

A Statistical Project to Support Mainstreaming Tourism in Sustainable Development

(Provisional version 19/06/2015 (work in progress), to be presented to UNCEEA meeting for comments)

JNWTO Statistics and Tourism Satellite Account Programme

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Project Proposal

(Provisional version 19/06/2015 (work in progress), to be presented to UNCEEA meeting for comments)

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1. Note to the UNCEEA

- 1.1. This draft Project Proposal is a first provisional version put to discussion. The World Tourism Organization (UNWTO) kindly invites the UNCEEA to express its views and comments, specifically considering the following:
 - Proposed scope
 - Proposed operations for the development of the project, including the timeframe
 - Views on the possibility to include this project in the UNCEEA programme of work and collaborate with the UNWTO Committee on Statistics and Tourism Satellite Account
 - Possibility that individual members of the UNCEEA may wish to collaborate
 - Advice on country experiences and proposals for pilot countries
 - Funding possibilities

2. Rationale for the project

- 2.1. 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 imply tourism expenditure².
- 2.2. As such, tourism has implications on the economy, on the natural and built environment, on the local population at the destination and on the tourists themselves. Due to these multiple impacts, the wide range and variety of production factors required producing those goods and services acquired by visitors, the wide range of natural resources used and residuals discharged, and the wide spectrum of stakeholders involved or affected by tourism, there is a need for a holistic approach to tourism development, management and monitoring. This approach is strongly recommended in order to formulate and implement national and local tourism policies as well as the necessary international agreements or other processes in respect of tourism³.
- 2.3. Every year, more people are in motion than ever before in history. Tourism can be a positive force, bringing economic, social and environmental benefits to destinations around the world: increased revenue, job opportunities, (foreign) investment, a positive contribution to the trade balance, rural development, protection of cultural heritage, and conservation of natural habitats.
- 2.4. However, there are potential risks and negative impacts associated with tourism: urbanization sprawl, loss of biodiversity and disruption of fragile ecosystems, competition with other land uses, impact on local ways of life and traditions, landscape impacts, pollution and depletion of water and energy sources, erosion, atmospheric pollution, etc. These effects are further aggravated the higher the degree of tourism seasonality⁴.
- 2.5. Not only is it a moral obligation for tourism stakeholders to watch over the social, environmental and economic implications of their actions... It is clearly in the interest of the tourism sector to maintain and sustain the basis for its prosperity, the tourism destinations⁵.
- 2.6. In parallel, the aspiration of sustainable development lies at the forefront of current global policy. While many countries face important sustainability issues stemming from their economic and human activities, including tourism, they also recognize that these activities can contribute to that desired sustainable

² World Tourism Organisation (2014b), *Glossary of tourism terms* (online), available at: <u>https://s3-eu-west-1.amazonaws.com/staticunwto/Statistics/Glossary+of+terms.pdf</u> (14-05-2014).

³ IRTS 2008, paragraph 4.1.

⁴ Ministerio de Medio Ambiente (2003), Spanish System of Environmental Tourism Indicators, Ministerio de Medio Ambiente, Madrid.

⁵ World Tourism Organization (2004), *Indicators of Sustainable Development for Tourism Destinations*, UNWTO, Madrid, preface.

development. But understanding precisely how and how much tourism and sustainability are linked remains largely an open issue.

- 2.7. It is widely understood that sustainability englobes (a) economic, (b) social and (c) environmental dimensions. The economic implications of tourism are increasingly better understood at the national level, in part thanks to the development of internationally comparable statistics (basic statistics and macroeconomic indicators) and Tourism Satellite Accounts (macroeconomic aggregates and indicators). As a result, we know that in many countries tourism is an important economic sector, a major constituent in international trade in services, and a generator of jobs and wealth.
- 2.8. Such information is helping countries better understand the importance and extent of their tourism sectors, and design and evaluate policies. But the world is moving beyond economic (GDP) measures of progress. Stakeholders now want information on the social and, especially, the environmental implications of economic activity.
- 2.9. Tourism sector stakeholders, including governments, face questions like⁶:
 - Is tourism a strain on the environment? Are there positive effects on the environment?
 - How do these compare to the economic effects of tourism? What are the trade-offs?
 - How much does tourism contribute to greenhouse gas emissions? How does this compare to other industries?
 - How does tourism compare to alternative uses of land?
 - Compared to other industries or the whole economy, how resource intense is tourism?
 - How is tourism affected by climate change? And how does it contribute to climate change?
 - Is tourism a net contributor to sustainable development?
- 2.10. Indeed, this more holistic view on development is embodied at the global policy level in the UN Post-2015 Development Agenda and the Sustainable Development Goals (SDGs). Tourism is explicitly mentioned in the Targets pertaining to Goals 8 (on sustainable economic growth and employment: 8.9), 12 (on sustainable consumption and production: 12.b) and 14 (on sustainable use of oceans: 14.7). It can be conceived that tourism is relevant in additional Goals and Targets, especially in those countries where tourism is a key economic sector.
- 2.11. In addition, in the 10-Year Framework Programme (10YFP) on Sustainable Consumption and Production established at the Rio+20 Conference⁷, one of the six programmes is dedicated to "Sustainable tourism, including ecotourism", under the joint lead of UNEP and UNWTO. Under the notion that "the well-being of humanity, the environment, and the functioning of the economy ultimately depend upon the responsible management of the planet's natural resources"⁸, one of the four key areas in the tourism programme centers on the application of guidelines, tools and technical solutions to monitor progress.
- 2.12. At this very moment, the UN is working on an Indicators Framework to track SDG progress. At the request of the GA Open Working Group on SDGs⁹ and to support the Inter-Governmental Negotiations¹⁰, an Interagency and Expert Group on SDGs¹¹ set up by the UN Statistical Commission¹² is mobilizing expert

⁶ Several questions taken or adapted from Jackson, C. et al. (2008), *Linking the Canadian Tourism Satellite Account and the Canadian System of Environmental and Resources Accounts to measure the environmental impact of tourism in Canada: An exploratory study for two pilot countries*, presented to the 9th International Forum on Tourism Statistics, Paris, November 19-21, 2008.
⁷ See Rio+20 Outcome Document "The Future We Want", A/66/L.56, available here.

⁸ See 10VED website

⁸ See 10YFP <u>website</u>.

Established Sixty-seventh of UN General A/67/L.48/Rev.1: at session the Assembly, see: http://www.un.org/ga/search/view_doc.asp?symbol=A/67/L.48/Rev.1&Lang=E. See also the website of the Open Working Group: https://sustainabledevelopment.un.org/owg.html.

¹⁰ See <u>https://sustainabledevelopment.un.org/intergovernmental</u>.

¹¹ The Inter-agency and Expert Group on SDGs (IAEG-SDG) is has been established by the Statistical Commission at its 46th session to develop an indicator framework for the monitoring of the goals and targets of the post-2015 development agenda at the global level, and to

contributions¹³ to ensure that such SDG global indicator framework is robust and high-quality. Indeed, "it is recognized in the SDG process that the use of statistical frameworks to underpin indicator sets is a desirable objective"¹⁴.

- 2.13. This makes UNWTO, and especially its Statistical unit (STSA), responsible for a robust and high quality proposal on tourism-relevant SDG indicators. The IAEG-SDG intends the SDG Indicator Framework be finalized by October/November 2015¹⁵. With the lion's share of the work required to define tourism related indicators for the SDGs still pending, UNWTO needs to move quickly if it wants to make a credible proposal and get it included in the final list of SDG indicators.
- 2.14. There is thus a clear need for UNWTO¹⁶ to advance in the comparable measurement of tourism in relation to, especially environmental, sustainability as a means to inform debates and guide policy. This is becoming urgent in the context of the Sustainable Development Goals, which require a solid set of indicators to monitor progress.
- 2.15. The urgency to contribute tourism relevant SDG indicators is an important catalyst for this initiative, but the global tracking it embodies is only part of a broader need for information. Stakeholders at international, national and sub-national levels need quality information on a structural basis to assess and act upon (environmental) sustainability concerns related to tourism. Fundamentally, the necessary conceptual underpinnings for such information (including any kind of indicators) need to be developed in order to produce meaningful measures.
- 2.16. In the design of information that is meaningful to stakeholders, it is important to note the particularity of tourism as an essentially demand-driven phenomenon that is strongly influenced by the behavior of the special kind of consumer that sparks it all: the visitor. This means 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. Indeed, it is increasingly recognized that stakeholders actually involved with tourism policy and management require information at the sub-national level.
- 2.17. At the same time, national level (macroeconomic) information on tourism remains necessary for various user purposes: global monitoring and benchmarking across countries, mainstreaming tourism in development agendas, awareness raising and advocacy by national tourism administrations, and for informing on global issues such as climate change.

2.1. Designing a new STSA project, strategic for UNWTO

2.18. The overall long-term aim that UNWTO's Statistics and Tourism Satellite Account Programme (STSA) is committed to is developing the measurement of tourism, primarily in relation to the environment, in order

support its implementation. Its terms of reference are available here: <u>http://unstats.un.org/files/IAEG-SDGs%20-%20Terms%20of%20Reference%20(April%202015).pdf</u>.

¹² The UN Statistical Commission is the highest body of the global statistical system, see: <u>http://unstats.un.org/unsd/statcom/commission.htm</u>.

¹³ From Members States, supported by International Organizations.

¹⁴ Taken from the paper "FAO Perspectives on Implementation of the SEEA: A discussion of the link between SEEA and Governance" (para 31-33), presented at the Ninth Meeting of the UN Committee of Experts on Environmental-Economic Accounting, New York, 25-27 June 2014.

¹⁵ See First Meeting of the Inter-Agency and Expert Group on the Sustainable Development Goal Indicators, New York, 1-2 June 2015, "Way forward – possible timeline and process": <u>https://docs.google.com/file/d/0B8n3WhOaTbGVRTYzRnJNbExwbDg/view?pli=1</u>.

¹⁶ The World Tourism Organization (UNWTO) is the UN specialized agency for tourism and as such is recognized "as the appropriate organization to collect, to analyze, to publish, to standardize and to improve the statistics of tourism, and to promote the integration of these statistics within the sphere of the United Nations system".

to meet stakeholders' needs for a more adequate consideration of sustainability. There are two dimensions implicit here that may need to be explored as part of the project: one relating to the sustainability of tourism itself, and the other relating to how tourism contributes to sustainable development¹⁷.

2.1.1. A statistical project

- 2.19. While evident to statisticians, it is important to acknowledge that any attempt to globally monitor tourism in relation to sustainable development requires a statistical approach. Why? Because statistics by definition ensures international comparability. But not only this, a statistical approach also helps ensure a certain quality in the measures, including the so-called indicators. Quality in the sense of policy relevance and utility, analytical soundness, and measurability and practicality¹⁸. These important attributes of statistics for feeding policy at the global, national and sub-national level are increasingly recognized and demanded— as exemplified by the UN General Assembly's request for the UN Statistical Community to lead the design of SDG indicators.
- 2.20. Consequently, the project proposed here will strive to be firmly standards-based—a non-negotiable condition for international comparability and credibility. In addition, a better understanding of the links between tourism and sustainability may require going beyond existing standards and further developing or extending current measurement frameworks. Embedded in this is an important share of normative work. Both UNWTO and the UN have reinforced on a number of occasions their wish to play an increasingly normative role: "countries need targeted support to establish, implement, monitor and report on normative standards and agreements" to ensure that "no-one is left behind"¹⁹.

2.1.2. Focus on the environment

- 2.21. Given limited resources, it is proposed that this project focus predominantly and in a first instance on the environmental (and environmental-economic) dimension of sustainability as opposed to the social (social-economic) aspect. The mains reasons are that (1) the comparable measurement of the environmental dimension of tourism is the least developed of the three pillars but arguably the most demanded (this is a user needs perspective) and (2) unlike for the social dimension, there exist since recently international standards that govern the measurement of the environment and its relation to the economy, facilitating a linking to the tourism measurement standards (this is a practical perspective).
- 2.22. This is supported by the International Recommendations for Tourism Statistics 2008²⁰ (IRTS 2008) which states that links with the environmental impacts should take a high priority in the measurement of tourism and sustainability.

2.1.3. A systems approach

2.23. The latter point on existing standards is important because it enables working on the conceptionally established System of Environmental Economic Accounts (SEEA), which is increasingly acknowledged as

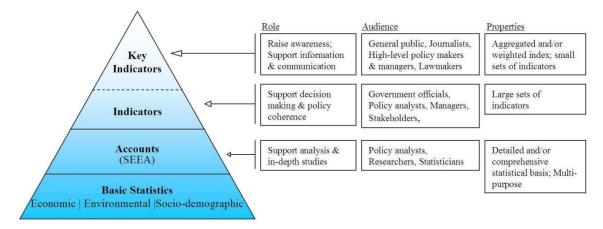
¹⁷ International Network on Regional Economics, Mobility (2014), *Bridging tourism statistics and tourism destination marketing's frameworks: seeking measurable concepts and appropriate tools at sub-national levels*, (online), available at: http://statistics.unwto.org/project/inroute.

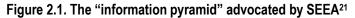
¹⁸ United Nations Statistics Division (2015), *The System of Environmental-Economic accounts and the Sustainable Development Goals Indicators*, United Nations, New York.

¹⁹ For example: Minutes of the 14th meeting of the UNWTO Committee on Statistics and TSA held on 14-15 January 2014 (<u>http://statistics.unwto.org/event/14th meeting</u>) and Hanif, N. (2015), *Speech paper*, presented to the ECOSOC Dialogue on the longer-term positioning of the UN development system in the context of the port-2015 development agenda.

²⁰ United Nations (2010), International Recommendations for Tourism Statistics 2008, (online), available at: http://unstats.un.org/unsd/tradeserv/tourism/manual.html (30-05-2014).

a cornerstone framework in SDG indicator development. SEEA implementation follows the logic of a system of information, conceptualized as an "information pyramid" (Figure 2.1) whereby basic statistics and data are organized using accounting frameworks, and indicators are sourced from accounts.





- 2.24. The approach of linking tourism and environmental measurement could then be simplified as linking the "environmental pyramid" shown above with the "tourism pyramid" (i.e. the System of Tourism Statistics, comprising basic tourism statistics and the TSA).
- 2.25. In this sense, one of the realizations made in structuring this project is that the IRTS 2008 mistakenly presents as two separate approaches, the macro approach and the indicator approach, what is actually one and the same: a systems approach. While the IRTS 2008 correctly points at the two prominent directions to further the development of tourism statistics (i.e. national and sub-national), it generates confusion about "indicators". Now, after advancing with the measurement and analysis of tourism at the sub-national level (through the INRouTe²² project) and certainly in the run-up to the post-2015 Development Agenda and the SDGs, it is understood that in order to better understand tourism in light of sustainability UNWTO needs to develop not only indicators at the sub-national level but also at the national level.

2.1.4. Blowing new life into the TSA

2.26. Due to the strategic character of the initiative, the large complexity involved (content-wise and institutionally), and the need to strive for credibility in the process and results, it becomes inevitable to design a long-term project. The TSA is one of the most strategic projects UNWTO has pushed ahead in recent years; culminating in the Tourism Satellite Account: Recommended Methodological Framework 2008²³ (TSA: RMF 2008) and in the implementation in approximately 60 countries of a TSA exercise. The current proposed project will help blow new life into the TSA by reaffirming its cornerstone relevance for better understanding tourism and catering to the information needs of stakeholders.

²¹ Taken from European Commission, Food and Agriculture Organization of the United Nations, Organisation for Economic Co-operation and Development, United Nations and World Bank (2014a), System of Environmental-Economic Accounting 2012: Applications and Extensions, white cover publication, pre-edited official editing, text subject to (online) available at: http://unstats.un.org/unsd/envaccounting/seearev/ (11-06-2015).

²² See A Closer Look at Tourism: Sub-national Measurement and Analysis – INRouTe-UNWTO Collaboration: http://statistics.unwto.org/project/inroute.

²³ Commission of the European Communities, Organization for Economic Cooperation and Development, United Nations and World Tourism Organization (2010), *Tourism Satellite Account: Recommended Methodological Framework 2008*, (online), available at: http://unstats.un.org/unsd/tradeserv/tourism/manual.html (30-05-2014).

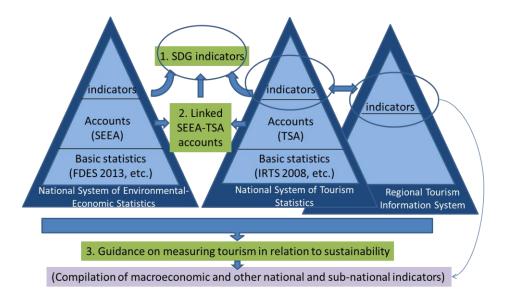
- 2.27. Also, the project will give new impetus for further implementation of the IRTS 2008 and TSA: RMF 2008 and renewed joint efforts and collaboration between the entities involved in tourism statistical production: National Tourism Authority, National Statistical Office, Central Bank, Migration Authorities and others. It will raise awareness in countries of data needs and data gaps, but also of the fact that in many countries a lot more useful data currently exists than many stakeholders may be aware of.
- 2.28. It must be underscored that the project as described here (and in a subsequent Project Document) is only a first endeavor to be submitted for discussion.

3. Striving to be politically relevant and statistically solid

3.1. Objectives and expected output

- 3.1. Considering the three levels (global, national and sub-national) at which stakeholders require measures to better understand tourism in the context of sustainability, three main objectives are provisionally identified:
 - 1. Designing indicators for global monitoring and getting tourism in the SDGs indicator framework
 - 2. Linking SEEA and TSA
 - 3. Advancing towards an understanding of tourism in relation to sustainability in the broader sense, drawing on national and sub-national conceptual work
- 3.2. These three objectives could give way to three main outputs seen as achievable over the medium term:
 - 1. Inclusion of tourism related indicators for Targets 8.9 and 12.b within the SDG Indicator Framework and the specification of a "tourism theme" set of indicators
 - 2. Methodological document (1st draft version) detailing the expansion of the national System of Tourism Statistics to include environmental information, principally by means of SEEA-TSA linking
 - 3. Guidance document on the initial lessons for measuring tourism towards better understanding tourism in relation to sustainability in the broader sense (including sub-national and national levels). (This could include the design of a basic set of coherent macroeconomic and other national and sub-national level indicators that, over the short and long term, can meet some basic needs of stakeholders interested in sustainability).
- 3.3. Ultimately, it may be expected that based on this work UNWTO/STSA could embark on the international compilation of indicator macroeconomic and other national and sub-national indicators relating tourism and (principally environmental) sustainability issues. Figure 3.1 below show how the project's three objectives are related.

Figure 3.1. Schematic representation of the proposed project



3.4. Though there is an important degree of inter-dependency amongst these objectives, they are shown in chronological order (decreasing urgency). Following the information pyramid logic, and based on existing standards (IRTS 2008 and TSA: RMF 2008), the lines of work described below will strive for coherence amongst them and with existing related standards.

3.2. Objective 1: Indicators for global monitoring and getting tourism in the SDGs indicator framework

- 3.5. Indicators are useful for tracking progress, raising the profile of policy issues, promoting accountability, and supporting policy development by drawing attention to major trends and structural change. Their main audiences are the general public, journalists, private and public sector managers, policy-makers and non-governmental stakeholders²⁴.
- 3.6. Because this audience is so varied and largely composed of non-experts, indicators need to strike a balance between, on the one hand, being simple enough to communicate and adaptable to user needs, and, on the other hand, being statistically accurate, analytically sound and scientifically coherent. This is achieved when indicators are summary, fit-for-purpose measures derived from larger information systems²⁵.
- 3.7. A solid proposal is needed of indicators to form part of the SDG Indicator Framework. These indicators should be conceptually rooted in the existing standards for tourism economic accounting (the TSA) and for economic-environmental accounting (the SEEA). It should also be possible to, ultimately, largely or in part source such indicators from these accounts linked. In order to make a proposal first a stock-take of possible indicators needs to be realized, which then need to be evaluated based on the IAEG-SDG specified requirements of: policy relevance and utility, analytical soundness, and measurability and practicality of measurement.
- 3.8. Proposed indicators should not be limited to the three SDG Targets that explicitly mention tourism, but should include indicators to inform other Goals or Targets where tourism might be relevant (e.g. Target 6.4—on improving water efficiency across all sectors—is clearly related to-tourism). This is related to the IAEG-SDG work stream on inter-linkages. The rationale behind this is to best cater to varying country circumstances and priorities. This is in line with recent UN discussions to have a "core" global set of indicators applicable to all countries (approximately 100-120 indicators), complemented by a larger

²⁴ United Nations Statistics Division (2015).

²⁵ United Nations Statistics Division (2015).

"thematic" set from which indicators can be "added on" and reorganized to more closely track national development priorities or certain themes (like tourism).

3.9. A key aim is to attain IAEG-SDG acceptance of the proposed global monitoring indicators for inclusion in the "core" SDG indicator framework and as an optional "tourism theme". However, it should not be excluded that additional indicators or activities could be developed to support (global) monitoring more generally.

3.3. Objective 2: Linking SEEA and TSA

- 3.10. In its chapter on "Understanding tourism in its relationship with other macroeconomic frameworks", the IRTS 2008 section "tourism and sustainability" explicitly mentions that, regarding tourism sustainability issues, the measurement of the links between tourism and the environment in terms of macro-accounting and indicators should be seen as a priority. It goes on to say that in countries where both TSA and SEEA are being developed, the links between tourism and the environment can be estimated at the level of the national economy through "incorporating tourism as a specific set of industries and of consumers within the hybrid flow accounts of the environmental accounts".
- 3.11. The TSA is an extension to the System of National Accounts that makes explicit what is otherwise "hidden" in the national accounts: the economic transactions related to tourism. This is necessary because tourism productive activities are not defined by the characteristics of the production process or similarity of the economic activity undertaken (in the way that traditional industries are defined). Tourism is defined as the activity of visitors whom, as a particular kind of consumer, acquire goods and services. Tourism is thus demand-driven. The TSA is the accounting tool that incorporates an economic measurement of visitors and their acquisition of goods and services, i.e. their expenditure, and links this to the different economic activities that produce these goods and services.
- 3.12. The TSA identifies a set of "tourism industries": those activities that typically produce tourism characteristic products. The identification of tourism characteristic products is done through a share-of-demand/expenditure criteria (the expenditure on the product represents a significant share of total tourism expenditure) or a share-of-supply criteria (tourism expenditure represents a significant share of the supply of the product in the economy; implying that the supply of the tourism characteristic product would cease to exist in meaningful quantity in the absence of visitors). In this way, accommodation, food and beverage service activities, passenger transport (rail, road, water, air), transport equipment rental, travel agencies, cultural activities, and sports and recreational activities are defined as the tourism industries for international comparability purposes. Countries may add retail trade of country-specific tourism characteristic goods and other activities if deemed relevant.
- 3.13. With this focus on visitor expenditure, the TSA is thus strictly economic (with the exception of its Table 10 where some non-monetary indicators are considered).
- 3.14. The SEEA 2012 is also a satellite to the National Accounts. It is conceived as a multipurpose conceptual framework for understanding the interactions between the economy and the environment, and for describing stocks and changes in stocks of environmental assets. "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 recognizes that the responses to environmental pressures will usually rely on understanding connections between the environment, the economy and individuals"²⁶.
- 3.15. Both tourism and the environment have international standards that govern the production of comparable data in their respective fields, and feed into their accounting frameworks: the IRTS 2008 and the FDES 2013. As the SEEA and TSA are fully consistent with SNA, they share an important denominator. Even though it

²⁶ See SEEA 2012 Applications and Extensions, Chapter 4: Extensions of the SEEA.

remains to be seen to what extent the SEEA and the TSA are consistent with each other, and though possibly not straightforward, it is conceptually possible to establish a link amongst them at the accounting level by making use of the same concepts, definitions, classifications and accounting principles.

- 3.16. The end result in terms of data presentation could take the form of a set of prototype tables that specifically focus on (1) tourism within the most relevant SEEA accounts and on (2) the environmental aspects in the tourism accounts. Indeed, the SEEA 2012 - Applications and Extensions provides an initial basic example of what environmental-economic accounts data for tourism could look like with the example of "an environmentally extended TSA" exercise in Italy.
- 3.17. The IRTS 2008 states that the core of such macro-approach of SEEA-TSA linking at national level could consist of establishing a more complex type of input/output matrix in which not only the "usual" inputs are considered, but also the environment inputs are established in quantity, and output also includes wastes, greenhouse emissions and other environmentally significant by-products. This would "make explicit" the tourism component in the most relevant (Supply and Use, Assets, and Economic Activities related to the environment) accounts proposed in the SEEA Central Framework (SEEA-CF). It seems relevant to explore tourism in the accounts on: energy, water, air emissions, land, expenditure on environmental protection and on environmental taxes, etc.
- 3.18. Of course, both TSA and environmental accounts would need to be compiled at a sufficient level of detail to allow some type of mutual integration.
- 3.19. Common classifications like ISIC will play an important role in the design of a linked accounting structure. The TSA distills each industry's (classified according to ISIC) tourism share, i.e. their supply attributable to tourism consumption. If environmental accounts data exist that follow the same classification, a link can be made between the two sets of accounts.
- 3.20. The so-called tourism ratios (between the total value of tourism share and total value of the corresponding variable of supply) could serve as vehicles in identifying the use of environmental natural inputs, residual flows and environmental assets (shown in environmental accounts on water, energy use, etc.) that is attributable to tourism. Of course, important assumptions are implicit in this approach and it is important to explore to what degree these hold.
- 3.21. Exercises of some sort of SEEA-TSA linking have been carried out by countries like Canada²⁷, Sweden²⁸ and others.
- 3.22. Another promising venue of SEEA-TSA linking goes beyond the Central Framework to consider ecosystems. Consideration of tourism in the Experimental Ecosystem Accounting framework of the SEEA (SEEA EEA)²⁹ seems very appropriate for developing a better understanding of tourism in relation to sustainability more generally, albeit also a challenging one. Ecosystems provide a range of (material and non-material) benefits to economic and human activities, including tourism. In turn, human behavior (including that pertaining to tourism) can modify positively or negatively the capacity of an ecosystem to provide its services. SEEA EEA "provides insight into how ecosystems can be conceptualized as a form of "capital", which may then be considered in relation to other measures of capital, including economic, social and other environmental capital. Assessment of changes in the quantity and quality of broad measures of capital is generally recognized as important in the assessment of sustainable development and overall human well-being"30.

²⁷ Jackson, C. et al. (2008).

²⁸ Lagerström, M. and Rosenblom, T (2010), A study of linking the Swedish Tourism Satellite account (TSA) and the Swedish Environment Satellite Account (ESA), in order to measure the environmental impact of tourism, presented to the 10th International Forum on Tourism Statistics, Lisbon, Portugal, November 2010.

²⁹ European Commission, Food and Agriculture Organization of the United Nations, Organisation for Economic Co-operation and Development, United Nations and World Bank (2014c), System of Environmental-Economic Accounting 2012: Experimental Ecosystem Accounting, (online) available at: http://unstats.un.org/unsd/envaccounting/seearev/ (11-06-2015).

³⁰ SEEA-EEA 2012, paragraph 1.37.

- 3.23. Thus far, the SEEA Experimental Ecosystems Accounting (SEEA-EEA) explicitly considers "tourism and recreation" as an important "cultural service" provided by ecosystems. It could seem relevant to explore a broader consideration of the benefits that accrue to tourism from the flow of ecosystem services, and how tourism activity impacts these flows.
- 3.24. Within SEEA-EEA's inherently territorial perspective there is "an awareness of the need to relate the generation of ecosystem services to the location of the beneficiaries", something that still poses many challenges and warrants testing and development of methods³¹. Tourism shares this territorial characteristic and it is believed that UNWTO/STSA's work on the sub-national measurement and analysis of tourism (INRouTe project) could expose many connections with SEEA-EEA (this is related to the third objective, below).
- 3.25. The work of linking of TSA with SEEA will pave the way for (1) conceptually designing meaningful indicators and (2) eventually sourcing (some part of) these indicators from such linked accounts (though in the meantime this may not be possible and indicators will have to be sourced from basic data directly).

³¹ SEEA-EEA 2012, paragraph 3.12.

- 3.26. As shown in Figure 2.1, a pivotal function of accounts is the organization and integration of data from different sources of basic data. Indicators can then be sourced from these accounts to provide information for international and national stakeholders. While indicators can be sourced directly from basic statistics, the filter of an accounting framework lends significantly to the coherence and consistency of the indicators, ultimately providing robustness to indicators sourced from these accounts³².
- 3.27. At this point it is important to differentiate between (i) the conceptual work and (ii) the subsequent implementation in countries. Over the medium/long term, and with the support of national and international experts, it seems possible that some kind of (draft) methodological document could be developed extending the national System of Tourism Statistics to include consideration of the environment as a crucial element in sustainability, principally by means of SEEA-TSA linking. This methodological document could possibly (initially) take the form of a technical note³³. An option that should be considered is whether and how such a methodological document could pave the way for a future update of the current tourism statistics standards (IRTS 2008 and TSA: RMF 2008).
- 3.28. Such a methodological document will notably be based on the creation of case studies in collaboration with statistically-developed countries that have already realized some exercise of SEEA-TSA linking. The document should strive for some type of initial agreement internationally, and will probably be presented to the UN Statistical Commission—though it remains to be seen to what degree of "consensus" such a document could aspire to and whether presentation to the UNSC would be made requesting some kind of discussion/endorsement (of a proposed work plan and, ultimately, a document) or not (possibly presenting it as room document).
- 3.29. A full-fledged implementation of SEEA-TSA linked accounts in countries seems difficult in most countries over short/medium-term and is beyond the scope of the objectives initially identified³⁴. Currently, about 60³⁵ countries have some TSA exercise and about 24³⁶ regularly compile at least one SEEA (SEEA-type) account.
- 3.30. Given this scenario, and in order to help fill the information gap in countries unable to implement SEEA-TSA linked accounts, the project will consider whether it is feasible to propose a minimum set of data, including indicators, that are rooted conceptually in the relevant standards but can be sourced directly from basic statistics (availability of data being a prime concern) in order to provide stakeholders with useful information in the meantime. Part of this will be worked out in relation to the first objective described above, whereby the principal purpose is global monitoring.
- 3.31. The indicators sourced from basic statistics may or may not overlap with the indicators to be sourced from extended environmental economic accounts for tourism. This project could set the foundation in order for UNWTO/STSA to ultimately embark on the world wide compilation of indicators linking tourism and the environment. It is possible that such compilation start out with an exercise similar to the one UNWTO/STSA realized for TSA data: <u>TSA Data Around the World: Worldwide Summary</u>.

http://unstats.un.org/unsd/envaccounting/workshops/int_seminar/Imp_SEEA.pdf.

³² SEEA-AE 2012, paras 2.6-2.9.

³³ In line of, for example, the one developed for water: <u>http://unstats.un.org/unsd/envaccounting/ceea/meetings/tenth_meeting/BK9d.pdf</u>.

³⁴ However, this project will provide recommendations of venues for further development and it is evident that implementation in countries, and the related capacity building and technical assistance, needs to be an important component of such future work.

³⁵ World Tourism Organization (2010), TSA Data Around the World: Worldwide summary, (online), available at: <u>http://statistics.unwto.org/content/tsadata</u>.

³⁶ UN Committee of Experts on Environmental-Economic Accounting (UNCEEA) Taskforce on the Implementation Strategy for the SEEA Central Framework", draft version:

3.4. Objective 3: Advancing towards an understanding of tourism in relation to sustainability in the broader sense, drawing on national and sub-national conceptual work

- 3.32. The territorial/spatial perspective is very relevant in the consideration of sustainability, as it certainly is for tourism (as mentioned in para 2.16). Indeed, the SEEA-EEA states that "spatial areas must form the basic focus for measurement" thus enabling the development of ecosystem accounting at national and subnational levels³⁷.
- 3.33. While some elements related tourism policy may be handled at the global (climate change, multilateral agreements on facilitating tourist visas or reducing air emissions) or national level (marketing a country brand to increase inbound visitor arrivals or legislation concerning employment in the tourism industries), many (arguably most) are best dealt with at lower levels of aggregation: at the level of the sub-national region (physical planning to favor the development of tourism along a stretch of coastline) or locally (restoration of a historical city center to attract visitors or the organization of a music festival).
- 3.34. Ensuring coherence amongst the different measurement guidelines proposed by UNWTO is crucial to the credibility of tourism statistics and of the Organization.
- 3.35. The UNWTO-launched³⁸ INRouTe project³⁹ has been working for a number of years on advancing the measurement and analysis of tourism at sub-national levels in order to provide guidance to entities involved with regional and local tourism destinations. The conceptual starting point for the proposed Regional Tourism Information System (RTIS) are the national-level standards on tourism statistics (both IRTS 2008 and TSA: RMF 2008), and a key consideration of the RTIS are the sustainability implications of tourism. In fact, one of the four research areas⁴⁰ it focuses on is precisely "(B) tourism and sustainable development", including "(B1) Tourism and the environmental, social and cultural dimensions" and "(B2) Tourism and the economic dimension".
- 3.36. INRouTe has developed the following guidance documents⁴¹: Towards a Set of UNWTO Guidelines, Bridging tourism statistics and tourism destination marketing's frameworks: seeking measurable concepts and appropriate tools and sub-national levels; Sub-national Tourism: Basic Glossary; INRouTe – Tourism Observatory; Meetings Industry; Visitors Behavior Measurement and Deconstruction of Tourism Destination Demand; Sustainability, Territory and Tourism; and Regional TSA.
- 3.37. From the work currently being carried out by INRouTe, it becomes clear that sustainability (environmental but also economic and social) related to tourism is most adequately considered at the sub-national level. "Because there are likely to be both administrative boundaries within countries and different environmental and economic circumstances in different areas of a country, the compilation of accounts by subnational areas could be a sensible approach"⁴².

⁴¹ See <u>http://statistics.unwto.org/project/inroute</u>.

³⁷ SEE-EEA, paragraph 4.

³⁸ Cooperation Agreement between UNWTO and INRouTe "for the development of official guidelines for entities involved with regional and local tourism destinations", available: <u>http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/agreement_.pdf</u>.

³⁹ The need to continue collaboration with INRouTe has been re-confirmed by the UNWTO Executive Council through the Committee on Statistics and TSA which "request[ed] the Secretary General to keep working in collaboration with INRouTe along the future programme of work of UNWTO in order to guarantee the success of such an initiative focused on the measurement and analysis of tourism at the subnational level" see World Tourism Organization (2014b), *Decisions Taken by the Executive Council at its 100th Session*, Rovinj, Croatia, 27-29 October 2014, CE/100/DEC, (online), available at: <u>http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/ce100_decisions_en.pdf.</u>). The current agreement with INRouTe ends in May 2016 at which time INRouTe will submit to UNWTO a "Handbook on Regional Tourism" (provisional title). This will be the right time to explore a new multi-year project with INRouTe.

⁴⁰ International Network on Regional Economics, Mobility and Tourism and World Tourism Organization (2012), A Closer Look at Tourism: Sub-national Measurement and Analysis – Towards a Set of UNWTO Guidelines, (online) available at: <u>http://statistics.unwto.org/project/inroute</u> (11-06-2015).

⁴² International Network on Regional Economics, Mobility and Tourism and World Tourism Organization (2015), A Closer Look at Tourism: Sub-national Measurement and Analysis – Subnational Tourism: Basic Glossary (Provisional version), UNWTO, Madrid.

- 3.38. An examination should be made of how the guidelines on sub-national measurement and analysis developed by INRouTe project, including the set of indicators it proposes, relate to the (macroeconomic) SEEA-TSA linked accounts and to the indicators to be developed for national and global monitoring purposes. An exploration of coherence at different territorial levels seems warranted. Ultimately, UNWTO should be able to propose a basic and coherent set of macroeconomic and other national and sub-national indicators that, over the short and long term, can meet some basic needs of stakeholders interested in sustainability.
- 3.39. In addition, and as mentioned in the above section, it could be explored whether and how INRouTe's work and acquired expertise could contribute and relate to the ongoing work on ecosystem accounting and viceversa. This, together with the work on SEEA-TSA linking, will serve as important foundations in further developing an understanding on the broader relationship between tourism and sustainability.
- 3.40. It is expected that this line of work will produce some sort of guidance document on initial lessons on how to advance the understanding of tourism in relation to sustainability through its measurement. This could include the design of a basic set of coherent macroeconomic and other national and sub-national level indicators that, over the short and long term, can meet some basic needs of stakeholders interested in sustainability.

4. **Operations**

4.1. Figure 4.1 below shows a schematic representation of the main elements in the project's expected development. It must be highlighted that this is a first proposal presented for discussion.

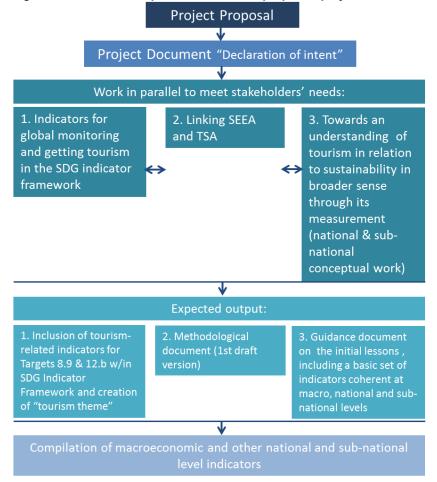


Figure 4.1. Schematic representation of the proposed project

- 4.2. Based the present proposal, a Project Document will be drafted describing the UNWTO/STSA project ahead, the lines of work and ensuing initiatives in more detail. It will be UNWTO's "declaration of intent" and a means to incorporate views from key stakeholders and to mobilize collaboration. Compared to this Project Proposal, the Project Document should include:
 - More detailed justification of the project, background, and description of stakeholder needs. This material should be useful input for the introductory sections to the future methodological document on SEEA-TSA linking and the indicator proposals.
 - More detailed description of the work envisaged to reach each of the objectives, e.g.:
 - A more detailed timeline with milestones for each of the project objectives over the 0 short/medium-term, a list of tasks.
 - the process in selecting and working with the pilot countries and an initial proposal on how 0 to design the case studies (e.g. ideally at least one statistical developed country per continent and geographical balance, the institutional arrangements with these countries (like the need for an collaboration, co-financing agreement?), missions, etc.).
 - Discussion of how this project may contribute to other UNWTO initiatives, such as the International Network of Sustainable Tourism Observatories⁴³
 - A proposal of text to update the current recommendation made in Chapter 8 Section D: "Sustainability" of the IRTS 2008.
 - Annexes that contain the work in progress on the key output documents, notably the Annotated outline to the Methodological Document on SEEA-TSA linking, a proposed list of pilot countries and methodology/work plan, any draft proposals on indicators, etc.
 - A strategy to effectively communicate the project internally and externally
 - Some initial ideas on initiatives to continue with a second phase of this project, broadening the scope to include a strategy for implementation in a general sense and possibly further methodological work. A strategy for implementation is understood to cover more widespread application in countries/areas as well as the international compilation of indicators by UNWTO, and would involve elements like capacity building, technical assistance, compilation guidance, communication, and international cooperation.
- 4.3. This project draws inspiration from FAO's work "Towards a System of Environmental Economic Accounting for Agriculture"44 which shares some commonalities with the intended work presented here. (Capturing the specific relationships between the agricultural sector and the natural environment, SEEA-AGRI is presented as different from other extensions (subsystems) of the SEEA-CF because rather than focusing on a specific resource (water, energy) it focuses on a group of activities, and considers the relationship between these activities and the related environmental assets⁴⁵. In tourism the most relevant group of activities are known as the tourism industries, but the focus must first and foremost be on a group of consumers known as visitors whose expenditure determine whether the production of goods and services can be considered tourism or not).
- 4.4. Drawing from FAO's work, it is expected that this project will involve the following four complementary and overlapping stages, adapted to the project at hand:
 - 1. Conceptualization and documentation: reviewing, revising, expanding and/or relating the concepts, definitions, classifications, methods and indicators used in relevant frameworks and documentation; stock taking and evaluation of country examples; stock taking and evaluation of indicators for global monitoring; and drafting of each of the project's documents.

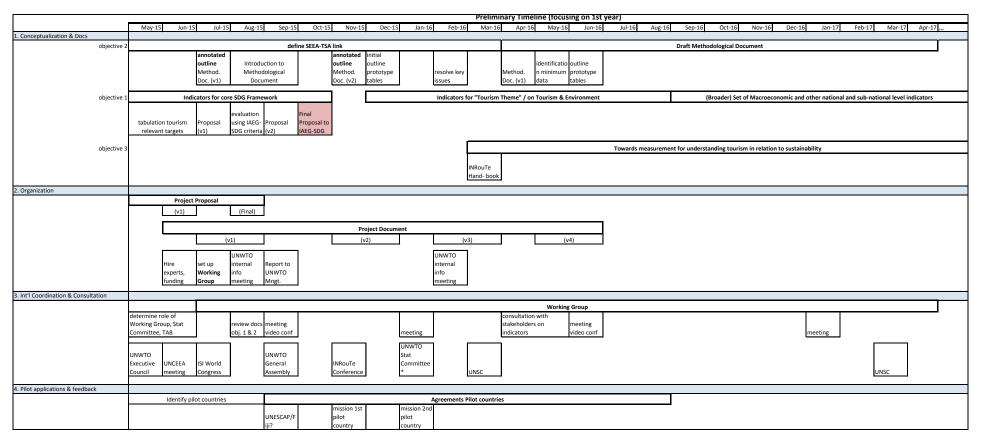
 ⁴³ see <u>http://sdt.unwto.org/content/international-network-sustainable-tourism-observatories-insto</u>
 ⁴⁴ See Gary Jones (FAO Statistics Division), "Towards a System of Environmental Economic Accounting for Agriculture, presentation at the London Group meeting 2-4 October 2012.

⁴⁵ Mayo, R. et al. (2013), Application of the System of Environmental Economic Accounting (SEEA) Central Framework and SEEA Experimental Ecosystems Accounting at FAO: Preliminary Findings and Ongoing Work, presented to the Sixth International Conference on Agriculture Statistics (ICAS-VI), Rio de Janeiro, Brazil, October 2013, (online), available at: http://eventos.ibge.gov.br/en/icas2013 (11-06-2015).

- <u>Organization</u>: managing the project internally and externally, including institutional arrangements like establishing a Working Group, harnessing the support of the international community, and reviews by relevant international platforms.
- 3. <u>Consultation</u>: review and discussion of methodological work
- 4. <u>Pilot application and feedback</u>: in collaboration with the relevant national entities, creation of case studies (notably in statistically developed countries where an initial exercise of SEEA-TSA linking has already been carried out though some exceptions may be considered)
- 4.5. In working through the above stages, UNWTO/STSA needs to rely on national expert contributions and will contract international experts. A Working Group will be set up, to contribute with ideas, and experiences and review drafts, as well as an Editorial Board to carry out the bulk of the technical drafting; both subsidiary to UNWTO's Committee on Statistics and TSA⁴⁶. Also important, and to be focalized through this Committee, are a careful tracking of related initiatives (SEEA implementation, the SIDS agenda, etc.) and collaboration with the international community (the UN agencies, other international organizations, Member States, UNCEEA⁴⁷, UN Statistical Commission, UNWTO statutory meetings).
- 4.6. Below is a preliminary timeline with some key activities and provisional dates; these are to be more precisely defined in the timeline in the Project Document.

⁴⁶ The Committee on Statistics and TSA is a subsidiary advisory body of the UNWTO Executive Council. It acts in matters such as: proposing initiatives related to the design and implementation of tourism statistics international standards; promoting international comparability of tourism statistics by proposing initiatives relative to the collection, homogeneity, processing and dissemination of data; helping member countries in their initiatives to improve their respective national systems of tourism statistics (STS) and in the development of the Tourism Satellite Account (TSA); and liaising with other international bodies with delegated responsibilities for leadership and coordination of related international statistics and their standards within sphere of the UN system.

⁴⁷ The United Nations Committee of Experts on Environmental-Economic Accounting is a governing body comprising senior representatives from National Statistical Offices and international organizations. It is chaired by one of the country members of the Committee.



* to endorse provisional Project Document (including work plan) and annotated outline for SEEA-TSA Method. Doc.

Bibliography

- Anzalone, M. (2014), Tourism and sustainability: macro-accounting approach for measuring the links between tourism and environment, presented to the 12th Global Forum on Tourism Statistics, Prague, Czech Republic, May 2014, (online), available at: www.tsf2014prague.cz/ (10-06-2015).
- Anzalone, M. and Piscitelli, I. (2012), La tavola della produzione delle industrie turistiche (PowerPoint presentation), presented to the seminar II primo Conto Satellite del Turismo (CST) per l'Italia, November 2012, (online), available at: www.istat.it/it/archivio/74705 (10-06-2015).
- Alarcón, P. et al. (2014), *Sustainable Tourism Indicator System for Andalusia*, presented to the 12th Global Forum on Tourism Statistics, Prague, Czech Republic, May 2014, (online), available at: www.tsf2014prague.cz/ (10-06-2015).
- Commission of the European Communities, Organization for Economic Cooperation and Development, United Nations and World Tourism Organization (2010), *Tourism Satellite Account: Recommended Methodological Framework 2008*, (online), available at: http://unstats.un.org/unsd/tradeserv/tourism/manual.html (30-05-2014).
- Dupeyras, A. (2014), *Measuring Competitiveness in Tourism: the OECD perspective*, presented to the 12th Global Forum on Tourism Statistics, Prague, Czech Republic, May 2014, (online), available at: www.tsf2014prague.cz/ (10-06-2015).
- Dupeyras, A. and MacCallum, N. (2013), 'Indicators for Measuring Competitiveness in Tourism: A Guidance Document', OECD Tourism Papers 2013/02, OECD (online), available at: <u>http://dx.doi.org/10.1787/5k47t9g2t923-en</u> (10-06-2015).
- Eriksson, M. et al (2006), Manual on Sustainable Development Indicators of Tourism Final version, Statistics Sweden, Stockholm.
- Eriksson, M. et al (2005), Methodological work on measuring the sustainable Development of Tourism Technical report, Statistics Sweden, Stockholm.
- Economic and Social Commission for Asia and the Pacific (2015), 'From goals and targets to indicators: Understanding the SDG process', *Stats Brief*, Issue no. 08, (online), available at: <u>http://www.unescap.org/resources/stats-brief-may-2015-issue-no-08-goals-and-targets-indicators-</u> understanding-sdg-process (11-06-2015).
- European Commission (2013), *European Tourism Indicator System*, European Union, (online), available at: http://ec.europa.eu/growth/sectors/tourism/offer/sustainable/indicators/index_en.htm (10-06-2015).
- European Commission (2013), Sustainable Tourism for Development Guidebook, UNWTO, (online), available at: http://icr.unwto.org/content/guidebook-sustainable-tourism-development (11-06-2015).
- European Commission, Food and Agriculture Organization of the United Nations, Organisation for Economic Cooperation and Development, United Nations and World Bank (2014a), System of Environmental-Economic Accounting 2012: Applications and Extensions, white cover publication, pre-edited text subject to official editing, (online) available at: <u>http://unstats.un.org/unsd/envaccounting/seearev/</u> (11-06-2015).
- European Commission, Food and Agriculture Organization of the United Nations, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations and World Bank (2014b), *System of Environmental-Economic Accounting 2012: Central Framework*, (online) available at: <u>http://unstats.un.org/unsd/envaccounting/seearev/</u> (11-06-2015).

- European Commission, Food and Agriculture Organization of the United Nations, Organisation for Economic Cooperation and Development, United Nations and World Bank (2014c), System of Environmental-Economic Accounting 2012: Experimental Ecosystem Accounting, (online) available at: http://unstats.un.org/unsd/envaccounting/seearev/ (11-06-2015).
- Hanif, N. (2015), Speech paper, presented to the ECOSOC Dialogue on the longer-term positioning of the UN development system in the context of the port-2015 development agenda.
- Instituto Nacional de Estadística y Geografía (2013), *Implementation of SEEA in Mexico* (PowerPoint presentation), presented to the International Conference Global Implementation Programme for the SEEA, June 2013, New York, (online), available at: http://unstats.un.org/unsd/envaccounting/workshops/SEEA_Conf_2013/main.htm (10-06-2015).
- International Network on Regional Economics, Mobility and Tourism and World Tourism Organization (2015), A *Closer Look at Tourism: Sub-national Measurement and Analysis – Subnational Tourism: Basic Glossary* (*Provisional version*), UNWTO, Madrid.
- International Network on Regional Economics, Mobility and Tourism and World Tourism Organization (2012), A *Closer Look at Tourism: Sub-national Measurement and Analysis – Towards a Set of UNWTO Guidelines*, (online) available at: <u>http://statistics.unwto.org/project/inroute</u> (11-06-2015).
- International Network on Regional Economics, Mobility (2014), *Bridging tourism statistics and tourism destination* marketing's frameworks: seeking measurable concepts and appropriate tools at sub-national levels, (online), available at: <u>http://statistics.unwto.org/project/inroute</u> (19-06-2015).
- Jackson, C. et al. (2008), Linking the Canadian Tourism Satellite Account and the Canadian System of Environmental and Resources Accounts to measure the environmental impact of tourism in Canada: An exploratory study for two pilot countries, presented to the 9th International Forum on Tourism Statistics, Paris, November 19-21, 2008.
- Lagerström, M. and Rosenblom, T (2010), A study of linking the Swedish Tourism Satellite account (TSA) and the Swedish Environment Satellite Account (ESA), in order to measure the environmental impact of tourism, presented to the 10th International Forum on Tourism Statistics, Lisbon, Portugal, November 2010.
- Manente, M. (2012), L'industria turistica italiana nel 2010: un'analisi allargata attraverso lo strumento del CST (PowerPoint presentation), presented to the seminar II primo Conto Satellite del Turismo (CST) per l'Italia, November 2012, (online), available at: <u>www.istat.it/it/archivio/74705</u> (10-06-2015).
- Mayo, R. et al. (2013), Application of the System of Environmental Economic Accounting (SEEA) Central Framework and SEEA Experimental Ecosystems Accounting at FAO: Preliminary Findings and Ongoing Work, presented to the Sixth International Conference on Agriculture Statistics (ICAS-VI), Rio de Janeiro, Brazil, October 2013, (online), available at: <u>http://eventos.ibge.gov.br/en/icas2013</u> (11-06-2015).
- Ministerio de Medio Ambiente (2003), Spanish System of Environmental Tourism Indicators, Ministerio de Medio Ambiente, Madrid.
- Organisation for Economic Cooperation and Development (2011), *Towards Green Growth*, OECD (online), available at: <u>www.oecd.org/greengrowth</u> (10-06-2015).
- Patrick, G. (2011), An advanced model for estimating greenhouse gas emissions for Irish air transport, Central Statistics Office, present to the Irish Transport Research Network Conference, August-September 2011, University College Cork.
- United Nations (2013), Framework for the Development of Environment Statistics (FDES) 2013, (online), available at: <u>http://unstats.un.org/unsd/environment/fdes.htm</u> (10-06-2015).

- United Nations (2012), System of Environmental Economic Accounting for Water (SEEA-Water), (online), available at: <u>http://unstats.un.org/unsd/envaccounting/seeaw/</u> (10-06-2015).
- United Nations (2010), International Recommendations for Tourism Statistics 2008, (online), available at: http://unstats.un.org/unsd/tradeserv/tourism/manual.html (30-05-2014).
- United Nations (n. d.), 'Measurement Framework in Support of Sustainable Development and Green Economy Policy', *System of Environmental-Economic accounts (SEEA) Briefing Notes*, (online), available at: <u>http://unstats.un.org/unsd/envaccounting/seeanews.asp</u> (11-06-2015).
- United Nations Economic Commission for Europe, (2014), Conference of European Statisticians Recommendations on Measuring Sustainable Development, United Nations, New York-Geneva, (online), available at: <u>www.unece.org/stats/sustainable-development.html</u> (10-06-2015).
- United Nations Statistics Division (2015), *The System of Environmental-Economic accounts and the Sustainable Development Goals Indicators*, United Nations, New York.
- Weber, J.L. (2014), Experimental Ecosystem Natural Capital Accounts: Mauritius Case Study, Indian Ocean Commission, (online), available at: <u>http://commissionoceanindien.org/fileadmin/resources/ISLANDSpdf/Experimental_Ecosystems_Natural_C</u> <u>apital_Accounts_Mauritius.pdf</u> (10-06-2015).
- Williams, P.W. et al. (2012), 'Toward an Agenda of High-Priority Tourism Research', *Journal of Travel Research*, SAGE Publications, volume 51 (1), pp. 3-11.
- World Tourism Organization (2015), Compendium of Tourism Statistics, Data 2009 2013, 2015 Edition, UNWTO, Madrid.
- World Tourism Organization (2014a), *Decisions Taken by the Executive Council at its 100th Session*, Rovinj, Croatia, 27-29 October 2014, CE/100/DEC, (online), available at: <u>http://dtxtq4w60xqpw.cloudfront.net/sites/all/files/pdf/ce100_decisions_en.pdf</u> (19-06-2015).
- World Tourism Organisation (2014b), Glossary of tourism terms (online), available at: <u>https://s3-eu-west-</u> <u>1.amazonaws.com/staticunwto/Statistics/Glossary+of+terms.pdf</u> (14-05-2014).
- World Tourism Organization (2010), TSA Data Around the World: Worldwide summary, (online), available at: http://statistics.unwto.org/content/tsadata (19-06-2015).
- World Tourism Organization (2004), Indicators of Sustainable Development for Tourism Destinations, UNWTO, Madrid.
- World Tourism Organization (1995), A Satellite Account for Tourism (draft), UNWTO, Madrid.