essential to characterize trips according to the place of usual residence of the visitor, his/her personal characteristics and the main destination of the trip. This information, usually collected through household surveys, is often represented in matrices showing the number and duration of trips by origin and destination”.

3.38. The second topic that deserves particular attention regarding coherence of data in a RTIS refers to the increasing evidence provided by Global Positioning System (GPS) units of a significant, structural underestimation in the number of trips obtained from household surveys where respondents keep a diary of their trip. It should be noted that these diaries are also used to record the route of each of the trips, and therefore it is important to understand exactly what the GPS system consists of.

Although these systems cannot totally substitute statistical surveys, they may give an indication—in particular at sub-national levels—about the size of flows which might improve the data received from statistical surveys and for evaluating their plausibility.

3.39. “GPS-based data collection methods are potentially more accurate and less of a burden on respondents when compared to paper diary methods, while exact locations of trip destinations and travel times can be recorded. Moreover, additional characteristics such as exact routes can be recorded. The GPS is a satellite-based positioning system. When a GPS data logger receives signals from at least three satellites (or four satellites when time is also measured), the position of a GPS receiver can be determined, accurate to within approximately 10 meters. The location on the earth at which a GPS receiver is situated is saved in location coordinates. In addition to location coordinates, GPS data loggers record the times at which they were situated at these locations. As a consequence, the accuracy of the GPS-based travel data depends much less on the respondents’ memory and the effort they are willing to make in retrieving addresses and taking notes when compared with paper diary methods. These improvements in accuracy are confirmed by various studies comparing travel behavior data recorded using GPS devices, data recorded by respondents in paper diaries and data obtained by means of telephone surveys”27.

3.40. Because raw GPS data, due to data confidentiality reasons, are not directly usable (traces are not segmented, there are missing segments, there is no information either on transport means or on trip purposes), increasing research has been carried out on developing post-processing methods to filter GPS records for use in analysis and model estimation.

3.41. “Travel behaviour characteristics like travel times and distances can be derived almost directly from GPS logs because a GPS logger records exact positions and exact times. However, for deriving modal choice and destination types visited additional data like Geographic Information Systems (GIS) data and respondent characteristics and smart algorithms are needed. Due to the fact that deriving modal choice and destination types visited is relatively complicated, different research projects to date have explored and experimented with possibilities for deriving these characteristics, but they all leave room for improvement”28.

3.42. As explained in Chapter 2, section D.2, it seems clear that there exist connections between tourism and travel / mobility (as areas of statistical analysis and measurement) and therefore it would be feasible to identify some initiatives of mutual interest to practitioners in these fields. In short, it would make sense to reflect:

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28 18 Deriving and Validating Trip Destinations and Modes for Multi-Day GPS-Based Travel Surveys: A Large-Scale Application in the Netherlands, Wendy Bohte and Kees Maat
- on the one hand, the possible complementarity in terms of the information needed and of the corresponding sources of information (the case of household surveys would be the most obvious example); and,
- on the other hand, the contributions for tourism of the more extensive research tradition in mobility with regard to traffic flows (where the recent efforts have focused on establishing the foundations of a set of data and indicators that is sufficiently robust to meet the needs of the public authorities responsible for tourism, i.e. the IRTS 2008).

The following two paragraphs contain some initial comments that could orient this search for coordination of potential initiatives between the two disciplines.\textsuperscript{29}

3.43. \textit{Observation units and associated characteristics}. While in mobility research it is assumed that all movements are carried out by the resident population, tourism activity by non-residents could distort the proper measurement of those flows (provided that these are significant in the specific scope of investigation). It is obvious that in certain countries the use of infrastructure elements, their maintenance and even their design is affected by the phenomenon of tourism.

The difference between the tourism population and the resident population at specific times of the year is enormous in many countries (France and Spain are notable examples). For example at a subnational level, in the archipelago of the Balearic Islands, the resident population is approximately 1 million persons and the arrival of nonresidents for tourism purposes annually reaches a figure of nearly 12 million, with over 60\% of this flow being concentrated in the months from June to September.

Moreover, research on mobility can find references of interest in IRTS 2008, as it is also critical for tourism to identify the main purpose and main destination of the trip as well as the principal activities undertaken while on a trip (there is a list of examples of activities associated with each of the 9 purposes identified).

3.44. \textit{Measurement of visitor activity}. The use of GPS devices in research on mobility is making it necessary to develop post-processing data software. Beyond the implications for the purpose of avoiding the overburdening of respondents and correcting underestimations of trips in household surveys, these experiments can be of enormous interest for the tourism community in a very specific aspect of the measurement of visitor activity: tourism statisticians cannot directly ask respondents whether they are tourists or same-day-Visitors, or ask them directly how many tourism trips they carried out during the period of reference. That is to say, the main variables of the study (trip and visitor) are necessarily variables derived from some related characteristics: subjects are asked about the number of trips taken, their duration and their main purpose, etc., and with this information it is possible to derive whether the traveler in question qualifies as a visitor or not.

\textsuperscript{29} Such paragraphs are an adaption of chapter D of “Developing tourism statistics at the sub-national level: the measurement of flows of trips and visitors” (Document presented by UNWTO at the International Conference on Measuring Tourism Economic Contributionat Sub-National Levels, 29 - 31 October 2008, Málaga, Spain).
D. Setting up a R-TIS as a medium-term process: statistical insight on selected topics

D.1. Employment

3.45. The collection of data on employment in the tourism industries should be part of the regular national statistical system. By its nature, employment in the tourism industries can be undertaken either in paid employment or self-employment. It is unlikely that a complete picture of employment in the tourism industries can be obtained from a single statistical source. In order to achieve a better coverage and get more detailed characteristics of persons employed, countries should, as far as possible, use the following major sources of data collection: (a) household-based sample surveys; (b) establishment-based sample surveys; and (c) administrative records.

3.46. Household labour force surveys are an important data source that can in principle cover the entire population of a country, all industries and all categories of workers, including the self-employed and casual workers. They can also capture economic activity in both formal and informal sectors, as well as informal employment.

3.47. Importantly, household labour force surveys collect data from individuals and thus provide information on persons who may be employed in more than one job (multiple-job holders) and different industries (tourism or non-tourism).

3.48. Establishment-based sample surveys are another important data source for jobs and persons employed. When the interest is in specific industries, which is the case with tourism industries, establishment surveys, given an adequate sampling frame, can provide an in-depth picture of target industries. It should be noted though that informal establishments are not covered by conventional establishment surveys. Reliable and detailed information on topics related to jobs and employment (for example, earnings, remuneration and labour costs) can be obtained in establishment surveys, especially when they can draw upon payrolls and other available records.

3.49. Statistics based on administrative records (such as social security files, tax reports, employment reports, etc.) are increasingly used. They are often based on continuous operations and can, therefore, be a useful source of flow statistics and other longitudinal data. However, they can also have various shortcomings, such as limited coverage (the exclusion of informal establishments) and content, inflexible concepts and definitions, incompleteness, inconsistencies and restricted access due to legal or administrative constraints.

3.50. In order to use basic statistical data and indicators to measure tourism related employment, a very important issue (that affects credibility of such measurement) is how to deal with the fact that the total output of each of the tourism industries usually exceeds consumption by visitors, as some of the outputs of most of these industries is purchased by other travellers. That’s to say that in order to avoid overestimating the production demanded by tourists and same-day visitors, it should be estimated what proportion of total supply of each of the tourism industries is purchased by visitors. This is a TSA issue and the way to proceed is by means of the “tourism share”, explained in the 2008 Tourism Satellite Account: Recommended Methodological Framework document.

3.51. Nevertheless, unless the specialization ratio is 100 per cent (i.e. all the output of an establishment goes to satisfy tourism consumption -which is practically never the case-), the tourism ratio of employment would theoretically differ from the tourism ratio of
output, as the labour intensity differs from one type of production to the other between and within establishments. Because establishments usually cannot provide separate employment figures for the different types of production, the usual option is to assume that the proportion of employment in the different types of production in an establishment that can be attributed to tourism demand is the same as the tourism ratio of either the output or the value added of the different types of production. Such hypothesis is based on a kind of “heroic assumptions”.

3.52. The use of “tourism shares” is a relevant methodological issue when related with the measurement of employment; in fact, there is a need to review the application of this methodology, as it does not account for the differences in the intensity of use of labor in the different production functions associated to the output of different products with a same unit of production: for instance, in hotels that have also a restaurant, is the required employment input necessary to produce one monetary unit of value added identical in its (main) accommodation activity and in its (secondary) food serving activity?. If this is not the case, then it is necessary to use a more sophisticated procedure to relate employment and value added. This difficulty is due to the fact that productive activities are not pure processes of production, that is that the information that was available statistically could not allow to separate the process consisting of producing the main output from that consisting of producing secondary outputs, because the factors of production were in part common.

3.53. A second and very different issue that affects credibility of tourism related employment figures is the phenomenon of seasonality in most tourism industries and consequently, the measurement of the number of persons working less than the standard working time of a full-year full-time worker might be relevant in most countries; therefore, they should be converted into full time equivalents, with regard to the working time of a full-time full-year employee.

3.54. As tourism related employment may be measured in different ways (as a count of the persons employed in tourism industries in any of their jobs, as a count of the persons employed in tourism industries in their main job, and as a count of the jobs in tourism industries), figures obtained in either of such measurements should be presented as full-time equivalent figures; by so doing, such full-time equivalent figures will improve the comparability of employment estimates.

3.55. It should be highlighted that each measure serves different purposes, and countries may adopt one or more of them depending on the intended use and focus. If the intent is to determine the number of people who depend to some extent for their livelihoods by working in the tourism industries, then a count of persons with a job (main or other) in these industries would be appropriate. The measure based on employment in the main job would serve to gauge those with significant attachment to the tourism industries, for instance. If the intent is to make a comparison between tourism and non-tourism industries or between the tourism industries and the economy overall, then a count of jobs in the tourism industries would be more appropriate.

3.56. Full-time equivalent figures (or FTEs) are made up of three parts: number of hours worked, a standard working time and a total number of employees:
- **What do we mean by working time?** Increasingly “total number of hours worked” by more and more workers challenge the statistical mantra that they should be preferred to “total number of paid workers”. For some heavily unionized or regulated occupations the number of hours actually worked may be close or the same as paid hours worked but for most of workers in the tourism sector this is simply not true;
- The concept of standard working time adds an additional complexity to the number of hours worked because it should address the fact that a standard working day differ not only in the different tourism industries but more importantly by occupation;
- Finally, the annual average to measure employment is an issue especially in those industries where seasonality is relevant (as is the case of tourism industries).

3.57. Due to all these complexities in the measurement of employment, the need for metadata is crucial and countries already providing such figures to the UNWTO Compendium of Tourism Statistics are requested to explain how this conversion to FTEs is handled.

3.58. Consequently, bringing credibility to the measurement and analysis of employment in the tourism industries requires abandon the generic definition of “tourism related employment”; instead different rigorous definitions are needed depending on the purpose of the focus chosen.

A key concept in tourism economics is the concept of tourism sector, defined as “the cluster of production units in different industries that provide consumption goods and services demanded by visitors. Such industries are called tourism industries.” Because only part of the production of such industries is attributable to visitors consumption, not all the employment of all those tourism industries can be labeled as “tourism employment”; instead the terms tourism sector employment and employment attributable to tourism are more precise in relation with the use of employment data for two main and different purposes. While the first of them is the appropriate concept regarding human resource planning purposes (and is measured with basic statistics and indicators), employment attributable to tourism is an estimate of how much of the employment in each of the tourism industries is directly related to tourism consumption (which is an accounting issue related to the macroeconomic TSA framework addressed by the use of “tourism shares”).

Finally, tourism sector full-time equivalent employment would be the most appropriate figure for international comparability because seasonality is unequal all along the globe.

D.2. The relevance of tourism trip Origin/Destination matrix and the need for modeled data

3.59. Chapter 4, section C.2, will refer to this topic as a particular area of experience of mobility researchers related to household and personal based surveys. This is considered of special usefulness in order to better specify the complexity and scope of producing a national Origin / Destination matrix breaking it down by regional territorial entities. This document recommends such approach (see paras. 4.95 to 4.99).

It is here stressed that the reference made to O/D matrix is clearly linked to national domestic tourism and to the national breakdown performed in terms of subnational territorial entities: under this premise the present section is presented.

3.60. A different case is the one referring to flows of residents from countries other than the country of reference (inbound visitors to the country as a whole) to each of the regions; under this assumption it might be appropriate to link national personal surveys to non-residents (border surveys in particular) with regional surveys to guests of accommodation establishments.

This particular case will be referred in Chapter 4, section C.
3.61. The household survey has been identified by UNWTO as the most appropriate tool in order to estimate Domestic Tourism at the national level. Moreover, it is worth stressing the relevance of combining short-term surveys and other pluri-annual surveys (possibly every five years). The latter will have a structural focus, and in case that its sampling design would be suitably regionalized, it will support a relevant number of registries in order to support an estimate of flows of trips and travellers linked to domestic tourism (also to their principal characteristics). Additionally, it will allow counting with a basic set of relevant parameters of tourism behavior of resident population, and intra-national comparability.

However, it is possible that in the pluri-annual survey the total number of those primary data would not be enough to generate, with the desired statistical robustness, an O/D matrix of those flows of the resident population, neither the set of parameters useful for analysis as mention in the next paragraph. If that would be the case, it may seem obvious that direct observation of those information items of the national survey should be complemented with a modeling process and possibly even with broader sampling for specific territorial entities (in order to better estimate flows towards them), or with supplementary sampling generated at the regional levels by/or for those that would be interested (this option should allow a more rigorous estimate of some key parameters, such as average length of stay and the average expenditure per visitor).

3.62. “Interregional origin/destination flows constitute a set of data (normally represented in a matrix) that makes it possible to understand, in general, the distribution of trips made by members of households residing in one region (origin) to other places in the country of reference (destination) and to estimate the average length of those trips. This information is vital for establishing the propensity to travel of residents of regions of origin, the demographic and behavioural factors associated with the tourists generated in these regions, their average daily expenditure, and relating this to other relevant parameters for tourism analysis. It should be noted that an origin / destination association is incomplete in the sense that travel from one region to another may require crossing the territory of other areas” (INRouTe and UNWTO 2012, para 6.7).

Please note that there is no beforehand assurance of the effective sample size that would be enough in order to generate the O/D matrix with primary data.

3.63. UNWTO has also stressed ”the data gathered, as well as the corresponding estimate of overnight stays, should be checked against data obtained from accommodation surveys and from other administrative records available, like those of traffic management bodies, motorway concession holders, or even credit and debit cards. This internal reconciliation between sources is crucial for ensuring the credibility of data supporting origin / destination matrices” (INRouTe and UNWTO 2012, para 6.8).

3.64. In any case, the previous comments nuances that in order to comply with IRTS 2008 (para 3.31), with the perspective of the sub-national analysis of the “domestic” component of regional tourism, "it is also essential to characterize trips according to the place of usual residence of the visitor, his/her personal characteristics and the main destination of the trip. This information, usually collected through household surveys, is often represented in matrices showing the number and duration of trips by origin and destination”; however, in practice it is significantly costly and difficult to justify that a national Domestic Tourism household survey could offer all needed information for the sub-national perspective. It is neither reasonable to expect that each region (despite how relevant tourism might be) would count with its own Household survey (at least not as a permanent enquiry).
3.65. Attempting that national household surveys could count with a sample size large enough to allow for robust estimates of diverse variables/parameters for subnational levels might be overambitious. This forces a reflection on the opportunity and convenience of addressing a supplementary sampling in those regions where tourism is specially significant. This concept refers to “sampling growth with the same or different selection system than the main sample, applying it simultaneously or with a different periodicity. The supplementary sampling can be used for direct estimates or model assisted” (Saralegui, 2006).

In the specific case of basic sources for the analysis of tourism, those supplementary sampling should focus on estimates assisted or based on models and use them specifically for structural surveys of annual periodicity or more, particularly in the case of demand analysis and visitor behavior analysis (Saralegui, 2006).

If excursionist flow estimates are taken as an example, it would seem rather obvious that no matter how large the household survey sample size is (national or regional), it will always be necessary to count with some type of additional source concerning the movements of cross border flows. Mostly due to the fact that the data set coming from even large household survey samples draws a small number of observations (Saralegui, 2006).

(For more details, interested readers should see Saralegui, 2006 pp.217 and 218).

3.66. Moreover, providing that household surveys are expensive and entail several issues in order to guarantee robustness, their modeling objectives not only should be clearly specified (so that the number and phrasing of questions would allow to guarantee those objectives), but it should also be taken into account how to address correction and weighting of survey data (that would specifically include corrections for non-reported data as well as corrections for non-response).

3.67. It could be useful at this point to remember that a model is a simplified representation of a part of the real world, which focuses on certain elements considered important from a particular point of view (please see Chapter 4, section C.1). Models are useful tools in offering a “common ground” for discussing policy with a certain level of objectivity and are the basis for forecasting future travel demand.

3.68. In this context, some specific warnings using supplementary household surveys for modeling purposes might seem particularly appropriate:
- When asking for visitor’s usual residence, the question should ask for the municipality within the country of residence (so that he/she could be assigned to one of the regional subsets of visitors –see definition of “Regional Tourism” in Glossary);
- Identify clearly the type of accommodation used during the stay using a precise classification of accommodation used by visitors (own/rental lodging should be identified as well as friends and relatives’ homes);
- Different type of means of transportation (if several, at least request number of days of use for the main two of them);
- Travel behaviour information should not be sought in general terms (i.e. average values) but with reference to a concrete temporal point of references (e.g. a pre-assigned travel day);
- It is not recommended to examine the various activities in isolation, but rather to take the complete activity pattern while at destination as the basis for analysis (including the identification of main itineraries –see the definition in the Glossary, and see Chapter 4, section C).
D.3. Prices

3.69. The 2008 *International Recommendations for Tourism Statistics* (IRTS 2008) refers to prices in two chapters: in relation with the measurement of tourism expenditure and when addressing the supply perspective (chapters 4 and 6 respectively). But only once (para. 4.36 (e)) the term “price indexes” is mentioned.

“In order to estimate tourism expenditure, some countries might find it useful to make frequent measurement of flows of visitors and their characteristics (for instance on a monthly basis), but only to survey their expenditure less frequently (for instance, every two or five years). Tourism expenditure could then be estimated for a current period using modelled spending of visitors while on trips on the basis of these detailed observations and extrapolating the values using relevant volume (that of flows of visitors) and price indexes”

Such paragraph refers to the fact that price and volume measurement is related to the decomposition of transaction values in current prices into their price and volume components. In principle, the price components should include changes arising solely from price changes, while other changes (relating to quantity, quality and composition changes) should be included in the volume components. This is also referred to as measurement in price of the previous years, implying the analysis of economic transactions valued at certain fixed prices.

This section D.3 will highlight the relevance of considering tourist price indexes for a more rigorous analysis of tourism particularly as a demand side phenomenon:

- Also the Statistical Office of the European Union (EUROSTAT) presented in 1992 (EUROSTAT, “Tourist prices, rates and costs”, Document S3/92/38/EN, Joint EC/EFTA Meeting of the Working Group on "Statistics on Tourism", 27-28 October, 1992, Luxembourg) a document exploring the building of demand and supply side price indexes. Interesting enough, it was mentioned that “as far it is known, tourism price indexes from the supply side are not calculated by countries, and International Organizations have not dealt with them” (pg 7);
- Although the Tourism Satellite Account has opened the floor for developing supply and demand side tourist price indexes (in order to correct consumption and production cost aggregates), it is not evident that at the national level, these initiatives deserves priority; in any case, it would seem logical to start with demand side indexes based on national Consumer Price Index (CPI) and learn from the complexity that such initiative entails;
- Nevertheless, at the subnational levels, supply side price indexes might be particularly relevant because “destination competitiveness is, in a sense, tourism’s Holy Grial” (Ritchie and Crouch, 2000);
- Focusing on demand side tourist price indexes, some of the conclusions of the second document (Perez Mira, 2002) presented by UNWTO in 2002 are relevant because they highlight the complex task of setting up such indexes at the national level (complexity that would for sure be amplified at a regional level);
- “Based on the analysis that has been carried out, all signs would seem to suggest that a single index of a general nature – for all three forms of tourism-could be constructed; nevertheless, each form of tourism has its own special features. That
is, the travel party is not the same, the products consumed are not necessarily the same and the weighting structure will for sure not be same neither. Therefore, it is necessary to consider a price index for each form of tourism.” (Perez Mira, 2002):

- Such document (Perez Mira, 2002) used Spain official CPI Index (designed by the National Statistical Office); more specifically, it used elementary indexes of tourism related consumption products (accommodation, food and services and other tourism services) and corrected the weighting structure of Spain provinces (based on the consumption level of resident population) by using tourism coefficients derived from the household tourism survey.

3.70. Such statistical re-elaboration of Spain’s CPI indexes for tourism identified some main difficulties that quite probably would also be present in other similar type of exercise for other countries:

- Weighting system of CPIs is based on national household budget surveys which collect data on the basis of place of residence. This gives rise to a serious problem in monitoring the real prices actually paid by consumers when there is a geographic dislocation between the place of consumption and the place of residence. This is clearly the case for goods, which by definition are tourism related in the measure in which consumption takes place outside the usual environment;
- CPIs include a weighting structure based on the content of the consumer’s shopping basket. Determining the content of the visitor’s shopping basket involves setting aside the consideration of the nature of the goods employed in the product classifications on which these indices are based, making it necessary to address the problem of establishing which products and which quantities correspond to tourism consumption (domestic, outbound and inbound);
- If the portion of total consumption carried out by residents in their capacity of visitors is taken into account, the weighting structure can be seen to change substantially in favour of specific products, to the detriment of all other products.

3.71. From a different perspective, Eurostat also warns in section 6.5.5. Accommodation and food service activities (Eurostat, “Handbook on price and volume measures in national accounts”, Luxembourg, 2001) about some major issues to be considered when compiling price data of accommodation services for visitors, food and beverage serving services as well as other tourism related services (see Annexes 31 and 32):

- “Quality”
The wide coverage of this product heading means that very different qualities of products are included - youth hostels and five star hotels, take-away kebab stalls and Michelin-rated restaurants. Proper price and volume measurement would imply that the greatest possible product detail is obtained in the data, so that separate prices and values are collected, and any aggregate data are constructed using appropriately weighted subsets. For example, in hotel services, separate collection of data for different ratings of hotels enhances the measurement of price and volume movements”.

- “Group bookings and discounts”
One common feature of the hotel trade is that there can be considerable discounts available for block bookings, for example when a tour operator purchases a block of rooms for a season. Changes in these discounts should be viewed as a price effect and recorded in the price index.”

- “Household and Business consumption”
Whilst the product consumed is unlikely to differ for household and business consumption (business people and private persons can stay in the same hotels and eat
in the same restaurants), it is possible that the weighting structure will be rather
different, with private persons consuming a greater proportion of the cheaper
products. Of course, the discounting of rooms for tour operators could mean that some
private persons can afford higher quality rooms than they would be able to afford at the
regular hotel price."

"Besides these national issues, such document also highlights two regional issues to be
considered:
- The nature of these activities might differ between metropolitan, urban and rural
areas, and for touristic regions;
- Price development of such services might be different for the different regions
due to the particular significance of tourism in some of them".

D.4. About the use of administrative data

3.72. The following three paragraphs are reproduced from United Nations, *Handbook of
Statistical Organization: The Operation and Organization of a Statistical Agency, third

"A statistical agency should not automatically initiate a new survey in response to every
demand for information. Rather, it should systematically attempt to react to new
demands by exploring how they might be satisfied using regularly collected data or,
failing that, by examining whether the administrative records already in the hands of
the Government can address the new request, at least to some degree. Whether or not,
or rather to what extent administrative records can be used to replace or to
 supplement statistical survey information, is a very complex issue and the answer also
depends very much on specific national situations. Statisticians tend to be wary of the
quality of administrative information, in terms of concepts and coverage" (423).

"Nevertheless, the attractive feature of administrative records is that they are to be
collected or have been collected anyway. It is probably true in many countries that
some administrative records, such as tax records, have a very good coverage of parts of
the population, and that the rate of response is substantially better than that achieved
by a statistical agency. Moreover, there is always the possibility of improving on the
information yielded by those records by supplementing them with data obtained from
a much smaller sample of respondents" (424).

"If these advantages are recognized, it follows that some part of the statistical agency,
preferably one that is set up alongside the field organization, should have staff charged
with the following responsibilities:
- Keeping abreast of administratively collected data held by other parts of the
  Government;
- Evaluating each new request to determine the extent to which it can be met
  without resorting to a new or expanded survey;
- Negotiating with the custodians of the relevant information to determine how it
  can be shared within the legal framework imposed on government information
  activities" (425).

3.73. Statistics based on *administrative records* are increasingly used also in the case of
tourism statistics being the case of New Zealand an outstanding example: Statistics
New Zealand and the National Tourism Administration (at present integrated in the
Ministry of Business, Innovation & Employment-MBIE-) started by 2007 using
electronic card transaction data of one bank in order to estimate correlations of such
Tourism and Sustainability: A Statistical Insight at Subnational Levels

data with overnight figures for both domestic and international visitors by Regional Tourism Organizations. Also by 2007 Lincoln University developed a yield research. A major step in the process was the preparation of the Tourism Data Domain Plan in 2011 with the purpose of “to achieve clarity and agreement from stakeholders about the main priorities for tourism statistics, and provide the strategy for addressing these priorities over the next five to eight years”. “This Plan will inform changes to the collection, analysis and dissemination of data on tourism. It will ensure that the data being collected is relevant, useful and meets future needs.”

Between the different recommendations proposed, the development of regional indicators of tourism from alternative data sources was included (see R.Burson and P.Ellis, “Using electronic card transaction data to measure and monitor regional tourism in New Zealand”, MBIE, New Zealand (2015)) and one consequence by 2014 was the cessation of the Domestic Travel Survey carried on by Statistics New Zealand.

D.5. Recommended guidelines to move the supply side statistical agenda forward

3.74. As explained in the previous paragraphs, it is hardly feasible to comprehensively gauge and analyse employment in tourism industries on the basis of only one statistical source; instead, the integration of data from different sources is a preferable solution because this method yields more comprehensive information, provides a better overview and a more consistent picture, and results in a more accurate analysis.

It was also mentioned that the collection of data on employment in the tourism industries should be integrated in the regular national statistical system, which means that such dataset is closely related to official supply side data.

Tourism statistics infrastructure relies basically on demand side surveys and consequently there is not so much insight on the potential and shortcomings of supply side statistical tools such as establishment-based sample surveys and administrative records.

3.75. There is an entire set of characteristics of tourism activity that might explain, in some cases, the limited usefulness of national sources, even in cases where their samples are regionalized or where microdata from the corresponding sources is provided; the heterogeneous nature of tourism industries in different regions, the disparity in the size of the corresponding establishments, the levels of disaggregation of the classification of economic activities used by national surveys, are relevant examples.

As already mentioned “it is recommended that the basic core of the Regional Tourism Information System refers to basic statistical data and indicators derived from six official statistical surveys at the national level which allows for articulating a set of national/sub-national basic tourism statistics and indicators which constitutes the basic core of the R-TIS proposed in this document”; while three of them are demand side surveys (border surveys, domestic tourism household survey and population census), the other three are supply side surveys:
- Statistical business register;
- Structural business survey;
- Accommodation survey.
These three statistical sources exist in statistical developed countries; other countries with a lower level of statistical development might find inspiring this document in order to set up a planning work schedule.

3.76. The *statistical business register* integrates physical and monetary information of enterprises (and other type of formal productive entities) and the corresponding establishments; it provides a descriptive type of analysis of all economic activities in terms of employment, incomes, etc., at the national level.

3.77. **This register is built up from statistical surveys data as well as administrative records and is the frame for developing most supply side economic surveys such as the *annual structural business surveys*.**

In most statistically developed countries, the sample used by these annual surveys differentiates two set of enterprises: those with more than a fixed threshold of employment (for instance, more than 20 employees) –all of them are investigated-, while only part of them are in the case of having a lower level of employment. Due to the fact that most tourism enterprises are small and medium sized, these surveys might underestimate employment figures regarding tourism as well as monetary figures of those tourism industries, particularly so in those subnational territorial entities where tourism is significant.

3.78. **Accommodation surveys** instead are addressed to local units providing accommodation services to visitors (establishments); usually they do not discriminate the total frame of such units; consequently, the sample is not a random sample but a complete/censal one.

The following recommendations are in line with the measurement and analysis that the R-TIS dataset should allow for regional and sub-regional levels.

3.79. A *first recommendation* is that regional tourism entities and other key stakeholders consider the opportunity to approach the National Statistical Office in order to evaluate the representativeness of tourism sector official supply side data (being the number of establishments, persons, jobs and earnings, the most relevant ones) and if appropriate, consider a cooperative network for setting up initiatives to articulate such basic set of statistical data and indicators at the national / regional level; in due time, such set could be expanded to the regional / sub-regional levels.

3.80. A *second recommendation* refers to statistically measure seasonality and use statistical tools to eliminate such component of main data series in order to improve a more robust analysis of tourism.

“Seasonality is one of the most important features of tourism demand and has important impacts on many aspects of the tourism industry. Accurate forecasts of seasonal tourism demand are crucial for the formulation of effective marketing strategies and tourism policies for both the private and public sectors” (S.Shen, G.Li and H. Song, “Effect of seasonality treatment on the forecasting performance of tourism demand models”, Tourism Economics, 2009, 15 (4), 693-708).

The use and efficiency of labour are highly uneven across both space and time, even within small regions. Tourism trips and visits can be extremely seasonal and labour use similarly so. Thus, the accuracy of employment statistics for core tourism industries reported by general/national surveys (such as Labour Force Surveys) is open to question. This issue is of central importance.
If, due to seasonality (see Glossary) a “tourism job” is not comparable with those in other sectors or other locations, then one aim of the development of a TSA – that is, to report on employment effects, may be compromised. Reliance on secondary indicators (such as income from employment and self-employment) to model labour use may be adequate for the derivation of multipliers, but even this approach requires the consistent reporting of such figures by operators.

3.81. National Statistical Offices (NSO) and other national bodies of a significant number of countries release seasonal adjusted series in order to detect trends in the original data of those variables (such as employment and consumer prices) that have a clear seasonal pattern, in order to allow for a more rigorous short term analysis of what monthly or quarterly data really express.

3.82. But regarding tourism, seasonality is not only present in employment figures but obviously in demand side units (such as arrivals and overnights) which have also a highly seasonal nature and therefore, should be published both in its original form and seasonally adjusted; the difference between adjusted and non adjusted data might be relevant (see for instance the case of Austria in P.Laimer and J. Ostertag, “Measuring seasonality in Tourism Statistics”, 5 UNWTO International Conference on Tourism Statistics, Tourism: An Engine for Employment Creation”, Bali, Indonesia, 30 March-2 April 2009).

At the subnational level, particularly in main tourism destinations, it is recommended that demand side data be published in both formats; the potential cooperation of NSO should be explored as well as other bodies or Universities familiar with conventional statistical software used for that purpose.

3.83. UNWTO’s Affiliate Members Programme has developed a Prototype Methodology for Seasonality taking Punta del Este 365 as a seminal case study for reducing seasonality in main tourism destinations by developing new tourism products.

3.84. A third recommendation refers to UNWTO and ILO efforts to improve and enlarge labour statistics; both organizations agreed in 2006 to cooperate for adapting to tourism industries the conceptual background developed by ILO in order to measure employment in line with the International Classification of Occupations (ISCO-08).

In fact, the UNWTO Statistics Committee meeting in 25-26 March 2010 discussed a joint ILO/UNWTO document entitled Proposal to Develop a Tourism View of the International Standard Classification of Occupations which called for linking employment and supply side statistics.

"For occupations related to tourism it is not so easy to define and specify occupations that produce related goods or services and/or that require specific skills and knowledge. Many tourism characteristic products are also provided to consumers that are not visitors; also the skills and knowledge required to produce such products may vary greatly from one product to another.

In order to define the concept of tourism occupations it is therefore especially important to clearly identify the purpose of doing so. We understand the key purposes might be the following:
- To measure the total number employed in producing tourism characteristics products, name the occupations, and measure the numbers and characteristics of those employed in these occupations;
Chapter 3. The proposed Regional Tourism Information System (R-TIS): conceptual design and institutional background

- To measure total employment in occupations that produces tourism characterized products, regardless of whether or not employing establishments belong to a tourism characteristic industry;
- To identify and measure skill shortages and training requirements that need to be addressed to facilitate development of tourism”.

The development of case studies at subnational levels (mainly at the regional level) might be of interest both to regional as well as to national bodies. An example could be the ILO/UNWTO best practice in measuring employment conducted in 2013.

E. Setting-up the R-TIS Institutional background

E.1. UN recommended principles

3.85. A Regional Tourism Information System (R-TIS) is a statistics project. Therefore existing international standards and guidelines, such as IRTS 2008, TSA RMF 2008, and UN guidelines on regional statistical development should be used as reference.

3.86. By its very nature statistics are compiled to answer questions and, at times, to allow questions to be formulated with sufficient precision: this explains why statistics is of special interest to Governments. In the particular case of regional and local governments, the UN Handbook of Statistical Organization (UN 2003) is an exception to official UN statistical documents due to the fact that the subnational perspective is referred in different chapters.

3.87. Chapter III of such Handbook refers to “Users and their needs” and the following paragraphs are of particular interest from the perspective of this document.

3.88. “Problems relating to the interaction between statistical agencies and regional authorities are similar to those relating to interaction with ministries; the latter cut across subject areas, while the former cut across geography. This is a simplification of the problem of assessing and satisfying the information needs of other levels of Government. A more detailed examination of the problem reveals questions concerning problems of access to officials who work for different levels of Government; issues related to central versus regional politics; and constitutional issues that may pose formidable barriers to communication and access”. (para. 185 within UN2003).

3.89. “Often, those responsible for regional Government will ask for a small-scale version of what is done at the national level. Thus, if the national agency compiles national accounts, a consumer price index or other information, it is likely that all of these, limited to the scope of the region but as comprehensive as possible, will be required to satisfy regional authorities”. (para. 186 within UN2003).

3.90. “More realistically, the needs of regional and local authorities will be subordinate to those of the government apparatus. Thus, all of them, irrespective of size, will be interested in the number of people (or families or households) who live under their jurisdiction; the demographic and income characteristics of this population; employment status; housing conditions; and possibly health and education attributes. Such information makes planning at a local level possible”. (para. 187 within UN2003).

Please note that the term “Regional” in the context of this document refers to sub-national levels, not to world regions.
3.91. “In most countries with a federal constitution, each state (province, autonomous region) has a Government with certain well-defined interests, as well as a residual set of concerns that, by consensus, are left to the federal level: for example, foreign trade and payments can be managed only at the national level”. (para. 188 within UN2003).

3.92. “The problem posed to the central statistical agency is how, without compromising reliability or thoroughness, to meet the requirements for information for geographical areas that are substantially smaller than the nation. Different countries respond to this challenge in various ways. For example, in some countries the national statistics is essentially the sum of the statistics estimated by the offices of each of its politically defined regions, except in matters explicitly of federal concern. In other countries, an understanding is reached whereby the national statistical agency agrees to supply local offices with core statistics of equal merit for each subject area, to be supplemented with information collected by each local statistical agency” (para. 189 within UN2003).

3.93. “Part of the dialogue between central statistical agencies and regional and local Governments assesses what useful statistical information can be squeezed out of existing administrative records, as well as ways to persuade the collectors of administrative records to take into account possible regional requirements. In those situations where there is access to these records, their coverage is usually adequate for small areas. The outcome of this dialogue, if successful, is a mixture of national and regional statistical estimates with local area information derived from administrative records” (para. 191 within UN2003).

3.94. The UN Handbook also mentions that “the chief statistician should keep lines of communication open to local and regional bodies at all times and bestow authority upon someone in whom he or she has total confidence. Few situations can escalate as rapidly as a centre-periphery misunderstanding, with mutual recriminations arising from a failure to communicate openly”. (para. 194 within UN 2003).

3.95. “In general, allowing representatives from peripheral bodies to see a statistical agency from the inside is the best possible way of demonstrating its inherent limitations. Thus, it might be advisable for the central agency to accommodate trainees from the regional organizations. Where no group ethos of statisticians exists, one might institute surrogate measures to develop one. In the end, the creation of a national community of statisticians bound by common professional interests (e.g., through a professional association that recognizes professional standing irrespective of level of Government), may turn out to be a more potent device to preserve harmony between the center and the regions than the introduction of purely organizational measures”. (para. 195).

3.96. The UN2003 Handbook also mentions the need for articulating a policy “with a number of necessary elements:
- Statistics that are compiled nationally but accompanied by regional brake-downs;
- Ways to ensure the reliability of regional statistics;
- Conditions of access to the regional database;
- Support for regional agencies that wish to supplement their own databases with resources available at the national level;
- Consultation on geographic classifications” (para. 193 within UN 2003).

3.97. This last element is of great importance when searching for interregional comparability as well as international comparability (which is an objective for the UNWTO); the proposed hierarchical classification of territorial entities proposed in this document (see para. 2.26) is in line with such indication.
Once again it should be remembered that IRTS 2008 (see Chapter 3, Box 5) only includes eleven paragraphs on measuring tourism at subnational levels; nevertheless, some very clear recommended guidelines were mentioned about how to make progress in this area. In none of them the term “region” is mentioned.

3.98. Because measurement requires definitions, this document proposes a hierarchical classification of territorial entities in which the region is defined as well as other regional and local level units (see Glossary/Territorial entities): such classification (or any other of similar type) should be adapted by countries and allow for comparability (either at inter or intra-national levels).

3.99. UNWTO has also proposed the criteria to define operationally the concept of the usual environment (see UNWTO IRTS 2008 Compilation Guide Chapter 2 /B. Operationalizing the basic concepts in tourism statistics) warning that such definition should be homogenous for all regions in a given country; this is a responsibility and prerogative of the National Statistical Offices.

3.100. In line with the proposed design of a R-TIS including, as the basic core of such a system an articulated set of national/regional basic statistical data and indicators, a final principle to be recommended refers to the need of a governance structure (see Annex 35) in line with the following two basic guidelines:

- Regional Tourism Administrations can and should move forward in the measurement and analysis of tourism activity in their region taking into account its own regional tourism reality and applying, as far as possible, the general guidelines mentioned in the present document and using the most appropriate observational instruments. For their part, National Tourism Administrations and National Statistical Institutes should provide information, documentation, and if needed, data files of those national sources that could be of use in this respect; and

- These national bodies should be able to obtain benefits for their own statistical and work and analysis from initiatives on the part of regions (mainly those where tourism activity is especially notable), which could be used as indicators or as supporting material in the corresponding estimates or analyses of national scope. Consequently, those regions that have taken initiatives in this area should have a stable communication platform to liaise with other regions and with the above-mentioned national bodies, to report on these initiatives.

E.2. Designing and Operating a Regional Inter-institutional Network (RIN)

3.101. One of the challenges of the setting up of a Regional Tourism Information System (R-TIS) is for regional authorities and key tourism stakeholders to be aware that it must be understood as a medium/long-term project. Consequently, sustainability of such project requires the creation of an institutional tool: this document recommends a Regional Inter-institutional Network (RIN) with a governance structure and a working agenda designed and agreed by authorities and stakeholders. Such agenda should identify common initiatives for both regional and sub-regional levels, as well as others proper for each of them.

(For more details, interested readers on adapting such initiative to local levels, should be aware that Espinosa Uresandi, N. and Alzua Sorzabal, A. (2014) includes such guidelines in the case of large cities identified as tourism destinations; Additionally, the present document embodies Annex 4 Extending the Regional Inter-institutional Network (RIN) to sub-regional entities).
Associated to such challenges is that effective decision-making needs to build upon and influence decisions taken locally and to draw on the skills and resources of a diversity of people and institutions at many levels. It must build partnerships -networks of institutions, individuals and processes- that enable associated partners to pool information, knowledge, a collective vision and capacities to develop agreed objectives.

Because such an institutional tool should also provide both legitimacy and credibility for regional tourism and assist to the sustainability of such R-TIS, its design should consider four basic elements:
- Objectives (the strategic one and other complementary objectives);
- Programmes;
- Activities associated to each programme;
- Technological infrastructure and other resources.

The following sub-sections will provide guidance on each of these elements.

### E.2.1 Objectives of selected programmes

3.102. Basically all this document is about the conceptual design of a recommended Regional Tourism Information System and its setting up as a precondition for taking regional tourism seriously; such design should also allow to extend R-TIS to particular sub-regional levels where tourism is significant (being tourism destinations and cities the specific territorial entities for which such extension should set its priority).

The setting up of a R-TIS is a medium/long-term project by its own and as already explained, is considered to be the strategic project regarding the measurement and analysis of tourism at subnational levels proposed by UNWTO.

But such an endeavour is not just a statistical sounded project; includes also three other complementary objectives:
- Empowering tourism entrepreneurs and other key regional stakeholders of the tourism sector;
- Avoiding information overlapping between national and regional levels; and
- Fostering the dissemination and use of data and analysis.

3.103. In order to properly achieve them, the following programmes are viewed as especially relevant to be carried on along the first years; for each of them it would be necessary that associated partners of the Regional Tourism Inter-Institutional Network explicitly identify the expected outcomes.

- **Networking regional tourism**
UNWTO has been aware for a couple of years of the need to provide countries, particularly its Member States, with guidelines in the area of adequately measuring and analyzing tourism at the sub-national level. This will be an important step beyond the work currently carried out by UNWTO at the national level and is seen to be the way towards tailoring policy to those areas where tourism does or could contribute to generate national welfare.

It also becomes an opportunity for National Tourism Authorities to reinforce their leadership of the sector. Designing a robust articulation of national / sub-national tourism policies creates the need to 1) define the concepts pertaining to “sub-national levels” and 2) operationalize the measurement of these concepts. Both issues are crucial in understanding why we need to take sub-national tourism seriously.
Consequently, lobbying regional tourism should also consider advocacy forums among tourism industries planners and policy makers and other stakeholders on the use of tourism information and the importance of increasing budget allocation for statistical activities.

**Identification of available and necessary information for the setting up of the R-TIS**

In all of the International Conferences co-organized so far by INRouTe (MOVE 2009, 2011, 2013 and 2015) as well in the International Seminars held in Venice 2012 and 2014, it has been pointed out the particular need at the sub-national level to identify the information required by key practitioners and stakeholders and discuss how could it be gathered besides using conventional national statistical sources available (mainly produced by Central Statistical Offices and National Tourism Administrations).

This is, very precisely, the challenge regarding the third set of information of the R-TIS because such information should address different types of issues such as the potential development of tourism products, respond to the changing patterns of tourism demand, etc; such information is usually disregarded from an official statistical perspective.

**Foster the cooperation of key tourism stakeholders and relevant practitioners**

The structural weakness of many regional tourism administrations would justify by itself the need for such cooperation framework. Also the support to main local tourism destination should include the creation of a critical mass of information and knowledge; for such purpose tourism practitioners -including tourism officials who commission surveys and research, and those who undertake such surveys- and different key stakeholders in relevant tourism destinations -including public institutes and agencies, universities, research centres, industry associations, trade bodies and specialized firms- should be invited to become part of the RIN.

**Training**

UNWTO is quite aware that the great majority of National Tourism Administration do not have the appropriate size or the required skill for properly foster tourism as an economic driver of the national economy; this is far more evident at the sub-national levels. Moreover, a high rotation of the technical staff associated to statistics and research in regional tourism administrations is a problematic issue.

These situations short-cut the necessary sustainability of many initiatives related with tourism development also at the sub-national levels; consequently, training the present staff and developing the appropriate training materials are crucial to partially mitigate such challenges.

In addition, also tourism practitioners and key tourism stakeholders might urge the need for proper training initiatives as a prerequisite for the effectiveness of the necessary cooperation of all of them.

**3.104.** The content and nature of the proposed programmes will be modified along the years but all of them are considered as critical for the setting up of the RIN. Other additional programmes might be considered in a later stage.
E.2.2 Implementation of activities included in each of the programmes

3.105. A limited number of activities (each of them should include the expected result/s or output/s) considered as particularly relevant are suggested in order to implement each of the four programmes identified in the previous chapter.

- **Networking regional tourism.**
  The following activities are considered particularly appropriate:
  - Setting a research agenda that could be shared by all the members of the RIN;
  - Design of an information dashboard addressed to main practitioners and stakeholders;
  - Organization of Seminars as well as appropriate participation on a selected number of topics.

- **Identification of available and necessary information for the setting up of the R-TIS.**
  Prior to any decision regarding launching surveys for collecting data, the RIN might consider the opportunity to start documenting existing data sources (surveys, statistical use of administrative records, as well as any other type of statistical operation); such an initiative (see Annex 5 for a suggested framework and see Annex 6 as a practical example) should also contribute to develop basic pillars of the statistical culture through which any user, wanting to identify how data are produced and obtained, is informed about the significance and reliability of tables of available data sets.

In addition to such data that allow for setting up the Regional Tourism Information System, it has been mentioned that the RIN should be active in the development of the third component of the R-TIS (see Glossary / R-TIS).

INRouTe has identified some case studies that might be of interest for different type of regions:
  - The experience of the Cote d’Azur (France) in these 30 years highlights interesting issues regarding the setting up of a Regional Tourism Information System such as the adequacy of conventional statistics surveys (household surveys in particular) for gathering the data needed for tourism analysis and management (see Annex 7);
  - Articulating a comprehensive set of basic data and indicators in order to allow for periodical input-output estimates of tourism impact on a regional economy (as the case of Asturias-Spain) can also be used for designing Regional Strategic Developments Plans understanding that tourism is a key economic driver (see Annex 8);
  - Completion of the information sought at the regional level implies to investigate available sources and what type of caution or gaps arise when identifying existing data sets for each of the areas of interest. The experience of the Osservatorio del Distretto Turistico delle Province di Venezia, Rovigo, Treviso e Vicenza highlights the relevance of such insights regarding the production structure of the tourism industries as well as the labour market in the Veneto Region (see Annex 9);
  - Gathering information about tourism behaviour (including itineraries) using new technologies (instead of launching new surveys). The experience of CICtourGUNE in relation to the Dynamic Pricing Monitor within the Basque Tourism Observatory is particularly relevant (see Annex 10);
- Foster the cooperation of key tourism stakeholders and relevant practitioners

Regional inter-institutional network for the setting up of a Regional Tourism Information System: such network should be integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institution/s.

Consequently, such a network should be understood as the support for a proper governance structure decided by those stakeholders in order to guarantee the sustainability of such medium-long term initiative.

INRouTe has identified some case studies that might be of interest for different types of regions:

- The guidelines provided to the Baltic Sea Region countries by the EU/ Baltic Tourism Heritage Information System (BASTIS) project, could be used as a useful material in order to focus on how to set up such cooperation network (see Annex 11);
- Also the Tourism Observatory in Costa Dorada / Tarragona, identifies governance as a key topic when setting up a Regional Inter-Institutional Network (see Annex 12).

- Training

The Regional Inter-institutional Network should prepare a reasonable number of informative documents addressed to user groups regarding stored information and analysis conducted on a regular basis, especially in relation to its associated partners. It should also manage the acquired knowledge and facilitate the technical training via in person courses and seminars, as well as online training.

E.2.3 Assessing the effectiveness of programmes implementation

3.106. In principle, assessing effectiveness of programmes implementation defined by the RIN will include at least three main dimensions:
- the territory of reference;
- the present or potential significance of tourism;
- key stakeholders of the tourism sector.

3.107. In order to assess effectiveness of the four programmes suggested as the first phase of the functioning of the RIN (and eventually, also some particular activities included in any of them), it should be highlighted the challenging issue of fragmentation of tourism as an economic sector (a "cluster of production units in different industries that provide consumption goods and services demanded by visitors"). Such fragmentation is indeed complex enough due to the fact that only part of the production of such industries is tourism related.

3.108. Other elements of tourism, as a demand side phenomenon, adds more complexity such as the existence of three different forms of tourism (inbound, domestic and outbound) each of them with its own singularity, as well as the variety of types of tourism and tourism products.

3.109. Therefore, tourism as an economic sector is complex and fragmented (especially at the sub-national levels due to the need of considering the link and relationships between tourism and territory); also national policies affecting tourism appear to be very
complex and of many different kinds. The combination of both seems to hamper a coherent tourism approach, especially if the interaction between different groups of policies (intended or not intended for tourism) is analyzed and their effectiveness in relation to the overall goals is assessed.

3.110. Effectiveness of such programs should be assessed principally ex-ante and ex-post and refer both to quantitative measurement (using appropriate indicators) and qualitative valuation (by answering questions that the Tourism Regional Inter-Institutional Network associated partners might pose).

3.111. In a main tourism destination, it would be reasonable to assume that a kind of Tourism Unit / Administration exists. In this case, the objective for correctly assessing effectiveness of existing programmes (by means of both quantitative and qualitative data) could reasonably be a useful initiative for such authorities. The following steps are suggested to be followed for such purpose.

For example it should explain that, before planning the activity, it is necessary to clearly define the objectives and the expected results, in order to select consistent indicators for the evaluation and to compare the results really obtained (objectives, expected results and indicators should be aligned and they should respect a logic process). We believe that in this step the RIN, thanks to its Regional Tourism Information System, should support decision-makers in understanding what the real objectives are (a gap to be filled, a strengths to be improved, etc.); what are the best activity to be implemented; if the activity is really able to achieve the expected results or if it is better to adopt another alternative; if this activity is consistent with the other initiatives taken by the decision-makers (conflicting activities can be the cause of ineffectiveness).

It should secondly explain that it is necessary to monitor both short-term effects (outputs) and long-term effects (outcomes). The RIN can support decision-makers in defining the period of time to be covered, in selecting the most suitable indicators both for outputs and for outcomes and in implementing the best tools to monitor them (all data necessary for the evaluation could be part of the R-TIS third set of information).

Finally, it should be remember that a correct assessment of effectiveness requires to verify the causal relationship between the effects and the activity, in other words if the effects have been really produced by the activity and not by other factors.

3.112. If the situation in a territory is that no such tourism sector exists and/or no critical mass of resources exists (basically human resources assigned to tourism development and management at destination), assessment tools and practice cannot be implemented. Instead, it could be useful to look for a qualitative approach only (posing questions and analyzing answers provided by main tourism stakeholders in such territory, using methodologies such as Scenario Monitoring, etc.)

3.113. The following initiative could be of interest for different types of regions. Designed by CISET, such initiative refers to a comprehensive assessment framework (including the main steps to be followed for correctly assessing effectiveness, how to monitor expected outputs and outcomes of activities and programmes, verification of the causal relationship between effects and activities implemented, appropriate indicators to measure assessment of the main activities usually carried out by regional bodies, etc.). A concrete example (applied to a tourism marketing activity organized every year by the Veneto Region) could be illustrative (see Annex 13).
E.2.4  Technological infrastructure and other resources

3.114. For the RIN to address its strategic objective, its programmes and activities, it is required to design the corresponding technological medium integrated in an online platform, which should count with diverse services and applications, among which are the following:
- the front office of the platform would be a web page constructed with a collaborative ambition;
- as part of the back office of the platform, it would be relevant to count with a user management module where key stakeholders are included as a separate set of users;
- Given that the RIN needs to keep escalating its on work, upgrading continuously, this requires collaborative modules;
- a forum module, where users, mainly stakeholders, can participate with their opinions on specific topics;
- the core of the back office will be formed by the data warehouse and its different datamarts;
- a module that allows for online training (webinars and other similar functions);
- a visualization module, facilitating the comprehension of the statistical information provided.

In sum, the tool needs to count with all the required modules that eventually allow securing that the RIN achieves its strategic goal over time.

3.115. Besides such infrastructure, the RIN should account, as a minimum, for a regional coordinator as well as a technical manager; in fact, it is relevant to define a clear management structure and objectives and a research agenda.

3.116. Apart from being part of such technological infrastructure, the data base supporting R-TIS basic statistical data and indicators (as explained in different chapters of this document) should be geo-referenced in order to allow for "scalability" at different territorial levels as well as for improving tourism analysis at such levels.

3.117. It should be kept in mind that available infrastructure does not guarantee a proper dissemination of the basic outcome of the work carried on by the regional inter-institutional platform. In fact, the manner in which statistics are disseminated is equally important because it is through this process that statistics are converted into information. First and foremost, statistics must be presented in a professional manner and accessible to all under equal conditions; best dissemination practices are those which inform and explain without advocating a particular position.

3.118. Another challenging topic when setting up a R-TIS concerns the development of new information useful for key tourism stakeholders. Leaving aside the use of surveys, it seems that administrative records produced by different bodies (both official and private) such as traffic authorities, government bodies such as fiscal authorities, employment and social security departments, credit cards companies, attraction sites, mobile phone companies, etc., could be particularly useful. Nevertheless, not always the procedures allowing for the creation of useful set of data with the appropriate coverage and quality are implemented by such bodies: therefore, the existence of potential relevant information does not necessarily mean that its access by users is guaranteed.

3.119. It would be necessary to find a kind of industrialization process among stakeholders involved to be applied to such information sets in order to create those basic data and indicators that could complement those other obtained by surveys. This
complementary information is certainly related with the third component of a R-TIS but it could also be the case of the other ones too -official statistical data- if such industrialization process would be properly applied.

3.120. This document includes some case studies that might be of interest for different type of regions:

- the experience of CICtourGUNE with the Basque Tourism Observatory might be particularly useful; this observatory addresses the elements mentioned in the present document related to joining the diffusion of statistical data with a third set of data non statistical but valuable in any case to provide information on the performance of the offer side of part of tourism industry in the Basque Country. Moreover, it incorporates visualization techniques that significantly facilitate comprehending and making a greater use of the data available, as well as allowing users to create their own reports. This is, users can play as much a passive or an active role when consuming regional tourism data (see Annex 14);

- also very useful are the experience of the NIT (Institute for Tourism Research in Northern Europe) with BASTIS, the Baltic Sea Heritage Tourism Services. Its content is now focussing on the national level, but the technology and structure could very easily be adapted for the regional level. BASTIS also encompasses the abovementioned tool requirements. As it is using the free software of Wikipedia it is at the same time very cost-effective and user-friendly. Its philosophy particularly focuses on a collaborative multi-editor approach and the contextualization of data from different sources (see Annex 15).
Chapter 4. Operationalizing the measurement of visitors (including related characteristics of visitors and trips) as well as travel behaviour at destination

A. Introduction

4.1. At the national level, consumption by visitors linked to inbound and domestic tourism is very different:
- The economic relevance of expenditure by international visitors is considered similar to exports of the destination country, being added in total to the national production system contributing to the Balance of Payment travel account;
- Domestic tourism consumption on the contrary, is part of resident’s final demand and its effects have to be considered only for those additional activities undertaken by residents in their capacity of visitors (in other words, excluding the consumption that they should have done anyway as residents in the country of reference).

4.2. The adaptation of the conceptual framework of the IRTS2008 to sub-national levels requires for the inclusion of the territory and travel behaviour as well as other topics that have not been addressed or not properly defined in such international standard.

4.3. In fact, the development of new concepts, definitions and insights that connect tourism with territory are part of the challenge to strengthen the credibility of tourism when measuring and analysing tourism at different sub-national levels (regional and sub-regional).

4.4. In addition to the concepts of visitor, tourism trip, purpose of the trip, forms of tourism and tourism consumption are the key statistical units to measure and analyze tourism from the demand side (see Annex 17), the subnational focus implies to give special attention to other concepts and issues all of them closely related to the objective of bringing consistency between tourism destination and tourism statistics conceptual frameworks, such as:
- The new concept of “regional tourism” and “regional tourism expenditure”;
- The operationalization of the new concept of “travel party”;
- The enlargement of the list of “purpose of the trip” (and the association between purpose and activities carried on by visitors at destination);
- Considering the potential to improve the use of “tourism products” as the criteria for market segmentation;
- Operationalizing the measurement of travel behavior of visitors at destination;
- Selection of the appropriate tools for measuring tourism flows of the resident population when travelling for tourism purpose within the country of reference;
- The need for model data.

This chapter will address these topics and provide useful recommendations in order to improve the actual measurement of regional tourism demand.

31 Needless to say that there are other topics, which might be relevant and are not mentioned in this document (such as same day visitors, the use of private accommodation by visitor, etc.). In due time, some of them should also be included in a revised version of this document.
B. A. From traditional concepts to new supplementary ones

4.5. Tourism has been a particular privileged world-wide research area in terms of its statistical development: in fact, there are no other research areas that have gained the UN Statistical Commission support to change approved international standards in such a short time period. Only 15 years after the approval of the first standard -1993 Tourism Recommendations- two new documents (about the set up of a Tourism Statistical System and a macroeconomic framework to measure tourism contribution to national economies –the Tourism Satellite Account-) have boosted the recognition of tourism as a key economic driver.

4.6. Being a demand side phenomenon, tourism has also seen recognized its status as a particular type of economic sector; this means that tourism combines a demand approach where the public side outweighs the private side, and a supply approach mainly represented by the private side. This combination is still one major challenge for measurement and analysis at the national level but also explains the complexity of the corresponding adaptation at the subnational regional/local levels.

4.7. Chapter 3 referred to the statistical insight of the proposed conceptual design and set up of a Regional Tourism Information System where deliberately no particular mention to the demand side has been included; instead it was considered that a proper chapter should be devoted to the demand side for very different reasons:

- Most research and knowledge in tourism as a research area is associated to the demand perspective; consequently, the conceptual background developed at the national level should be taken as reference when adapting such framework to the subnational levels;
- There is clear evidence at the national level that domestic tourism is not just more important in terms of its economic contribution than inbound tourism, but also that its measurement is far more complex. Learning from such complexity is crucial for setting up regional surveys if deemed appropriate;
- UNWTO is aware that because tourism is unevenly distributed across the national territory, a better understanding of tourism activity in subnational territories will be instrumental for a more efficient design of national policies. Thus, the subnational measurement and analysis of tourism in these destinations where tourism is significant, becomes a relevant issue.

B.1. Basic concepts and definitions

4.8. The following paragraphs are based in IRTS 2008 UNWTO Compilation Guide chapter 2 /Statistical units. All of them refer to the basic concepts described in the IRTS 2008: visitor / tourism trip/ tourism visit/forms of tourism, and tourism consumption of goods and services.

4.9. A visitor is a traveller taking a tourism trip. Visitors are a subset of travellers and making a distinction between visitors and travellers is crucial for the compilation of tourism data.

The fact of being a visitor is a transient situation and refers to the relationship between an individual and the territorial entity that he/she visits. For a territorial entity to be considered as visited by a traveller so that he/she could be considered as a visitor, requires his/her stay in that territory to have a minimum duration and this stay to
involve some kind of activity, even if it does not involve any economic dimension (for instance stopping to visit a free landmark): driving through a territory without stopping is not considered as a visit in tourism statistics.

4.10. *IRTS 2008* (para. 2.9) defines a **tourism trip** as a trip taken by a visitor to a main destination outside his/her usual environment, for less than a year, for any main purpose other than to be employed by a resident entity in the country or place visited. A trip is a concept to be associated with a visitor or a travel group or party; nevertheless, a trip taken by such a group or party of n persons corresponds to n trips.

4.11. A domestic or an outbound tourism trip refers to the travel of a visitor from the time of leaving his/her usual residence until he/she returns; it thus refers to a roundtrip. An inbound tourism trip refers to the travel of a visitor from the time arriving in a country to the time of leaving. A tourism trip is characterized by its main destination, among other characteristics (for example, main purpose) (*IRTS 2008*, para 2.30).

4.12. A trip can be viewed and measured from two different perspectives: from the perspective of the visitor or from the perspective of the place/s visited; the meaning of the term “trip” is slightly different in each case:
- Viewed from the perspective of the visitor, and this is the perspective when measuring tourism using a household survey for example, the term trip refers to a roundtrip, and includes the whole displacement undertaken by a traveller since leaving his/her place of origin (normally, the usual residence, or any other place within his/her usual environment, visiting other places and staying there, and then back to his/her usual environment considered globally as his/her point of departure). A round trip, viewed that way, includes usually visits to different places with stops of varying durations;
- From the perspective of the place visited or a sub-national regional entity, INRouTe considers that the term “trip” refers to two possible situations:
  - a proper trip (associated to residents in the region of reference);
  - part of a round-trip (associated to residents of another regions of the country of reference).
(In both cases see Glossary / *Regional Tourism and Tourism Trip*).

4.13. It should be recalled that observing tourism trips is not the same as observing visitors, as an individual might make more than one trip during the observation period. Quite frequently, tourism statistics uses the term “visitor” instead of “tourism trip” or “tourism visit”. *IRTS 2008* recommends that these concepts be clearly defined and differentiated both in the statistical operations and data dissemination.

4.14. A round-trip might be composed of one or more visits to different places, seen as different destinations, or as a unique (aggregated) destination. The term tourism visit refers to a stop in a place visited during a tourism trip: there might be as many visits as stops. The stop does not need to be overnight to qualify as a tourism visit. Entering a geographical area without stopping there does not qualify as a visit to that area.

The IRTS2008 recommends that countries define the minimum duration of stops to be considered as tourism visits.

4.15. These kinds of trips (**multi-destination trip**) might be quantitatively important enough so as to cause that statistics on number of visits to destinations cannot be aggregated to provide statistics on numbers of visits, or trips, at the national level.
4.16. IRTS 2008 defines three basic **forms of tourism** (domestic, inbound and outbound) in terms of the activity of visitors and their country of residence; this document recommends the extension of the basic forms defined in the international standard to the new concept of **regional tourism**:

<table>
<thead>
<tr>
<th>Glossary definition of regional tourism:</th>
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<tbody>
<tr>
<td>In order to separate visitors who have their place of usual residence within the region of interest from those who come from other regions or countries, it is recommended that three subsets of visitors to or in this region be identified:</td>
</tr>
<tr>
<td>- Residents from countries other than the country of reference (inbound visitors to the country as a whole)</td>
</tr>
<tr>
<td>- Residents from another region of the country of reference</td>
</tr>
<tr>
<td>- Residents in the region of interest</td>
</tr>
</tbody>
</table>

Such definitions are consistent with those addressed in IRTS 2008 under "forms of tourism" (see **Forms of Tourism**)

It should be noticed that inbound regional tourism would include the first two subsets while the third one includes both domestic and outbound regional tourism (those who travel for tourism purposes within the region of interest or those who travel outside such region but either remain in the country of reference or travel outside the country of reference, correspondingly)

Regional tourism is a particular type of form of tourism to be used at the subnational-regional level which comprises the activities of these three subsets of visitors and it might be the case that the identification of outbound regional tourism (in either of the two cases already mentioned) is not a priority in most regions; if that would be the case, the third subset will refer exclusively to domestic regional tourism.

If deemed appropriate and feasible, additional subsets could also be identified for analytical purposes (in terms of tourists or same-day visitors).

4.17. Finally, IRTS 2008 includes a concrete **list of consumption goods and services typically acquired by visitors** for international comparability purposes: each and every single one of them are coded in the UN Central Product Classification, Version 2 and have the corresponding explanatory notes. Consequently, visitors do not acquire any tourism products but just goods and services provided by establishments mainly linked to the tourism industries. (see Annex 31).

Supplementary, within Annex32 a concrete list of industries -meaning all those establishments providing those goods and services- is included.

**B.2. Supplementary concepts**

4.18. Regarding how countries have in practiced implemented tourism statistics, they have traditionally been far away from the general development of economic statistics: the use of proper classifications of economic activities and products, as well as the isolation from National Accounts and Balance of Payment frameworks are the most appropriate examples. But at the same time, a relevant number of countries have carried on a tremendous progress developing basic data and indicators using new surveys and applying proper statistical procedures to administrative records in order to derive statistical information.

4.19. Indeed, official tourism statistics have made significant progress in terms of alignment with the established (economic) measurement frameworks. Some examples of the main differences between the 2008 International Recommendations for Tourism Statistics and the 1993 Recommendations are quite eloquent about both issues and portray very well this positive evolution (see Table 1 included in chapter 2, para. 2.22).
Chapter 4. Operationalizing the measurement of visitors (including related characteristics of visitors and trips) as well as travel behaviour at destination

4.20. In this Sub-section, special attention will be given to the following concepts all of them closely related with the objective of adding consistency between tourism destinations and tourism statistics conceptual frameworks; some of them refer to IRTS 2008 while others are part of the work carried on by INRouTe since 2012:
- The concepts of “travel party and travel group”;
- The enlargement of the list of “purposes of the trips” (and the association between purpose and activities carried on by visitors at destination);
- About the use of “tourism product” as the criteria for market segmentation;
- The new concept of “regional tourism expenditure”.

Travel party and travel group

4.21. Visitors are at the center of the observation of tourism. Nevertheless, visitors do not always travel alone. A travel party is defined in the IRTS 2008 (paras. 3.2. to 3.5) as visitors travelling together on a trip and whose expenditures are pooled. A typical travel party is made of members of a family travelling together.

4.22. A travel party may be made of friends or other persons related by any type of link. Travel parties share most of their expenses. As a consequence, for the most part of expenditure, it is not possible to identify individual expenditures corresponding independently to each of the members of the travel party in particular for what relates to transportation, accommodation, food serving services that usually constitute the bulk of tourism expenditure.

The expenditure of persons travelling together in a travel party for the items shared will be estimated as the average expenditure of the travel party (a simple average (the same for all products) or a more complex one (different formula according to the products consumed) for the products on which expenditure is shared, that might also take into consideration the age structure of its membership) plus their individual expenditure (IRTS 2008 para. 4.36. and Box 4.2.).

4.23. The official definition of travel party needs to be described for operational and measurement purposes; the link between “visitor” and “household” should be clarified; The IRTS2008 Compilation guide explains and recommends how to measure a travel party (Chapter 2, B.3.4).

4.24. It should be kept in mind that the individual (named as “visitor”) is the central observation unit all along the conceptual framework of tourism statistics: more precisely (IRTS 2008 para. 2.25).
- The usual environment, the basic core of such framework (defined as “the geographical area –though not necessarily a contiguous one- within which an individual conducts his/her regular life routine”) refers only to individuals
- “The usual environment of an individual includes the place of usual residence of the household to which he/she belongs, his/her own place of work or study and any other place that he/she visits regularly and frequently.”

While the fact of being a visitor is a transient situation (and refers to the relationship between a traveller and a country/place that he/she visits), the household is by far a more stable unit; this stability is a prerequisite for those units (institutional units) used in national accounts for setting up sectorial accounts (such as for the household sector).
4.25. A travel party might coincide with the household if, and only if, all the members (and only them) travel together. Increasing change in travel patterns also justifies the opportunity to be more precise when analyzing tourism behavior of those visitors travelling or intending to travel together but not being part of the same household (see Annex 20).

4.26. Because household surveys are basic for measuring national domestic and outbound tourism, the concepts of household and visitor have a complex relationship because both are identified simultaneously in such surveys; this complexity affects the measurement of trips and their characteristics as these are associated with a visitor or a travel party.

More specifically, UNWTO has warned that the measurement of national domestic and outbound tourism – in terms of number of visitors, trips undertaken, characteristics of visitors and trips, as well as the estimate of daily average expenditure by visitor - should rely on household surveys that have the proper design and sample size to provide such data with the required statistical robustness. Therefore, there might be cases (when studying for instance the propensity to travel and the average stay of trips of the resident population) that these attributes of the trip could be attached, for analytical purposes, both to the household and its members (as visitors).

4.27. The travel party can be identified in any type of surveys addressed to visitors. Consequently, there is a need to operationalize the link between household and travel parties in different type of surveys (and this is a must particularly at sub-national levels due to the relevance of national household surveys as potential provider of regional estimates of key tourism characteristics).

For so doing, the following recommendations are proposed:

- When using household surveys (see also next section C.1), the objective would be to identify:
  - number of tourism trips taken a) by the household – in this case, the travel party and household coincide - , b) other tourism trips taken by members of the household;
  - characteristics of each household member as well as those characteristics of all or some of the trips undertaken.
- When surveying visitors at destination, the objective would be to identify:
  - Number of persons pertaining to the travel party and the qualification of such party as a) a household- in this case, all the members have the same postal address and the travel party and household coincide-, b) part of a household (not all members of the household are part of the travel party) or c) combination of persons pertaining to different households;
  - Place of usual residence of the household(s);
  - Characteristics of the round trip and of the visit to the destination.

In both cases a “reference person” should be selected in order to properly report on behalf of all the persons pertaining to the travel party.

It is recommended to use as a first operational definition of the travel party “all or part of the members of the same household travelling together in a tourism trip”. There might be also other possible grouping of visitors that might have “pooled expenditures” (such as a combination of individuals pertaining to different households travelling together in a tourism trip) but their identification in a survey would be in most cases highly inefficient (IRTS 2008).
Chapter 4. Operationalizing the measurement of visitors (including related characteristics of visitors and trips) as well as travel behaviour at destination

(For more details, interested readers should see Annex 18 about the operational definition of “travel party”)

**Travel group**

4.28. This concept is also proposed in the IRTS 2008. A travel group is made of visitors (individuals) or travel parties travelling together on a tour organized for them by a third party (usually, a specialized business): examples are people travelling on the same package tour or youngsters traveling as a group and part of the same organized summer camp: each individual of the group participates in the common expenses which cover a pre-established set of services: usually transportation, accommodation, and others. However, they maintain total individual control on other expenses. The share of common expenses corresponding to each person in the travel group is totally defined and frequently corresponds to the amount paid by each member to belong to the travel group. Not all travel using a package implies that the person traveling belongs necessarily to a travel group: there are packages elaborated on demand and on which persons travel alone (or within travel parties).

4.29. In addition to travel party and travel group as new observation units proposed in the IRTS 2008, there is an increasing interest to also identify different group of visitors in terms of different personal characteristics (such as age, different type of disabilities, etc.).

**Purpose of the trip and activities carried on by visitors at destination**

4.30. IRTS 2008 recommendations are very clear regarding the mutual link between both concepts:
- “Each tourism trip has one and only one main purpose though a visitor can also undertake secondary activities while on his/her trip” (IRTS 2008, 3.16);
- “The main purpose of a trip is defined as the purpose in the absence of which the trip would not have taken place” (IRTS 2008);
- Countries might find it useful to expand the list of tourism trips according to the main purpose: “in this case, a hierarchical structure is recommended, one in which subcategories to those proposed (9) are developed” (IRTS 2008);
- “Besides the activities associated with the main purpose of the trip, visitors may undertake additional activities considered as secondary, the identification of which may be relevant for planning, promotion and other analytical purposes”. Surveying visitor trips should allow for identifying the main purpose and such double set of activities (main and secondary ones) (IRTS 2008).

4.31. Marketing destinations for tourism is clearly associated with the objective of studying links between purpose of visit and activities undertaken. Consequently, marketing design policies could benefit from recording data on those main and secondary activities undertaken by visitors while at destination.

4.32. The classification of tourism trips according to the main purpose includes eight characteristics associated to “Personal” and one to “Business and professional” purposes; the focus of such aggregated classification –included in the IRTS 2008- is the national level. Consequently, not all the categories are equally relevant in all possible territorial entities. In fact, this is also becoming ever more relevant in many small (island) states, for example.
4.33. The main purpose of the trip as contextualized in the IRTS 2008, has opened the door for different practitioners and researchers to give special attention to the revised conceptual background for tourism measurement. It should be highlighted that what is really new in the IRTS 2008 regarding such concept are the following remarks:

- The classification of the main category "Personal" has been enlarged to include "Education and training", "Shopping" and "Transit";
- Each of these categories has been associated with a list of examples of main activities undertaken while on the trip. Such association is only for illustrative purposes;
- The content of "Business and professional" purpose has been clarified and improved vis-à-vis the 1993 Recommendations for Tourism Statistics.

Evidence in all countries around the world identifies "Holidays, leisure and recreation" by far as the most important purpose, especially for international visitors. Consequently, such category would justify an additional level of classification. "In this case, a hierarchical structure is recommended, one in which sub-categories are developed”. Such sub-categories should also include examples of associated activities.

Tourism product

4.34. From a measurement perspective (which is the case of this document), the following definition is proposed: a tourist product is a supply side concept branded for attracting visitors to a specific territorial entity, that can be identified by them once at destination. This document also provides recommendations for the operationalization of the measurement of destinations for comparability purposes (see chapter 4, section C.4).

Such products can neither be defined in a standard way, nor can a proper typology be set up; additionally, only part of their components can be measured although this is not usually done.

Such products include remunerated components (services -such as lodging, eating and transportation, as well as potential activities to be undertaken) and components provided for free (climate, nature, landscape, enjoyable "atmosphere", etc.); the later ones, tied to non-reproducible resources, while price-less, influence greatly the consumption pattern of visitors.

4.35. Rarely such products can be homogenous basically because being a composite offering of services, each destination will have its proper singularity due to a different integration / participation of different stakeholders and tourism industries, as well as, for instance, the lack of normalization of establishments providing accommodation to visitors (not just due to a question of lexicon -not the same classification label means the same in different nations- but also because of the type of complementary services provided).

4.36. Consequently, in terms of comparability, which is a basic objective for UNWTO, only those remunerated components mentioned in IRTS 2008 (see Chapter 4. A Coverage of tourism expenditure) could be measured. In order for such comparisons to be credible, there is the need for an accepted set of concepts, definitions and classifications to be used.

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32All along this document it has been highlighted that the term "tourism product" should not be confused with "tourism characteristic consumption products" defined as those goods and services whose expenditure represents a significant share of total tourism expenditure (for a more precise quotation see Glossary / "Tourism industries")
4.37. Usually these products are associated to what is often called a “market segment”. The overall number of arrivals or overnights in a given territory and their declared main purpose of the trip (a demand side concept) is the usual criteria to associate trips with a market segment.

Obviously, a single tourism product can be associated to different type of visitors and hence with different market segments because a tourism product, irrespective of the definition used, includes a bundle of goods and services available to such travelers when visiting a tourism destination.

It might be added that a visitor can also be linked to different tourism products offered at the destination without considering its main purpose of the trip.

4.38. Using a supply side concept of tourism product for a demand side purpose (identifying market segments) is not a reasonable practice unless the following assumptions apply:
- there is a one to one relationship between a tourism product and a market segment and also;
- a one to one relationship between goods and services provided embedded in the product and the activities (either main or secondary) undertaken by visitors while at destination.

The application of both assumptions, although not necessarily a strict type of relationship, is far from evident; also the number and type of resources available in each of such territorial entities adds more difficulties for the purpose of comparing tourism products.

**Regional Tourism Expenditure**

4.39. All of the aspects mentioned below are included in IRTS 2008 and should be taken into account when designing a questionnaire (or a section of it) aiming at estimating expenditure related to regional inbound tourism. Given that the level of expenditure may differ depending on the subject being an inbound visitor or a resident visitor living in other regions, it will be necessary to identify the number and type of questions according to these different visitor types. Moreover, whether these questions are asked before the trip or during the trip must be define beforehand.

4.40. The issue of the timing of tourism expenditure is relevant, as often items such as transportation, accommodation, etc., are booked and paid for before being “consumed”. The corresponding payment might also happen after consumption when paying by credit card or by a special loan drawn for this specific purpose.

4.41. Following the rules of the System of National Accounts 2008, final consumption by households (individuals) is deemed to occur at the moment of the transfer of ownership of goods or that of the delivery of services, and not the time of its payment. Tourism expenditure follows the same rules. Consumption expenditure on transport services occurs when being transported, on accommodation services, when staying in the place of accommodation, on travel agency services, when the information is provided and the travel services are booked, etc.

The acquisition of all goods and services during a tourism trip is, in principle, part of tourism expenditure.
Moreover, all services delivered before the trip and clearly related to the trip, (for example, inoculations, passport services, medical control, travel agency services, travel insurance, transportation services from the usual environment to the place visited, etc.) are included in tourism expenditure. All goods acquired before the trip that are intended to be used on the trip (specific clothes, medicines, small items to take along to use or give away, or purchase of camping gear, luggage, etc.) or brought along as gifts, should also be included.

(For more details, interested readers in the operationalization of such a concept should see Glossary / Regional Tourism Expenditure).

C. Selecting the appropriate measurement tools

4.42. As stated by officials of Ireland Central Statistical Office33, “tourism statistics are difficult and costly to compile at a national level. At a regional level these difficulties and costs escalate and may be so prohibitive as to prevent their compilation altogether. Realistically, the traditional methods of compiling tourism statistics (from survey data) cannot provide robust, detailed, small area or regional tourism information and thus alternative approaches to compiling sub-national statistics and deriving indicators must be considered. In particular, administrative datasets relating to the tourism supply side or large commercial datasets arising from tourists’ electronic fingerprints should be explored and exploited”.

4.43. A challenging topic when measuring tourism is that some key concepts are not directly observed: for instance, the two very basic concepts of usual environment and visitor. The main reason is that when surveying travelers or households, the interviewees do not know what the term usual environment means and he/she may have a guess of what a visitor is but is not familiar with the proper definitions (and this is relevant because a visitor is a subset of travelers and a clear distinction should be made for both subset of flows).

This is also the case of the concepts of travel party and travel group.

4.44. All the concepts associated to the IRTS 2008 and the corresponding UNWTO IRTS 2008 Compilation Guide have clear operational definitions and all of them have already been operationalized in different types of surveys throughout the years (except the case of travel party because of its very recent formulation). The only exception is the usual environment for which UNWTO has proposed instead four criteria that should be kept in mind when defining it:

- frequency of the trip (except for displacements to vacation homes);
- duration of the trip;
- the crossing of administrative borders;
- distance from the place of usual residence.

4.45. The following paragraphs attempt to provide clarification regarding two topics that clearly highlight the fact that when the focus changes from the national to the sub-national level, the measurement instruments might be adapted or substituted.

4.46. A first and major issue is about grouping visitors according to some characteristics either of the visitor himself/herself, the trip undertaken, or some other type of components (e.g. activities undertaken, expenditure, etc). In fact, setting up a cluster of characteristics of visitors useful for different key stakeholders might require both sets of characteristics as well as other analytical components that have not been identified in the IRTS 2008.

4.47. The case of activities undertaken by visitors while on the trip (its identification, measurement and analysis) is crucial because they imply expenditures, selection of activities and different preferences for the time devoted to them, the evaluation of the tourism experience, etc. Consequently, the marketing perspective has been brought for the first time to the attention of tourism statisticians, given that marketing strategies are nurtured and would be enriched if gaining depth if this information is achieved.

4.48. But the identification of such activities is a challenging issue precisely because activity is a complex variable item. The Federal Cooperative Highway Research Program (NCHR) Report 571: Standardization of Personal Travel Surveys provides advice on how to deal with this issue. "Until now, most travel surveys did not adequately account for activities undertaken by the respondent. However, with the increasing use of activity-based and time-use surveys (and it is possible that time-use diaries will become the primary data collection instrument in the context of travel and travel behavior), activity has become a very important item. It is widely acknowledged that the demand for travel is derived, hence the collecting data on the types of activities undertaken gives insight into the types of trips the respondent makes”.

Because of the importance of travel and travel-related activities, these have been separated into different categories and sub-categories in the understanding that "standardization of the activities to be included in designs that provide an activity list would also be useful and has been requested by some professionals involved in transportation surveys. The grouping of activities into common travel-related categories would also be a useful element of this aspect of standardization”.

(It is interesting to highlight the different approach of tourism practitioners and mobility researchers irrespective of the common interest in linking purpose of the trip and activities undertaken by visitors at destination.)

4.49. A second issue which has not usually deserved particular attention by tourism statisticians is that household and border surveys are the main surveys for the measurement and analysis of tourism at the national level. There exists substantial methodological documentation trying to allow for comparability among countries, establishing a series of recommendations aiming at producing homogeneous information sets in different countries. UNWTO has conducted a significant effort for the sake of comparability at the international level and supportive technical documents on both inbound and household surveys.

4.50. These types of surveys allow for a high degree of knowledge about domestic, outbound and inbound tourism at the national level, and in some occasions they offer disaggregated information at the regional level. In fact, they could gather, for instance, an origin/destination trip matrix (providing that the sampling process would have taken this into account, and the corresponding sample size would be suitable) among main issuing countries and the incoming country of reference – in the case of border surveys – and among regions of the country of reference – in the case of household
surveys, as well as a great volume of basic data and indicators regarding the main trip characteristics, such as the motivation for taking it, the transport mode, the type of accommodation, the associated expenses, etc.

4.51. From a statistics perspective, it is not trivial to insist that potential regional household surveys, accommodation surveys and other surveys should share with the corresponding national surveys not just a common methodological framework, but also a set of information items that ideally should be obtained posing similar questions in their respective questionnaires. 34

More specifically, given that at the subnational level a key issue is to deconstruct the arrivals universe in accordance with a set of characteristics of the trip and the visitor as well as other type of components (such as travel party size and composition, origin and destination of the trip, availability of travel mode/s, attractions visited, activities undertaken, etc.), the surveys providing such basic data and indicators should be as homogeneous as possible.

4.52. As explained in Chapter 3, all these basic statistical data and indicators should be georeferenced so that the R-TIS data base could allow for measuring and analysing tourism impacts on different type of visitors and territorial entities (see Glossary / Scalability).

In the past, geocoding typically occurred as a survey post-processing step. More recently, survey responses rely on GISs to geocode origins and destinations in real-time; in these efforts, interviewers are able to determine whether the geographic information obtained should be complemented with additional details (see para. 3.44).

C.1. Household surveys applied to regional tourism: learning from national experience

4.53. Three different type of topics will be presented in the following paragraphs:
- first of all, paragraphs 4.70 to 4.79 refer to UNWTO's recommendations regarding the use of such surveys at the national level: some comments will be provided for adapting these to sub-national territorial entities if deemed appropriate;
- Second, paragraphs 4.80 to 4.83 is a proposal built on the work supported by the Inter-American Development Bank (IDB) in the southern part of America’s (the regional entity called ConoSur, including Argentina, Brazil, Chile, Paraguay and Uruguay) and more particularly, in the design of Brazil’s Strategic Plan for the development of tourism statistics (PET 2016-2021). Such proposal refers to the articulation of a quinquennial /annual set of household surveys for estimating both domestic and outbound tourism;
- paragraph 4.68 rises the attention on a topic that is not usually highlighted particularly in these type of surveys: non-sampling errors.

In any case, it should be highlighted as already mentioned, that household surveys applied to tourism is not so straightforward as applied to other social phenomena. In fact, when designing such national surveys there are two issues that highlight such complexity: the unequal distribution of tourism over the national territory and the high degree of heterogeneity of the population in terms of tourism behavior.

34 Although a supply side survey, accommodation surveys are mentioned here because guests data (its total number as well as associated personal or trip characteristics) are key demand side data.
4.54. In the case of measuring domestic tourism at the national level, household surveys (technically speaking, Household Income/Expenditure Surveys) should be in principle the preferred option. In addition to UNWTO initiatives regarding the use of Household Surveys for measuring domestic tourism (WTO, 2003) the United Nations Statistics Division as well as other International Organizations have published different manuals and documents on such surveys.

4.55. The most recent contribution has been UNWTO IRTS 2008 Compilation Guide, were clear guidance is provided regarding the measurement of the main characteristics of the trip to be observed in such survey design for the national level:
- duration: in terms of overnights away from the usual environment; if there is no overnight, then the number of hours of absence -classified in relevant groupings- might be used;
- destination: the main destination of a trip being defined as the place visited that is central to the decision to take the trip (IRTS 2008, paras. 2.31).

4.56. The main destination of a tourism trip is defined as the place visited that is central to the decision to take the trip. However, if no such place can be identified by the visitor, the main destination is defined as the place where he/she spent most of his/her time during the trip. Again, if no such place can be identified by the visitor, then the main destination is defined as the place that is farthest from the place of usual residence.
- iii. places visited during the trip: such trip must necessarily be a round-trip. The identification of such places should include the corresponding characteristics: length of stay in each of them (in terms of overnights, or hours of stay if no overnight), and type of accommodation used if relevant.

4.57. These places can be defined in terms of a classification of territorial entities (see Glossary). The types of accommodation to be determined (see IRTS 2008 paras. 3.35. to 3.38) should at least separate market accommodation from non-market accommodation, as well as be consistent with the classification used for the characterization of inbound tourism, and that of the supply of accommodation services.

4.58. In its IRTS 2008 Compilation Guide, UNWTO presents a prototype of questionnaire to measure flows and expenditure associated to inbound tourism: irrespective that many of the questions posed could also be included in a household survey, question 23 is particularly relevant from a sub-national perspective. It refers to “overnight stays in the places visited” included in a national survey (analysis of the answer to this question allows for identification of the different visits of a round trip and, consequently, could assist in further initiatives to split national information between the different regions).

4.59. The places and points of interest visited would also be a key information to be analyzed and according to which visitor behavior within destinations could be deconstructed. Itineraries within destinations, not only understood as movements among different municipalities, but also as the different routes, paths or ways that visitors take in the visited destination, are essential for the design of regional/local tourism initiatives. Gaining knowledge over the exact points visited, both by tourists and excursionists, and the time invested in each of them, is of great interest. Mostly due to this, the characteristics of such routes and the visited spots are basic characteristics regarding tourism behavior.
- iv. main mode of transport used: defined as the one used to travel the largest distance, (IRTS 2008 para. 3.32.). Secondary modes of transport might also be identified.
4.60. The used mode of transport would be another of the characteristics of the trip about which it would be necessary to obtain additional information, besides the one offered by national or regional surveys. In these surveys, main mode of transport is considered as the one used for the longest distance. Therefore, other modes of transport used in the trip's destination are left behind (either by not gathering information about them, or by disregarding it). This would occur in the case of urban means of transport, or other modes of high relevance within destinations (such as bicycle routes or themed trains) that could even signify one of the main attractions of the destination.

- **main purpose of the trip**: its classification should adjust to the international recommendations (IRTS 2008 paras. 3.10. to 3.20.).

4.61. Such characteristic offers a first approach to what makes tourism movements happen (work, studies, leisure, ...) but once at the destination, the visitor performs numerous activities that are at their disposal, some of which they even ignore before reaching the destination. All of those activities (the main and other secondary activities) if registered, would allow for the deconstruction of the universe of arrival figures closer to what the visitor really does once at destination.

4.62. In addition to these five main characteristics of the trips undertaken by visitors, the UNWTO IRTS2008 Compilation Guide mentions expenditure as another relevant characteristic in order to analyze visitors' behavior.

In fact, it would seem that the average expenditure by a travel party (significantly more than the case of the visitor – as an individual) should be one of the basic parameters when deconstructing the visitor’s flow that access a given tourism destination. This document suggests the use of expenditure diaries as the appropriate tool for such purpose.

4.63. Although most countries implement household surveys using either traditional face to face interviews or telephone assisted technologies, new approaches are under way such as the case of German Reisenanalyse being a survey which is a privately organized multi-client study using a mix of household type and online interviews.

Moreover, Eurostat suggests using mobile positioning data in line with the research carried out during 2012-2014. As mentioned in Demunter (2014) “Mobile positioning data can be used to potentially strengthen current tourism demand surveys through mixed-mode data collection”. In such scenario the number and duration of trips could be based on mobile positioning data while main characteristics of the visitor as well as other characteristics of the trip would rely on demand surveys. The sample size of the demand survey could be decreased considerably since the survey would not need to support breakdown by destination, thereby reducing the cost and burden of data collection.

4.64. Because household surveys are expensive and tourism is a complex phenomenon, the time framework for such surveys applied to tourism requires some analysis. The decision taken by Brazil, and supported by the rest of ConoSur countries, is to stop with non-regular annual surveys35, and build on an articulated set of quinquennial household surveys, in order to provide robust estimates of key tourism indicators and a reasonable number of records so as to allow for setting up and Origin / Destination matrix, and conduct less ambitious –and cheaper-annual surveys, in order to allow for annual estimate of main aggregates of domestic and outbound tourism.

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35 meaning that although so intended, not every year surveys are conducted
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4.65. Such an approach implies three basic understandings:
- the design of both type of surveys (quinquennial and annual) and the corresponding samples require the technical cooperation of the National Statistical Office due to the experience of the Brazilian’s NSO and the legitimacy of such institution as custodian of Brazil’s Statistical System;
- quinquennial household surveys should allow for building different type of typologies of visitors in order to improve the analysis of such subset of regional inbound visitors;
- annual surveys should be designed as a sub-sample of the quinquennial survey.

4.66. Other complementary remarks of such an innovative approach must also be highlighted:
- The annual survey could perhaps be conducted exclusively online or over the phone. In this case, a possible bias should be taken into account, as not all households may have access to Internet /telephone. However, the high cost of personal interviews is difficult to be justified;
- These annual surveys would have as a main purpose estimating flows and eventually correct basic typologies obtained from the quinquennial survey;
- Ideally modelling emerging from the structural survey results and from the accommodation survey could be attempted. This modeling would be aiming at estimating each of the two components of inbound tourism at regional levels which include, in addition to non-residents flows, those residents in Brazil traveling for a tourism purpose to other regions.

4.67. There are many other aspects and topics that could be mentioned regarding the use of household surveys for tourism purposes; one is related to the fact that asking about tourism is not easy (because the interviewed has never heard about the usual environment concept) and non-sampling errors might be particularly relevant. In fact, such type of errors occurs mainly in the operational field work and might be particularly common in tourism statistics due to the transient situation of being a visitor. Although not measured, they can affect the credibility of survey data and be particularly relevant in those territorial entities for which only a limited number of records are available.

The distinction between sampling and non-sampling errors occur in any type of survey irrespective of it being a demand or supply side survey. It is a good opportunity to clarify what they really are particularly in connection with a common request of most regional and sub-regional authorities: the enlargement of national surveys sample in order to provide better estimates of subnational data. This remark is closely linked to para. 6.3.1 to 6.3.5. of Allnut Report (2004).

4.68. Within the design, planning and result reports of most statistical operations and statistical surveys (also referred as sampling surveys) only sampling errors are mentioned, those generated by representing the target universe just with one sample or part of it (which makes sense because only those surveys using a fraction of a statistical frame can qualify as a statistical survey). There are different methods to calculate these errors, that need to be applied always ex-post when results have already been obtained. However, the error estimate is not worked out, and its mention comes from a mere theoretical approximation not reflecting the actual data, and instead of contributing to transparency, it can mislead users:
- Working out the confidence interval and the sampling error can only be conducted if the selection of respondents has been at random, i.e. if all members of the population have had the same probability to be chosen. For instance, within demographic surveys, if the selection of individuals would be conducted
under the right technical statistical conditions, there would be no need to check it against an age-gender structure known from other population projections, as it is usually done. The expected structure, evidently with a certain error, should be close to such a known structure. And if it not close, any other data should be questioned as its interpretation might not be reliable;

- Therefore, the following considerations only make sense if the actual sampling is random and it has been conducted properly and accurately over the reference population units;
- Ex-ante error level calculations, made through a statistical formula linking size of the target population, size of the sample, confidence interval and resulting on an error level, are only useful to provide an approximation of the capacity that a given sample size has to provide more or less reliable results;
- Within the results of a survey there is no sampling error level, each estimated figure has a different error level to be calculated once the work has been concluded. This is, each cell of the data matrix of each statistical table has a different error level, which has a direct relation, among other factors, with the size of the part of the sample intervening in the estimate of the figure of a given cell, cross checking the states, or one, two or more characteristics of the classification;
- Within sampling designing there are different methods for selecting the sampling units, ranging from purely random to stratified, direct sampling and sampling at different stages. The choice between one or other is conditioned by the possibilities of accessing the universe, of selecting the sample, by the need to represent defined segments that would not be proportionally within the sample, and over all by budgetary reasons. These different sampling methods can impact the error level, but the key impacting factor is the sampling size, hence, the budget. When estimating the characteristics of a large size population, the larger the sample size smaller the error level, but from at a certain point increasing the sample size is highly costly and it barely corresponds to a reduction of the sampling error level;

- It should be highlighted the singularity of surveys at country borders or access points to foreign visitors, given that the universe to be described, the flow of visitors, it is unknown ex-ante, it is rather part of the estimation to be conducted with the surveys and the different guidelines via administrative records.

When evaluating the quality of survey results, emphasis with more or less rigor tends to be made on sampling errors. However, many times, non sampling errors are forgotten, and this can provoke even larger errors (see Glossary / Errors (statistical and non-statistical)).

C.2. Household surveys applied to regional tourism: learning from passenger transportation surveys

4.69. The precise meaning of the term “mobility” is particularly relevant vis a vis “Tourism”.

4.70. When it comes to measure national domestic tourism and the mobility of resident population, household surveys are the basic tools as previously mentioned (see para. 4.26). Therefore, the use of households as statistical units in tourism has a long tradition.

It seems that there is no agreed or standard definition of “mobility”. The international transportation research community usually refers the term mobility to “mobility surveys”; that is, as a particular type of survey.
This document uses the term “mobility” as follows: “In transportation literature, mobility is an area of research that refers to the measurement and analysis of travel behavior (mainly road travel) of the resident population. For that purpose, mobility surveys are mostly addressed to households; data of households and their components (individuals), vehicles used and trips undertaken are the key elements for such analysis but also for a multitude of planning, policy or infrastructures options” (De Dios Ortuzar and Willumsen, 2011)

From a tourism research perspective particularly at the sub-national level, long distance/scale mobility surveys are the most relevant ones.

4.71. Because it is a demand side phenomenon, the definition of tourism requires clarifying first what a visitor really is and some key characteristics of the visitors themselves as well as of the trip undertaken. For such purpose, some basic concepts are explicitly mentioned:
- Economy of reference and country of residence;
- Place of usual residence;
- Citizenship and nationality;
- Usual environment of an individual;
- Tourism and being employed by a resident entity in the place visited;
- Tourism trip (and the main characteristics of such trips: main purpose, duration, and others);
- Tourism visits (as parts of a tourism trip).

As stated in IRTS 2008, those concepts allow for the official definition of a visitor as a traveller taking a trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purposes) other than being employed by a resident entity in the country or place visited. These trips taken by visitors qualify as tourism trips. Tourism refers to the activity of visitors.

A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor) if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise.

4.72. Consequently, tourism is defined as a subset of travel and visitors as a subset of travellers. These distinctions are crucial for the compilation of data on flows of visitors (either overnight visitors –tourists- or same-day visitors –excursionists-) at the national as well as at subnational levels.

4.73. The connection between transport research and tourism research refers to travel demand36 it is not a matter of the supply side not being of interest (specifically transport infrastructure and mobile units are the basic elements without which there will be no movements for any purpose). Instead, it appears logical that the shared interest in both research areas should lay, for the time being, in the exchange of knowledge and experiences related to demand measurement and analysis of passenger transportation. In both of them, trip generation and travel behaviour are basic and common grounds searching for synergies.

36The following paragraphs are based in chapters 3 and 4 of Juan de Dios Ortuzar and Willumsen (2011).
4.74. Precisely because travel demand is the nexus between mobility and tourism as research areas, it should then be evident that people travel in order to satisfy a need undertaking an activity at particular locations: consequently, it is the distribution of activities over space which makes for transport demand.

4.75. Taking this approach, it is advisable to consider the difference between the classification of territorial entities proposed in this document and the boundaries of the common study areas of mobility research: while in mobility research administrative type units are primarily used, in tourism research is precisely the opposite. In the case of mobility, the focus is on analytical units as well as in administrative ones given the preponderance of studies on transport planning.

4.76. This section highlights some synergies between both research areas that might be extremely useful for tourism practitioners and other relevant key stakeholders, such as:
- to learn from the experience in designing mobility household surveys and how to use such type of data with others obtained from individual type surveys for modeling purposes;
- to find the way to rise the interest of transport planners and researchers in tourism as a particular type of trips carried on by visitors (understood as a particular type of travellers);
- to share the experience in measuring long-howl tourism trips;
- etc.

(For more details, interested reader might also find of interest Chapter 2, section D.2).

4.77. Within mobility research it is common to use as a category for categorizing trips whether they are "home-based" or "non-home based". In the case of tourism, those categories are not enough, as visitors can be at their secondary dwelling or at a vacation home, both are non-home based but radically different. In the case of the sub-national perspective this might be relevant, particularly in those areas where the stock of second homes is important.

4.78. The empirical measurement of travel behavior of visitors is a basic input for tourism planning; because planning (particularly territorial planning –see Chapter 2-) is vital to the tourism sector and the development of tourism products are conceptualized to be a component of general tourism planning (see UNWTO "Handbook on Tourism Product Development, Madrid 2011 pg 106); this document recommends that tourism research and analysis at the sub-national level should take these references seriously. In fact, the empirical measurement of travel behavior of visitors should be one of the main inputs for such contribution.

4.79. For that purpose, the starting point entails specifying and representing the travel pattern: the Origin Destination (O-D) matrix includes the total number of trips from one origin (Oi) to a destination (Dj) in each of the territorial entities considered, during a particular time period. Such matrix may be disaggregated by type of visitors and purpose of the trip.

4.80. In general, O-D matrix is derived from household surveys and consequently the observation unit used is the household and those characteristics that are considered of special interest for the measurement focus (mainly four: income level, car ownership and household size and structure). Other type of surveys is also possible and would supplement household survey data (such as roadside interviews) and therefore other O-D pairs would be obtained. Ideally both types of data should be available for the same base year when household survey data is collected.
In any case, even the combination of both type of surveys will fail to produce matrices where all cells have been sampled. Modelling is required to generate fuller matrices.

(For more details, interested readers should see in Chapter 3, section D.2.)

4.81. In the first case (household surveys) the reference is to household-based model where data source would be population census, and their respective strata will also be based on census variables of the already mentioned four characteristics.

4.82. In the case of person-category model, observation units are persons (considered individually -and not as members of a household- and refer to population in the territorial area of origin according to different categories,) because the analysis of the purpose of the trip corresponds to individuals.

4.83. When defining such categories, it is relevant to remember that it requires the detailed analysis of trip characteristics (to find variables that define similar categories). This alternative focus, as opposed to household-based model counts with some advantages beyond the cost related ones (given that the sample size required is significantly smaller than that required to estimate household –based models). Precisely De Dios Ortuzar and Willumsen (2011) point out two advantages (see section 4.3.3 “The Person-category approach”):
- “Demographic changes can be more easily accounted for in a person-category model as, for example, certain key demographic variables (such as age) are virtually impossible to define at household level;
- Persons categories are easier to forecast than household categories as the latter require forecasts about household formation and family size: these tasks are altogether avoided in the case of persons.

Next section C.3 will suggest some guidance based on the previous paragraphs.

C.3. Other demand side surveys applied to regional tourism

4.84. As in other subnational áreas, in the particular case of regional tourism (see Glossary), the basic focus refers to the measurement of inbound tourism which includes both residents from countries other than the country of reference (inbound visitors to the country as a whole) and residents from another regions of the country of reference; its size, identification of its typologies or basic tourism segments, activities undertaken while at destination, expenditure, etc. are usually the relevant topics for key tourism stakeholders.

At the regional level such measurement could be more feasible that at sub-regional levels due to the existence of available human resources and expertise in dealing with statistical type of surveys, unless investment in this sense is implemented.

4.85. Depending on the relevance of resident population in a given region in terms of travelling for tourism purposes in such region, such “domestic tourism flows” could be measured using household surveys adapting the national experience to the given region.

4.86. As already mentioned (see para. 4.26), national household and border surveys do not usually have the proper sample size so as to provide a robust inference for regional figures. In such cases (bearing the exception of islands or regions with a very limited number of port of entries with a feasible way to measure flows of visitors) the
statistical measurement of regional tourism demand should rely on interviewing visitors staying in accommodation establishments (particularly for those type of establishments for which the universe is known). Unless regional tourism authorities have the required technical staff and financial resources to implement a proper border survey.

4.87. Regional tourism includes both overnight and same-day visitors (which might be a relevant flow); part of them can stay in owned or rented second homes, staying with friends and relatives, sharing part of private accommodations, and in commercial accommodation establishments of different types. The measurement of such flow should include at least, those visitors staying in the last type of accommodation.

4.88. Such guest surveys should be similar to those used at the national level with a particular attention to the activities carried on by visitors while at destination and the corresponding expenditure.

4.89. An important issue to be verified is whether surveys conducted to visitors while at destination are statistically based (meaning, leaving aside other issues, that the sample used is a random sample). An example of this issue is basing the characterization of visitors to a given destination only upon surveying guests at accommodation establishments. This destination might count with significant excursionists or tourists at second homes, etc. Hence, this characterization would be partial.

4.90. Some form of exogenous information needs to be used to overcome the underestimation and the bias resulting when considering visitors staying at those types of accommodation establishments as the only possible use of visitors for accommodation while at destination as mentioned earlier.

4.91. Although being a supply side survey (which provides basic demand side data related to the number of guest paying for accommodation services while at destination), the reference to national accommodation surveys is a good example to rise the attention about the policy implication of a recommended principle mentioned in this document: regional surveys "are sought to be supplementary to the statistical information obtainable as a disaggregation of operations carried out with a national coverage and in an official capacity mainly by National Statistical Offices and National Tourism Administrations, in order to avoid information overlapping between national and regional levels." (see Chapter 5 and also Glossary/Regional Tourism Information System).

In fact, it is not unusual to find regional tourism authorities arguing about three main statistical issues for setting up an own accommodation survey:
- the coverage of the frame or list of such establishments is not complete;
- dissemination of monthly data is not timeliness and finally;
- the work carried on by field staff could be improved.

4.92. Particularly in the case of accommodation surveys, attention should be paid to the methodology used by National Statistical Offices (which are in most cases responsible for running such surveys), and to the questionnaire and the way sample data are upgraded.

Regarding the first bullet point above, if such situation could be seen as the usual case in most regions where tourism is significant, there could be a strong argument for regional authorities to find the way for cooperation with NSOs to update regularly the units to be included in such frame. The partial completeness of such frame will affect
the credibility of number of bed rooms available as well as overnight figures particularly for those sub-regional entities such as main tourism destinations and cities where tourism is significant.

Timeliness of accommodation data might be an issue for regional and sub-regional authorities and not so much for National Statistical Offices. There is increasing experience at the national level in those countries with well developed statistical infrastructure of good practices in relation with collecting information in accommodation establishments using either through the internet (using a web application), fax, email or telephone.

4.93. Out of all possible methods, the most effective method, without a doubt is the use of internet using automatic uploading of requested information via an XML file (Extensible Markup Language) generated from ERP systems of hotel management (Enterprise Resource System); Ideally, XML data files should be shared at a national and regional level, which would imply that being files with a set structure, the content and its configuration would be the result of a consensus among national and regional authorities.

4.94. Regarding the third issue, reducing non-sampling errors derived from work carried on by field staff might not be a feasible task in all circumstances.

4.95. Regarding measuring visitor expenditure at destination, a challenging issue that deserves particular attention is when out of the tourism trip this is surveyed. Given that, at the moment of the interview, the visitor can only inform of what has happened up to the moment of the survey. In the case in which information on expenditure is also collected, biases might be important, as many persons often leave the purchases of souvenirs or things to bring back home to the very last moment before departure. Also the effect of unexpected events, either in the country of origin or the country visited (ranging from natural disaster, bad weather, political turmoil as well as personal reasons) might obligue the visitor to take decisions different from those anticipated.

In any case, if considered feasible, the use of travel expenditure diaries could be an option.

4.96. Besides the use of national surveys for a primary description of tourism at the regional level (border, household and market accommodation surveys), the previous sections have also highlighted the need for some type of adaptation required in the case of the last two types of surveys if designed at regional as well as sub-regional levels. If those adaptations/improvements have been implemented these new regional surveys should provide with more robust basic data and indicators on similar questions addressed in national surveys (due to a greater number of records available for some characteristics of trips –such as the main set of activities carried out by visitors or the average expenditure by visitor at destination- as well as the reduction of recall bias).

4.97. A particular issue that might be of interest is to highlight that at subnational levels the measurement of regional inbound visitors (either non-national visitors or national visitors residing in a different region) refers to "open areas" identified as any territorial entity which does not have any control mechanism for entry (such as border controls, entrance fees, etc.).

"Considering an "open area", whatever its size is, there are two main types of survey to carry out: accommodation establishments type and surveys at popular tourist places. A third option is represented by surveys on means of transport but these are subject to
many problems concerning the definition of the target population and the design of the sampling plan” (Eurostat Methodological manual on the design and implementation of surveys on inbound tourism / Part IV Inbound visitors to an open area, Luxembourg 2000).

4.98. In any case, other tools might be more appropriate for measuring something that is central to key tourism stakeholders for marketing purposes and destination management: identifying what visitors really do at destination (his/her activities, itineraries undertaken, associated time employed, expenditures, etc.).

4.99. In fact, the conceptual framework for the measurement of tourism (IRTS 2008 paras. 3.6 and 3.9) identifies a set of basic characteristics of visitors and trips; these characteristics jointly with other type of them (mainly travel party size and composition, origin and destination of the trip, availability of travel mode/s, attractions visited and activities undertaken) should allow for the identification of travel patterns of visitors.

From the focus of this document, no overall travel picture of individuals or travel parties should be a priority but instead just behavior of visitors at destination; consequently, such focus is less ambitious that the one used in mobility research (which is based on household surveys instead than on individual surveys and looks for a more descriptive type of analysis as previously mentioned -see previous section C.2).

4.100. Clustering types of visitors according to specific bundle of characteristics should be useful for a number of topics, particularly at the sub-regional level:
- About focusing on the environmental consequences of a given pattern of behavior (in terms of greenhouse gases, energy used, ecological damage, etc.);
- Monitor the effectiveness of initiatives designed to promote sustainable behavior when travelling;
- How visitors from different countries of residence show different travel patterns across both space and time;
- How communication strategies by destinations should be adapted to different markets;
- Etc.

4.101. In the case of tourism, a travel and/or activity pattern survey addressed to individuals should be more robust than those derived from household surveys seeking to address overall travel patterns instead of concrete behavior evidence at destination.

4.102. Some important issues involved in the design of such surveys are:
- The appropriate statistics universe or frame to derive statistical samples and allow for grossing up of sample data;
- Whether to seek local travel / activity diary surveys;
- How to obtain data about changes in behavior over time (e.g. via panel surveys, retrospective questions...);
- What level of detail to seek on the selected activities;
- What mode of data collection to use: self-completion questionnaire, interview or some combination;
- How to check or verify the relevance of non-sampling errors (which in the case of tourism could be very relevant due to the fact that relevant variables are not directly observed);
- Etc.
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4.103. Other potential data sources could be:
- Attitudinal questionnaires, individual interviews and focus groups. Such data can provide snapshots of the distribution of opinions and attitudes within a target population, and assist to understand behavior;
- Objective monitoring of travel behavior and its consequences. This type of data can be particularly useful when the aim is to monitor general trends or to evaluate policy initiatives in relevant tourism destinations;
- Including a particular module on household surveys in order to have a proxy of tourist staying with friend and relatives.

C.4. Operationalizing the measurement of tourism destinations for comparability purposes

4.104. UNWTO has recently published a *Handbook on Tourism Product Development*, in which some topics are defined differently as in this document.

In the referred document, a tourism destination has the following attributes:
- "comprises many products within the overall destination;
- involves many stakeholders with differing objectives and requirements;
- is both a physical entity and a socio-cultural one;
- is a mental concept for potential tourists;
- is subject to the influence of current events, natural disasters, terrorism, health scares etc.;
- is subject to historical, real and fictitious events;
- is evaluated subjectively in terms of what represents value-for-money e.g. based on reality compared with expectations; and
- differs in size, physical attractions, infrastructure, benefits offered to visitors and degree of dependence on tourism – in fact no two tourism destinations can be treated the same, each offering its own unique and authentic attributes. (section 1.2 The Tourism Destination and its Characteristics)"

4.105. The focus of UNWTO in this document seeks instead for operationalizing the measurement of tourism destinations for comparability purposes within a given country (intra-national) as well as for international comparability; a quite different type of approach.

4.106. Focusing on those territorial entities that quality as tourism destinations because of (1.) the significance of tourism flows (the demand side criterion), as well as (2.) the turnover of those establishments pertaining to the tourism sector that provide goods and services to visitors (the supply side criterion), is a major step in potential extensions of the conceptual framework developed so far because these territorial entities:
- presuppose the existence of a tourism sector and market in such territories which is the case of tourism destinations, but not exclusively;
- suggest that thresholds on the minimum volumes of supply and demand for a destination to qualify as tourism destination be elaborated;
- allow for comparability (intra-national and international comparisons) between specific components of such markets in similar types of destinations;
- provide sub-national authorities and other key stakeholders with an operational concept to be applied in order to qualify a territory as a tourism destination;

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- The concept and implementation of territorial entities also provides advice for potential tourism developments involving a significant amount of investments.

4.107. Those tourism destinations that satisfy both the demand and supply criterion already mentioned, share a common set of components that should be defined and listed in order to support for comparability purposes: this document recommends that as a first step, comparability should be limited to main tourism destinations because the critical mass of key components of supply and demand in such territorial entities allows one to focus on the relationship between economic analysis and destination management at sub-national level.

4.108. The following paragraphs provide a list of relevant components that should be considered for comparability purposes.

**Resources**

4.109. In order to become tourist attractions, resources (natural, cultural or built resources) need to be translated into products by the action of the local and non-local stakeholders; this has already been the case in main destinations. Both for already existing tourism destinations as well as for potential tourism destinations in a medium term process, such resources should be listed, documented and ideally geo-referenced in a proper data base.

Each “tourism product” combines goods and services. Any tourism destination has one or more tourism products.

**Stakeholders**

4.110. These includes tourism practitioners -including tourism officials who commission surveys and research, and those who undertake such surveys- and different key stakeholders at regional and sub-regional levels –including governments, public institutes and agencies, universities, research centres, industry associations, trade bodies, and specialized firms, tourism destination managers, tourism development authorities, tourism businesses, etc.

4.111. Both public and private side of the tourism sector are crucial for the satisfaction of visitors. Private agents need to competitively and sustainably match demand and supply. Public bodies encapsulate a varied set of functions and investments (endowment and management of infrastructures to access diverse services, safety, preserving natural and cultural resources, planning and territorial ordination, etc) which influence the perception of the destination attractiveness. Moreover, within their competences, public administrations directly condition the pace and activity of firms that produce the goods and services located in destinations demanded by visitors (they condition this pace and activity via their better or worse bureaucratic agility to resolve business procedures, their legal capacity to adapt the sector regulations to the new demands in ever more changing contexts, etc.).

**Establishments producing goods and services demanded by visitors**

4.112. Such production units pertain to any of the tourism industries (see Glossary/ Tourism industries) although only part of the production of such establishments is related with tourism demand.
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Tourism flows

4.113. The measurement of the flows of visitors and all associated variables (both related to the visitor and to the trip) is highly sensitive to the definition of usual environment. Such flows refer to the different forms of tourism (see Glossary).

Territory

4.114. The integrated set of infrastructures and equipment, resources, stakeholders and productive establishments are located in a territory that must be precisely defined in order to be properly measured (in terms of physical and monetary components such as number of resident and non-resident population, infrastructure, economic activity, etc.).

4.115. The following paragraphs will focus on some key components of tourism destinations and a minimum set of basic data and indicators needed for its measurement.

It is suggested to generate, for comparability purposes, a limited number of basic statistical data and indicators (no more than 15 -see paras. 1.28/2 and 3.22- for a particular type of tourism destinations: those selected by countries that might wish to volunteer, from 2017 onwards, to cooperate with UNWTO on the initiative proposed in the Chapter 1.

4.116. If applicable, the concept of significance implies the existence of a tourism sector and a tourism market in such a territory. In order for the supply and demand sides to be measured, the conceptual framework of IRTS 2008 is especially adequate for one main reason: there is a formal international agreement about the concepts, definitions and classifications to be used for the measurement of the tourism sector (as a cluster of production units in different industries that provide goods and services demanded by visitors) and flows of visitors associated to the three forms of tourism (inbound, domestic and outbound).

4.117. This document focuses in the identification and measurement of some components of such sector and market, as well as the corresponding territory. Because the measurement and analysis of travel patterns of visitors is a clear priority for marketing research and management at sub-national levels, the following ones are particularly important:
- Tourism products;
- Activities undertaken by visitors;
- Tourism population;
- Characterization of visitors and trips;
- Regional tourism expenditure.

4.118. Consequently, the definition used for tourism product is proper for such purpose: a tourism product (nothing to do with tourism consumption characteristic products – see Glossary/Tourism industries) is branded for attracting visitors to a specific subnational area, and can be identified by a visitor before reaching the destination. If it is the trigger of the main purpose of the visit, then there are other products that can be supplementary and known off before and during the visit once at the destination. Such products can neither be defined in a standard way, nor can a proper typology be set up; only part of their components can be measured although this is not usually done.
4.119. In such products there are embedded at-a-cost components (services—such as lodging, eating, transportation, as well as potential activities to be undertaken—) and components provided for free (climate, nature, landscape, enjoyable “atmosphere”, etc.); these last ones, related with non-reproducible resources, although price-less, influence greatly the consumption of visitors.

Tourism product is a supply side concept usually associated to market segments.

Although the consumption of a tourism product is more than just paying for goods and services, at least basic data and indicators associated with their corresponding tourism sector performance could allow for comparability (such as overnights, establishments, and employment).

4.120. It should be highlighted that comparison based on a demand side concept such as market segments will lack of statistical rigor according to the reasoning presented in Chapter 4/A.2.

4.121. **Activities undertaken by visitors** has been proposed in Chapter 4 in order to request respondents of surveys about round trips; this question should be further adapted if applied at destination level. For instance, identification of attractions visited, tourism experience, about the degree and frame of trip planning—such information would render distribution channels much more effective, more precise level of expenditure and its main components, etc.

Such activities can be derived using a questionnaire but it is also possible to identify them related to movements at the destination either following signposted itineraries or moving around: gathering such information would allow for more targeted types of visitors and design of new or improved tourist products.

4.122. It seems obvious that the development of new technologies related to the growing registry of different types of digital footprints left behind by tourism-led mobility patterns, will increase our knowledge about what visitors do while at destination. In fact, mobility research has already acquired a critical mass of knowledge about the design of new tools and empirical analysis about travel behavior and consumption patterns in particular (which presupposes that researchers share a culture of reporting data in a format that allows other stakeholders to use the data for further analysis).

The adaptation of such tools and research to the case of tourism should give priority to the design of surveys focusing on activity-based travel behavior of visitors at destination, the use of Google Map technology, GPS and pop-up questions related to such behavior, explore the potential of open data, etc.

In any case, basic data and indicators about itineraries are not standardized as is the case of the kind of information pertaining to tourism products and the characterization of visitors and trip. Consequently, this document does not provide any particular recommendation on a minimum set of associated data to be obtained.

4.123. The concept of **tourism population** is a statistical concept that is not defined in the 2008 International Recommendations for Tourism Statistics official document. The measurement of such concept requires the use of full-time equivalent procedures.

Equivalent tourist population figures should be included in different type of indicators measuring tourism impacts on the environment such as:
- ecosystems
Chapter 4. Operationalizing the measurement of visitors (including related characteristics of visitors and trips) as well as travel behaviour at destination

needs for waste management facilities
- water cycle
- energy flows
- etc.

As an indicator of population density and tourism specialization, such figures can also foster comparability between tourism destinations.

4.124. Regarding **characterization of visitors and trips**, it should be kept in mind that the universe of arrivals or overnights is used as a proxy to the number of visitors; consequently, surveys addressed to visitors at destination should take advantage of looking for a statistical sound research on both characteristics of visitors and trips. Such universe allows to split survey data according to different type of characteristics both of the visitor (either tourists or excursionists – same-day visitors-), and the trip (such as the main purpose and main destination, organization of the trip, length of stay, etc.) as well as other type of components (mainly travel party size and composition, origin and destinations of trips, availability of travel mode/s, attractions visited, activities undertaken, etc.). Clustering different characteristics and other components allow for setting up different types of visitors for analytical purposes. A practical example can be found in CISET 2014 “Italian and Domestic Tourism Expenditure in the Veneto Regions. A milestone for the Veneto Region TSA Compilation”.

Besides the traditional data used for measuring the market from the demand side (arrivals and overnights figures), this document understands that in statistically developed countries there is a set of basic data and indicators that could be used for enlarging the traditional scope of measuring demand and supply. (see Chapter 5 about the completeness of a R-TIS of the following publication38: INRouTe and UNWTO (2012)).

4.125. Some of these data highlight the possibility to derive from the respective national databases (particularly border, household and accommodation surveys) a more ambitious analysis about typologies of visitors than just the breakdown of arrival figures by main purpose of the trip. Nevertheless, supplementary information about what visitors really do at destination (in particular, those topics related with travel behavior patterns) should be envisaged. Also the emotional drivers of visitors when arriving at destination and the evaluation of their experiences while at the destination constitute an important set of data for destination management (basically in terms of qualitative type of data).

4.126. As will be mentioned in Chapter 4, the questionnaire to be used for the measurement of **regional tourism expenditure** requires three basic sets of ventilation:
- according to the two possible perspectives to view the trip (from the perspective of the visitor or from the perspective of the regional or local entity visited);
- if the visitor is a resident or non-resident in the region of reference; in some destinations it might be relevant to breakdown the first category into nationals/foreigners;
- when the expenditure took place (pre-trip or during the trip). While pre-trip payments might include accommodation, transportation tickets, package tour as well as other services, payments during the trip might include a more comprehensive list of goods and services.

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38 A copy of this publication is available here: http://www.e-unwto.org/doi/pdf/10.18111/9789284414963
4.127. In due time the measurement and analysis of these five components of the tourism sector and market in a tourism destination should be extended and also include additional concepts and challenging topics such as:
- Vulnerability: meaning either the degree of diversification of markets and types of visitors, or the degree of dependence to tour operators / foreign direct investments / accessibility to destination by low cost air companies or other factors that could affect sustainability of the tourism destination;
- Tourism and new technologies: both in relation with tourism data collection and in relation with definition of "new" terms in official statistics such as online intermediaries, online purchases / reservation, etc.;
- Main externalities caused by tourism and its measurement: for instance, related to the use of resources (such as water, land, etc.), inflationary pressure affecting mainly the resident population, real estate and vacation homes developments with a marginal and highly seasonal type of occupancy rate throughout the year;
- Etc.
Chapter 5. Linking the R-TIS with the TSA as the foundation for a regional TSA (R-TSA)

A. Introduction

5.1. All along the document it is mentioned that in order to take regional tourism seriously, the first priority should be the setting up of a R-TIS; such recommendation imply that this initiative is a prerequisite for developing a Regional extended TSA exercise. Different sections of chapter 5 addresses and provide insight on the complexity of the necessary link between the R-TIS and the R-TSA.

5.2. It should be possible that TSAs, and any extension to encompass environmental data, could be seen as flexible in the sense of applying accounting principles to the policy questions at hand and, from this point, the data requirements can be established. How these data are then found, whether via collections by official statisticians, via big data, or via modeling is a second step that will be tackled appropriately in different ways in different countries/regions.

5.3. This chapter also provides clarification on what a R-TSA really is and guidance about addressing such an objective; it also highlights how the R-TIS should support such initiative in a given region39.

In line with such focus, three issues are addressed in different sections:
- Why promoting a regional TSA?
- Could a feasibility study help to evaluate the requirements needed?
- What can a region where tourism is significant really do when the feasibility study reveals that there are no data and resources enough to support the development of a proper R-TSA?

5.4. Regarding the issue of why promoting a regional TSA?, the following four answers are the most relevant ones.
- The first answer might seem quite obvious: tourism is essentially territorial, since it involves specific territorial areas inside the country and it firstly and directly impacts on the regional community in terms of employment, income and socio-cultural and environmental effects. The sub-national level is then the suitable dimension for tourism planning and decision-making, since it is just at this level that many relevant questions arise, such as: Is tourism strategic for the region? What is the impact of tourism expenditure? What are the characteristics and the dynamics of the tourism labour market? What is the level of investments for tourism?, etc.

Such questions are of increasing interest for regional authorities, both in regions where tourism is already developed and in regions where tourism is in the early phase of the life-cycle, because of the prospects of income and employment that tourism can bring.

- The second reason that justifies the importance of a R-TSA is the specificity that characterises every region and that makes it desirable for them to develop their own measurement and analysis of tourism’s contribution to the regional economy.

39Section C addresses the issue of linking national and Regional Tourism Information Systems.
In this sense a simple regionalization of national sources and analysis could not be sufficient, because the role of some tourism components changes according to territorial scales; also because regional statistical data obtained to support a R-TSA development might be, ceteris paribus, of better quality than that derived from nation-wide surveys in terms of describing the structure of the tourism sector and demand.

According to this consideration, sub-national tourism cannot be considered as a mere disaggregation of national tourism, since analysis translates in a thematic singularity and technical complexity when it comes to measuring sub-national tourism. This is evident if we think that some themes such as the relevance of the inbound and the “domestic” component of Regional Tourism or of specific typologies of tourism (business tourism, cruise tourism, etc.) may not be so relevant at national level but be of priority interest in some specific regions. Another evidence is represented by tourism flows generated by residents: from a national perspective these flows are classified as domestic tourism, while at sub-national level residents from other regions are also part of regional inbound tourism for the region of reference. The same reasoning is true for excursionism too, whose analysis makes sense just at sub-national level since this phenomenon directly impacts on regional supply and community. (see Glossary/Regional Tourism).

Specificity refers not only to tourism demand but also to tourism supply, which from a sub-national perspective may include specific activities and products that are not considered at national level: this is the case for some industrial activities producing “souvenirs” and typical products, that, while at national level their involvement in tourism might be absolutely marginal, in the regional economy their production are supported by tourists’ expenditure.

The specificity and uniqueness of every region not only stress the potential for the regional authorities to develop their own R-TSA, but it also emphasises the differences among regional experiences and the difficulty to give unique and standardised interpretation. In this sense this chapter tries to stimulate a clarification of some important aspects (for example by exploring experimental approach to TSA “other aggregates”), also by citing the experience of some regions that have already experimented the development of their R-TSA.

The third answer to why promoting a TSA? is the need to provide regional stakeholders with useful information and indicators for raising awareness of tourism importance in the region, identifying possible business opportunities, attracting investments, etc.

Promoting an extension of TSA to sub-national level can reinforce the role of credible tourism economic analysis and effective modelling for destination management. In this sense the R-TSA and in particular the process that brings to the final R-TSA play a crucial role, by encouraging an effective accounting for tourism at regional level and supporting the development of tourism strategy for destination management. It is just at the regional level that an in-depth analysis of tourism contributes to many strategic issues, such as conservation vs use of natural and cultural resources, contribution to sustainable development, alternative use of resources, etc.
However, stakeholders’ dissatisfaction due to a perceived inadequate tourism information system is common: for example information is frequently not available or not updated; data are difficult to be found or correctly interpreted; the nature and organisation of information are not consistent with stakeholders’ needs and a long etc.

Then, the availability of comprehensive information required by the process that builds up the R-TSA can encourage a more concrete and valuable dialogue between technicians - with their statistical/analytical background - and decision- and policy-makers and private companies. Indeed a dialogue between these and other relevant stakeholders (see para. 1.4) is important for favouring harmonization, coordination and a better understanding of tourism statistics, sharing common languages and identifying information needed by private and public stakeholders, so that statistics and R-TSA can be a real support for decision-making process.

Finally, the fourth reason is related to the important contribution that tourism gives to other disciplines, since its interconnection with many other economic sectors such as transports, agriculture or other activities and issues, such as culture, sustainable development, etc. It is then evident that a deep understanding of tourism characteristics and dynamics at the destination level, in particular in terms of economic impacts, is functional for better defining the size and nature of the linkages with the other regional activities and sectors developed in the region. Considering, for example, transport infrastructure and services, tourism analysis could generate growing awareness and understanding of the significance of tourist flows according to the typologies of transports (airplane, train, bus, etc.) and then support strategies for improving services and income (see Chapter 2, section B).

5.5. A second issue that cannot be ignored is the evidence that the process behind the development of a R-TSA is extremely demanding of information and a body of detailed statistics is needed to complete all TSA’s elements.

As explained in Chapter 3, a proper R-TIS (Regional Tourism Information System) is justified under two circumstances: the significance of tourism in the region and the availability of a basic set of national statistic sources.

As a consequence, before a region decides to set up a R-TSA, a feasibility study should be required, in order to verify the availability of basic statistical data and indicators derived from national and regional sources, the existence of an appropriate statistical infrastructure and of a professional team and the availability of resources for developing supplementary data. (see Chapter 3, section B).

Of particular interest is the development of the professional team that can be conceived as an inter-institutional and multi-disciplinary network. As emphasised in Chapter 4, such a team is vital not only for setting up a R-TIS, but also because it stimulates the creation of the necessary knowledge and expertise on tourism economic analysis though the cooperation and integration of a pool of experts – practitioners and researchers - in different disciplines: statistics, geography, economy, etc.

Since many regional statistics are very often produced by the National Statistical Offices, as a regionalisation of national data, it is recommended that official statisticians should be involved in the development of the R-TSA in order to promote the use of national instruments to collect tourism data at regional level using a common set of
concepts, definitions, classifications, accounting rules, etc.; in a second phase, the regional authority can then decide to supplement national statistics with other sources specifically tailored to their own territorial specificities.

5.6. Attention has to be paid also to which kinds of information are more appropriate to be included in the information system supporting the design of a proper R-TSA. Since a body of detailed statistics is needed, a well structured R-TIS Tourism Information System should include three sets of information as already mentioned (see para. 3.10). Since these sets of information are based on several sources, that in some cases are interrelated, it is recommended to avoid overlapping between entities and between national and regional levels.

5.7. The last and fourth issue is about the question What can the region do when the feasibility study reveals that there are no data and resources enough to support the development of a proper R-TSA?

The answer suggested is to invite the region not to give up and to find alternative solutions. Although it might not be possible to set up a proper R-TSA, it is however recommended to promote a descriptive analysis that identifies the main characteristics of regional tourism from the supply and demand side. This recommendation, in order to be translated in operational terms, implies the setting up of a complex governance structure as already explained (see para. 3.11 and Annex 35).

It is suggested to identify information gaps (in order to start the set up of a more appropriate regional tourism information system, supporting in the future the development of a proper R-TSA), and develop statistical Supply/Demand checking – using national and regional data regarding overnight/occupation of establishments providing accommodation for visitors/number of arrivals/number of visitors/employees in the tourism sector/average expenditure/etc.

Finally, other initiatives could be envisaged in line with some of them for which UNWTO has either elaborated useful material that should be adapted to be used at sub-national levels (this is the case of measuring the Meetings Industry and its tourism connection, as well as the measurement of vacation homes); a third example could be about the opportunity for expanding the third component of the proposed R-TIS with data useful for key stakeholders although non necessary being official nor statistical data (the case of measuring special events is definitively one example) (see Annex 30).

All these questions and issues will be addressed in this chapter.

B. The Regional TSA in perspective: UNWTO initiatives during 2002-2013

5.8. IRTS2008 and TSA:RMF2008 clearly mention the adaptation of the statistical framework for basic statistics and indicators (see para. 3.12) and the development of the TSA (see Annex 20).

5.9. Regarding the TSA:RMF 2008, it should be remembered that the first time UNWTO referred to a regional TSA was in 2002: “The Tourism Satellite Account (TSA) from the Regional Point of View: Reflections for Debate” signed by José Quevedo—UNWTO consultant and first President of Spain’s National Statistical Office—appeared in volume 2 of the Enzo Paci Papers on Measuring the Economic Significance of Tourism (a series of eight annual reading documents prepared by UNWTO Statistical Unit).
UNWTO used such document in order to promote an international consultation process about the opportunity to extend the TSA conceptual framework to subnational levels; main milestones of such process were the following international Seminars and Conferences supported by Visit Scotland, the Comité Regional du Tourisme Riviera Cote d’Azur and, finally the Direction du Tourism of France, respectively:
- Glasgow 2003 (February 10-11)
- Antibes 2004 (February 18)
- Paris 2005 (April 21-22)

5.10. As an outcome of such process, a discussion paper (dated in September 2005) was drafted by the UNWTO Department of Statistics and Economic Measurement of Tourism and presented with the title “Adapting the national Tourism Satellite Account project to subnational levels” to the WTO conference “The Tourism Satellite Account (TSA): Understanding Tourism and Designing Strategies”, Iguazu Falls, Argentina/Brazil/Paraguay, 3-6 October 2005. Session 3 of the conference was devoted to “Tourism Satellite Accounts: The Regional Perspective” and the central paper was drafted by Calvin Jones and received requested comments by Mara Manente; also other comments were presented.

The above mentioned UNWTO document was drafted in the perspective of “an international consultation on updating the conceptual framework of tourism statistics (those approved in 1993, as well as TSA:RMF 2000); a consultation that UNWTO opened up in the first quarter of 2006. Such process was part of the international community’s efforts to clarify the conceptual relations and bridge some of the existing gaps between the TSA, the Balance of Payments and the System of National Accounts. In the Introduction of the 2005 document, UNWTO explicitly mentioned the basic initiatives of the TSA project at a national scale and how the extension of the TSA conceptual framework to adapt such tool at subnational levels should take place: “this document sets out an initial proposal for its regional adaptation, in which precedence would be given to promoting the economic analysis of tourism as a first step in assessing the consistency of the regional system of tourism statistics and identifying the need for new sources and analyzing key factors that may influence the results”.

5.11. Also the introductory chapter of that document (pages 2 and 3) summarizes UNWTO’s position on the two possible ways to adapt the National TSA (TSA): regionalization of the TSA (identified as TSA-R) and development of a regional TSA (identified as R-TSA). These were the main arguments presented for both approaches’ be compatible with each other:
- tourism is essentially territorial: the development of tourism in the regions is of increasing interest to the regional authorities, and to Regional Tourism Administrations (RTAs) in particular, because of the prospects of employment in the various tourism industries;
- information on tourism activity at regional level cannot be obtained by relying solely on the regionalization of national sources: even supposing, in the best of instances, that they had the necessary sample sizes for gathering the relevant data, the specific features of tourism in regions where it is an important industry make it desirable for them to have their own sources;
- consequently, if those regions have the necessary administrative skills and resources, they should, logically, progress in the measurement and analysis of tourism’s economic contribution;
- more specifically, more and more RTAs realize the desirability of preparing regional TSAs as a means of approaching the tourism sector from the supply side and, hence, providing useful indicators for tourism enterprises and organizations in identifying possible business opportunities, assessing the volume and intensity
of tourism business and determining the extent to which private and public regional tourism networks and clusters are interconnected;
- in any event, the paucity of information of all kinds that typifies regional systems of tourism statistics (even to the point where there is often no table of macro-magnitudes that may be taken as a benchmark for calculating the economic contribution of tourism) means that serious consideration should be given, as a first step, to the possibility of using estimation techniques for the main variables of the economic contribution of tourism. This initial exercise will serve not only to determine the need for future information in the form of statistical operations to further the progress towards an R-TSA but also to raise awareness of tourism and, in so doing, generate the necessary political interest in and financial commitment to strengthening the tourism information system;
- lastly, and needless to say perhaps, where countries do not have an TSA project, it would be inadvisable for a region with substantial tourism activity not to initiate the process of formulating its own R-TSA project.

5.12. Three years after the Iguazú Conference, the United Nations Statistical Committee approved in its 2008 session the new standards of tourism statistics presented by UNWTO; since then, the following initiatives launched or supported by UNWTO have paved the way to promote INRouTe and assume that the work carried on “will form the basis for future UNWTO guidelines on the measurement and analysis of tourism from the sub-national perspective. This perspective is crucial for a better understanding of the spatial distribution of domestic tourism (both in terms of flows and in terms of economic contributions), an issue recurrently highlighted by several UNWTO Member States as being of utmost importance” (INRouTe/UNWTO 2012, Abstract).

The following initiatives have been the most relevant ones:
- Philipines/Cebú 2008- Sixth International Tourism Forum for Parliamentarians and Local Authorities;
- Spain/Malaga, 2008 - UNWTO International Conference on Measuring Tourism Economic Contribution at Sub-National Levels, “Knowledge as Value Advantage for Tourism Destinations”;
- Spain Donostia/San Sebastián- MOVE2009 1st International Conference on the Measurement and Economic Analysis of Regional Tourism;
- UNWTO/INRouTe Cooperation Agreement 2011;
- Spain/Bilbao - MOVE2011 2nd International Conference on the Measurement and Economic Analysis of Regional Tourism;
- Italy/Venice, 2012-INROUTE first Seminar on “Regional Tourism: setting the focus”;
- Colombia/ Medellín - MOVE2013 American Chapter 2nd International Conference on the Measurement and Economic Analysis of Regional Tourism;
- Italy/Venice, 2014 - INROUTE second Seminar on Regional Tourism: Moving towards a Regional TSA approach;
- UNWTO Statistics Committee sessions.

All of them have contributed to the production of a significant number of national initiatives related with the measurement of tourism at subnational levels as well as R-TSA exercises being the Flanders-Brussels TSA projects the last of them.

C. Complexity of the regional measurement of tourism

5.13. As previously stated (see INRouTe/UNWTO 2012, para. 3.5), "there are many aspects of the measurement of tourism at the national level that are quite different when compared to cases of sub-national scope": this is true both for demand and supply. That
is to say that the scope of sub-national tourism is not a mere disaggregation of national tourism; it also has its own thematic singularity and technical complexity when it comes to its measurement.

5.14. **Regarding regional demand**, in addition to the main issues addressed in Chapter 3, section D.2, the following ones are particularly relevant as well:

- Tourism trips undertaken by the resident population has greater importance because the measurement and analysis of national domestic tourism can only be improved from a sub-national perspective (and this implies setting a link between tourism and territory), and requires also to learn from the experience of mobility researchers (see Chapter 2, section D.2);

- In fact when considering the adaptation of national TSAs to subnational levels, it becomes evident that the use of data derived from national household surveys used for measuring domestic tourism are not so robust (in statistical terms) as assumed; a main reason could be that the use of such surveys are more short term oriented and lack of a proper sample size so as to derive the main indicators needed for setting up an estimate of the economic contribution of such form of tourism;

- Demand side surveys at the national level have not always been designed to provide regional estimates. In the case of domestic tourism surveys, the possibility or not to generate an Origin/Destination matrix of intraregional flows of trips/visitors makes the difference (see Chapter 3). The IRTS2008 states “for sub-national analysis of domestic tourism, it is also essential to characterize trips according to the place of usual residence of the visitor, his/her personal characteristics and the main destination of the trip. This information, usually collected through household surveys, is often represented in matrices showing the number and duration of trips by origin and destination”.

5.15. **Regarding regional supply**, in addition to the topics addressed in Chapter 3, section D.2, the following issues should be sufficient to raise the need for setting up an agenda for improving its measurement:

- the concept of “tourism sector” (see Glossary/Tourism Sector) is not always appropriate at sub-national levels due to the fact that a cluster of existing number of production units in different tourism industries might not be significant at such territorial level (for the criteria used to determine "significance", see also Glossary/Significance);

- the identification of tourism industries at the regional level might justify, in some cases, the consideration of, for example, the producers of souvenirs, jewelry and handicraft as tourism related activities, while this would not necessarily be the case at the national level (in the case that the associated expenditure were marginal or scarcely significant);

- also vacation homes (or more precisely, accommodation services associated with all types of vacation home ownership), as a peculiar type of tourism industry, might deserve special attention in some regions (see Libreros (2010) and Cañada, (2010));

- the measurement of passenger transport is almost impossible to approach exclusively from the regional perspective (as it is normally necessary for the national information to be disaggregated using some kind of ad hoc indicators or parameters); also interregional trade in tourism characteristics products (both goods and services) should be mentioned as very problematic because it is not so easy to measure what one region produces and which part of it is consumed by visitors in another region;

- while at the national level it would be possible to justify not prioritizing certain issues (like the measurement of the tourism contribution of special events, the
Meetings Industry and its tourism connection, the expenditure associated with the maintenance of vacation homes, the phenomenon of same-day visits, linking tourism expenditure to the main purpose of the trip, etc.), these could be of priority interests for certain regions were tourism is significant.

5.16. There are many other examples but when looking to the structure of tourism industries, these two particular issues should deserve special attention:

- one of them refers to the challenging issue of setting up an articulated set of data at national and regional levels based on particular national surveys such as Business Registers or Annual Industrial Surveys due to the use of different statistical units (enterprise and establishment). For a better understanding of such complexity, see Annex 21.

Certainly the effort carried on in Poland tempting to develop a harmonized approach for setting R-TSA in all 16 regions (in terms of NUTS 2), illustrate that such articulation is a challenging issue and might deserve a project by its own (see "Methodology of the regional tourism satellite account for Poland – concepts and feasibility study", Ewa Dziedzic and Teresa Skalska – see Dziedzic, E and Skalka, T, 2014-). Also MacFeely S., Delaney J. and O’Donoghue F (see MacFeely et al. 2012) have carried on a detailed project applied to Ireland

- the other issue has been highlighted by Calvin Jones (Jones, 2005) (when discussing about regionalizing the national TSA), and refers to the irrelevance of using "national averages" for regional measurement in regions were tourism is significant.

"Perhaps, however, a strength of the R-TSA approach is also its most striking limitation: standardization of structure across regions. This will impact upon usefulness and accuracy. For example, as Statistics New Zealand points out 'tourism activity' may comprise whale watching in one of its regions, skiing in another. It may be difficult to construct a classification and survey system that is flexible enough to deal with these difficulties. More importantly, unless there is a full set of regional Input-Output Tables upon which to base the R-TSA it is likely that national ratios for important aspects such as industry production functions, or imports of products (here including inter-regional imports of course) must be adopted, or adapted (via the use of indirect measures). This may lead to significant (and invisible) error in regions where the industrial structure or activity varies significantly from the national 'average' – surely the case for many touristic regions. Meanwhile, the institutional platform for a R-TSA would have to be carefully considered. Regional stakeholders may feel aggrieved at a lack of involvement in TSA development, particularly if they feel results are not tailored to their needs. There may also be a tension if the timescale of national development is slow. Consider the UK: London, for example, might have used TSA results to inform its bid for the 2012 Summer Olympics, and the city has adequate resource to develop such a tool; yet the statistical and accounting expertise exists largely within the national statistical agency, which is largely uninvolved in TSA development at national, let alone regional level." (Jones, 2005).

D. Clarifying the adaptation of the TSA to subnational levels

5.17. UNWTO has summarized as early as 2005, the two possible methodological approaches to do so (see WTO 2005, paras. 3.1 and 3.3):

- "the interregional approach, which would be common to all the regions of the national territory and based on and intimately linked to the System of National Accounts. It is an approach that relies on the existence of a TSA and the availability in each region of uniform tourism information for each of the tables and aggregates
Chapter 5. Linking the R-TIS with the TSA as the foundation for a regional TSA (R-TSA)

to be regionalized. An example of this approach is the regionalization of a TSA (identified as TSA-R) in Australia, Canada, Norway and others;

- the regional approach, which would entail the presentation of a given region, in which tourism is particularly significant, provided there is sufficient information for so doing. The TSAs of Scotland, Wales, Andalusia, Madrid Flanders, and others would be examples of this second approach, identified as R-TSA.

For either of these approaches, the first thing to note is that no conceptual framework exists at regional level equivalent to the System of National Accounts. The SNA93 does not define a specific framework for regional accounting; nor are the general statistical systems of most countries designed for this purpose. When mentioning regional accounts, they refer to a table or macro-magnitudes but never to a set of associated accounts developed to a similar degree”.

5.18. Researchers and practitioners working all these years on regional tourism measurement have accepted that the first option could be identified with the use of “top-down” accounting approach while the second option would be associated with a “bottom up” approach. Such terminology might be mainly associated to European national accountants when referring to regional accounts: the term “methods” refers to the particular type of data collection used by EU Member States in order to estimate regional accounts and aggregates. In fact the Eurostat Manual on Regional Account Methods (see Eurostat 2012) refers to “Methods of regionalization” in two different, although complementary ways: data requirements for regional accounts and compiling practices (labeled as “bottom up / top down/ mixed methods”).

It seems that the translation of this wording to TSA development at subnational levels is not really appropriate.

5.19. More precise is the terminology used by Cañada (2013) referring to methodological approaches (avoiding the term "methods"): “regionalization” (of a national TSA) and “regional estimation” (of a TSA for a specific region, “just as one would calculate a national-level TSA”) (Cañada. 2013 para 1.2). It seems obvious that setting up a R-TSA requires, as a minimum, both the regionalization of a national TSA if available, as well as supplementary regional surveys and modeled data: this will be the content of section 5 focused on the second approach already mentioned.

5.20. This section will refer exclusively to the first methodological approach (regionalization of TSA) which builds on:
- the expertise and institutional competences of National Statistical Offices;
- the same data sources as those used for the National Accounts as a whole;
- allocation methods used for regionalizing national data in National Accounts will probably be the same or a very similar one;
- quite probably the publication of the commodity breakdown of supply and demand and the disaggregation of the GDP and employment by industry will not be so detailed as in the TSA;
- conceptually there are no significant differences with the TSA except for the need to define the different forms of tourism at the regional level (see Glossary/Regional Tourism);

INRouTe has not much to say on this regard but learn about how such approach can contribute to set up of R-TSAs; an alternative, which implies a much more expensive and time demanding approach but provides also a more powerful instrument to foster regional tourism measurement, policy design and analysis.
5.21. The following paragraphs (Jones. 2005: 5) provide a summary of major benefits and statistical constraints of the regionalization of TSA approach: “TSA-R has a number of benefits. Firstly, it should produce results that are regionally comparable and consistent within the nation. Secondly, it may be undertaken at relatively low cost particularly if there are good quality demand and supply surveys that can be regionalized – and the full use of such resources should be optimized. There are also institutional implications to a centralized approach. It will involve the national statistical agencies, ensuring a considered approach to the conceptual difficulties, and the proper use of concepts and methods. TSA-R may also be more easily integrated into national series of variables – for example timely indicators of gross value added – which will aid the production of up-to-date results. Finally, and importantly, a TSA-R project, which starts from the national TSA results should be quickly credible and believable in the eyes of politicians and officials within central government.

5.22. The TSA-R approach relies very heavily on nationally constructed business and consumption surveys. Hence a full regional stratification of business inquiry, household and tourism surveys is a key requirement. Surveys of business are not always stratified to ensure an adequate return for each industry for each region, and this will be a significant difficulty in TSA construction. Similar problems may arise with surveys of tourists, particularly if international entry/exit points are used for surveys and these are regionally concentrated. There are significant methodological (not to mention conceptual) difficulties involved in allocating tourism consumption arising from a multi-region trip. Moreover, where tourism is concentrated in non-industrial or less populous regions, survey sample sizes may seriously hinder reliability and accuracy, unless TSA requirements are explicitly part of the survey design (this is rare at the moment). It is important that in addition to statistical and sampling issues, conceptual and methodological approach for national surveys is adequate to regional applications”.

5.23. As pointed by Peter Laimer (2012, para. 1.2), “the development of R-TSAs follows in principle the same steps and methodological requirements as those for national TSAs. Nevertheless, the statistical challenge is to regionalize the national TSA, and to guarantee consistency with the national TSA as with the Regional National Accounts. Apart from statistical obstacles, the characteristics of tourism demand and supply differ according to the individual regions”.

5.24. It might also be worth mentioning some comments and suggestions provided by UNWTO (see WTO 2005) reproduced below:

“For the “top-down” TSA-R approach to be feasible in a country with an TSA, it is essential to have access to a set of homogeneous tourism-related regional indicators so that the national aggregates may be regionalized”. (para. 7.1 within WTO 2005).

“The fact that a country does not have Regional Economic Accounts is no impediment to regionalizing the TSA on the basis of those indicators. It would, however, be wise to qualify the estimation as experimental and to spell out the most significant limitations of the exercise. A consequence of this exercise will surely be that regions with appreciable tourism activity will be encouraged to consider the desirability of promoting an R-TSA project”. (para. 7.2 within WTO 2005).

“To ensure that it has the desired legitimacy, the TSA should be regionalized by the same technical unit that prepared the TSA (usually the National Accounts Department of the corresponding NSO)” (para. 7.4 within WTO 2005), in cooperation with key tourism stakeholders representative institutions.
“For its part, the credibility of the results of an exercise of this kind depends on the fulfillment of two requirements:
- that nationally constructed business and consumption surveys be based on full regional stratification samples; and
- that the indicators and statistics used are representative of each of the regions”.

5.25. However, because of the very nature of tourism (which involves a number of industries) and its relation with the territory, the existence of homogeneous indicators cannot always be guaranteed in advance”. (para. 7.5 within WTO 2005).

“Since all these circumstances do not normally coincide, the work associated with the TSA-R should follow a pre-agreed plan to ensure that the results achieved, in addition to having the credibility expected by the institutions belonging to the aforementioned cooperation network, are available on a database that may be accessed by them.” (para. 7.6 within WTO 2005).

5.26. Tourism practitioners (including tourism officials who commission surveys and research, and those who undertake such surveys) are usually not aware of the great complexity and technical expertise required for what national accountants call reconciliation process particularly in setting up Table 6 in TSA: reconciliation between supply and demand is something that quite probably national accountants are the only ones that could deal with.

5.27. The regionalization of the TSA requires also a reconciliation process in order to guarantee internal consistency between TSA and all regionalized accounts (see Kosovo, 2010 and Van Ho et al. 2008).

5.28. UNWTO has suggested that a TSA-R project should include, if not all at least some of the actions outlined in the following table.

Table 2 Actions to be included in a TSA-R approach Source: Adapted from WTO 2005 Chapter 7, pp.24

<table>
<thead>
<tr>
<th>Action proposed</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Constitution of the Regional Inter-Institutional Network for R-TIS</td>
<td>Responsibility for and permanent monitoring of the process</td>
</tr>
<tr>
<td>(ii) Formation of a Technical Committee and of regional executing units</td>
<td>Technical supervision of the process and formation of regional technical teams</td>
</tr>
<tr>
<td>(iii) Assessment, from a regional and global perspective, of the tourism statistics and national accounts available and analysis of their quality and consistency</td>
<td>Updated inventory of statistical resources available at national level</td>
</tr>
<tr>
<td>(iv) Formulation of a Joint Programme of Statistical Research on Tourism with a view to regionalization</td>
<td>A requirement of the process. Harmonization of methodologies and definition based on the prospective needs of the TSA for information on tourism supply and demand</td>
</tr>
<tr>
<td>(v) Analysis of the terms of reference of the programme defined in (iv) above and incorporation of the relevant adjustments. Development of the final programme.</td>
<td>Exchange of technical views and search for consensus</td>
</tr>
<tr>
<td>(vi) Familiarization of the national and regional technical teams with the terms of reference of the Programme defined in (iv) above with a view to its orderly execution</td>
<td>Guidelines for the orderly execution of the new Statistical Research Programme</td>
</tr>
<tr>
<td>(vii) Determination of characteristics and application of specific modules on intraregional/national tourism trends and seasonality</td>
<td>Specific module applicable at regional level</td>
</tr>
</tbody>
</table>
E. Setting up a Regional Tourism Information System (R-TIS) as a prerequisite for developing a Regional extended TSA exercise

E.1. Cautionary remarks about the term “system” in official UN and UNWTO documents

5.29. The System of National Accounts (SNA2008) is a standard accounting system that summarizes the transactions within the economy and the rest of the world. More specifically, the system of national accounts represents an integrated set of standard concepts, definitions and classifications applicable to the most important macrodata of economic statistics.

5.30. SNA 2008 gives great flexibility in the design of functionally oriented satellite accounts, as the objective of such accounts is to focus on specific aspects of an economic domain, escaping from some constraints of its central framework. As a consequence, for a specific domain, various designs of satellites accounts are possible, focusing on different aspects considered of more particular interest, and this is the case of tourism.

5.31. The Tourism Satellite Account is an example of an extensive form of such flexibility allowed by the present National Account System (SNA 2008): as the term “satellite” indicates, TSA is linked to, but distinct from, the central statistical system.

5.32. The UN Handbook of Statistical Organization, Third Edition (New York 2003), identifies the concept of a National Statistical System (NSS) with three basic components: the institution/s that support it (the central statistical agency and eventually, regional statistical offices), the coordination tools (a set of concepts, definitions, classifications, basic data and indicators), and other institutional arrangements (being governance a significant issue).
5.33. For a national System of Tourism Statistics (STS) to be a proper sub-system of the NSS, a medium/long-term perspective is required; both the official documents of the two international standards on tourism statistics (IRTS 2008 and the TSA:RMF 2008) as well as UNWTO IRTS 2008 Compilation Guide provide clear guidance on how such process should be articulated.

5.34. The basic message although not even explicitly mentioned is that the focus of such medium/long-term process should follow a "systems approach". In statistics, applying a systems approach to organize information in any particular thematic areas means the application of concepts, definitions, classifications, accounting rules and principles of recording consistent with those of the System of National Accounts.

5.35. In the case of tourism, such approach has been followed in the 2008 international standards on tourism statistics; because this document follows a statistical founded initiative to adapt such standards, the conceptual design of the R-TIS uses also such an approach.

5.36. "The STS is defined as a set of components of a statistical nature which are structurally mutually connected and comprising:
- the statistical sources themselves;
- the corresponding data derived from them (i.e. statistics drawn from surveys, administrative records; statistics of a synthetic nature - like the TSA - etc.);
- the specific tools, methodological references and instruments used at some stages of the process (as is the case of concepts, definitions, classifications, databases, etc.); as well as
- The instrumental and organizational resources used in all these processes."

(UNWTO IRTS CG 2008 para. 1.8).

5.37. The development of a national STS is closely linked with the implementation of a Tourism Satellite Account (TSA). "A TSA provides the conceptual framework and the organizational structure for the integrating of most tourism statistics with each other and with the other economic statistics (mainly National Accounts and Balance of Payments data). In order for the TSA to be such an integrated framework, the same conditions as those required for the System of National Accounts (SNA 2008) should apply: tourism statistics should be coherent (the same concepts, definitions and classification should apply to all related components) and consistent (measurements related with each component should be commensurable so as to be integrated within a unique analytical framework". (UNWTO IRTS 2008 Compilation Guide para. 1.4).

In fact, this link between both the IRTS 2008 and the TSA 2008 and the source of data used in their compilation provides the foundation for the establishment and maintenance of improved national systems of tourism statistics.

5.38. As stated in the TSA:RMF 2008 para. 1.17, the TSA should be considered from two different perspectives:
- As a statistical tool that complements those concepts, definitions, aggregates and classifications already presented in the International Recommendations for Tourism Statistics 2008 and articulates them into analytical tables which provide elements for comparing estimates between regions, countries or groups of countries;
- As the framework gives guidance for countries in the further development of their system of tourism statistics, the main objective being the completion of the Tourism Satellite Account, which could be viewed as a synthesis of such a system.
5.39. It should be clearly mentioned that tables 8 (Tourism gross fixed capital formation of tourism industries and other industries) and 9 (Tourism collective consumption, by products and levels of government) of TSA lack of a robust approach, given that TSA is no accounting system.

As stated in the TSA:RMF 2008 official document:
- "the estimation of a tourism gross fixed capital formation aggregate is suggested in order to guide further statistical development and research in those countries where tourism is especially relevant, but no specific aggregate will be used for international comparisons" (TSA:RMF 2008, para. 4.107);
- "the estimate of tourism collective consumption is proposed as a useful statistical exercise only and will not be used for international comparisons" (TSA:RMF 2008, para. 4.112).

(For more details, interested reader should see Annex 33)

Because the TSA is not a proper accounting system (by comparison to the central statistical system associated to the National Account framework), tourism statistics cannot be labeled at present as a proper statistical system. This understanding is in line with IRTS 2008 para. 1.36: The IRTS 2008 highlight that the concepts, definitions, classifications and indicators presented "should be viewed as an important foundation of the system of tourism statistics. As such, they should be used as a reference for coordination, reconciliation and interpretation of the information in the area of tourism, although this information might extend beyond the still restricted domain these Recommendations touch upon".

E.2. Linking national and regional tourism information systems

5.40. UNWTO has provided guidance on how to expand national STS in order to provide with the information required by key tourism stakeholders: although being the basic core of national Tourism Information Systems (TIS), official statistics data should be supplemented with other data and indicators. The following paragraphs (included in UNWTO (2011b), paras. 17. and 18.) provide some examples of this new type of data.

The national STS, i.e. basic tourism statistics and indicators as well as TSA aggregates, "should be the foundation for a reliable and accurate national Tourism Information System (TIS). The TIS might also include supplementary statistics, non-statistical information, and additional types of indicators. This new set of information should be designed for national purposes only. Special attention should be given to the following set of indicators:
- 'early warning' indicators could be derived from sources such as credit card records as well as air traffic slot allocation data. Both types of data are administrative information (as arrivals figures are) and some countries have already experience in deriving these indicators which have proved of great interest for analysis....;
- short-term performance indicators of tourism industries' turnover and employment could be derived from administrative records produced by official sources such as fiscal sources and social security schemes....; and
- business cycle indicators could be derived from business tendency surveys. This type of qualitative information (based on answers of staff personnel in some key tourism industries such as accommodation or travel agencies) is widely used in most countries for non-service sectors. ...".
5.41. Because of all cautionary remarks about the use of the term "system" previously mentioned (using official UN and UNWTO documents and being the focus the national level), it is obvious that the conceptual design of a Regional Tourism Information System (R-TIS) as defined in this document cannot be understood as a proper "system", nor should the concept "regional statistical system" be used.

Nevertheless, such design follows a "systems approach" because this document follows a statistical approach to adapt 2008 International Standards on tourism statistics to subnational levels.

5.42. Consequently, the conceptual design of R-TIS respects the recommendation in IRTS 2008, and it might be appropriate to remember that these recommendations suggest, as a first approach, "that national statistical offices, tourism authorities and/or other organizations with direct responsibility for tourism statistics promote the use of national instruments to collect tourism data at the regional and local levels using a common set of definitions, based on the present IRTS 2008, para. 8.29); if "this first approach is not feasible or is not considered completely satisfactory, especially in those regions where tourism is particularly relevant, the regional tourism authorities might wish to complement national data with other data in order to design policies and foster economic analysis tailored specifically to their own regions. In this case it is recommended that these new data follow international and national statistical standards and recommendations". (IRTS 2008, para. 8.31).

5.43. As stated in chapter 3, the proposed basic set of statistical data and indicators- no more than 15- to be obtained from R-TIS for comparability purposes (both internationally and intra-nationally) should be considered as a minimal requirement for analytical purposes. For instance:
- The information selected is considered to be the minimum required input for modelling exercises. (Data modelling techniques are used extensively to derive synthetic estimates when the cost of obtaining small area statistics is too great to obtain them from a survey.) To the extent that this is the case, the initial information set would be complemented by indicators obtained from such exercises, always taking note of the effects on comparability (e.g. indicators of job creation, pollution generated by tourism industries, same-day visitors, average daily expenditure referring to different sub-sets of visitors, etc.); (Additionally, please see Annex 22);
- Both sets of information (statistical data -basic data and indicators- and synthetic estimates) and other indicators would make it possible to advance in both the macroeconomic analysis of tourism and in the design of instruments such as the regional TSA, social accounting matrices, general computable equilibrium models, etc." (para. 4.18 of UNWTO/INRouTe (2012) "A closer look at Tourism").

5.44. It should also be mentioned that the six sources identified (Border survey - Domestic tourism household survey - Accommodation survey - Statistical business register - Structural business survey - Population census) enable setting up an articulation between national level data and regional level data. This should be understood as a priority objective in terms of the measurement of regional tourism and the development of a Regional Tourism Information System (R-TIS). Such an articulation nation-region will produce a conceptual and data framework for analyzing interregional tourism within a harmonized framework; and in so doing, will also contribute to international comparability between regions. (para. 5.12 of UNWTO "A closer look at Tourism").
5.45. Also a cautionary remark seems quite appropriate about the temptation to think that setting up a R-TIS requires necessarily that national surveys could expand their sample size for specific regions where tourism is particularly significant: before so doing, this document suggests to evaluate if this extra cost could be justified in terms of the complementary amount of records to be obtained (see para. 5.14).

5.46. An additional remark seems also fitting in the context of this chapter: it refers to the statistical relevance of the number of basic data and indicators that should be included in the R-TIS regarding "Tourism and sustainability". This is not a trivial remark because usually the measurement of tourism in a sustainability perspective refers to the same indicators that those measuring tourism as an economic sector (notably arrivals and overnights figures). The Sustainable Tourism Indicator System for Andalucía is a best practice example of properly addressing the complexity of a set of indicators for such purpose (see following Box).

**Box 6. New Utilities for Regional TSA Information System: Sustainable Tourism Indicator System for Andalucía**


In the case of Andalucía, the elaboration of a R-TSA has been favoured by the following facts:
- The importance of tourism in the regional economy
- Decentralisation in terms of tourism policy in Spanish regions
- A well developed regional statistical system: the regional Statistical Institute (IECA) has produced Regional Accounts since the year 1975 with updates every 5 years.

The first experience on R-TSA in Andalucía was the pilot experience for the year 1995; since then, such exercises are updated every five years. Such a process has been a major input for identifying main gaps of statistical information and methodological differences between demand and supply statistics previously used, as well for reshaping the evolution of the system of tourism statistics.

In fact, as important as the R-TSA publication every five years, is the required process of elaboration and the methodological requirements imposed by the production of a TSA. First of all, the satellite methodology implies being part of the total system of the economy of reference and in addition, the fulfillment of UNWTO requirements for the TSA has configured the Statistical System for Tourism in the region of Andalucía. Therefore, the elaboration of R-TSA since 2000 has helped Andalucía to produce, not only a high volume of statistical information for tourism, but also to focus on the quality of these statistics in order to obtain a better understanding of tourism activity and its components (demand and supply) and the connections between them.

In the case of Andalucía the experience acquired during the production of subsequent R-TSA exercises has eased the process of creating a complete system of tourism statistics, providing not just the information and the interrelation with economic accounts but favouring the development of the System of Sustainable Tourism Indicators dynamic and interrelated not only with the economic accounts but with the environment, the cultural sector, the territory and with the destination as a whole.
Chapter 6. Measuring tourism and sustainable development at sub-national levels: setting the focus

A. Introduction

6.1. This chapter identifies some issues of particular relevance to the measurement of tourism in relation to sustainability that have not always received the attention required. This might have been due probably to the fact that the concept of sustainability is a "policy concept"; therefore there is no agreed definition of sustainable tourism that might be directly amenable to measurement. At this time, it may be premature to spend significant resources to determine a singular definition; however, it is likely to be necessary to be able to describe the elements and perspectives relevant to sustainable tourism such that the work on developing the statistical framework is scoped appropriately. The description of sustainable tourism will reflect a combination of the user requirements and a general understanding of sustainable development as encompassing economic, environmental and social dimensions.

6.2. The conceptual design developed for setting up the R-TIS as proposed in this document (see Chapter 3) is supported by the understanding that the central core of such a system should allow for scalability of particular sets of layers of information; such concepts should be properly understood (see para. 3.27):

- **Scalability**: Refers to the integration of information across different spatial scales with the aim of developing information sets for particular type of analysis at a level suitable for public policy purposes as well as for key tourism stakeholders interest. Indicators, aggregates and totals may serve many purposes depending on the scale at which they are applied, on the audience to be reached, and on the quality of the underlying data. Scalability might be associated to rearrangement of data meaning the procedure to reorganize information sets produced in a research area in order to be used in others; this is the case of INRouTe’s proposed set up of a R-TIS in which the set of statistical data should be generated by articulating different type of information layers (see Statistical information-layers-)

In this document, scalability is associated to the geo-reference of basic data and indicators at the sub-regional level; re-arrangement implies using own classification categories in order to use such information for analysis purposes. In the particular case of linking tourism and environmental sustainability, scalability should require the use of GIS at the level of cadastral units in order to integrate in such scale resident population, visitors, accommodation establishments and use-activity of visitors, as the main set of data; supplementary data such as other establishment in other tourism industries, tourism natural and build resources, etc, should also be geo-referenced in due time.

- **Statistical information** (layers): It is proposed that the articulation of a basic core of national / regional layers of statistical data derived from available national statistical sources on economic, environmental and socio-cultural dimensions of sustainability is the main priority in the setting up of a R-TIS. In due time, a second type of layers are also suggested by extending such link to sub-national levels such as other sub-regional administrative or analytical units, municipalities, multi-local (more than one municipality), other local administrative or analytical units. For such purpose it might be necessary to
develop sub-national statistics for any of such dimensions. The term “articulation” implies linking with statistical rigor national and regional data used to measure the same variables.

6.3. The operationalization of such concepts allows to set up an integrated information system with three basic axes: activity of individuals (being tourism the main focus), territory (using different scale of analysis) and sustainability (including the three dimension: economic, environmental and sociocultural). Such a system implies the coherence of data used in terms of international statistical standards.

Figure 1. Integration of tourism statistics in a broader context. Source: Hernández Martín, R. (2015)

6.4. From a statistical perspective, tourism statistics should look for the integration in a broader measurement framework; this document has a statistical focus and refers to the subnational dimension but not all the three dimensions of sustainability are equally addressed:
- Tourism statistics international standards (IRTS 2008 and the TSA: RMF 2008) refer basically to the economic dimension and this document has been conceived as a guidance reference to adapt such standards to subnational levels;
- Being statistical standards, the 2008 documents share a systems approach (see Glossary) with others such as the System of Environmental and Economic Accounting (SEEA_CF 2012) and complementary documents (SEEA Experimental Ecosystem Accounting, SEEA Applications and Extensions, and the Framework for the Development of Environmental Statistics –FDES 2013);
- There is no such integrated approach between 2008 tourism standards and environmental statistics standard (the Framework for the Development of Environmental Statistics –FDES- 2013). Nevertheless, FDES2013 document suggests some initiatives where the INRouTe project might contribute for a closer approach between these standards taking advantage of the new paradigm arising from the SEEA: space is related to assets that provide services (see Annex 16 on SEEA data for tourism);
There is no attempt in this document to consider any similar link between tourism statistics and socio-cultural statistics; the only references are the use of Population Census and employment data for setting up of a R-TIS and the potential of two shared characteristics of culture (the fact that both are territorial based activities and labor intensive sectors) that could set up a common statistical agenda between UNWTO and UNESCO in due time.

6.5. From a different but related perspective, the United Nations has adopted the 2030 Agenda for Sustainable Development; its 17 Sustainable Development Goals (SDGs) and corresponding 169 targets, will apply to all countries. Tourism is explicitly mentioned in the SDGs in three targets:
- Goal 8, on the promotion of “sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, includes as Target 8.9 "By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products";
- Goal 12 aimed to "ensure sustainable consumption and production patterns" includes as Target 12.b to "Develop and implement tools to monitor sustainable development impacts for sustainable tourism which creates jobs, promotes local culture and products";
- Goal 14 set to "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" includes as target 14.7 "by 2030 increase the economic benefits of SIDS and LDCs from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism".

6.6. As already mentioned, UNWTO is convinced that this document can contribute to the objectives of the 2030 Agenda for Sustainable Development in the understanding that tourism measurement at subnational levels might be useful to apply it in due time (see para. 2.6).

6.7. For that to happen, the recommendations included in this document in order to set up a R-TIS should allow to integrate tourism statistics developed at those spatial scales used by the Ecosystem Accounting framework.

6.8. The following paragraphs provide recommendations about how tourism statistics should look for the integration in a broader measurement framework regarding the three economic and environmental dimensions of sustainability.

A.1. The economic dimension

6.9. The relationship between tourism and sustainable development in terms of its statistical measurement was introduced for the first time in the IRTS 2008 document in sub-chapter 8/D; as can be checked in box 7, all along the 12 paragraphs, the scope of its measurement at national and subnational levels imply a very different focus.

In 2006/2007, when the final phase of drafting the IRTS document to be presented to the UN Statistical Commission meeting in 2008 was taking place, UNWTO was not active in the world-wide discussion (officially launched by the UN Statistical Commission by 2005) for a consolidate approach after the experience of successive updates of the Handbook of National Accounting: Integrated Environmental and Economic Accounting (United Nations, 1993).
The Statistical Commission determined that the revision of the IEEA should first proceed as a proper area of work with the development of a Central Framework covering those issues on which there had been general international agreement (in fact, the new System of Environmental and Economic Accounting (SEEA) Central Framework document was approved by 2012), and then proceed with the development of material covering those issues on which agreement was not likely to be reached within the timeframes available and on which on-going research and discussion would be required. (SEEA_CF 1.16).

6.10. Such second area of work became focused on accounting for the environment from the perspective of ecosystems. While SEEA Experimental Ecosystem Accounting is not a statistical standard, it provides a consistent and coherent synthesis of current knowledge regarding an accounting approach to the measurement of ecosystems within a model that complements the SEEA Central Framework 2012 document (SEEA_CF 2012).

Also during the revision process, a need emerged for material covering potential extensions and applications of SEEA-based data sets, which would fulfil the aim of promoting and supporting the widespread adoption of the SEEA among official statisticians, researchers and policymakers. To this end, SEEA 2012 Applications and Extensions was developed.

6.11. The SEEA Central Framework document is also supported by publications that further elaborate the conceptual framework of the SEEA for specific resources or activities. These include, at present, the SEEA-Water and others such as the SEEA-Energy and the SEEA-Agriculture, Forestry and Fisheries are expected during 2017.

SEEA-CF 2012 and its complementary materials urges for the update of IRTS 2008 paras. 8.33 to 8.45 (reproduced in Box 7) in order to properly clarify the differences between the macroeconomic and national approach for Tourism and Sustainable Development (identified with the Tourism Satellite Account) and the subnational approach (also referred in IRTS 2008 as “empirical approach” identified with “indicators”).

**Box 7. IRTS 2008 sub-chapter 8/D “Tourism and sustainability”**

<table>
<thead>
<tr>
<th>D. Tourism and sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.33. The issue of tourism and sustainability is an increasingly important one and any measurement of tourism and its effect on an economy must take into account the social, economic and environmental impacts. Links with the latter component should be a high priority.</td>
</tr>
<tr>
<td>8.34. Nature in its pristine form (mountains, beaches, tropical forests, deserts, etc.) or transformed by humans (landscapes, cultural heritage, etc.) is an important attraction for some visitors.</td>
</tr>
<tr>
<td>8.35. But tourism also contributes to irreversible damage to the environment, through pressure on fragile ecosystems, through construction of resorts or roads that destroy the natural sites and heritage, through the pressure that is exerted on land, water and air and through diverse processes of all kinds generating pollution, discharge of residuals, erosion, deforestation, etc.</td>
</tr>
<tr>
<td>8.36. This damage may also affect the feasibility of new tourism development in given locations or the profitability of present tourism investments and, consequently, affect job creation and employment.</td>
</tr>
<tr>
<td>8.37. In the last 10 years, the growing awareness about the negative impacts associated with certain tourism practices, along with the general acceptance of the principle of sustainable development, has led the world community to reassess tourism activity in the light of its long-term economic, social and environmental sustainability.</td>
</tr>
<tr>
<td>8.38. In recent years, beyond the measurement of the economic contribution of tourism in terms of Tourism Satellite Account aggregates and other complementary and/or alternative modelling exercises</td>
</tr>
</tbody>
</table>
8.39. Both approaches (macro-accounting and indicators) have their potential and challenges for measuring at different territorial levels the links between tourism and the environment and thus are recommended as the first priority regarding tourism sustainability issues.

8.40. The existence of both the Tourism Satellite Account and the system of environmental and economic accounts (SEEA) allows a country where both international recommendations are being developed to estimate the links between tourism and the environment at the level of the national economy. This could be done in two ways: (a) Incorporating tourism as a specific set of industries and of consumers within the hybrid flow accounts of the environmental accounts; (b) “Greening” the tourism GDP that is derived from the Tourism Satellite Account, taking into consideration the cost of the degradation of the environment and the use of the natural capital by tourism; expenditures that prevent degradation could also be taken into consideration as a further adjustment.

8.41. The core of this macro-approach at national level consists in establishing a more complex type of input/output matrix in which not only the “usual” inputs are considered, but also environment inputs are established in quantity, and output also includes waste, greenhouse gas emissions and other environmentally significant by products. Consumption of fixed capital would also include estimation of the degradation of the environmental assets. As the core of the Tourism Satellite Account is a representation of tourism industries and tourism consumption within a supply and use framework, it could be adapted into this type of analysis, provided both the Tourism Satellite Account and environmental accounts are compiled at a sufficient level of detail to allow some type of mutual integration. Nevertheless, leaving aside conceptual issues, there is increasing evidence that developing each type of account is not a straightforward exercise.

8.42. The second approach is more empirical and might be more appealing to countries in which existing tourism regions and destinations would be interested in the design of concrete and geographically-oriented goals and policies in terms of developing a more environmentally-friendly tourism with which all stakeholders might be associated, including visitors.

8.43. In this case, the focus would be to develop a set of indicators to highlight an interface between tourism and environmental issues that might identify phenomena or changes that require further analysis and possible action. Like other indicators, these indicators are only tools for evaluation and have to be interpreted in context to acquire their full meaning. They might need to be supplemented by other qualitative and scientific information, notably to explain driving forces behind indicator changes, which form the basis for an assessment.

8.44. These indicators might be used as a central instrument for improved planning and management, bringing managers the information they need when it is required and in a form that will empower better decisions.

8.45. It is recommended that linking tourism and sustainability be considered a priority.

6.12. To date, the first approach barely counts with a sufficient number of case studies that would enable the setting up of a methodological design to standardize how such a link between TSA and SEEA could be set-up. It may be expressly noted the pioneering exercise conducted by Statistics Canada during 2007/2008 (Jackson, Kotsovos & Morissette, 2008), and more recently the one included for Italy in the SEEA Application and Extensions document.

In any case, it is a national and macroeconomic approach that takes into account the entire country and on which the UNWTO has taken up the challenge of moving towards that goal. For both reasons, such an approach is beyond the scope of this document.

(Interested reader should see UNWTO Measuring Sustainable Tourism (MST), http://statistics.unwto.org/mst).
6.13. The subnational approach as referred in the IRTS 2008 is not linked to the TSA (which focuses on tourism as an economic sector) but just to “indicators” and has been preferred not only by countries but also by International Organizations such as UNEP, UNWTO, European Energy Agency, European Commission and others. In most cases the approach for such link between tourism and sustainability has not been statistics oriented and have been developed before the new international standards on tourism statistics (IRTS 2008 and TSA:RMF 2008) were approved by the UN Statistical Commission. Nevertheless, it would seem obvious that the adaptation of such standard to subnational levels should imply not just the measurement of the consequences of the flow of visitors on the sustainable development of the territory of reference but also the identification of tourism as an economic sector and its proper statistical measurement (which is a clear recommendation of IRTS 2008).

6.14. Moving from the generic concept of “indicators” to the rigorous measurement of tourism at subnational levels, requires understanding two types of connected initiatives:

- First it will be necessary to measure and analyse the volume of tourism activity in a given territory (which means taking into account the importance of tourism flows as well as the goods and services demanded by visitors). Formulated so, we would be giving priority to tourism destinations as the preferred observation unit (a territorial entity identified as an analytical unit);
- For that purpose, it would be necessary to count with basic statistical data and indicators of the tourism sector in such destination (both from the demand and supply side –including employment and number of establishments of tourism industries-) likely to bring a structural approach to this sector (i.e., what are the magnitudes and basic parameters to address a rigorous economic analysis of the sector); that is, the objective should be allow for a descriptive structural analysis, with the desirable rigor and completeness to be developed for a multiannual period of reference (not necessarily to be carried out annually);
- Secondly, the sustainability analysis (i.e., how tourism affects the overall sustainable development of such territorial entity) involves measuring both the resident and the tourism population and analysing how tourism activity does or not approach those objectives to ensure that their impact in terms of sustainability are zero or negative; that is, the objective would be to conduct a regular assessment of the corresponding impacts and contributions over those three components of sustainable development aforementioned.

6.15. Surely it is no coincidence that the limited experience available to address the measurement of impact / contribution of tourism to the sustainable development has not been particularly successful. At least three major reasons could be identified:

- Most of the experiences are initiated before the approval by UN in 2008 of the new international standards on tourism statistics that have proved to bring a solid conceptual framework to the measurement and economic analysis of tourism;
- There has been no clear international leadership fostering the need for international comparability at least on the most researched dimension of sustainability: environmental;
- The isolation of tourism statistics background from general economic and social statistics development: concepts like “tourism sector”, “tourism related employment”, “tourism population” and many others are not yet familiar within the tourism community (in particular, practitioners and researchers) but are key concepts in order to develop sustainability type of indicators.
6.16. As already mentioned (see Chapter 1, section C) one of the singularities of the INRouTe initiative vis-à-vis other projects or initiatives regarding tourism at sub-national levels is its statistical foundation by adapting the 2008 UN international standards on tourism statistics as well as the cooperation agreement with UNWTO. Such approach allows for a robust conceptual design of a R-TIS and its set up (for the provision of a set of basic statistical data and indicators –being its basic core the link of tourism and sustainable development-) in the perspective of measuring and analysing tourism in a standardized way in order to allow for comparability (both intra-national and international) of those regions where tourism is significant.

This approach jointly with the existence of a regional inter-institutional network for the setting up of a R-TIS (see Chapter 3, section E.2), should allow for a supplementary objective such as facilitating the incorporation of sustainability criteria in decision-making and management of tourist destinations by the corresponding key tourism stakeholders. In fact, the recommended design of the inter-institutional network points to such initiative as a key objective.

A.2. The environmental dimension

6.17. There are different types of arguments that underline the strong relationship between tourism and environmental sustainability and consequently, the need for a closer link regarding the measurement of both areas. For instance:

- Resources in and impacts on tourism and environment, respectively, tend to be highly concentrated in the territory. Tourism and environment cannot be understood without reference to the territory. They have both local, regional, national and global implications;
- Tourism very often takes place in sensitive environmental zones, particularly coastal zones and natural protected areas;
- Tourism development should be understood as a process respectful with territorial assets in order to make compatible territorial preservation and development;
- The analytical and policy interests of tourism and environmental managers may not always be the same. Therefore, a way of using information from each of them and then being able to rearrange it is needed. Tourism managers may be interested in the impacts of a destination while environmental authorities may be interested for example in impacts taking place on a coastal basin due to more than one destination and also by non-visiters;
- Tourism is both a factor in environmental negative impacts and a strong ally of environmental protection, given that it uses environmental resources and services in order to provide its own services;
- Both tourism and environmental statistics have been influenced by the dominance of mainstream economic statistics: administrative borders, despite being misleading, are mostly used and the economic approach dominates. For example, there are not sound statistics on biodiversity or water consumption worldwide that can be used and integrated with tourism statistics;
- Mobility of people is a key, but neglected, issue for both tourism and environmental statistics;
- Environment and tourism statistical alliance can improve existing methodologies by putting the focus on the geographical scale and avoiding administrative limits (by also using analytical units);
- Rearrangeability and scalability of information displayed in layers is the way of improving decision-making in transversal topics such as tourism and environment (see para. 3.27);
- The origin of tourism studies in many countries is related to national park management. This is an example of the sharing methods of tourism and environmental fields.

(For more details, interested readers should see Chapter 2, section D.2 as research areas” as well as Chapter 4, section C.2).

6.18. With such a focus, this document identifies three main priorities as strategic policy issues regarding the measurement and analysis of tourism at subnational levels:
- In order to bring credibility to regional tourism as a key driver of economic development there is a need for developing a proper conceptual design of a Regional Tourism Information System (R-TIS);
- For comparability purposes (which is UNWTO responsibility as UN specialized agency for tourism) such R-TIS should have as its basic core official statistics;
- Tourism activity impact environmental sustainability and consequently, those basic statistical data and indicators derived from such R-TIS should be applicable first of all to a regional level but also, in due time, to a regional/ sub-regional breakdown such as tourism destinations / cities.

6.19. The connection of such priorities should be based not only on the statistical framework of tourism statistics international standards (IRTS 2008 and TSA:RMF 2008) but also on other statistical standards related to environment statistics and the system of environmental economic accounting (UNSD et al., 2014: SEEA_CF 2012). The link of all these UN international standards has been supported by a common approach labeled as a “systems approach”, meaning that in any particular thematic area the application of concepts, definitions, classifications, accounting procedures and principle of recording must be consistent with those of the System of National Accounts (SNA 2008).

6.20. For that to happen it is crucial that tourism datasets at subnational levels be geo-referenced including not just tourism data but also supplementary data in order to allow for linking measurement and analysis between tourism and ecosystems in specific territorial entities. Such geo-referenced databases would allow for scalability of the information needed in different sub-regional territorial levels. In order to operationalize such connection between the three priorities already mentioned, this document refer to statistical concepts and definitions as in the 2008 standard and proposes new ones as explained in the Overview /para. 0.6). The following concepts have been particularly crucial:
- Articulation of national / regional/ sub-regional basic statistical data and indicators;
- Statistical information (layers);
- Territorial entities (hierarchical classification for a subnational breakdown);
- Scalability;
- Significance (economic importance);
- Statistical information (layers);
- Geo-referenced data bases;
- Tourism population;
- Regional tourism.

6.21. Regarding the Economic Environmental Accounting project launched by the UN since the beginning of this century, readers should be advised that in addition to the SEEA_CF 2012 international standard, other complementary documents have been disseminated.
in the last years: that is the case of *SEEA 2012 Applications and Extensions, SEEA Experimental Ecosystem Accounting 2014, “Framework for the Development of Environmental Statistics –FDES 2013-”* and *“SEEA Experimental Ecosystem Accounting: Technical Guidance”*. All along this chapter different paragraphs of these documents are quoted although in some cases only partially.

6.22. Tourism is explicitly mentioned in *SEEA Applications and Extensions* document as an example of SEEA extensions: such a case “involves a decomposition of existing SEEA accounts using additional information, for instance through linking to specific spatial areas, through further breakdown of the household sector, or through a focus on certain themes where there is an interaction between human activity and the environment, such as tourism....” (EC, OECD, UN & WB (2014) SEEA Applications and Extensions para. 4.2.).

6.23. The link of TSA to the SEEA (both are satellite accounting systems of SNA 2008) can be made by explicitly identifying tourism as a set of industries and of consumers within environmental combined physical and monetary flow accounts of the SEEA_CF (EC, OECD, UN & WB (2014) SEEA Applications and Extensions para. 4.4.). In fact, this approach was outlined in IRTS 2008 para. 8.40.

6.24. The link to the SEEA can then be made by focusing on (i) the residuals generated as a result of tourism consumption (either by the visitors themselves or by the enterprises supplying goods and services to visitors; and (ii) the natural inputs used in the production of tourism products. Important connections may also be possible by linking measures of tourism activity to measures of ecosystem condition and extent. For example, activity to improve the attractiveness of an area to tourists may lead to improvements in ecosystem condition. Alternatively, increasing tourism activity may increase environmental pressures and reduce ecosystem condition. Measures of ecosystem condition and extent are not well developed. Initial efforts in this area are summarized in SEEA Experimental Ecosystem Accounting. (EC, OECD, UN & WB (2014) SEEA Applications and Extensions para. 4.51.).

This new impetus arising from the international effort of setting up the *System of Environmental Economic Accounting Central Framework (SEEA_CF 2012)* and supplementary initiatives as previously mentioned urges UNWTO to update IRTS 2008 sub-chapter 8/D "*Tourism and sustainability*" (see
6.25. Box 5). There are at least three reasons for such an initiative:
- TSA and SEEA extended approach might allow for the provision of new macroeconomic indicators besides those derived from TSA exercises; both type of indicators apply to a national context and would enrich Sustainable Development Goals (SDGs) indicators framework. In this case we would be moving from statistics international standards to an extended experimental accounting approach focusing on tourism and environmental sustainability;
- Some indicators might be applied at “finer levels of geographical detail” (SEEA_CF 2012 section 6.3.3/Data by geographical area); by so doing it would be feasible to derive modeled data useful for measurement and analytical purposes at subnational levels;
- Such an effort will require also a methodological background which presumably will enrich tourism statistic standards 2008 conceptual design; if that would be the case, INRouTe would be benefited by that and will also need to update different recommendations as suggested in this document (see chapter Explanatory Notes / Foreword);
- Linking tourism measurement of ecosystem provision of services for “tourism and recreational purposes” would allow for new indicators focusing on the environmental pressures due to the development of tourism at different subnational territorial levels. Subnational basic statistical data as well as the list of those indicators proposed in this document (see Chapter 3) for comparability purposes (see para. 3.18) could be used if properly geo-referenced, for identifying tourism in ecosystem accounting related data.

By so doing, the SEEA Experimental Ecosystem Accounting framework would benefit of UNWTO/INRouTe support for subnational tourism measurement in line with the recommendations provided in this document; some of them are imbedded in the following paragraphs and will be further developed in the following sections of this chapter.

6.26. Linking tourism (operationally defined in the tourism statistics international standards) and sustainable development (a policy oriented concept without any universally accepted operational definition for its measurement) is a complex and challenging task; in fact the work presented in this document provides some background that could be helpful in clarifying the difference between tourism as an economic sector that impact the socio-economic components of sustainability and the environmental impact due to tourism infrastructure and the activity of visitors.

6.27. INRouTe’s first effort has been the design of a conceptual framework for the measurement of tourism as a sector of economic activity at subnational levels (see para. 1.1); consequently, there is a need to set up a classification of territorial entities to be adapted by each country according to the significance of tourism in different parts of the national territory.

This perspective of tourism, not only as a phenomenon of demand, but necessarily implying that a given territory may or may not qualify as a destination depending on the existing level of supply and demand, it is a necessary requirement for public authorities to count with sound information and hence tourism development planning at subnational levels. On the one hand, because the very sustainability of the tourism sector is something particularly relevant in the mature tourism destinations (given the relentless growth of tourist flows) and, on the other hand, because tourist development in a given territory often negatively affects its own environmental sustainability.
6.28. In any case, all these UN statistical international standards and complementary documents on environmental accounting insist once and again on the need for developing integrated information systems; consequently, terms as "integrated data", "multi-dimensional", "cross-cutting issues", etc. appear systematically all along this chapter.

6.29. Such insistence goes inline with the focus of this document; adapting the UN 2008 international standards for the measurement and analysis of tourism at national level to sub-national levels, has proved to be not just a mere question of semantics (changing the term ―nation‖ to ―region‖ or ―tourism destination‖, for example). It is a challenging issue that requires interdisciplinary research in order to overcome what Professor Jafar Jafari\(^{41}\) formulated as tourism's detrimental tendency to isolate itself, as is the case for instance, in relation to sustainability: "In the name of sustainability, we now have many models of 'sustainable tourism development'. These boosterism molds often suggest that this [sector] in and by itself can become sustainable. However, tourism cannot be isolated from the larger contexts which structure and explain it, as many do".

6.30. The focus of the work presented in this document is consistent with the recommendations referred in the *Framework for the Development of Environment Statistics (FDES) 2013*. As already explained, this new international statistical standard updates the FDES 1984 and in such revision it was taken into account "the increasing prominence of environmental sustainability and sustainable development issues and concepts. Existing environment statistics and indicator frameworks were analyzed, including major developments in the field of environmental-economic accounting and selected thematic developments pertinent to environment statistics" (UNSD, 2015: FDES 2013, para. 1.7).

6.31. These clear policy positions on sustainable development, taken after the publication of the FDES in 1984, have had direct relevance to the area of environment statistics. It is vitally important to take them into consideration in this revision as the concept of sustainable development has played a defining role in helping to coalesce thinking around goals that are well-defined and representative, regarding the state of the environment.

"This concept of sustainable development has underscored the point that it is important to conserve the environment while ensuring the economic and social well-being of the world’s human population. Adequate response to these initiatives has contributed significantly to defining the statistical needs in this area. Any conceptual approaches that ensue for describing the environment must respond to them, making possible a better understanding of the sustainability of the environment as well as serving the function of assessment and decision support". (As part of Annex B/B.8 FDES 2013).

6.32. It should be highlighted that FDES 2013 warns that "environmental indicators have the purpose of defining objectives, assessing present and future direction with respect to goals and values, evaluating specific programmes, demonstrating progress, measuring changes in a specific condition or situation over time, determining impact of programmes and conveying messages". This recommendation makes a clear difference

\(^{41}\) Jafari, J., Bridging Out, Nesting Afield: Powering a new platform, *The Journal of Tourism Studies*, 16 (2), James Cook University, Australia, December 2005.
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between B.1 Tourism and environmental sustainability related indicators and those related with the other two components of sustainable development (B.2 and B.3). Tourism and its impacts on the social and cultural dimensions of the resident population and B.3 Tourism economic contribution and impact. (see para. 3.15).

6.33. Finally, although non a statistical document, UNWTO Guide for Local Authorities on Developing Sustainable Tourism (1998) drew attention in sections 6 and 7 on a similar approach as the one presented in the precedent paragraphs.

Section 6 “Maintaining the sustainability of Tourism” states that “with good planning, development and management of tourism, negative impacts of tourism can be minimized, but tourism development must be continuously monitored, and actions taken if problems arise in order to ensure that tourism remains sustainable”. Attention is provided on the following basic topics:
- Managing environmental impacts: describes positive and negative potential impacts (the list of these last ones is significantly larger and detailed);
- Managing socio-economic impacts: refers to tourism as an economic sector and the list of positive impacts is significantly larger and detailed that negative type of such impacts;
- Use of environmental indicators: refers to UNWTO indicators initiative that finally become the “Indicators of Sustainable Tourism for Tourism Destinations: A Guidebook” which includes environmental as well as other type of indicators;
- Maintaining the tourism product and tourism markets: the attention is focused on “upholding the sustainability of tourism also requires preserving the quality and sometimes enhancing the tourism product of tourist attractions, facilities, services and related infrastructure”.

Section 7 “Managing the tourism sector” states that “Effective management of the tourism sector by local authorities, in co-operation with the private sector and NGOs, is essential. Tourism management has several functions including policy and planning, co-ordination with other government agencies, establishing and administering standard for tourist facilities and series, marketing, education and training, maintaining the vitality of the tourism sector, monitoring and responding to crisis situations when they arise”.

One of the main topics identified in former section is the setting up of a “Tourism management Information System [...] according to the statistical standards recommended by UNWTO”; also “Maintaining the vitality of the Tourism Sector” is highlighted as another relevant topic.

Nevertheless, the socio-cultural dimension will be considered more specifically at a later stage as mentioned in paragraph 6.34. Consequently, this document builds not just on statistical international standards (tourism and environment statistics) but also on previous UNWTO non-statistical recommended guidance documents.

A.3. The Socio-cultural dimension

6.34. In addition to economic and environmental sustainability, the sociocultural dimension is crucial for tourism planning and management: poverty, employment, wages, identity, education, skills, crime, changes in host populations, living conditions, characteristics of tourism employees’ households, etc. are relevant issues for tourism key stakeholders.
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Data on these issues can be obtained from public records (being cadastral records particularly relevant), population censuses, social security, social services, and should be integrated with economic and environmental statistics.

This document does not address detailed analysis regarding sub-regional levels on this third dimension of sustainable development although the conceptual framework developed for the design of the R-TIS certainly allow for its measurement (see Annex 39).

B. Tourism and the environmental dimension: the sub-regional perspective

6.35. This section provides recommended guidelines in order to set up a particular type of statistical initiative such as the extended Regional Tourism Information System to sub-regional levels. As previously mentioned (see paras. 3.11 and 3.23), the design for an operative articulation of a national / regional tourism statistics’ dataset is a key objective. Moreover it should be seen as a first priority regarding the more comprehensive objective of developing a R-TIS including a supplementary articulation of regional /sub-regional basic statistical data and indicators. Even more so, in those countries with a developed statistical system where some regions have a very significant dependence on tourism.

6.36. The database hosting both datasets (national/regional tourism data and supplementary regional/sub-regional tourism data) should be geo-referenced and might be by its own a medium/long term project, given that its objective also embodies specific topics such as:
- Analyze relationships between tourism and the territory;
- Provide relevant information for territorial and tourism planning;
- Support investment projects;
- Set up of an improved management and monitoring background by public authorities responsible for tourism development;
- Provide insight for marketing design strategies;
- Foster economic analysis of regional tourism adapting the TSA framework;
- Allow for a multidisciplinary approach regarding tourism environmental sustainability agenda;
- Consolidate a Regional inter-institutional network for the setting up of a Regional Tourism Information System: such network should be integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institution;
- Such a network should be understood as the support for a proper governance structure decided by those stakeholders in order to guarantee the sustainability of such medium-long term initiative;
- Contribute to develop ecosystem accounting initiatives;
- Etc.

6.37. The recommended conceptual design of the R-TIS recommends the use of the following six sources (all of them national sources) to provide most of those basic statistical data and indicators that would be the core of R-TIS:
- Border survey;
- Domestic tourism household survey;
- Accommodation survey;
- Statistical business register;
- Structural business survey;
- Population census.

6.38. A Regional Tourism Information System should also include a third dataset and indicators not necessarily of official and/or statistical nature (such as electricity consumption by households, credit card expenditure records, transport authorities control, business cycle indicators, early warning indicators, etc.), considered to be relevant not only for the measurement/monitoring of tourism (carried out by the regional tourism authority or other regional entities, other entities of supra-regional scope or even by national bodies), but also for analytical purposes (such as analysis of the performance of certain subsectors and foresee their evolution, the perceptions of the demand of a certain destination, etc.).

Such dataset should also include information on sub-regional levels because some of these statistical surveys allow for such breakdown including the municipal level; in a later stage the regional/sub-regional dataset should be completed with available regional official statistical surveys.

6.39. In fact, it is recommended that for sub-regional territorial entities, the main issues to focus on could be, in a first instance:
- Define a minimum set of statistical information both from the demand and supply side (principally concerning accommodation services for visitors, numbers of establishments and the corresponding associated employment) completed by a broader set of administrative information (generated basically by the municipality or tourism destination) that could identify some characteristics of tourism activity considered to be of special interest for most if not all key stakeholders (such as vacation homes, same-day visitors, impact of special events, identifying visitors behavior at destination, etc.);
- Check if such territorial entities have or not the necessary resources to filter such data with the appropriate statistical insight (see Chapter 3) and to properly use such administrative records for analysis and the design of policies;
- It is recommended to consider the opportunity to launch demand side surveys in order to supplement national/regional data regarding the following key variables: main characteristics of visitors and trips, average daily expenditure by visitors and satisfaction during their stay. Such surveys would allow for geo-referencing such demand data using as a proxy the name of the accommodation establishment/s used by visitors.

6.40. Such approach should follow the recommended guidelines (see Chapter 4, section B) to create a regional inter-institutional network for the setting up of a Regional Tourism Information System (R-TIS): such network should be integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers.

The proposed network might request the cooperation of any type of national or subnational institution not just for launching such initiative but also to allow for potential cooperation efforts in order to progressively complete the R-TIS data set (for instance, by complementing accommodation for visitors establishments lists, available attractions, infrastructure and collective equipment related to tourism), extend such dataset to those territorial entities where tourism is particularly significant and
provide technical assistance to those sub-regional entities in order to include or use sub-regional geo-referenced data so that all data would have the same formal structure.

6.41. It is recommended that the set up of a R-TIS should focus, as a first step, on no more than 15 information items; because part of such data are also available for some territorial entities at the sub-regional level, the proper articulation of region/sub-regions should be developed and consequently, all or part of the proposed 15 indicators could also be associated to them.

Such objective will require to identify the physical space of such entities and define such units according to a Classification of Territorial Entities (see Glossary).

6.42. UNWTO STATS Unit will start asking by 2017, on a voluntary basis, for subnational statistical indicators (no more than 15) for a selected number of countries with a developed national statistical system: each of such countries will select one or more regions where tourism is particularly significant. For each of those regions (within a country) as identified in the classification of territorial entities used in this document (see Glossary), the following sub-regional breakdown would apply: other sub-regional administrative or analytical units, municipalities, multi-local (more than one municipality), other local administrative or analytical units. Such breakdown implies that some of such territorial entities could be labeled as tourism destinations. Such proposal has the potential of enlarging economic analysis as well as foster international and intra-national comparability.

Such an initiative should be understood as developing a sustainable network of countries that should identify the required data and determine the best way of collecting it on a regular basis; it should also include UNSD in order to allow for its expansion in due time, as a global initiative aligned with the UN 2030 Sustainable Development Agenda.

C. Adapting the Regional-Tourism Information System (R-TIS) to Sub-Regional Extensions

6.43. To properly understand the nature of such a system (the R-TIS), the following remarks are highlighted all along this document in order to provide proactive arguments to support such medium-long term initiative:

- This initiative has been conceived and developed as the adaptation of 2008 international standards for tourism statistics (the International Recommendations for Tourism Statistics –IRTS 2008- and the Tourism Satellite Account: Recommended Conceptual Framework –TSA 2008-) to subnational levels;
- It is recommended that the basic core of such system refer to basic statistical data and indicators; most of them should be derived from official statistical surveys at the national level (six main sources have been identified). Other regional official statistical data might be also included;
- Such national sources are available in practically all EU member countries as well as in non-European countries pertaining to the G.20 international community;
- The conceptual design of the R-TIS uses a set of concepts, operational definitions, accounting rules and principles of recording and classifications consistent with those of the System of National Accounts. Also other statistically supplementary concepts have been included (the INRouTe initiative has developed around 15 new concepts such as tourism population, significance-economic importance of tourism at territorial levels-, scalability, regional tourism, etc.) and it has moved...
away from the statistically vague term of destination, to a precise hierarchical classification of territorial entities;
- The setting up of the R-TIS requires also a particular type of governance structure: a regional inter-institutional network integrated by key tourism stakeholders (both at the regional and sub-regional levels) and supported technically by a multidisciplinary group of experts in statistics, geography, economics and tourism as well as other practitioners and researchers. Such a group might request the cooperation of any type of national or subnational institutions;
- The R-TIS database is recommended to be geo-referenced (not only for rearrangement of data but also for mapping purposes) and prioritize an articulated set of basic data at the national/regional levels;
- The initiative of setting up a R-TIS is recommended as a necessary pre-requisite for comparing nationally and internationally main tourism destinations and cities where tourism is significant, as well as to rigorously measure territorial, environmental and other economic and social impacts of tourism activity;
- Other countries without such an advanced level of statistical development might find inspiring this document and might also request UNWTO for technical assistance in order to set up a planning work schedule for those regions where tourism is particularly significant, to be in line with the recommended guidelines proposed. This is of particular interest for those countries that have decided to renew their national tourism information system as the first phase of a Project that also includes the subnational measurement as a second priority.

C.1. Basic and supplementary information

6.44. At the sub-regional level (and particularly at the city level), it should be highlighted that even for those territorial entities where tourism is significant, it may not always be appropriate to adapt the conceptual design of the R-TIS due to organizational and financial arguments that such initiative would require. In other words, it seems more feasible and appropriate that the Regional Tourism Information System should also include sub-regional basic statistical data and indicators from national and regional statistical surveys if available.

6.45. Nevertheless, it might be the case that sub-regional tourism authorities require for policy design as well as for management purposes, supplementary information obtained from ad hoc statistical surveys or other type of information (non official and/or non statistical) derived from administrative records. In this case, the following paragraphs included in the DCMS Allnutt report (2004) are still pertinent:

"Those requiring local statistics need –and should pay for- supplementary local surveys that should follow nationally set standards.

Usual residence based sampling frames are not appropriate for surveys measuring tourism in a locality. If adequate lists of accommodation providers are developed they could provide a sampling frame for local surveys to supplement national domestic tourism and inbound tourism surveys with the sample formed by those staying in sampled accommodation on sampled nights.

Such surveys would not cover the visitor nights spent in friends and relatives’ homes. To cover these, one would need to include relevant questions in household surveys conducted in the locality –or if there were no such surveys purposely conduct a
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6.46. Therefore, irrespective of what type of sub-regional territorial entity, it is recommended to develop a feasibility study to properly evaluate whatever possibilities of improving and expanding basic statistics and indicators would be more appropriate.

6.47. It is recommended that in order to supplement sub-regional basic data and indicators already available (both statistical or not), tourism destinations and municipal authorities might consider if it could be appropriate to carry on different type of surveys; ideally, such surveys should address the measurement of different topics not usually identified in official statistical demand side surveys such as tourism behavior, activities carried on while at destinations, itineraries undertaken, etc.

More specifically, such indicators (providing mainly physical type of information) can be both statistical or derived from some particular type of administrative records. In both cases data should be associated with a time series in order to allow for statistical type of analysis in relation with some basic tourism aggregates. Some examples of such indicators could be:

- Population and housing census (focusing on second homes and rented houses in particular);
- Consumption of water and electricity;
- Big data type of information (examples below).

Regarding big data, it needs to be underlined that the exploitation of such data bases is in the interest of nations/countries but perhaps even more of sub-national territories that have more issues for statistic estimation. Within that line of thought, the research advances made particularly at sub-regional levels could be in the form of case studies that could be replicated in other territorial entities.

Two data bases that have already been explored in connection to tourism are the use of credit card information and cell phone tracking, inferring from them residents’ mobility in general and visitors’ mobility in particular.

Regarding credit card information exploitation, it represents partial information but highly of interest. It is partial for the following reasons:

- It is unknown whether its use is of a tourism nature or not;
- There is expenditure impossible to be broken-down by activities and by geographical levels as they are performed jointly (e.g. tourism package bought in the point of origin).

However, this information can help checking against different estimates conducted as at least the following can be known:

- Entities, number of credit cards, and expenditure;
- Their "place of residence";
- Where they were used at the highest possible level of disaggregation;
- Expenditure:
  - total and average
  - per different sectors and activities.

Concerning cell phone usage, the first element to be highlighted is that in developed economies more than 90% of the population count with a cell phone, in 2015 one-quarter of the global population used smartphones and this is expected to grow to one-
third by 2018⁴², which allows for an approach that can be checked against the available demographic statistics.

This alternative can offer relevant information at least to contrast the number of incoming and internal trips and some of their basic characteristics. Moreover, if this where of interest at the state or country level, it could be considered key for tourism estimation at sub-national levels with the desired geographical disaggregation. It could even be useful to monitor the flow of visits within a given territorial entity currently under research.

From an operational standpoint, according to Williams et al. (2015) "every time a person makes a voice call, sends a text message or goes online from their mobile phone, a call detail record (CDR) is generated which records time and day, duration and type of communication, and an identifier of the cellular tower that handled the request. The approximate spatiotemporal trajectory of a mobile phone and its user can be reconstructed by linking the CDRs associated with that phone with the locations (latitude and longitude) of the cellular towers that handled the calls." (2015, pp.2). In principle it would entail exploiting the records (CDR) and GIS data of mobile phones. Information that could be obtained would be:
- number of trips;
- the precise geographic location.

6.48. Such information could be potentially linked with other supplementary data obtained by appropriate surveys, such as:
- Place of residence of the device, and infer the place of residence of the traveler;
- Visited places;
- Trips made within its usual environment, recurring and motivated in its activity and also issuing trips of residents;
- Incoming tourism trips with overnight;
- Number of overnights;
- Access points;
- Incoming trips without overnight (excursionists).

6.49. Nevertheless, the nature of such potential supplementary data is not just demand side data but also supply side one. Due to the nature of data obtained from statistical surveys, the territorial entities for which such data might be available are administrative entities and have, almost in all countries, the municipality as their lower level of ventilation.

6.50. Because tourism is a transient situation, sometimes even a seasonal phenomenon, municipalities might need to invest in sufficient basic collective equipment and infrastructure to cope with peaks.

In such situations, which is the case of a good number of tourism destinations, there is progressive evidence and consensus that more detailed breakdown of territorial units might prove to be useful for measuring tourism behavior at destination, setting up different typologies of visitors and analyzing the economic and social territorial impacts.

6.51. Such units, whatever they could be labeled ("small areas" or "small territorial units") would qualify as analytical units and could be labeled generically as "small tourism

⁴² Source: eMarketer 2015
destination area" (STDA); next sub-section Analytical territorial units for sub-regional measurement and analysis of tourism will focus particularly on tourism destinations using a case study supported by the regional statistical department of Spain’s Canary Islands Region, which uses a proper terminology of territorial entities.

C.2. Analytical territorial units for sub-regional measurement and analysis

6.52. INRouTe’s proposed hierarchical classification of territorial entities include administrative and analytical units (see Glossary), because such units might qualify as a tourism destination (which is a basic unit for tourism measurement and analysis at subnational levels). The following paragraphs will focus on tourism destinations linked to statistically developed countries.

6.53. These paragraphs will also refer to a new area of statistical development called “neighbourhood statistics” based on analytical units instead of administrative units with the purpose of highlight the potential for adapting such approach in those regions where tourism is significant in order to allow for improved analysis of tourism and economic as well as territorial impacts at sub-regional levels; such approach has a great potential for tourism destinations in order to better understand tourism behavior, economic impact and analysis, as well as to serve for improving management and monitoring in such territorial entities.

6.54. Analytical units usually refer to considerations of size and shape of territorial entities in order to allow for comparability of particular social research; in fact, the rise of “neighbourhood statistics” in England, Wales, Scotland and some areas of Canada (the city of Calgary and the island of Montreal) and USA and its use for “improving the way in which policies can be developed and monitored at the small area level” points to the need for analytical units due to the fact that “it now seems clear that global “off the shelf” measures derived from censuses and other surveys provide truncated information about the context of small territorial areas and therefore offer only limited potential for studying neighbourhoods and health” (Gauvin et al., 2007)

6.55. Besides health (which has been a particular research area requiring small units information for public health purposes), data on neighbourhoods (also referred as small areas or small territorial units) cover a wide range of topics, including population, social conditions, housing, crime, education, etc.; data are all of them geo-referenced (Flowedew, Manley and Sabel, 2008).

6.56. Data zone construction requires that data be geo-referenced and implies the use of GIS software supplemented with ad hoc programs for aggregation purposes.

6.57. The aim of this new area of statistical work is to define small territorial units with the required homogeneity for any of such particular research areas being zone definition (a fundamental procedure in geographical information science involving comparisons of several spatially distributed variables in addition to consideration of size and shape) the key challenge.

6.58. There are a number of criteria that have to be considered in the construction of a zonal coverage being population size, compactness of shape, homogeneity of the population in terms of social and economic variables, and elements of the physical and social environment that might affect how meaningful the zones would be to local people, the most common ones used in the construction of such zones (Flowedew, Feng and
Manley, 2007). All of such small territorial units are not administrative units but analytical ones built on using statistical data and criteria.

6.59. Population and Housing census—a decennial statistical initiative—are the key reference for neighbourhood statistics supplemented with other administrative type of statistics; in fact, the computerization of administrative and other records over the last few years has resulted in an increasing amount of data being potentially available at the local level.

6.60. Because zonal construction should care about its stability over time, all the criteria already mentioned, homogeneity of the population deserves special attention regarding such design. Homogeneity is mainly operationalized with a socio-economic definition and is measured using some type of statistical procedure (Townsend, Philimore & Beattie, 1988) based on Census data (household type data as well as other personal data).

6.61. As mentioned (see para. 1.23), INRouTe refers to the project *Tourism micro-destination in the Canary Islands* (see Annex 38) as a case study for providing guidance on extending the R-TIS to sub-regional levels; based on it and in order to illustrate the analytical potential of developing “small tourism destination areas” (STDA) as an analytical type of territorial entity (see para. 2.5), the following four topics have been identified in this project as all of them seem particularly relevant in line with measuring tourism and sustainable development at sub-regional levels:

- Tourism is unevenly distributed in most regional territories;
- Defining territorial boundaries for setting up a small tourism destination area (STDA) zone design;
- The concept of homogeneity applied to such STDA;
- Linking sub-regional tourism and experimental ecosystem accounting (see Annex 39).
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Glossary

Presentation

This Glossary embodies around 160 terms addressed to the target population of this document which refers to tourism practitioners - tourism officials who commission surveys and research, and those who undertake such surveys- and different key stakeholders at regional and sub-regional levels –including governments, public institutes and agencies, universities, research centres, industry associations, trade bodies and specialized firms.

Tourism statisticians and practitioners might be interested in a more complete list such as UNWTO Statistical Glossary which includes terms related specifically to tourism statistics and general statistical terms identified in the SDMX project common vocabulary and other international statistical initiatives.

Because this document has as a basic aim the adaptation of the UN 2008 international recommendations on tourism statistics, almost half of the terms included are reproduced from or linked to terms referred in UNWTO Statistical Glossary and other UNWTO/STATS documents: all of them are identified as /A

The rest of them could be either identified as /B if extracted from other international organizations or national statistical documents, or /C in the case that they are INRouTe proposed terms

The Glossary also includes explanatory notes (identified as /E.N.) when deemed appropriate.

This version has benefitted from the suggestions and comments received during the 2015 worldwide consultation; when these have addressed clarifications or editorial amendments to the 2008 IRTS and TSA: RMF documents they have not been included as such changes would correspond, eventually, to the UNWTO Statistics Committee; such body is competent to evaluate the opportunity to propose such modifications in the corresponding documents.

Each term is identified with a capital letter meaning the source used as follows:

A: International Recommendations for Tourism Statistics (IRTS 2008) as well as other UNWTO/STATS documents:
   - UNWTO IRTS 2008 Compilation Guide
   - Measuring Domestic Tourism and the use of Household Surveys (jointly with ILO),
   - other Technical Papers

B: Other international organizations or national statistical documents:
   - System of Environmental and Economic Accounting (SEEA_CF 2012) and complementary publications
   - National Cooperative Highway Research Program (NCHRPR) Report 571/USA
   - Other documents: Statistical Data and Metadata exchange (SDMX), Statistics Canada Quality Guidelines (1998 and 2009 editions) and OCDE Statistical Glossary
   - European Union Commission and Eurostat statistical documents

C: INRouTe proposals

These three subsets of terms (both their number or definitions) might be modified as the result of the present 2016 world-wide consultation process.

More specifically, regarding those terms identified as INRouTe proposals, it should be highlighted that as mentioned in the chapter Overview, “this document is a first step in the process to take tourism measurement at subnational levels seriously. Therefore, such process is foreseen as a medium term initiative and consequently, the recommendations about the operationalization of those topics will quite probably need to be redrafted in due time”
List of Terms

Activities (and main purpose of the trip)/A

Each tourism trip has one and only one main purpose: each main purpose of a tourism trip (see also Purpose of a tourism trip (main and secondary purposes)) is associated with a group of main activities undertaken during the trip as follows:

1. **Personal.** This category includes all purposes of tourism trips that are not classified as business and professional (see 2. Business and professional below):
   1.1. **Holidays, leisure and recreation.** This category includes, for example, sightseeing, visiting natural or man-made sites, attending sporting or cultural events, practicing a sport activity as a non-professional; using beaches, attending summer camps for youngsters, visiting establishments specialized in well-being (for example, wellness hotels), seeking for gastronomy or culinary experiences, etc.
   1.2. **Visiting friends and relatives.** This category includes, for example, attending weddings, funerals or any other family event; short-term caring for the sick or old, etc.; it excludes on the job training.
   1.3. **Education and training.** This category includes, for example, taking short-term courses; following particular programmes of study (formal or informal) or acquiring specific skills through formal courses, university sabbatical leaves, etc.
   1.4. **Health and medical care.** This category includes, for example, receiving services from hospitals, clinics, convalescent homes and, more generally, health and social institutions, etc. This category includes only short-term treatments because long-term treatments requiring stays of one year or more are not part of tourism.
   1.5. **Religion/pilgrimage.** This category includes, for example, attending religious meetings and events, pilgrimages, etc.
   1.6. **Shopping.** This category includes, for example, purchasing consumer goods for own personal use or as gifts except for resale or for use in a future productive process, (in which case the purpose would be business and professional), etc.
   1.7. **Transit.** This category consists of stopping at a place without any specific purpose other than being en route to another destination.
   1.8. **Other.** This category includes, for example, volunteer work (not included elsewhere), investigative work and migration possibilities; undertaking any other temporary non-remunerated activities not included elsewhere, etc.

2. **Business and professional.** This category includes the activities of the self-employed and employees as long as they do not correspond to an implicit or explicit employer-employee relationship with a resident producer in the country or place visited, those of investors, businessmen, etc. It also includes, for example, attending meetings, conferences or congresses, trade fairs and exhibitions; giving lectures, concerts, shows and plays, participation in foreign government mission except when stationed on a duty in the country visited, working as a guide, participation in a professional sports activity, on the job training; etc.

Related terms:
- Activity of visitor
- Purpose of a tourism trip (main and secondary purpose)
- Tourism flows
- Visitor
- Visit
Activity (principal)/A  The principal activity of a producer unit is the activity whose value added exceeds that of any other activity carried out within the same unit.

Related terms:
Tourism industries

Activity of visitors/A  As explained in IRTS 2008 -paras. 4.14 and 4.15-, as well as in TSA: RMF 2008 -paras. 2.3 and 2.5-, the notion of activity encompasses all that visitors do for a trip or while on a trip both in physical and monetary terms. It is not restricted to what could be considered as typical tourism activities, such as sightseeing, sunbathing, visiting sites, etc. Travelling for the purpose of conducting business, for education and training, etc. can also be part of tourism if the conditions that have set up to define tourism are met.

Related terms:
Visitor
Activities(and main purpose of the trip)

Activity of visitors (at destination)/B  Activity of visitors at destination is a complex variable; most tourism or travel surveys do not adequately account for activities undertaken by the respondent. However, with the increasing use of activity-based and time-use surveys (and it is possible that time-use diaries will become the primary data collection instrument in the context of travel and travel behaviour), activity has become a very important item. It is widely acknowledged that most travel or tourism variables are derived variables (such as activity) meaning that collecting data on activities undertaken gives insight for identifying different typologies of visitors and tourism. Therefore, an appropriate coding of purpose of the trip and categories of activities undertaken is of great importance when surveying visitors and other travellers.

Related terms:
Activity of visitors
Product (tourism)
Visitor

Administrative data use/A –see E.N.-)  Administrative records are data collected for the purpose of carrying out various governmental programs, for example, income tax collection. As such, the records are collected with a specific decision-taking purpose in mind, and so the identity of the unit corresponding to a given record is crucial. In contrast, in the case of statistical records, on the basis of which no action concerning an individual is intended or even allowed, the identity of individuals is of no interest once the database has been created.

Related terms:
Regional Tourism Information System

Birth rate (enterprise/establishment)/B  The birth rate of a given reference period (usually one calendar year) is the number of enterprise births as a percentage of the population of active enterprises. This birth rate may vary depending on the birth concept that is used.

At subnational levels, birth rates should refer to establishments instead. Births do not include entries into the population due to mergers, break-ups, split-off or restructuring of a set of enterprises.
Business demography/B

Business demography covers events, like births and other creations of units, deaths and other cessations of units, and their ratio to the business population. It covers follow-up of units in time, thus gaining information on their survival or discontinuity. It also covers development in time according to certain characteristics like size, thus gaining information on the growth of units, or a cohort of units, by type of activity.

The demography of enterprises can be assessed by studying enterprise births and enterprise deaths and by examining the change in the number of enterprises by type of activity, i.e. by examining the flows and stocks to get a complete picture of the enterprise dynamism.

Related terms:
- Birth rate

Business register/B

Business registers are lists of enterprises and other units, as required by the registers Regulation or recorded on voluntary basis, whose activities contribute to the Gross Domestic Product of the Member State. For instance, all Member States of the European Union maintain Business Registers for statistical purposes; national Business Registers are the central repository for information on businesses.

Related terms:
- Administrative data use
- Enterprises

Business statistics

See Structural business statistics

Business visitor/A

A business visitor is a visitor whose main purpose for a tourism trip corresponds to the business and professional category.

Related terms:
- Activities (and main purpose of the trip)
- Purpose of a tourism trip (main and secondary purposes)

Carrying capacity/C - see E.N.-

Carrying capacity is a concept that refers to the maximum number of visitors a destination can sustain at any one time without damage to itself. It can be characterized by three dimensions—environmental, economic and social. Each dimension depends on both the characteristics of the destination and the characteristics of visitors and their behavior while at destination.

This document does not include explicit guidelines for determining carrying capacity.

Related terms:
- Tourism destinations
- Tourism flows
CATI/B

Computer-assisted Telephone Interviewing (CATI) systems are similar to Computer-Assisted Personal Interviewing (CAPI) systems in that the questionnaire items are displayed online and the interviewer enters the respondent’s answers with the keyboard or mouse. In addition, WAPI (Web Assisted Personal Interviews) is becoming more important; in several cases a combined method is used (CATI and WAPI).

Related terms:
Survey

Census/A

A survey conducted on the full set of observation objects belonging to a given population or universe.

A census is the complete enumeration of a population or groups at a point in time with respect to well-defined characteristics: for example, Population, Production, etc. In some connection the term is associated with the data collected rather than the extent of the collection so that the term sample census has a distinct meaning. The partial enumeration resulting from a failure to cover the whole population, as distinct from a designed sample enquiry, may be referred to as an ”incomplete census”.

Related terms:
Survey

Classifications (of products and industries)/A

The typology of tourism characteristics consumption products and tourism industries are grouped in 12 categories (see Tourism industries). Categories 1 to 10 comprise the core for international comparison and are described in terms of International Standard Industrial Product Classification of all Economic Activities (ISIC) and the Central Product Classification (CPC)—both are UN classifications. The two other categories are country specific, with category 11 covering tourism characteristic goods and the corresponding retail trade activities and category 12 referring to tourism characteristic services and activities.

Related terms:
ISIC, Rev. 4
CPC, Ver. 2
Tourism industries
Enterprises

Coding (complex variables)/B

Refers to how to code the responses to certain types of questions that involve categories that may vary from survey to survey, depending on the level of detail required for a specific survey. Codes should be set up in such a way as to allow varying levels of aggregation, depending on the needs of any particular survey. In general, this can be done by setting up multi-digit codes, where appropriate, in which the first one or two digits represent the coarsest level of aggregation that would be used, the next digit would provide greater disaggregation, and a further digit (if applicable) could provide even further disaggregation.

This would follow along the lines used in ISIC and CPC international classifications of economic activities and products.
Standardized categories could be proposed for complex variables such as means of travel, activity, internet and cell phone use, type of accommodation establishment, etc.

**Related terms:**
- Activity of visitors
- Activities (and main purpose of the trip)

**Coherence/A**

Coherence is defined as the adequacy of statistics to be combined in different ways and for various uses.

When originating from different sources, and in particular from statistics surveys using different methodology, statistics are often not completely identical, but show differences in results due to different approaches, classifications and methodological standards. There are several areas where the assessment of coherence is regularly conducted: between provisional and final statistics, between annual and short-term statistics, between survey statistics and national accounts, between statistics from the same socio-economic domain, and between survey statistics and national accounts.

The concept of coherence is closely related to the concept of comparability between statistical domains. Both coherence and comparability refer to a data set with respect to another. The difference between the two is that comparability refers to comparisons between statistics based on usually unrelated statistical populations and coherence refers to comparisons between statistics for the same or largely similar populations.

**Related terms:**
- Survey
- Data documentation
- Data confrontation
- Comparability

**Comparability/C –see E.N.-**

The term comparability used in statistics refers to comparisons of statistical basic data and indicators derived from different data sets (e.g. regions).

In this Glossary, comparability refers both to international and intra-national territorial entities; for both purposes-especially for intra-national comparability of tourism destinations- a continuous lobbying for the implementation of a common set of concepts, definitions and classifications is a necessary condition.

**Related terms:**
- Coherence
- Regional Tourism Information System

**Country of residence/A**

The country of residence of a household is determined according to the centre of predominant economic interest of its members. If a person resides (or intends to reside) for more than one year in a given country and has there his/her centre of economic interest (for example, where the predominant amount of time is spent), he/she is considered as a resident of this country.
Related terms:
Residence
Dwellings
Household

Coverage
Coverage is the completeness of the information for the target population that would be derived if all of the frame units were to be surveyed. Coverage errors are discrepancies in statistics for the target population versus those for the frame population. These errors are a function of both the frame under-coverage (or over-coverage) of the target population and of coverage errors occurring during survey operations resulting in differences in the survey estimate for those actually covered from those for which an estimate was required. Coverage errors can have both spatial and time dimensions.

Related terms:
Frame
Survey

CPC, Ver.2/A
The Central Product Classification, version 2, covering all goods and services, is a system of categories that are both exhaustive and mutually exclusive. This means that if a product does not fit into one CPC category, it must automatically fit into another. The CPC classifies products based on the physical properties and the intrinsic nature of the products as well as on the principle of industrial origin.

It is intended to serve as an international standard for assembling and tabulating all kinds of data requiring product detail, including industrial production, national accounts, service industries, domestic and foreign commodity trade, international trade in services, balance of payments, consumption and price statistics. Other basic aims are to provide a framework for international comparison and promote harmonization of various types of statistics dealing with goods and services.

Related terms:
ISIC, Rev. 4
Tourism industries

Data analysis
The process of transforming raw data into usable information.

Related terms:
Descriptive analysis

Data confrontation
The process of comparing data that has generally been derived from different surveys or other sources, especially those of different frequencies, in order to assess and possibly improve their coherency, and identify the reasons for any differences.

Such data may not be coherent for a number of reasons including the use of different data item definitions, classifications, scope, reference period, etc.

Related terms:
Survey
Coherence
Data reconciliation
Data documentation/A

Data documentation should refer to what official statisticians name as "metadata" which are a particular type of data and other documentation that describe the contents and the quality of the statistical data and related processes.

Statistical metadata can be classified in various ways, but there is a clear high-level distinction between the metadata needed to search for and display data (Structural metadata) and the metadata that give more information on definitions, methodologies, processes and quality (Reference metadata).

Reference metadata should include all of the following: a) "conceptual" metadata, describing the concepts used and their practical implementation, allowing users to understand what the statistics are measuring and, thus, their fitness for use; b) "methodological" metadata, describing methods used for the generation of the data (e.g. sampling, collection methods, editing processes); c) "quality" metadata, describing the different quality dimensions of the resulting statistics (e.g. timeliness, accuracy).

This document includes guidelines for documenting tourism statistics at the subnational levels; such guidelines are an adaptation of UNWTO Tourism Statistics Metadata Project: General Guidelines for documenting tourism statistics, ver. 2 May 2005.

Related terms:
Regional Tourism Information System

Data modelling/A

Techniques used extensively to derive synthetic estimates when the cost of obtaining small area statistics from a survey is too great. Synthetic estimates are achieved through the development and use of sophisticated statistical modelling and estimation techniques, which integrate data from two or more sources.

Related terms:
Regional Tourism Information System

Data quality (evaluation)/A

Data quality evaluation is a process used to determine whether final products meet the original objectives of the statistical activity, in particular in terms of that data's accuracy, timeliness, reliability, comparability, coherence and accessibility and some other items. It allows users to better interpret survey results and the Agency to improve the quality of its surveys.

There are two broad methods of evaluating data quality.

Certification or validation is the process whereby data are analyzed before official release with a view to avoiding gross errors and eliminating poor quality data. This process frequently coincides with an interpretative analysis of the data and usually involves time constraints and deadlines, and therefore only methods that yield rapid results can be used.

Sources of error studies generally provide quantitative information on the specific sources of errors in the data. While timeliness is important, the results of these studies often are only available after the official release of the data. (See Errors (statistical)).
Related terms:
Errors (statistical and non-statistical)
Data reconciliation
Data confrontation

Data reconciliation/A
The process of adjusting data derived from two different sources to remove, or at least reduce, the impact of differences identified.

Editing and reconciliation may involve fixing errors or adopting alternative sources and methods that are aimed at improving the process of reviewing or understanding data.

Related terms:
Survey
Data confrontation

Destination
See Tourism destination

Destination (main and secondary destinations) of a trip/A
The main destination of a tourism trip is defined as the place visited that is central to the decision to take the trip (see also Purpose of a tourism trip - main and secondary purposes, and Visit). This definition is consistent with that of the main purpose of a trip. However, if the visitor can identify no such place, the main destination is defined as the place where he/she spent most of his/her time during the trip. Again, if the visitor can identify no such place, then the main destination is defined as the place that is the farthest away from his/her place of usual residence: each trip should be associated its main destination.

Related terms:
Trips
Purpose of a tourism trip
Destination management
Itinerary

Destination management/C
Destination management aims at organising, coordinating and integrating in a long-term way all the components that make a successful destination with a clear focus on the needs of visitors, residents and businesses and with the purpose of making the destination able to compete with similar type of destinations in the tourism market.
The setting up of a Regional Tourism Information System (R-TIS) as designed in this document should have as main purpose to serve as a robust tool for destination management purposes.

Related terms:
Tourism destinations
Territorial entities

Domestic tourism (national)/A
Comprises the activities of a resident visitor within the country of reference, either as part of a domestic tourism trip or part of an outbound tourism trip.

Related terms:
Forms of tourism
Regional Tourism
Visitors
Trip
Dwellings

Each household has a principal dwelling (sometimes also designated as main or primary home), usually defined with reference to time spent there, whose location defines the country of residence and place of usual residence of this household and of all its members. All other dwellings (owned or leased by the household) are considered secondary dwellings.

**Related terms:**
- Vacation home
- Household
- Country of residence

Economic analysis (tourism)

Tourism generates directly and indirectly an increase in economic activity in the places visited (and beyond), mainly due to demand for goods and services that need to be produced and provided.

In the economic analysis of tourism, one may distinguish between tourism’s ‘economic contribution’ which refers to the direct effect of tourism and is measurable by means of the Tourism Satellite Account, and tourism’s ‘economic impact’ which is a much broader concept encapsulating the direct and secondary indirect effects of tourism and which must be estimated by applying models.

**Related terms:**
- Economic contribution
- Economic consequences
- Economic impact
- Tourism demand
- Tourism supply

Economic consequences (tourism)

The comprehensive term including all economic effects, both positive (benefits) and negative (costs), both direct and secondary, produced by visitors, their consumption expenditures and the reaction of business firms, non-profit organizations and government agencies to visitors and their activities in a national economy.

**Related terms:**
- Tourism Satellite Account (TSA) 2008
- Economic impact (tourism)
- Visitor
- Visitor-trip
- Visit

Economic contribution (tourism)

The direct effects on the national economy measured by the Tourism Satellite Account (TSA) basic aggregates.

**Related terms:**
- Tourism Satellite Account (TSA) 2008
- Economic impact (tourism)
- Job
- Employment
- Economic analysis (tourism)

Economic impact (tourism)

The sum of an expanded set of direct and secondary indirect effects of Tourism Consumption and other elements of Total Tourism Internal Demand on the national economy (such as Tourism Gross Fixed Capital Formation and
Tourism Collective Consumption; all these aggregates are TSA aggregates

**Related terms:**
- Tourism satellite account (TSA 2008)
- Economic contribution (tourism)
- Job
- Employment
- Economic analysis (tourism)

**Economically active population/B**

The economically active population or labour force comprises all persons of either sex who furnish the supply of labour for the production of goods and services as defined by the system of national accounts during a specified time-reference period.

**Related terms:**
- Employment
- Tourism sector employment

**Ecosystem/B**

For accounting purposes ecosystems are defined in relation to spatial areas with each area considered an ecosystem asset. Thus, ecosystem assets are spatial areas containing a combination of biotic and abiotic components and other characteristics that function together.

Assessment of ecosystems should consider their ecology and location. Key characteristics of the ecology of an ecosystem are (i) its structure (e.g. the food web within the ecosystem); (ii) its composition, including biotic (flora and fauna) and abiotic (soil, water) components; (iii) its processes (e.g. photosynthesis or the recycling of nutrients in an ecosystem), and (iv) its functions (e.g. resilience). Key characteristics of its location are (i) its extent; (ii) its configuration (i.e. the way in which the various components are arranged and organised within the ecosystem); and (iii) the landscape forms (e.g. mountain regions, coastal areas) within which the ecosystem is located.

Traditionally, ecosystems have been associated with more or less ‘natural’ systems, i.e. systems with only a limited degree of human influence. However, a wider interpretation has become more common, based on the recognition that human activity influences ecosystems across the world. Consequently, ecosystems change as a result of natural processes and because of human actions.

Ecosystems provide a range of services for economic and other human activities such as recreation which is strongly related to tourism.

**Related terms:**
- SEEA_CF
- Territorial entities

**Ecosystem (degradation and enhancement) /B**

The measurement of ecosystem degradation is one of the key drivers of ecosystem accounting and for the System of Environmental-Economic Accounting (SEEA) international statistical standard more generally. Indeed, without a concern for a falling ability of the environment to provide ecosystem services it would be possible to continue to view the environment as infinitely capable of regeneration and of supporting economic and human activity.
While the general idea of ecosystem degradation as reflecting a fall in the capacity of ecosystems to supply ecosystem services is well accepted – there remains debate about how this concept should be defined for measurement purposes.

In the context of describing general principles for ecosystem accounting the most relevant observation is that ecosystem degradation is not something that can be directly measured.

**Related terms:**
- SEEA_CF

**Employees/B**

Employees are all those workers who hold the type of job defined as "paid employment".

**Related terms:**
- Employment
- Jobs

**Employees (in full-time equivalent units)/B**

Figures for the number of persons working less than the standard working time of a full-year full-time worker, should be converted into full time equivalents, with regard to the working time of a full-time full-year employee.

Included in this category are people working less than a standard working day, less than the standard number of working days in the week, or less than the standard number of weeks/months in the year. The conversion should be carried out on the basis of the number of hours, days, weeks or months worked.

**Related terms:**
- Employees
- Employment
- Full time equivalent

**Employment (attributable to tourism industries)/A – see E.N.-**

Employment in tourism industries may be measured in different ways: as a count of the persons employed in tourism industries in any of their jobs, as a count of the persons employed in tourism industries in their main job, or as a count of the jobs in tourism industries. Figures obtained in either of such measurements should be presented as full-time equivalent figures (See Employees (in full-time equivalent units)).

**Related terms**
- Enterprise
- Employees

**Enterprise/B**

The smallest combination of legal units that is an organizational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations.

It should be highlighted that the term enterprise is not used in the 2008 international standards on tourism statistics (national accountants might be familiar about the differences of the terms enterprise and establishment...
specially regarding the two different but still complementary approaches in National Accounts between a sectorial vs functional approaches (being the enterprise associated to the first one while establishment is to the functional one –and this is precisely the approach used in the Tourism Satellite Account).

**Related terms:**

*Employment*
*Establishment*
*Job*
*Small and medium sized enterprise*

**Environment/B**

For accounting purposes, environment is defined in two perspectives:
- From the perspective of environmental flows, the environment is the source of all natural inputs to the economy, including natural resource inputs (minerals, timber, fish, water, etc.) and other natural inputs absorbed by the economy, for example, energy from solar and wind sources and the air used in combustion processes. (SEEA_CF).
- From a stock perspective, the environment includes all living and non-living components that constitute the biophysical environment, including all types of natural resources and the ecosystems within which they are located.

**Related terms:**

*SEEA_CF*

**Establishment/A**

An establishment is an enterprise, or part of an enterprise, that is situated in a single location and in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added.

The term "establishment" is used in Eurostat ESA 2010 lexicon as "local kind of activity" unit (term used in the SNA 2008)

**Related terms:**

*Enterprises*
*Employment*
*Employees*
*Jobs*
*Relevance*

**Errors (statistical and non-statistical)/A – see E.N.-**

Usually errors are mentioned and measured when documenting statistical surveys (this is the case of sampling errors) while non-statistical errors are usually ignored (such as coverage, nonresponse, measurement and processing errors). It is not evident that non-statistical errors are neglectable

**Related terms:**

*Data quality (evaluation)*

**Excursionist/A**

A visitor (domestic, inbound or outbound) is classified as a same-day visitor (or excursionist) if his/her trip does not include an overnight stay.

**Related terms:**

*Tourism flows*
*Visitors*
**Forms of tourism/A**

There are three basic forms of tourism: domestic tourism, inbound tourism, and outbound tourism. These can be combined in various ways to derive the following additional forms of tourism: internal/national/international tourism (i.e. internal = domestic + inbound; national = domestic + outbound; international = inbound + outbound)

**Related terms:**
- Tourism flows
- Domestic tourism
- Inbound tourism
- Outbound tourism
- Regional Tourism

**Frame/B**

A frame is any list, material or device that delimits, identifies, and allows access to the elements of the survey population. Frames are generally of two types: area frames and list frames. A list frame is a list of units in the survey population. Area frames are usually made up of a hierarchy of geographical units, which in turn contain units in the survey population; that is, the frame units at one level can be subdivided to form the units at the next level. All of the elements included in the frame constitute the frame population. Frames are often much more than a simple list of units or a map with geographic units delineated. A frame usually includes other information (e.g., identification, contact, classification, address, size, maps in case of geographical units) to be used in carrying out the survey.

The frame may or may not contain information about the size or other supplementary information about the units, but should have enough details so that a unit, if included in the sample, may be located and taken up for inquiry. The nature of the frame exerts a considerable influence over the structure of a sample survey. It is rarely perfect, and may be inaccurate, incomplete, inadequately described, out of date or subject to some degree of duplication. Reasonable reliability in the frame is a desirable condition for the reliability of a sample survey based on it.

**Related terms:**
- Survey
- Coverage

**Full-time equivalent/A**

Is a measure of the time devoted to a specific type of activity

The term full-time equivalent, sometimes abbreviated as FTE, refers to a statistical procedure used to derive “average figures” during a reference period (either a week, a year or any other period). It has been basically applied to labour force statistics but also to education and other social research areas such as sustainability.

FTE data are used to improve the comparability of employment, jobs and resident/non-resident population figures.

In the case of employment, FTE data are made up of 3 parts: number of hours worked, a standard working time and a total number of employees.

A full-time employee is therefore counted as one also in FTE figures, while a part-time worker gets a score in proportion to the hours he or she works.
For example, a part-time worker employed for 20 hours a week where full-time work consists of 40 hours, is counted as 0.5 FTE.

Such statistical procedure could be also applied to tourism to derive Tourism Population estimates using overnights figures of both resident population and non-residents visitors (staying either in accommodation establishment or in second homes). In the case of tourism, such figures should refer to a calendar year.

Equivalent Tourism Population figures are used basically when measuring tourism contribution to sustainability, particularly on environmental sustainability and are necessary to derive territorial indicators of population density and tourism specialization that could allow for improved comparability between tourism destinations.

**Related terms:**
- Employees
- Employment
- Tourism population

**Full-time equivalent units/A**

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<tr>
<td>Employees</td>
<td>Employment</td>
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Such figures are used to improve the comparability of employment, jobs, resident/non-resident population figures, etc.

**Related terms:**
- Employees
- Employment

**Full-time job/B**

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<tr>
<td>Employment</td>
<td>Jobs</td>
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One in which a person usually works 30 hours or more per week

**Related terms:**
- Employment
- Jobs
- Main job
- Tourism sector employment

**Geography of tourism/C**

Geography of tourism tries to explain the differentiation, organization and anthropization of space as a consequence of tourism activities; dimension, scope, impacts of flows produced in between origin and destination spaces; as well as the behavioural patterns of tourists in destinations; the role of agents intervening in the tourism production, distribution and consumption, and the representations and images that tourism produces in relation to the territory where it occurs.

At the same time, it is a study of the processes of valuing tourism resources and spaces, in an integrated manner, and it lays out the scope of impacts at social, environmental and economic levels, as well as those associated with competitiveness, positioning, and attractiveness of spaces within the destination.

**Related terms:**
- Environment
- Ecosystem

**Governance/A**

Tourism governance is a measurable government practice, geared towards the efficient management of the tourism sector at the different levels of
government, through forms of coordination and cooperation among them in order to achieve the goals shared by networks of actors that have a bearing on the sector, with the aim of attaining solutions and opportunities on the basis of agreements founded on the recognition of interdependencies and shared responsibilities.

**Related terms:**

**Tourism destination management**

**Household/B**

All persons who occupy the same housing unit and share responsibilities and resources. A household may consist of a family, one person living alone, two or more families living together, or any other group of related or unrelated persons who make joint decisions and share resources. These persons may or may not be related to each other.

For households, the centre of predominant economic interest lies in the region where they are resident, not the region where they work.

From a regional perspective, the following individuals could be treated as residents in a given region:

(a) Travellers or visitors i.e. individuals who leave the region for less than one year.

(b) Workers who work for part of the year in another region or country, in some cases in response to the varying seasonal demand for labour, and then return to their households.

(c) Workers who regularly cross the border of the region or country where they live each day or somewhat less regularly (e.g. each week or month) to work in a neighbouring region or country.

(d) People who go abroad for *short-term studies* as well as for full-time study generally continue to be resident in the territory in which they were resident prior to studying abroad. This treatment is adopted even though their course of study may exceed a year (*long-term students*). However, students become residents of the territory in which they are studying when they develop an intention to continue their presence in the territory of study after the completion of the studies. Members of the same household who are accompanying dependents of students are also considered to be residents of the same economy as the student.

(e) People who go abroad for the purpose of *medical treatment* maintain their predominant centre of interest in the territory in which they were resident prior to the treatment, even in the rare cases where complex treatments take a year or more. As with students, accompanying dependents are treated in the same way.

An exception could be envisaged at the regional level, whereby these students and patients would be treated as residents of the host region, if the host region is in the home country and when they stay there more than one year.

**Related terms:**

*Country of residence*

*Dwellings*

*Place of usual residence*

*Vacation home*
Household vehicle/B
A motorized vehicle that is owned, leased, rented or company-owned and available to be used regularly by household members during the travel period. Includes vehicles used solely for business purposes or business-owned vehicles if kept at home and used for the home to work trip (e.g., taxicabs, police cars) that may be owned by, or assigned to, household members for their regular use.

Related terms:
Means of transportation
Household

Inbound tourism (national)/A
Comprises the activities of a non-resident visitor within the country of reference on an inbound tourism trip.

Related terms:
Forms of tourism
Regional Tourism
Visitors

Indicator (statistical)/B
A statistical indicator is a data element that represents statistical data for a specified time, place, and other characteristics.

A simple aggregation such as the number of accidents, total income or women Members of Parliament, is not in itself an indicator, as it is not comparable between populations. However, if these values are standardized, e.g. number of accidents per thousand of population, average income, or women Members of Parliament as a percentage of the total, the result meets the criteria for an indicator.

Related terms:
Visitors

INRouTe (Research areas and topics)/C
The International Network on Regional Economics, Mobility and Tourism (INRouTe) proposal’s for the design of a R-TIS (Regional – Tourism Information System) is built on the following four research areas:
A. Tourism as an economic sector;
B. Tourism and sustainable development;
   2.8. Tourism and the environmental, social and cultural dimensions;
   2.9. Tourism and the economic dimension;
C. Tourism and territorial cohesion;
D. Supporting tourism destinations’ key stakeholders.

Needless to say that there are many other areas that could be added in a later stage of the INRouTe project if the required resources (both financial and human) would be available.

Related terms:
Regional Tourism Information System

IRTS 2008/A
The United Nations Statistical Commission approved in 2008 the new International Recommendations for Tourism Statistics (IRTS 2008); such Recommendations updated the 1993 recommendations in the following ways:
(a) By reformulating the definition of visitors;
(b) By clarifying the concepts of trips and visits, and their characteristics (origin, destination, duration and purpose);
(c) By clarifying the treatment of vacation homes;
(d) By recognizing the travel party (members of the same household travelling together and sharing expenditure) as a relevant observation unit in tourism statistics;
(e) By modifying the classification of tourism-related purposes of trips to take into consideration the changes undergone in tourism behaviour since 1993, in particular regarding education and training, health and medical care and incentive trips;
(f) Through proposed classifications for characteristic tourism consumption products and characteristic tourism activities and revision of the classification of industries proposed in 1993 in line with the Central Product Classification, second revision, and the International Standard Industrial Classification of All Economic Activities, fourth revision;
(g) By considering tourism-related employment an integral part of tourism analysis and defining and incorporating into the recommendations variables related to employment in the tourism industry, an effort in which ILO played an important role;
(h) By making explicit the link with balance-of-payments statistics;
(i) By clarifying the relationship with the tourism satellite account, providing guidance on extensions of tourism statistics to the subnational level and recognizing the need to collect data to address sustainability concerns;
(j) By providing recommendations in several new areas, such as metadata, data quality, dissemination of data, inter-agency cooperation, implementation programme and policy for future updates.

Related terms:
Tourism Satellite Account (TSA)

ISIC Rev. 4/A

The International Standard Industrial Classification of All Economic Activities (ISIC) is the international reference classification of productive activities. Its main purpose is to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities.

In this fourth revision of ISIC, great efforts have been made to address the need for convergence between existing activity classifications at the international and multinational levels. Experience with the implementation of classifications and development work on classifications carried out in countries around the world have greatly contributed to ISIC, Rev.4. Explanatory notes have been extended to provide additional detail, allowing for more accurate interpretation of the content and boundaries of individual classes, which should lead to a less ambiguous application of ISIC, Rev.4.

The rationale for the final ISIC, Rev.4 structure, together with illustrative examples of the interpretation of the classification, will be discussed in the forthcoming UNSD Companion Guide to ISIC Rev. 4 and CPC, Ver. 2.

Related terms:
CPC, Ver.2
Tourism industries
Enterprises
**Itinerary/C**

IRTS 2008 identifies “trip” and “visit” as units related to the displacements of visitors: such trips qualify as “round trip”. From an analytical perspective the concept of itinerary (closer to the mobility research community – see tourism trip and tourism visit) allows for deeper understanding of the movement of visitors in space and time while at destination.

From a measurement perspective an itinerary can be defined as a systematization of an alignment of potential points of interest to be visited: in the case of tourism, such alignment is usually defined and structured for planning, promotion and commercial purposes. Successful itineraries usually become a tourism product.

The measurement of itineraries should incorporate, in addition to a reference to the corresponding administrative and analytical territorial entities and characteristics of visitor (obtained from local surveys) other set of information as well, such as:
- georeferenced information, which includes number of stops and points of interest visited (visited spots)
- length of time
- distance covered

**Related terms:**
- Tourism destination
- Visitors
- Visits
- Stops

**Job/B**

A job is defined as an explicit or implicit contractual relationship (relating to the provision of labour input, not to supplying output of a good or service) between a person and a resident institutional unit to perform work (activities which contribute to the production of goods or services within the production boundary) in return for compensation (including mixed income of self-employed persons) for a defined period or until further notice.

In that definition, both employee and self-employment jobs are covered: that is, an employee job if the person belongs to another institutional unit than the employer and a self-employment job if the person belongs to the same institutional unit as the employer.

The concept of job differs from the concept of employment:
- It includes second, third, etc. jobs of the same person. Those second, third, etc. jobs of a person may either successively follow one another within the reference period (usually, a week) or, as when someone has an evening job as well as a daytime job, run in parallel.
- On the other hand, it excludes persons temporarily not at work but who have a ‘formal attachment to their job’ in the form, for instance, of ‘an assurance of return to work or an agreement as to the date of return’. Such an understanding between an employer and a person on lay-off or away on training is not counted as a job in the system.

**Related terms:**
- Employment
- Establishment

**Jobs generated by tourism/B**

Jobs that can be directly attributed to tourism demand.
Tourism and Sustainability: A Statistical Insight at Subnational Levels

Related terms:
- Establishment
- Employment
- Full-time job
- Job
- Main job
- Tourism sector employment

Jobs (in full-time equivalent units)/B
Is defined as total hours worked divided by average annual hours worked in full-time jobs. This can be described as full-time equivalent work-years.

Related terms:
- Enterprises
- Employment

Main destination (of a tourism trip)/A
The main destination of a tourism trip is defined as the place visited that is central to the decision to take the trip. However, if no such place can be identified by the visitor, the main destination is defined as the place where he/she spent most of his/her time during the trip. Again, if no such place can be identified by the visitor, then the main destination is defined as the place that is the farthest from the place of usual residence.

The main destination, as well as any other destination during the trip (labelled as secondary destinations), can be requested in personal/household surveys.

Related terms:
- Tourism destination
- Forms of tourism
- Tourism destination management

Main job/B
The job at which the most hours are worked.

Related terms:
- Enterprise
- Employment
- Full-time job
- Job
- Tourism sector employment

Means of transportation/B
A mode of travel used for going from one place (origin) to another (destination). Includes private (such as car, motorcycle, etc.) and public modes, as well as walking and other modes (such as plane, buses, ship, bicycle, passenger line/ferry, etc.).

Related terms:
- Household vehicle
- Transportation

Metadata
See Data Documentation

Meetings industry/A
The term meetings industry is preferred by the International Congress and Convention Association (ICCA), Meeting Professionals International (MPI) and Reed Travel over the acronym MICE (Meetings, Incentives, Conferences and Exhibitions) which does not recognize the industrial nature of such activities.
To highlight purposes relevant to the meetings industry, if a trip’s main purpose is business/professional, it can be further subdivided into “attending meetings, conferences or congresses, trade fairs and exhibitions” and “other business and professional purposes”.

**Related terms:**
- Meeting tourism
- Forms of tourism

**MICE**

See Meetings industry.

**Mobility/C**

In transportation literature, mobility is an area of research that refers to the measurement and analysis of travel behaviour (mainly road travel) of the resident population. For that purpose, mobility surveys are mostly addressed to households; data of households and their components (persons), vehicles used and trips undertaken are key to such analysis as well as for a multitude of planning, policy and infrastructures areas.

From a tourism research perspective particularly at the subnational level, “long distance/scale mobility surveys” are the most relevant ones.

**Related terms:**
- Regional Tourism Information System

**Modelled data**

See Data modelling

**Modules/A –see E.N.-**

Also referred as supplementary surveys, are questions added to an existing survey to provide information on particular aspects of tourism or particular topics of interest. The results from supplementary questions can then be analyzed in conjunction with data already collected in the base survey.

**Related terms:**
- Regional Tourism Information System

**Municipality**

In relation with this document, the administrative unit corresponding to the first level of local level breakdown in the classification of Subnational Territorial entities proposed.

**Related terms**
- Region
- Territorial entities

**NACE Rev. 2/B**

NACE (“Nomenclature générale des Activités économiques dans les Communautés Européennes” – Statistical classification of economic activities in the European Communities) is the acronym used to designate the various statistical classifications of economic activities developed since 1970 in the European Union. It is the European standard classification of productive economic activities. NACE presents the universe of economic activities partitioned in such a way that a NACE code can be associated with a statistical unit carrying them out. NACE provides the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics (e.g. production, employment, national accounts) and in other statistical domains.
NACE is derived from ISIC, in the sense that it is more detailed than ISIC. ISIC and NACE have exactly the same items at the highest levels, where NACE is more detailed at lower levels.

**Related terms:**
*Tourism industries*
*ISIC Rev. 4*

**Nomenclature/A**

When classifying, nomenclature involves a systemic naming of categories or items. The terms "classification" and "nomenclature" are often used interchangeably, despite the definition of a "classification" being broader than that of a "nomenclature". A nomenclature is essentially a convention for describing observations, whereas a classification structures and codifies the observations as well.

**Related terms:**
*Classifications (of products and industries)*

**NUTS/B**

The Nomenclature of Territorial Units for Statistics (NUTS) provides a single uniform breakdown of the economic territory of the European Union (EU).

The NUTS classification is a hierarchical system for dividing up the economic territory of the EU for the purpose of:

- The collection, development and harmonization of EU regional statistics.
- Socio-economic analysis of the regions.
- Framing of EU regional policies.

In the context of EU Regional Accounts, the territory concept implies that activities are allocated to the territory where they actually take place, regardless of the residence of the units involved in the activity. In the hypothetical case where units in a region only have activities within their regional territory, the residence concept coincides with the territorial concept.

**Related terms:**
*Nomenclature*
*Territorial entities*

**Occupation/A**

A set of jobs whose main tasks and duties are characterised by a high degree of similarity (see also Tourism characteristic occupations). Occupation refers to the type of work done during the reference period by the person employed (or the type of work done previously, if the person is unemployed), irrespective of the industry or the status in employment in which the person should be classified. Occupation is defined in terms of jobs or posts.

**Related terms**
*Job*
*Employment*
*Post*

**Outbound tourism (national)/A**

Comprises the activities of a resident visitor outside the country of reference, either as part of an outbound tourism trip or as part of a domestic tourism trip.
Related terms:
Visitors
Trips
Domestic Tourism
Regional Tourism

**Package tour/A**
A single product provided by a tour operator which elaborates it and sells it directly or through travel agencies, in which travellers receive a combination of products associated to a trip, which are made of more than one of the following services: transport, accommodation, sightseeing, entertainment, etc. and other goods and services at will.

Package tours might refer to travel to one or more places within the economic territory of the country of residence of the packager selling the package, and also travel to destinations in one or more places or countries outside this economic territory, or a combination of both circumstances.

Related terms:
Travel
Tour operator
Travel agencies

**Place of usual residence/A**
The place of usual residence is the geographical place where an individual usually resides, and is defined by the location of his/her principal dwelling.

Related terms:
Country of residence
Dwellings
Household
Residents

**Person Miles (Kilometres) of Travel/B**
A measure of person travel. When a person travels 1 mile (kilometer), 1-person mile (kilometer) of travel results. Where two or more persons travel together in the same vehicle, each person makes the same number of person miles (kilometers) as the vehicle miles (kilometers).

Related terms:
Travel/Tourism

**Pilot survey/A**
The aim of a pilot survey is to test the questionnaire (pertinence of the questions, understanding of questions by those being interviewed, duration of the interview) and to check various potential sources for sampling and non-sampling errors: for instance, the place in which the surveys are carried out and the method used, the identification of any omitted answers and the reason for the omission, problems of communicating in various languages, translation, the mechanics of data collection, the organization of field work, etc.

Related terms:
Errors (statistical)

**Points of interest**
See Itinerary

**Post/B**
A post is a set of tasks, which are carried out by one person. Posts are assigned to persons through jobs (see also job).
Related terms:
Job
Employment
Enterprise

Product (tourism)/C
From a measurement perspective (which is the case of this document), the following definition is proposed: a tourist product is a supply side concept branded for attracting visitors to a specific territorial entity, that can be identified by them once at destination. This document also provides recommendations for the operationalization of the measurement of destinations for comparability purposes.

Such products can neither be defined in a standard way, nor can a proper typology be set up; additionally, only part of their components can be measured although this is not usually done.

Such products include remunerated components (services -such as lodging, eating and transportation, as well as potential activities to be undertaken) and components provided for free (climate, nature, landscape, enjoyable "atmosphere", etc.); the later ones, tied to non-reproducible resources, while price-less, influence greatly the consumption pattern of visitors.

The concept “tourism product” is totally different to “tourism characteristic consumption product”-see Tourism industries-

Propensity to travel/B
This concept is usually associated to household surveys addressing mobility or tourism and is defined as the number of households in the sample that took at least one tourism trip during a given period, in relation to the total population (the frame used for such survey). Such relationship is expressed in %. Usually a household type survey provides this type of information.

Such concept can also be applied to visitors

Related terms:
Household
Trip (tourism)

Purpose of a tourism trip (main and secondary purposes)/A
The main purpose of a tourism trip is defined as the purpose in the absence of which the trip would not have taken place. Classification of tourism trips according to the main purpose refers to nine categories: this typology allows the identification of different subsets of visitors (business visitors, transit visitors, etc.).

Classification of tourism trips according to the main purpose

1. Personal
   1.1. Holidays, leisure and recreation
   1.2. Visiting friends and relatives
   1.3. Education and training
   1.4. Health and medical care
   1.5. Religion/pilgrimages
   1.6. Shopping
   1.7. Transit
   1.8. Other

2. Business and professional
Each tourism trip has one and only one main purpose though a visitor can also undertake secondary activities while on his/her trip.

For individuals traveling alone, each tourism trip has only one main purpose though a visitor can also undertake secondary activities not related to this main purpose while on his/her trip, from which secondary purposes can be inferred if relevant for analytical purposes. For instance, a person on a business trip might also spend a couple of days for recreation.

The main purpose of a trip is strongly linked with the main activities a visitor will deploy during his/her stay and determines significantly the level and pattern of his/her expenditure.

In the case of travel parties, the general principle when measuring expenditure is that the main purpose of the trip should be the one that is central to the decision for the travel party as a unit to take the trip, that is, the purpose in the absence of which the party would not have taken the trip.

However, it is evident that, once this central purpose has been defined, each individual member of the travel party might have a different particular purpose. This specific purpose will be considered as a secondary purpose of the trip for those of the accompanying party.

**Related terms:**
- Activities (and main purpose of the trip)
- Tourism destination
- Trips
- Visitors
- Tourist behaviour

**Region (subnational)/C**

In relation with this document, the administrative unit corresponding to the first level of territorial disaggregation of a country in terms of its political and administrative organization; for instance, NUTS 2 level in the EU, provinces in Canada and China, states in Brazil and Mexico, etc.

**Related terms:**
- Regional tourism
- Territorial entities

**Regional tourism (subnational)/C –see E.N.-**

In order to separate visitors who have their place of usual residence within the region of interest from those who come from other regions or countries, it is recommended that three subsets of visitors to or in this region be identified:

- Residents from countries other than the country of reference (inbound visitors to the country as a whole)
- Residents from another regions of the country of reference
- Residents in the region of interest

Such definitions are consistent with those addressed in IRTS 2008 under “forms of tourism” (see Forms of Tourism)

It should be noticed that inbound regional tourism would include the first two subsets while the third one includes both domestic and outbound regional...
tourism (those who travel for tourism purposes within the region of interest or those who travel outside such region but either remain in the country of reference or travel outside the country of reference, correspondingly)

Regional tourism is a particular type of form of tourism to be used at the subnational-regional level which comprises the activities of these three subsets of visitors and it might be the case that the identification of outbound regional tourism (in either of the two cases already mentioned) is not a priority in most regions; if that were the case, a third subset is proposed referring exclusively to domestic regional tourism.

If deemed appropriate and feasible, additional subsets could also be identified for analytical purposes (in terms of tourists or same-day visitors).

Related terms:
Data Analysis
Visitors
Inbound tourism
Domestic tourism
Outbound tourism
Geography of tourism

The economic dimensions of tourism trips are linked to tourism expenditure. Though tourism expenditure always relates to persons travelling or intending to travel outside their usual environment, the acquisition of goods and services may well occur within the usual environment of the visitor or in any of the places visited during the trip. This might depend on the nature of the good or service purchased (vehicle fuel, travel agency services, inoculations required for the trip) or on the particular behaviour of a visitor (some prefer purchasing clothes, gear, or other goods to be used on the trip before leaving, while others prefer doing it on the trip as part of their tourism experience).

That’s to say that the issue of the timing of tourism expenditure is relevant, as often items such as transportation, accommodation, etc., are booked and paid for before being “consumed”. The corresponding payment might also happen after consumption when paying off a credit card or a special loan drawn for this specific purpose.

This document defines Regional Tourism in terms of the adaptation to the regional level of the three forms of tourism defined in IRTS 2008 paragraph 2.39; consequently, symmetrical to IRTS 2008 paragraph 4.15, this Glossary defines three categories of tourism expenditure based on the country/region of residence of the transactors involved:

- **Inbound regional tourism expenditure** includes two components:
  - Expenditure associated with foreign visitors (inbound visitors to the country as a whole)
  - Expenditure associated with resident visitors from another region (of the country of reference)

- **Domestic regional tourism expenditure** includes the expenditure associated with resident visitors in the region of interest travelling within the such region

- **Outbound regional tourism expenditure** includes the expenditure associated with resident visitors in the region of interest travelling outside such region either remaining in the country of reference or travelling outside the country of reference, correspondingly)
The design of a proper R-TIS would be justified under two circumstances: the significance of tourism in a given region (see *Significance*) and the availability of a basic set of national statistical sources due to the fact that its design, as recommended by INRouTe, is very data demanding.

The main objective of a R-TIS should be to provide basic statistical data and indicators for territorial planning, tourism policies design and monitoring, and sustainable development measurement in such territorial entity. Consequently, R-TIS should consider both residents and visitors.

In fact, such a system requires three sets of information:

- a first set including statistical information obtainable as a disaggregation of operations carried out with a national coverage and in an official capacity mainly by National Statistical Offices and National Tourism Administrations on tourism understood as an economic sector as well as available on economic, environmental and socio-cultural dimensions of sustainability.

- a second set including statistical information provided by official statistical operations carried out by regional bodies (such as Regional Statistical Offices, Regional Tourism Administrations, Regional public institutes and agencies for tourism development and management, and other official bodies).

These operations are sought to be supplementary to the first set in order to avoid information overlapping between national and regional levels. Exceptionally, some countries might have institutionalized bottom-up methods of collection for national data purposes (basically for the National Statistical Offices).

It should be highlighted that both sets of statistical data do not allow to qualify R-TIS as a statistical system by its own; such set of data should be obtained using a systems approach (see *System approach*) and this is the focus recommended all along this document and consequently, constitute the basic core of the R-TIS.

- third set, including information not necessarily of official and/or of statistical nature (such as electricity consumption by households, credit card expenditure records, transport authorities control, business cycle indicators, early warning indicators, other indicators regarding tourism and sustainable development, etc.), considered to be relevant at regional and sub-regional levels not only for the measurement/monitoring of tourism (carried out by the regional tourism authority or other regional entities, other entities of supra-regional scope or even by national bodies), for analytical purposes (such as analysis of the performance of certain subsectors and foresee their evolution, the perceptions of the demand of a certain destination, etc.) and for gathering data requirement for providing answers to policy questions related with tourism itself or in relation with sustainable development issues.

The expansion of “big data” will certainly spread the content of this third set of information.

**Related terms:**

*Visitors*

*Regional Tourism*

*Forms of tourism*
Related terms:
Statistics
Region
Regional tourism
Geography of tourism
System of Tourism Statistics

Regional System of Tourism Statistics
See Regional Tourism Information System

Relevance/A
The degree to which statistics meet current and potential users' needs.

Related terms:
Survey (statistical)

Residents (national)/A
The residents of a country are individuals whose centre of predominant economic interest is located in its economic territory. Such concept needs to be adapted at the regional level (see Regional Tourism).

Related terms:
Outbound tourism
Residence
Dwellings
Household

Same-day visitor
See Excursionist

Sample (statistical)/A
A subset of the population of reference where elements are selected based on a process with a known probability of selection.

Related terms:
Errors (statistical and non-statistical)
Frame

Scalability/C
Refers to the integration of information across different spatial scales with the aim of developing information sets for particular type of analysis at a level suitable for public policy purposes as well as for key tourism stakeholders interest. In the case of tourism, the lack of territorial homogeneity of the characteristics of both visitors and trips (including the associated expenditures), is a strong argument to focus on scalability as a key concept.

Indicators, aggregates and totals may serve many purposes depending on the scale at which they are applied, on the audience to be reached, and on the quality of the underlying data.

Scalability might be associated to rearrangement of data meaning the procedure to reorganize information sets produced in a research area in order to be used in others; this is the case of INRouTe’s proposed set up of a R-TIS in which the set of statistical data should be generated by articulating different type of information layers (see Statistical information-layers-)

While in the particular case of INRouTe’s Project, scalability is associated to the geo-reference of basic data and indicators at the sub-regional level, rearrangement means using own classification systems in order to use such information for analysis purposes.
In the particular case of linking tourism and environmental sustainability, scalability should require the use of GIS at the level of cadastral units in order to integrate in such scale resident population, visitors, accommodation establishments and use-activity of visitors, as the main set of data; supplementary data such as other establishment in other tourism industries, tourism natural and build resources, etc., should also be geo-referenced in due time.

**Related terms:**
- Ecosystem
- Territorial entities
- Statistical information (layers)
- Regional Tourism Information System R-TIS

### Seasonality

See Seasonal (adjustment)

**Seasonal (adjustment)/A**

A statistical technique to remove the effects of seasonal calendar influences operating on a series of short-term data (such as arrivals, overnights, employment in the tourism industries, etc.). Calendar variations can be of very different kind: number of days in the calendar period, incidence of moving holidays, etc.

**Related terms:**
- Statistics
- Data documentation
- Tourism demand

### SEEA_CF/A

The System of Environmental-Economic Accounting 2012—Central Framework (SEEA Central Framework) -is a multipurpose conceptual framework that describes the interactions between the economy and the environment, and the stocks and changes in stocks of environmental assets; at the heart of such framework is a systems approach to the organization of economic and environmental information (this last type of information has its own international standard, the "Framework for the Development of Environment Statistics"-FDES 2013-).

The integration of information concerning the economy and the environment requires an interdisciplinary approach. The SEEA Central Framework brings together, in a single measurement system, information on water, minerals, energy, timber, fish, soil, land and ecosystems, pollution and waste, production, consumption and accumulation. To each of these areas are assigned specific and detailed measurement approaches that are integrated in the SEEA Central Framework so as to provide a comprehensive view.

The SEEA Central Framework is complemented by two publications: SEEA Experimental Ecosystem Accounting, and SEEA Applications and Extensions 2014.

**Related terms:**
- Systems approach

### Significance (economic)/C –see E.N.-

Refers to the economic importance of tourism in any subnational area; this concept, used in the IRTS 2008 (para. 5.10) as the criteria for defining a tourism characteristic product, is suggested to be also used at the
Tourism and Sustainability: A Statistical Insight at Subnational Levels

subnational level in order to identify when a territorial entity can be labelled as a tourism destination.

For the operationalization of "significance", it is recommended that key tourism stakeholders should agree on the use of a limited number of indicators (both from the supply and demand side); each country should complement them and fix the threshold for its application in absolute terms, if deemed appropriate and feasible.

This document proposes the following criteria:

- **From the Supply side**, the use of employment figures associated with part of the "Accommodation for visitors" industry (hotels as well as other activities such as motels, guesthouse, pensions, bed and breakfast, time share units, etc.)
  Complementary criteria could be based in other accommodation services for visitors, number of establishments in the tourism industries, etc.

- **From the Demand side**, the use of overnight figures; complementary criteria could be number of visitors, tourism expenditure as a proportion of regional GDP, etc.

**Related terms:**
- Establishment
- Employees
- Tourism destination
- Tourism population
- Visitors

**Skill/B**
The ability to carry out the tasks and duties of a given job

**Related terms:**
- Job
- Employment

**Spatial areas/C**
*See Territorial entities*

**Stakeholders**
Tourism practitioners – including tourism official who commission surveys and research, and those who undertake such surveys- and different key stakeholders at regional and sub-regional levels include governments, public institutes and agencies, universities, research centers, industry associations, trade bodies, consulting firms, tourism destination managers, tourism development authorities, tourism businesses, etc.

**Statistical data/C**
The basic core of the R-TIS must refer to official statistical data (at the national and regional level) in order to allow for comparability (a golden rule that UNWTO share with all other UN Sister Agencies)

There are three elements that make a data be a statistical data:

- The existence of a Frame or Universe (a list with the total population of the observation unit of reference – productive establishments, population, overnights, arrivals, etc.-)
- The selection of a random sample of such Frame using statistical techniques so that the data obtained can be representative of such Frame
- How the data obtained are upgraded to the total population of such Frame
Statistical information (layers)/C

This document proposes as the basic core of the design of a R-TIS, to articulate national/regional layers of statistical data derived from available national statistical sources on economic, environmental and socio-cultural dimensions of sustainability. In due time, a second type of layer is also suggested by extending such link to sub-regional levels such as the territorial entities breakdown proposed in this basic glossary: for such purpose it might be necessary to develop regional statistics for any of those dimensions. The term "articulation" implies linking with statistical rigor national and regional data used to measure the same variables.

**Related terms:**
Regional Tourism Information System
Territorial entities

Stop

See Itinerary

Structural business statistics/B

Such type of statistics should allow the establishment of a common framework for the collection, compilation, transmission and evaluation on the structure, activity, competitiveness and performance of businesses at the national level. The compilation of structural business statistics has as its purpose, in particular, to analyze:

(i) the structure and evolution of the activities of businesses;
(ii) the factors of production used and other elements allowing business activity, performance and competitiveness to be measured;
(iii) the national and regional development of businesses and markets;
(iv) business conduct;
(v) small and medium-sized enterprises;
(vi) specific characteristics of enterprises related to particular groupings of activities.

**Related terms:**
Statistics
Enterprises
Administrative data use
Establishment

Subnational area

See Territorial entities

Survey (statistical)/A

An investigation of the characteristics of a given population by means of collecting data from a sample of that population (see Frame) and estimating their characteristics through the systematic use of statistical methodology. Included are:

- A census, which attempts to collect data from all members of a population.
- A sample survey, in which data are collected from a (usually random) sample of population members.
- Collection of data from administrative records, in which data are derived from records originally kept for non-statistical purposes.
- A derived statistical activity, in which data are estimated, modelled, or otherwise derived from existing statistical data sources (like the TSA).

**Related terms:**
Regional Tourism Information System
Sustainable development/B

Is a broad political objective, encompassing an intention to avoid activities that will cause long-term damage and a desire to ensure adequate quality of life for present and future generations; as a policy concept “sustainable development” has played a defining role in helping to coalesce thinking around goals such as the new UN 2030 Agenda for Sustainable Development.

Tourism as an activity refers to those who travel with a tourism purpose; besides its contribution to the economy of the destination and place visited, tourism trips affects environmental sustainability and impacts on the social and cultural dimensions of the resident population.

At present, there is no agreed definition of sustainable tourism that might be directly amenable to measurement. At this time, it may be premature to spend significant resources to determine a singular definition; however, it is likely to be necessary to be able to describe the elements and perspectives relevant to sustainable tourism such that the work on developing the statistical framework is scoped appropriately. The description of sustainable tourism will reflect a combination of the user requirements and a general understanding of sustainable development as encompassing economic, environmental and social dimensions.

Related terms:
Ecosystem
Environment
SEEA_CF

Systems approach/B

In statistics, applying a systems approach to organize information in any particular thematic area means the application of concepts, definitions, classifications, accounting rules and principle of recording consistent with those of the System of National Accounts.

In the case of tourism, such approach has been followed in the 2008 international standards on tourism statistics as well as in the present document with the particularity that some supplementary concepts (those identified as /C) are proper to the sub-national adaptation of those 2008 international standards.

Related terms:
IRTS 2008
SEEA_CF
Regional Tourism Information System

System of National Account 2008 (2008 SNA)/A

In order to ensure that the compilation of the integrated tourism statistics is in line with the compilation practices of other economic statistics, it was decided that it shall be further aligned with the updated System of National Accounts 2008 (2008 SNA).

The System of National Accounts 2008 (2008 SNA) consists of concepts, definitions, classifications, accounting rules, accounts and tables that constitute a comprehensive, integrated framework for the estimation of production, consumption, capital investment, income, stocks and flows of financial and non-financial wealth and other related economic variables.

The System of National Accounts 2008 includes a specific framework showing the interface between demand for goods and services and the supply of these goods and services within an economy, namely the supply and use tables.
What makes tourism special, however, is the temporary situation in which an individual in the capacity of consumer finds himself/herself: he/she is taking a trip or a visit to a place outside his/her usual environment for less than a year and for a purpose other than being employed by a resident entity there. This differentiates a visitor from the other categories of consumers.

These specific characteristics of the visitor cannot be made explicit within the core of the System of National Accounts, where transactors are classified according to (relatively) permanent characteristics, one of them being their country of residence.

In order to deal with such situations, the System of National Accounts 2008 suggests the use of satellite accounts, annexed to its core, and which, to an extent to be defined in each case, share its basic concepts, definitions, classifications and accounting rules.

**Related terms:**
- R-TIS
- SEEA_CF
- Systems approach
- Tourism Satellite Account (TSA)

**System of Tourism Statistics/A**

Concepts, definitions, classifications and indicators presented in International Recommendations 2008 should be viewed as an important foundation of the system of tourism statistics. As such, they should be used as a reference for coordination, reconciliation and interpretation of the information in the area of tourism, although this information might extend beyond the still restricted domain these Recommendations touch upon.

**Related terms:**
- Regional Tourism Information System
- Statistics

**Target audience**

See Stakeholders

**Target population/A**

The target population is the set of units about which information is wanted and estimates are required. Practical considerations can dictate that a survey population be defined which excludes some units in the target population or which is comprised of differently defined units through which the target population can be accessed.

**Related terms:**
- Frame
- Survey

**Territorial cohesion/B**

Cohesion is a policy concept used particularly in the European Union to refer to pursuing harmonious development across the Union; territorial cohesion focus on the objective of respect for the territorial and cultural features in Europe. Obviously, tourism might very well affect territorial cohesion in a given region as well as in other adjacent ones such as in the European Union, MERCOSUR in Latin America, Central America, and other areas that share as a main common feature the free movement of persons.

Such concept relates with one of the objectives of this document: the need for gaining further knowledge on territories in order to better guide their development in relation with tourism.
This document uses as reference for the identification of subnational territorial entities the following hierarchical classification composed of both administrative and analytical units at two basic levels:

**INROUTE CLASSIFICATION OF SUBNATIONAL TERRITORIAL ENTITIES**

**REGIONAL LEVEL**
- Region
- Multi-regional (supra-national)
- Multi-regional (intra-national)
- Other administrative units (sub-regional)
- Analytical units

**LOCAL LEVEL**
- Municipality
- Multi-local
- Other administrative units
- Analytical units

The classification is proposed in order to operationalize the implementation of the conceptual framework proposed and more specifically, to allow for the setting up of the R-TIS; consequently, it should be adapted to any of such territorial levels in different countries, and other extensions could also be envisaged for tourism purposes.

The terms *region*, multi-regional and sub-regional used refers to subnational entities. Consequently, such terms and classification used in this document should not be understood as the same terms used by UNWTO in its capacity of UN Specialized Agency for Tourism (where region and regional refers to a pluri-national or international framework).

Starting from the classification of those basic entities, it is feasible to establish combinations per each different type of analysis. For this purpose, the criteria to be used should be defined, such as market segments (responding to different forms of tourism, and different characteristics of visitors and trips), availability of tourism infrastructure and facilities, territory physical characteristics, territorial planning requirements, etc. One of the possible examples is “tourism spatial area” (identified as small spatial scales where tourism is significant) which might be applicable in its entirety to a certain regional and/or sub-regional administrative entity, but more often it is likely that it might not cover a single municipality, neither an entire region. Such term is often used by territorial planners in order to bring tourism content into focus.

Such term is also implicitly identified in the *System of Environmental-Economic Accounting 2012 /Applications and Extensions* document (see Chapter IV "Extensions of the SEEA")

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43 In the document, the administrative unit corresponding to the first level of territorial disaggregation of a country in terms of its political and administrative organization; for instance, NUTS 2 level in the EU, provinces in Canada and China, states in Brazil and Mexico, etc. (see Glossary)

44 4.1 "The focus in this chapter is the potential of data from the accounts of the SEEA Central Framework to be extended and integrated with other information. The potential to connect SEEA accounts to a range of existing information sources can be of direct assistance in better understanding multi-faceted issues, such as sustainable development. It also recognises that responses to environmental pressures will usually rely on understanding connections between the environment, the economy and individuals. In this context the SEEA accounts do not provide
Such units would qualify as analytical units and could generically be labeled as “small tourism destination areas” (STDA).

Any of those unit/s of the proposed classification (either at the regional or local level) where tourism is economically significant (according to the criteria proposed in this Glossary (see Significance), should be the focus of tourism measurement and could be labeled as a “tourism destination/s”.

System In any case, the physical space of any of such units in the classification as well as any cluster of these must be identified precisely

Related terms:
NUTS
Product (tourism)
Regional Tourism Information System
Significance
SEEA_CF

Time share/A

There has been a trend towards the development of innovative types of vacation home ownership or something similar (as the outright ownership of a fixed asset is not always involved) that combine the privacy of an owned vacation home with the amenities, services and flexibility offered by collective accommodation as well as a reduction of costs for the “owner” over the periods in which he/she is not making use of the “property” for himself/herself. In the original timeshare system, what was purchased was a “right to use” a given physical property at a specific moment in time over its lifetime. Flexibility was gradually introduced in the system along different lines, relaxing the conditions concerning of a specific physical asset, the lifetime of the project, or the fixity of the period of use through the design of different types of administrative and financial constructs.

Related terms:
Accommodation for visitors
Tourism services

Tourism/A

Tourism is a social, cultural and economic phenomenon, which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which involve tourism expenditure.

Related terms:
Regional Tourism
Tourism characteristic occupations/B

Those occupations that predominantly lie within tourism industries

Related terms:
- Occupations
- Tourism industries

Tourism destination/C

This document approaches such concept from a twofold perspective: the type of physical space (see Territorial entities—which includes a classification of both administrative and analytical units-) and the economic importance of tourism in the territorial entity of reference (see Significance).

It recommends for main existing tourism destinations to consider the opportunity to develop a R-TIS (as described in this Handbook) while for potential tourism destinations it is recommended to develop a partial R-TIS that comprises a limited set of data (basically supply side data and indicators).

The application of the proposed economic criteria (both demand and supply side criteria) to decide if and when a territorial entity could be labeled as a tourism destination should foster the process by which existing tourism destinations improve their measurement and analysis by using administrative type of data linked to tourism activity (such as the number and performance of productive establishments associated to one or more tourism industries, jointly with the employment associated to them) and visitors surveys, if deemed appropriate.

By 2015, the UNWTO Committee on Tourism and Competitiveness has provided the following definition: "A tourism destination is a physical space with or without administrative and/or analytical boundaries in which a visitor can spend an overnight. It is the cluster (co-location) of activities, products, services and experiences along the tourism value chain and a basic unit of analysis of tourism. A destination incorporates various stakeholders and can network to form larger destinations. It is also intangible with its image and identity which may influence its market competitiveness."

Related terms:
- Product (tourism)
- Significance
- Territorial entities
- Visitors
- Visit

Tourism economic consequences/A

See Economic consequences (tourism)

Tourism economic contribution/A

See Economic contribution (tourism)

Tourism expenditure/A

Tourism expenditure refers to the amount paid by visitors for the acquisition of consumption goods and services, for own use or to give away, for and during tourism trips.

Related terms:
- Tourism Satellite Account (TSA 2008)
- Visitors
**Tourism flows/A**

Refers to the movement of visitors, within and across regions, domestically and internationally. The terms “tourism flows” and “flows of visitors” are used interchangeably.

**Related terms:**
- Visitors
- Forms of tourism

**Tourism industries/A** – see E.N.-

Tourism industries (also referred to as tourism activities) are the activities that typically produce tourism characteristic consumption products.

Tourism characteristic consumption products are those that satisfy one or both of the following criteria:

(a) Tourism expenditure on the product (either good or service) should represent a significant share of total tourism expenditure (share-of-expenditure/demand condition);

(b) Tourism expenditure on the product should represent a significant share of the supply of the product in the economy (share-of-supply condition). This criterion implies that the supply of a tourism characteristic product would cease to exist in meaningful quantity in the absence of visitors.

**List of categories of tourism characteristic consumption products and tourism industries**

<table>
<thead>
<tr>
<th>Products</th>
<th>Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accommodation services for visitors</td>
<td>1. Accommodation for visitors</td>
</tr>
<tr>
<td>2. Food and beverage serving services</td>
<td>2. Food and beverage serving activities</td>
</tr>
<tr>
<td>3. Railway passenger transport services</td>
<td>3. Railway passenger transport</td>
</tr>
<tr>
<td>4. Road passenger transport services</td>
<td>4. Road passenger transport</td>
</tr>
<tr>
<td>5. Water passenger transport services</td>
<td>5. Water passenger transport</td>
</tr>
<tr>
<td>6. Air passenger transport services</td>
<td>6. Air passenger transport</td>
</tr>
<tr>
<td>7. Transport equipment rental services</td>
<td>7. Transport equipment rental</td>
</tr>
<tr>
<td>8. Travel agencies and other reservation services</td>
<td>8. Travel agencies and other reservation services activities</td>
</tr>
<tr>
<td>9. Cultural services</td>
<td>9. Cultural activities</td>
</tr>
<tr>
<td>10. Sports and recreational services</td>
<td>10. Sports and recreational activities</td>
</tr>
<tr>
<td>12. Country-specific tourism characteristic services</td>
<td>12. Other country-specific tourism characteristic activities</td>
</tr>
</tbody>
</table>

**Related terms:**
- Activities undertaken by visitors
- Employment (attributable to tourism)
- Tourism sector
- ISIC Rev. 4
- Tourism Satellite Account (TSA 2008)

**Tourism population/C** – see E.N.-

Tourism population is a tourism statistics concept based on full time equivalent (FTE) estimates; as other type of FTE figures, they allow to derive “average figures” during a reference period (either a week, a year or any other period). It has been basically applied to labour force statistics but also
Tourism and Sustainability: A Statistical Insight at Subnational Levels

to education and other social research areas such as sustainability, in order to improve the comparability of employment, jobs and resident/non-resident population figures.

In the case of tourism related environmental indicators (such as potential pressure on protected areas or "ecosystems", urban waste production, electric power consumption, waste water treatment capacity, separate collection of containers, etc.), tourism population allows for deriving operational ratios used for environmental sustainability insight and monitoring purposes.

Tourism Population regional figures should be estimated using the number of overnights associated to inbound and domestic regional tourists; ideally, the following four subsets of stays should be measured; in

- establishments providing conventional accommodation services (identified in ISIC Rev.4 as 5510) (see Appendix 3)
- establishments providing other type of accommodation services (identified in ISIC Rev.4 as 5520, 5590, 6810 and 6820) (see Appendix 3)
- vacation homes
- friends’ and relatives’ homes

Usually regional estimates of Tourism Population figures should allow for a correction factor because not all such number of overnights are usually available.

Related terms:
- Full-time equivalent
- Regional tourism (subnational)

Tourism product

Tourism Satellite Account (TSA 2008)/A

The Tourism Satellite Account (described in the Tourism Satellite Account: Recommended Methodological Framework 2008) is the second international recommendation on tourism statistics that has been developed in a framework of consistency with the System of National Accounts (the International Recommendations for Tourism Statistics 2008 being the first). Both recommendations are mutually consistent and provide the conceptual framework for measuring and analyzing tourism as an economic activity at the national level.

As a statistical tool for the economic accounting of tourism, the TSA can be seen as a set of 10 summary tables, each with their underlying data and representing a different aspect of the economic data relative to tourism macroeconomics at the national level: inbound, domestic tourism and outbound tourism expenditure, internal tourism expenditure, production accounts of tourism industries, the Gross Value Added (GVA) and Gross Domestic Product (GDP) attributable to tourism demand, employment, investment, government consumption, and non-monetary indicators.

INRouTe has elaborated on a regional extended TSA approach

Related terms:
- R-TIS
- Systems approach
**Tourism sector/A**

The *tourism sector* is the cluster of production units in different industries that provide consumption goods and services demanded by visitors. Such industries are called *tourism industries*.

It should be highlighted that only part of the production of such industries is related to tourism demand –(see also *Tourism industries* for further clarification).

**Related terms:**
*Tourism industries*

**Tourism sector employment/B**

Not all business units in an industry identified as part of the tourism sector may actually be providing services directly to visitors, and those that do offer tourism goods and services may not be providing those services exclusively to visitors. However, regardless of whether or not an individual’s work is completely attributable to tourism, the level of service provided and the skills or occupational requirements involved is the same whether a visitor or another type of consumer is involved in the commercial transaction. For example, whether or not a bartender serves tourists or local patrons, the profile of the occupation and the human resources needs of that individual will be the same.

Therefore, for human resource planning purposes (i.e. training, recruitment, labour supply/demand imbalances, etc.) there is the need to understand the total number of people employed in the sector.

**Related terms:**
*Enterprise*
*Employment*
*Establishment*
*Full-time job*
*Job*

**Tourism trip/C – see E.N.**

A tourism trip is a trip taken by a visitor to a main destination outside his/her usual environment, for less than a year, for any main purpose other than to be employed by a resident entity in the country or place visited.

**Related terms:**
*Visits*
*Visitors*
*Itineraries*

**Tourism visit/A – see E.N.**

It should be recalled that observing tourism trips and visits is not the same as observing visitors, as an individual might make more than one trip during the observation period. Quite frequently, tourism statistics uses the term “visitor” instead of “tourism trip” or “tourism visit”. IRTS 2008 recommends that these concepts be clearly defined and differentiated both in the statistical operations and data dissemination.

A round-trip might be composed of one or more visits to different places, seen as different destinations, or as a unique (aggregated) destination. There might be as many visits as stops in different places visited.

**Related terms:**
*Trip*
Tourists
Visitors
Tourism flows

Tourist (or overnight visitor)/A
A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay.

Related terms:
Visitors
Trips
Domestic tourism
Inbound tourism
Outbound tourism

Tourist behaviour/C
Refers to activities undertaken by visitors at destination, such as general type of activities (see Activities-and main purpose of the trip-) , attraction visited, specific activities undertaken during displacements (tracks) through itineraries (either organized or not), etc.

In addition to associated characteristics of trips and visitors, tourist behaviour is a key element for measuring and analyzing tourism at subnational levels because the associated expenditure is critical for such measurement and analysis. No special reference can be found in IRTS 2008.

Related terms:
Activities (and main purpose of the trip)
Activity of visitors
Tourism destination
Itinerary
Stops
Data Analysis
Visitors
Visits

Tour operator/A
Tour operators are businesses that combine two or more travel services (for example, transport, accommodation, meals, entertainment, sightseeing) and sell them through travel agencies or directly to final consumers as a single product (called a package tour) for a global price.

Related terms:
Travel/Tourism
Travel agencies
Package tours

Transportation (modes)
See Means of transportation.

Travel /A
Travel refers to the activity of travellers. A traveller is someone who moves between different geographic locations, for any purpose and any duration. The visitor is a particular type of traveller and consequently tourism is a subset of travel.

Related terms:
Travel agency
Trips
Visitors
Visitor accommodation
Tourism flows
Destination
Forms of tourism

**Travel agencies/A**

Visitors (or potential visitors), when planning and organizing their trip, often use the services of travel agencies in order to get information on alternatives and for making their bookings (transport, accommodation, recreation activities either packaged or individually purchased, etc.). Their function consists mainly of selling the right to use a certain service provided by others at a certain moment in time and within certain conditions. Their role is to provide information and other services to the visitor and they are the intermediary in the purchase of certain services, although they might also provide additional services such as accompanying tours, guiding services, etc. Finally, it should be mentioned that travel agencies are under the specific jurisdiction of most national tourism administrations.

**Related terms:**
Travel
Tourism operators
Package tours

**Travel group/A**

A travel group is made up of individuals or travel parties travelling together: examples are people travelling on the same package tour or youngsters attending a summer camp.

**Related terms:**
Travel party

**Travel party/A**

A travel party is defined as visitors travelling together on a trip and whose expenditures are pooled.

**Related terms:**
Trips
Visitors

**Travel party (operational definition)/C**

As stated in the second paragraph of the 2008 International Recommendations for Tourism Statistics (IRTS 2008), “The activities carried out by a visitor may or may not involve a market transaction, and may be different from or similar to those normally carried out in his/her regular routine of life. If they are similar, their frequency or intensity is different when the person is travelling. These activities represent the actions and behaviours of people in preparation for and during a trip in their capacity as consumers”

The “travel party” is a new observation unit introduced by the IRTS 2008 in order to foster credibility and rigour in the measurement of average tourism expenditure by visitors; consequently, it is obvious that the operationalization of “travel party” needs to be linked to the observation unit used in those surveys that focus on the behaviour of consumers (households surveys being the most relevant ones in the case of domestic and outbound tourism).
Such unit is defined as “visitors travelling together on a trip and whose 
expenditures are pooled”; therefore, the operationalization of the concept of 
“travel party” should refer primarily to “all or part of the members of the 
same household travelling together in a tourism trip”. There might be also 
other possible grouping of visitors that might have “pooled expenditures” 
(such as a combination of individuals pertaining to different households 
travelling together in a tourism trip) but their identification in a survey 
would be in most cases highly inefficient.

Related terms:
Data Analysis
Trips
Visitors
Visits

Travel pattern (of visitors)/C

Refers to a homogenous subset of visitors in terms of one or more 
characteristics considered relevant. Each of such characteristics is also 
referred as “travel choices”.

The implementation of travel patterns (also referred as “travel styles”) would require, ideally, in addition to characteristics of both trips and visitor 
(main purpose of the trip, means of transportation used, type of lodging 
chosen, organization of the trip, etc), complementary ones associated with 
tourist behaviour at destination (these might also include qualitative ones).

The knowledge about what particular travel styles are prominent within a 
market is very useful for marketing campaigns, destination management and 
investors.

Related terms:
Data Analysis
Trips
Visitors
Visits

Trip

See Tourism trip

Turnover (business statistics) /B

Turnover comprises the totals invoiced by the enterprise or establishment 
during the reference period, and this corresponds to market sales of goods 
or services supplied to third parties.

Related terms:
Enterprises
Statistics
Visitors
Visitor trip
Visit

Types of tourism/C

See Types of visitors

Types of visitors/C

A cluster of visitors that share common characteristics either personal, related 
to the trip or travel behaviour created for analytical purposes.

Also referred as “types of tourism” or “market segments”.

Travel pattern (of visitors)/C
Usual environment/A

The usual environment of an individual, a key concept in tourism, is defined as the geographical area (though not necessarily a contiguous one) within which an individual conducts his/her regular life routines.

There are often differences in density of, transportation accessibility, cultural behaviour, proximity to national or administrative borders, etc., between territorial entities. These differences hinder the development of a unique worldwide statistical determination of the usual environment of an individual. Nevertheless, the determination of the usual environment should be based on the following criteria:
- Frequency of the trip (except for visits to vacation homes)
- Duration of the trip
- The crossing of administrative or national borders
- Distance from the place of usual residence

In addition to using the frequency and duration criteria to determine the usual environment, IRTS 2008 recommends that in practice the crossing of administrative borders be combined with the distance criterion to establish the limits of the usual environment for the following reasons:
- Administrative units might have very different sizes.
- Metropolitan areas may stretch over administrative borders even though they represent a compact or contiguous geographical area.
- The place of usual residence of some individuals may be very close to the administrative borders so that their crossing might not be relevant for tourism analysis.

Related terms:
Survey
Dwellings
Place of usual residence

Vacation home/A

A vacation home (sometimes also designated as a holiday home) is a secondary dwelling that is visited by the members of the household mostly for purposes of recreation, vacation or any other form of leisure.

Related terms:
Dwelling
Accommodation for visitor
Household

Value chain/C

In tourism literature the term “value chain” refers to the full range of activities required to bring a product or service through the different phases of production (including physical transformation and the inputs of various producers and services) in response to consumer’s demand.

The UNWTO Committee on Tourism and Competitiveness has provided in 2015 the following definition: “Tourism value chain is the sequence of primary and support activities which are strategically fundamental for the
performance of the tourism sector. Linked processes such as policy making and integrated planning, product development and packaging, promotion and marketing, distribution and sales and destination operations and services are the key primary activities of the tourism value chain. Support activities involve transport and infrastructure, human resource development, technology and systems development and other complementary goods and services which may not be related to core tourism businesses but have a high impact to maximize the value of tourism.”

Value chain might be useful as a method for identifying, for example, constraints and levels of inefficiencies that prevent the future addition of net value, innovation and competitiveness also in the tourism sector.

Sectorization of value chain analysis does not follow International Standard Industrial Classifications of all economic activities (ISIC) as recommended by the UN for developing tourism statistics basic data and indicators as well as macroeconomic analysis (input-output tables and Tourism Satellite Accounts); consequently, INRouTe understands that being a statistical based initiative, the proper measurement and analysis of value created by the tourism sector should be linked to UN standards.

**Related terms:**

*Tourism sector*

**Vehicle Occupancy/B** The number of persons, including driver and passenger(s), in a vehicle; also includes persons who did not complete a whole trip.

**Related terms:**

*Means of transportation*

**Vehicle Trip/B** A trip by a single vehicle regardless of the number of persons in the vehicle.

**Related terms:**

*Trip*

*Means of transportation*

**Visit** See *Tourism visit*

**Visitor/A** A visitor is a traveller taking a tourism trip to a main destination outside his/her usual environment, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor), if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise.

**Related terms:**

*Trip*

*Visit*

*Tourism flows*

*Household*

*Residents*

**Visitor-trip/C** A trip by one or more visitors in any mode of transportation; each visitor is considered as making one visitor-trip.
Related terms:

Visitors
Visits
Tourism flows
Means of transportation
Data analysis

Explanatory notes

Administrative data use

Administrative records present a number of advantages to a statistical agency or to analysts. Since these records already exist, costs of direct data collection and a further burden on respondents are avoided. They are usually available for the complete universe and, hence, for the most part unconstrained by sampling error considerations. Most importantly, they can be used in numerous ways in the production of statistical outputs. Examples of their uses include:

- the creation and maintenance of frames;
- the complete or partial (via record linkage) replacement of statistical collection;
- the editing, imputation and weighting of data from statistical collection; and
- the evaluation of statistical outputs.

Administrative datasets are not designed nor are the data collected with any specific statistical purposes in mind. The use of such data sources may require some compromises to be made with respect to population definition and coverage.

UNWTO is firmly convinced of the need to promote the use of administrative sources, among other reasons because it is impossible to base the development of the System of Tourism Statistics and the TSA on strictly statistical operations. And there are three areas on which attention should be focused: the information generated by traffic regulation authorities, fiscal sources and the “electronic fingerprints” left by tourists (toll motorways, bank cards, mobile telephones, use of the Internet to consult tourism websites, etc.) although not all of such electronic fingerprints qualify as administrative data.

Carrying capacity

From an analytical perspective, a particular concept that may be advanced from a measurement perspective is “carrying capacity”. This concept has been developed in the field of sustainable tourism and may speak directly to the linkage between the economic and environmental domains.

Carrying capacity is extremely difficult to determine due to its complexity. Nevertheless, tourist destinations—particularly ones with very fragile and rare ecosystems such as many National Parks—manage to estimate this in practice, using both objective (e.g. soil erosion level, presence of litter or graffiti) and subjective (e.g. visitors’ satisfaction, visitors’ perceived level of environmental degradation or crowdedness) indicators.

These notes supplement the paragraphs included in a reduced number of terms (17); due to editorial reasons, this practice helps keep the List of terms reasonably balanced.
Destinations with fragile ecosystems or unstable economies can sustain fewer visitors than destinations with stable economies or ecosystems; however, destinations that are plagued by “destructive tourists” (e.g., those that produce too much litter to be removed in a timely manner, those that distress the local wildlife with their aggressive demeanor) could sustain fewer visitors than destinations without such “destructive tourists” even if the ecosystem is not initially fragile.

The terms “congestion” and “carrying capacity” are not synonymous. The term “congestion” is usually used to mean a condition where the number of visitors is large enough to alter their experience (e.g., having to wait unreasonably long in lines, not being able to enjoy peace and solitude in locations that promise these two things) and/or the destination in the social, environmental or economic dimension; however, the number of visitors might not be large enough to actually damage the destination, as is the case when the number of them exceeds the carrying capacity.

Comparability

This document accepts that only statistical basic data and indicators allow for robust interregional comparability of tourism within a given country as well as for international comparability. For both purposes – especially for intra-national comparability of tourism destinations – a continuous lobbying for the implementation of a common set of concepts, definitions and classifications is a necessary condition for deriving a basic set of tourism statistics and indicators for such purposes. It is recommended for those regions where tourism is significant, to focus on an incremental approach that involves, first of all, the development of a limited set of statistical basic data and indicators at the national/regional levels (the term “articulation” – see 3.4 – implies linking with statistical rigor available national and regional data used to measure the same variables); such possibility should be checked by a statistical insight regarding its feasibility. Such an articulation nation-region will produce a conceptual and data framework for analyzing interregional tourism within a harmonized framework; and by so doing, will also contribute to international comparability between regions. In a second step an articulation of regional / sub-regional levels should be foreseen (and this is basically feasible in statistically developed countries) including geo-referenced data (see also Chapter 5/ D Adapting the R-TIS to sub-regional extensions).

However, a less robust type of comparability is also sought mainly for very different analytical purposes. Translated to the case of regional data, the third component of the R-TIS (see Regional Tourism Information System) should also allow for comparability purposes between regions and main tourism destinations.

Either carried out by the regional tourism authority or other regional entities, other entities of supra-regional scope, or even national bodies, the initiatives to create such a different but supplementary type of information should foster the analysis of regional tourism activity and be also relevant for all or some of the principal actors of the tourism sector.

Non-strict statistical type of comparability based on this R-TIS third set of data requires in addition to a common set of concepts, definitions and classifications, the use of the right type of territorial entities (see Territorial entities), as well as the use of measurement tools that should allow for valid and comparable results.

Data analysis

Such process allows for developing answers to questions through the examination and interpretation of data. The basic steps in the analytic process consist of identifying issues, determining the availability of suitable data, deciding on which methods are appropriate for answering the questions of interest, applying the methods and evaluating, summarizing and communicating the results.

Data analysis is essential for understanding results from surveys, administrative sources and pilot studies; for providing information on data gaps; for designing and redesigning surveys; for planning new statistical activities; and for formulating quality objectives.
Data from a survey can be used for descriptive or analytic studies. Descriptive studies are directed at the estimation of summary measures of a target population (for instance, the average daily expenditure of a German tourist in a given tourist destination) while analytic studies may be used to explain behaviour of and relationship among characteristics.

**Data modelling**

Survey data are often restricted in their capacity to produce reliable estimates due to the restrictions of sample size whereas administrative data may bring good geographic coverage but may exclude certain groups of people from the population. Because sublet changes within the population in territorial entities may not always be recognized by the assumptions made in the modelling process, synthetic estimates should always be used with care and movements over time should be used rather than absolute values generated by any modelling process.

Consequently, where modelling become more in evidence is when there is a shortage of data for particular variables, i.e., there are no direct estimates or benchmarks that can be used to provide a starting point. In this case, modelling may be required.

**Employment**

Each measure serves different purposes, and countries may adopt one or more of them depending on the intended use. If the intent is to determine the number of people who depend to some extent for their livelihoods by working in the tourism industries, then a count of persons with a job (main or other) in these industries would be appropriate. The measure based on employment in the main job would serve to gauge those with significant attachment to the tourism industries, for instance. If the intent is to make a comparison between tourism and non-tourism industries or between the tourism industries and the economy overall, then a count of jobs in the tourism industries would be more appropriate.

Countries may also be limited to one or other measure depending on their unique circumstances in terms of sources available.

**Errors (statistical and non-statistical)**

Statistical errors are mentioned and measured when documenting statistical surveys (this is the case of sampling errors) while non-statistical errors are usually ignored (such as coverage, nonresponse, measurement and processing errors). It is evident that non-statistical errors might be relevant.

- **Sampling errors** occur when survey results were obtained from a sample rather than the population as a whole. For probability sampling, the random variation due to sampling can be calculated. In practice, these errors may also include estimation errors that may be attributable to the use of estimators, which, deliberately or otherwise, create a bias (e.g., some small area estimators).
- **Coverage errors**, which consist of omissions, erroneous inclusions, and duplications in the frame used to conduct the survey. Since they affect all survey estimates, they constitute one of the most important types of error. Coverage errors may translate into a negative or positive bias in the data, and the impact may vary depending on the survey universe subgroup. One should also be concerned about classification errors, notably industrial and geographical, among others. For example, badly defined limits or erroneous coding may lead to an omission of part of the territory.
- **Nonresponse errors** occur when there is no response to one or all of the survey questions. Nonresponse leads to an increase in variance as a result of a reduction in the actual size of the sample and the recourse to imputation, and produces a bias if the non-respondents have characteristics of interest that are different from those of the respondents. Furthermore, there is a risk of significantly underestimating the sampling error, if imputed data are treated as though they were observed data.
• **Measurement errors** occur when the response provided differs from the real value; such errors may be attributable to the respondent, the interviewer, the questionnaire, the collection method or the respondent's record-keeping system. Measurement errors usually occur during data collection. Such errors may be random or they may result in a systematic bias if they are not random.

• **Processing errors** occur at subsequent stages of the process, when checking, coding, entering, imputing, and tabulating data. Like measurement errors, processing errors may lead to variance and bias. It is also necessary to look into the potential impact of snags in the survey process: uneven staff training, unusually high staff turnover, procedural changes in mid-operation, etc.

**Modules**

For effective implementation of supplementary surveys a framework for developing and implementing supplementary surveys needs to be in place. This framework should include:

- a requirement for evaluation of alternative data sources, including administrative records. If the information is already available, a supplementary survey would not be required;
- criteria for assessing proposals for supplementary survey (for example, the supplementary survey shall not undermine the goodwill and value of the base survey);
- guidelines for signing the supplementary questions;
- checklists for assessing impact, including effect on respondent burden;
- restrictions (for example, maximum length of survey);
- guidelines for outputs.

**Regional tourism (subnational)**

The terminology used is respectful with the different forms of tourism as in the IRTS 2008; this decision makes these terms not easy to understand in a first reading. In fact, UNWTO has received different suggestions during the 2015 world-wide consultation process of the Basic Glossary such as the followings:

- Proposal A).
  
  “Instead of the three categories listed under “Regional tourism (subnational)”, we propose the following 2 categories which could be break-down further needed be:

  • local: a resident of the region of interest
  • non-local: not a resident of the region of interest

  which can be combined in various ways with the forms of tourism listed in IRTS 2008 (e.g. domestic local inbound for domestic intra-regional tourism, domestic non-local inbound for domestic inter-regional tourism, etc.).”

  Readers should be aware that the terminology proposed in the Glossary is not only consistent with the one used in IRTS 2008 but takes also into account the proposed classification of territorial entities (which establish a distinction between region /local), but also with the fact that a Regional TSA should be consistent with the TSA international standard (which is also consistent with the IRTS 2008 definitions of forms of tourism).

- Proposal B).
  
  “The definition of excursionists associated with each of forms of tourism should be developed in line with the following breakdown:

  **DOMESTIC TOURISM:**

  The definition of "Domestic tourism" should be adapted to the regional perspective.

  Either there are two subsets of domestic Tourism:

  1. National domestic tourism: a visitor resident in the country of reference but outside the region of reference, within the region of reference.
2. Regional domestic tourism: a visitor resident in the region of reference within the region of reference.

OR

Include those visitors residents within the country of reference but outside the region of reference (1) in the concept of inbound tourism as a different subset from those international tourism.

**INBOUND TOURISM**

The definition of "Inbound tourism" should be adapted to the regional perspective.

Either including two subsets of Inbound Tourism

1. International inbound tourism: the activities of a non-resident international visitor within the region of reference

2. National inbound tourism: the activities of a non-resident national visitor within the region of reference

OR

Include the above (2.) subset within domestic tourism.

**OUTBOUND TOURISM**

The definition of "Outbound tourism" should be adapted to the regional perspective:

Comprises the activities of a resident visitor outside the region of reference, either within the country of reference or outside the country of reference.

Readers should be aware that it might be the case that at sub-regional levels, it would be very challenging to open the classification of either tourists or excursionists at the territorial entity of reference.

**Regional Tourism Expenditure**

Following the rules of the System of National Accounts 2008, final consumption is deemed to occur at the moment of the transfer of ownership of goods or that of the delivery of services, and not the time of its payment. Tourism expenditure follows the same rules. Consumption expenditure on transport services occurs when being transported; on accommodation services, when staying in the place of accommodation; on travel agency services, when the information is provided and the travel services are booked, etc.

The acquisition of all goods and services during a tourism trip is, in principle, part of tourism expenditure.

Moreover, all services delivered before the trip and clearly related to the trip, (for example, inoculations, passport services, medical control, travel agency services, travel insurance, transportation services from the usual environment to the place visited, etc.) are included in tourism expenditure. All goods acquired before the trip that are intended to be used on the trip (specific clothes, medication, small items to take along to use or give away, camping gear, luggage, etc.) or brought along as gifts, should also be included.

Consequently, determining the venue of tourism expenditure is not straightforward; from a subnational perspective, it is important to locate such expenditure geographically in order to analyse its impacts in a rigorous way.

**Regional Tourism Information System**

The R-TIS proposed in this document should include national information only for those data for which the corresponding statistical information sources provide the same information but at regional and eventually, also at sub-regional levels. It is a limited set of information sources for which it will be necessary to identify their existence and value their completion; in any case they allow for articulation of a relevant amount of statistical data at the national/regional level. The following six sources (all of them national sources) could provide most of those basic data and indicators:
Representativeness of regional data derived from national statistical surveys (see Survey) might be limited due to sample size. In such cases, modelling statistical data should be an option (see Data modelling).

More specifically, as a general remark, it should be recalled that tourism statistics are difficult and costly to compile at a national level. At a regional level these difficulties and costs escalate and may be so prohibitive as to prevent their compilation altogether. In terms of efficiency, the traditional methods of compiling tourism statistics (from survey data) cannot provide the basic set of statistical data and indicators required for regional tourism policy purposes and thus alternative approaches to compiling subnational statistics and deriving indicators must be considered. In particular, administrative datasets relating to the tourism supply side or large commercial datasets arising from tourists’ electronic fingerprints should be explored and exploited. Ideally, such type of information should be obtained at national level allowing for regional breakdowns.

Besides the database being georeferenced, R-TIS should include historical data series, as well as the corresponding metadata for users. Access should be free and promoted between the academic community, consulting companies and individual researchers and practitioners.

The first two information sets mentioned above should be understood as the basic core of such a system including:

- a set of basic data and indicators derived from statistical surveys and statistical operations based on administrative records. Such sources should cover the measurement of the three forms of tourism - outbound, domestic and inbound- and of the tourism sector. The information sets would have different periodicities – monthly, quarterly and annual – would be obtained from different informant units - visitors, households and productive establishments - and will refer to a limited number of research areas such as:
  - Tourism as an economic sector;
  - Tourism and sustainable dimension
    - The environmental, social and cultural dimension
    - Tourism and the economic dimension
  - Tourism and territorial cohesion;
  - Supporting tourism destinations’ key stakeholders.
- The production of national statistics and the implementation of modelling techniques should also be taken in consideration in order to broaden the set of regional statistical information. As an example:
  - The estimate of a tourism price index by re-weighting of the basic indices used by national CPI.
  - Employment data in the tourism industries to be derived from administrative records or continuous or regular annual or multi-annual statistic operations (as in the case of the Census of Population).
  - Regionalization of national Input-Output or Supply/Use tables or estimated as a regional approach per se.
- As for modelling, neither at regional level, even fewer at sub-regional levels, will it be frequent enough to have a set of basic statistical data and indicators for analysis, policy design, monitoring and management planning of tourist destinations; In other words, the statistics included in the first and second set cannot always be expected to be used as direct sources (for that to happen the sample size of the relevant surveys might request relevant financial resources); consequently, the use of modelling is inevitable both in relation to both statistical data derived from national sources as well as regional sources.
- Macroeconomic aggregates (such as those derived from Tourism Satellite Account exercises — either regionalization of national TSA or, alternatively, setting up of proper regional TSA).

**Significance (economical)**

For the application of both criteria proposed, it is recommended the use of the following indicators (either for a calendar year or monthly):

**A). Ratio between the Tourism Population and the overall Resident Population (%)**

At the local level, the ratio of such Tourism Population to the overall Resident Population should be more than X%. Such average of the Total Resident Population is considered to be relevant enough to affect (if maintained or increased during some years) the use of resources, environmental, and urban services management and territorial planning. (See also Tourism Population)

**B). Ratio between number of employees in ISIC Rev.4 class 5510 “Short term accommodation activities” and the total number of employees in the territory of reference (%)**

At the local level, this ratio should be more than Y%. Both criteria (and possible combination with other supplementary ones) should allow for the measurement of a tourism sector and a tourism market in such territorial entity.

This document recommends that at the regional level, national and regional tourism authorities should agree on the value of such ratios.

**Territorial entities (subnational breakdown)**

**At the regional level the following remarks apply:**

- the region is the basic unit (identified as the administrative unit corresponding to the first level of territorial disaggregation of a country in terms of its political and administrative organization — for instance, NUTS 2 level in the EU, provinces in Canada or China, states in Brazil and Mexico, etc.);
- multi-regional implies combination of two or more regions;
- other administrative units (for instance, NUTS 3 level in the EU as well as other areas above Local);
- central to such administrative entities is the existence of Regional public institutes and agencies for tourism development and management;
- examples of analytical units are: the French Riviera (combination of regional territories — “counties” — and an independent state — Monaco), some national parks, etc.

**At the local level the following remarks apply:**

This grouping includes any municipality or other defined subnational area below Regional:

- the municipality is the basic unit (identified with clear administrative/political boundaries);
- multi-local implies combination of two or more municipalities;
- central to such administrative entities is the existence of a specific unit (Destination Management Organization — DMO) responsible for tourism in the municipality;
- “tourism destination” and “tourism spatial areas” should not be identified as administrative entities because that would not always be the case; therefore they are considered as analytical units that might or not coincided with one of such entities.
- Both units might require some ventilation for incremental analytical purposes: in the case of a tourism destination with more than one tourism product or tourism spatial areas requiring more detailed insight regarding tourism specific infrastructure or equipment, a breakdown by “zones” (or whatever terminology could be preferred) should be implemented using supplementary criteria to those originally used for operationalizing such concepts;
- Geospatial information enables better analysis particularly for tourism information related to environmental sustainability issues; georeferenced data can be aggregated or disaggregated according to a wide range of scales and zones meeting diverse analytical and policy demands; this would be the case of areas that are meaningful from an ecological perspective, such as water catchments and coastal zones.

**Tourism industries**

Tourism as an economic sector is a cluster of production units in different industries that provide consumption goods and services demanded by visitors; only part of the production of such industries are tourism related.

Therefore, tourism as an economic sector is complex and fragmented; in addition, national policies affecting tourism are complex and vary considerably across regions (including EU policies, in the case of EU member countries). The combination of both seems to hamper a coherent tourism approach, especially if the interaction between different groups of policies (intended or not intended for tourism) is analyzed and their effectiveness in relation to the overall goals is assessed.

Although evident at the national level, fragmentation increases when the analysis refers to subnational territorial entities.

**Tourism population**

The measurement of such concept assumes that an occupied bedplace corresponds to a tourist equivalent figure; consequently, it refers only to overnight visitors (tourists). The term “tourism population” is preferred to “equivalent tourism population”

The annual ratio of tourism population (TP) to resident population (RP) in the territory of interest is a key indicator because it allows evaluating the pressure due to by tourists on land, resources and local communities, regardless seasonality. In order to measure such ratio both populations need to be transformed in terms of overnight figures; in the case of RP implies the use of a correction factor because not all residents overnight 365 days per year in their usual place of residence while in the case of TP such estimate implies multiplying the number of tourists by the average length of stay.

Given a territorial entity, a period of time (annual, for instance) and different types of stays by inbound and domestic regional tourists, such ratio expressed in % can be derived indicating the relevance of tourism flows in relation to the resident population.

\[
\text{TP: number of tourists} \times \text{average length of stay} / 365 \quad \text{(or number of total tourist nights / 365 or overnights by non-resident population / 365)}
\]

\[
\text{RP: overnights by resident population / 365}
\]

\[
\left[ \frac{\text{TP}}{365} \right] / \left[ \frac{\text{RP}}{365} \right] \quad 100 = \% \text{Tourism Population}
\]

**Tourism trip**

However, depending on the tool used for its measurement, a trip can be viewed from two different perspectives:

- From the perspective of the visitor (that’s the case when using household surveys)
- From the perspective of the place/s visited (that’s the case when surveying visitors at destination)
In each case the term “trip” is slightly different; focusing on the subnational level, the following remarks are relevant.

A) In the first case, aspects or attributes of the trip taken by resident visitors are usually gathered by way of a household survey. In this case, the term “trip” refers to a round trip. In these cases it is recommended to identify the associated visits, if any and to define the minimum duration of stops to be considered as visits (see tourism visits).

B) Regarding non-resident visitors, the “trip” refers to the travel of the visitor from the time of arriving to a destination to the time of leaving:
- In the second case, the visitor is interviewed at destination. From the perspective of a regional entity (see INRouTe Basic Glossary / Territorial entities), INRouTe understands that the term “trip” refers to two possible situations:
  • a proper trip (associated to residents in the region of reference)
  • part of a round-trip (associated to residents of another regions of the country of reference)

(In both cases see Regional Tourism)

In the transportation research community, a trip (also referred as a journey) is usually defined as a one-way movement from a point of origin to a point of destination. The concept of “tour” would be defined as a sequence of trips starting and ending at the same location; a “trip chain” is equivalent to a “tour” but it may not end at the same location.

Tourism visit

The term visit refers to a stop in a place visited during a tourism trip. The stop does not need to be overnight to qualify as a tourism visit. Entering a geographical area without stopping there does not qualify as a visit to that area. The IRTS 2008 recommends that countries define the minimum duration of stops to be considered as tourism visits.

Details of visits to individual destinations within a country might be collected by way of surveys at those destinations. Where a visitor has made a multi-destination trip, say for example, visiting three destinations, he/she could be recorded in the numbers of people visiting each of those destinations. If the statistics of the number of visitors to the destinations were aggregated, they would show a total of three visits. Consequently, statistics on visits at destinations cannot be aggregated to provide statistics on number of visits, or trips, at the national level.

In the transportation research community, the term “sojourn” is preferred (usually defined as a short period of stay in a particular location).