

# Evaluating conformity with international standards for a country's Tourism Satellite Account: Some insights from Iceland

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## 1. Introduction

In 2008, World Tourism Organization (UNWTO) released two documents which are considered to be international standards in tourism statistics namely International Recommendation on Tourism Statistics (IRTS 2008) and Tourism Satellite Account: International Recommendation Framework (TSA:RMF 2008). It should be noted that the TSA:RMF 2008 was an update of the conceptual framework of the Tourism Satellite Account (TSA) from the initial version established in 2001 by the Statistical Office of the European Communities (Eurostat), the Organization for Economic Co-operation and Development (OECD) and UNWTO. For constructing a TSA, countries should follow international standards. Essentially, Tourism Satellite Account (TSA) is a method of measuring the direct economic contributions of tourism consumption to a national economy (Frechtling, 2010).

In 2010, UNWTO in its publication “TSA data around the world” has established that worldwide “a total of 60 countries have been identified by early 2010 as having already produced or are currently developing a TSA exercise” (UNWTO, 2010, p. 2). However, there is no real evidence that these TSAs are constructed in order to conform with international standards since there is no international obligation for countries to adopt TSA.

Nevertheless, in the first semester of 2013 a comprehensive study on the assessment of compliance with international standards was carried out for United States Travel and Tourism Satellite Account (USTTSA) (Frent and Frechtling, 2013a); it is important to mention that the United States was among the first countries in the world having TSA ever since 1998 before international recommendations to be officially adopted. Moreover, the same authors elaborated “a program for ascertaining conformance with United Nations standards” in order to “improve the development, interpretation and comparison of TSAs across countries” (Frent and Frechtling, 2013b).

Before that the topic of conformity analysis with international standards for TSA was also found in several studies (these were also presented by Frent and Frechtling, 2013b but a synthetic presentation will also be provided in the following three paragraphs).

Canada was the pioneer in this field, in 2004 publishing a detailed study on this matter (Kemp and Nijhowne, 2004). Aspects of compliance were discussed also by Libreros et al. and the

authors concluded that the variation that exists in the implementation of TSA:RMF standards can hamper seriously the TSA comparability between countries (Libreros et al., 2006). It is worth mentioning also the Eurostat commissioned study on TSA published in 2009 where a detailed analysis on the TSA implementation in each EU country was provided (Eurostat, 2009); however, this report did not present a separate analysis on the level of the compliance with United Nations standards.

Also in 2010, OECD published a survey which included a self-assessment of the countries “compliance with TSA methodology” (OECD, 2010, pp. 104-105). What was very interesting in this research is the fact that most of the 35 respondent countries declared that they have a TSA in compliance with international standards while 3 countries admitted they are some differences and only one country stated there is no compliance. It is obvious that a simple positive answer to a question relating to the compliance with TSA:RMF 2008 is not a guarantee that the country is fully implementing the TSA:RMF standards without any evident proof on that.

At the same time one must admit that it is almost impossible to have a simple answer to this topic and implementing all standards completely could hardly be the case for a country. This was also one of the conclusions of a TSA survey in APEC<sup>1</sup> countries released in 2010 where it is recognized that “in a broader sense, no economy claims to fully implement the TSA:RMF standards in their entirety” (APEC, Tourism Working Group, 2010, p. 28).

Being aware of these issues, this paper demonstrates that evaluating conformity with international standards for a country’s TSA (in our case Iceland) is possible and can be in the same time a good instrument for improving future TSA compilations.

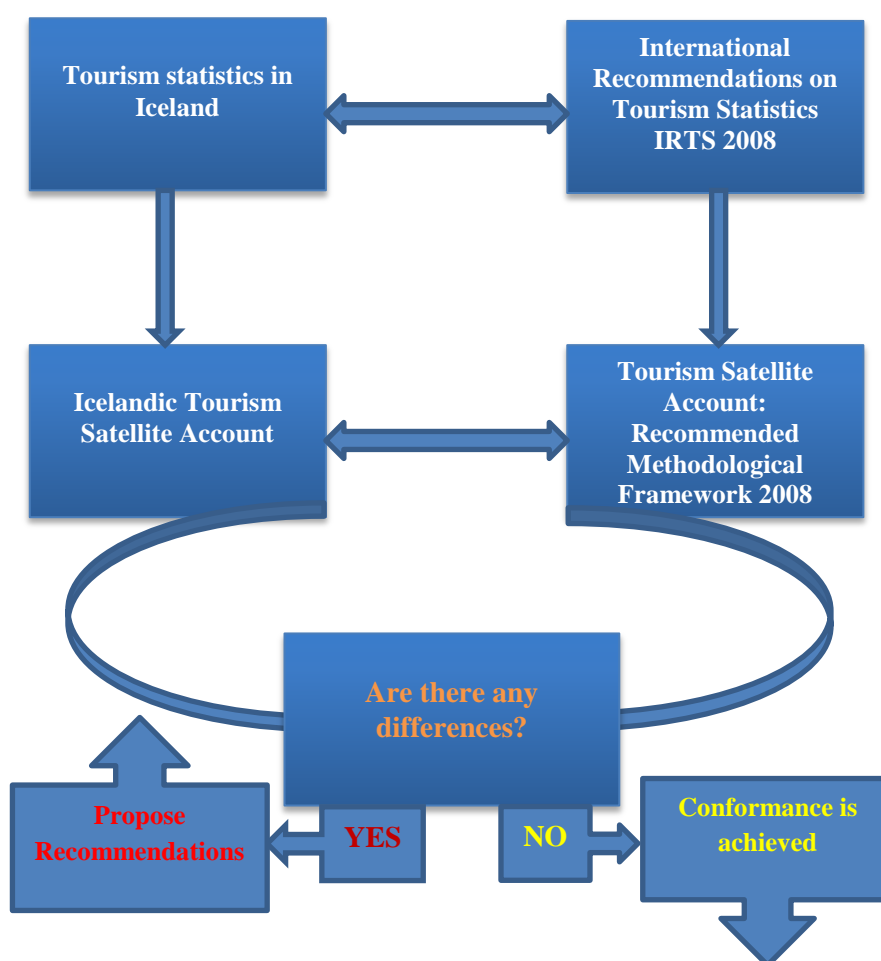
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<sup>1</sup> Asia Pacific Economic Cooperation (APEC) Tourism Working Group comprises the following countries: Australia, Brunei Darussalam, Canada, Chile, China, Indonesia, Japan, Korea, Malaysia, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, Singapore, Thailand, Chinese Taipei, United States and Vietnam. (Source: [http://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Tourism/tourism\\_links.aspx](http://www.apec.org/Groups/SOM-Steering-Committee-on-Economic-and-Technical-Cooperation/Working-Groups/Tourism/tourism_links.aspx)).

## 2. General approach

Broadly, the methodology is similar with the one used for the United States Travel and Tourism Satellite Account in 2013 (see Frent and Frechtling, 2013a; b). Evaluating the conformity with international standards for Icelandic Tourism Satellite Account is fundamentally a **comparative analysis** not only for TSA but also for tourism statistics (see figure 1).

**Figure 1:** The general approach of the conformity assessment for Icelandic TSA



Source: *author*

Therefore, there are two major pillars of the conformity assessment: firstly, the comparison aims tourism statistics existent in a country (in our case Iceland) and its compliance with International Standards in Tourism Statistics 2008 (IRTS, 2008); the second pillar envisages

the conformity with Tourism Satellite Account: International Recommendation Framework (TSA:RMF 2008). Basically, if differences from these standards are identified, recommendations are proposed to achieve conformance.

However, before starting the assessment, a comprehensive inventory of data sources in tourism statistics is also necessary to better identify the country's existing situation in terms of data coverage. An investigation of concepts, definitions and measurement issues related to tourism statistics have to be carried out. Then, a comparative analysis should be undertaken between TSA:RMF 2008 and Icelandic TSA's main aggregates, classifications of products and industries, TSA tables and other TSA specific issues. In this endeavour, both similarities and differences should be outlined.

### **3. Performing the conformity assessment for Icelandic TSA**

Iceland has started to produce TSA in 2008 and since then, only three TSA publications were endorsed by Statistics Iceland, the last one being released in 2011. Now, more than two years on, an evaluation of the TSA in Iceland (with special emphasis on the conformance to the international standards) is timely in order to improve future compilations. Following the general approach presented above, the major outcomes of the conformity evaluation can be divided in two parts respectively one assessment for tourism statistics and one for Tourism Satellite Account.

#### **3.1. Tourism statistics**

In this section first of all an inventory of data sources for tourism will be shortly presented. Then the definitions, concepts and measurement issues in tourism statistics are envisaged.

##### **3.1.1. Inventory of data sources for tourism statistics**

As mentioned previously the conformance assessment should start with an inventory of data sources for tourism statistics. This was also done for Iceland (see table 1). One can observe

that Iceland has no official demand-side survey carried out on a continuous basis. This a major lack of Icelandic tourism statistics. Also, the commissioned surveys of Icelandic Tourist Board do not succeed in covering this gap as they are not carried out on a continuous basis and more important, they have deficiencies in meeting the IRTS 2008 standards (see Frent, 2013, p. 19).

**Table 1:** Main data sources for tourism statistics in Iceland

*Source:* author

Name	Institution in charge	Brief details	Continuous (Yes/No)
Accommodation Statistics	Statistics Iceland	Data on capacities and occupancy of accommodation establishments (arrivals, overnights)	Yes
2007-2008 Travel demand survey	Statistics Iceland	Patterns of Icelandic residents undertaking trips domestically and/or abroad	No
External trade in service statistics	Statistics Iceland	Estimation of Travel item and Air passenger transportation as a proxy for tourism expenditure	Yes
Counting foreign visitors (at Keflavik airport)	Icelandic Tourist Board	Data on number of foreigners departing Keflavik airport	Yes
Commissioning visitor surveys (separately for inbound and domestic visitors)	Icelandic Tourist Board	Data on the profile and characteristics of trip for inbound visitors on the one hand and domestic visitors on the other hand	No

In addition to this list, a particular case is cruise statistics. The administrations of each port registering such traffic in Iceland usually provide these data. They are collected and centralized by Icelandic Tourist Board (ITB) and Icelandic Tourism Research Centre, the latter institution having more detailed data.

Of course that, excepting these data source, there are other data sources which are related to tourism but they are not specifically produced for it. For instance, this is the case of National Accounts, Employment statistics or Transportation statistics. These should also be envisaged as reference sources for compiling TSA.

### 3.1.2. Concepts, definitions and measurement issues

A comparative analysis in relation with IRTS 2008 for all definitions and concepts used in tourism statistics is necessary. Unfortunately, the usage of concepts and definitions specific to tourism is rather limited in the existing system of producing statistics for tourism in Iceland.

As there is no official demand-side survey for tourism carried out regularly, internationally recognized concepts and definitions in tourism statistics are not implemented. The ITB's commissioned surveys for inbound visitors and Icelandic residents do not refer to the IRTS 2008 concepts, which stands to reason as they are performed by market research companies and not by an official producer of data. Also, there is no definition of the visitor concept in the ITB's visitor counting at Keflavík airport.

Nevertheless, it should be borne in mind that the first TSA published in Iceland in 2008 makes reference to the following concepts: tourist (i.e. visitor), usual environment (called "everyday environment"), length of stay, purpose of visit, classification of tourists, tourist consumption (Statistics Iceland, 2008). However, here it should be noted that only a brief general explanation of these concepts is provided in relation with TSA:RMF 2008. For instance, the definition of tourist follows broadly the UNWTO international definition and the same does the definition of tourism consumption.

One of the core issues for tourism statistics but also for TSA is the measurement of tourism expenditure. An assessment of the conformance with international standards will be performed in this case (see table 2). Here, three levels of compliance were judged (adapted upon Frent and Frechtling, 2013a): "Yes" means the IRTS 2008 recommendation is fully implemented in Iceland, "Partially" means that only parts of the recommendation are found or the recommendation is found only in some data sources while in other data sources this is not found and "None" means that the recommendation is not at all considered in Iceland.

Table 2 demonstrates that out of fifteen international recommendations for measuring tourism expenditure only three were found as being "compliant" for Iceland while eight were not in compliance. At the same time, there were four recommendations that were considered partially compliant. Overall, one can see that Iceland is somehow characterised by much more noncompliance issues as regards the measuring of tourism expenditure. In the same time, it has to be admitted that having fulfilled all recommendations is an ideal situation and there is hardly one country performing this task.



**Table 2:** Assessing compliance with international standards in the case of measuring tourism expenditure in Iceland.

Source: based on IRTS, 2008, pp. 36-38

No	IRTS 2008 recommendations	IRTS Paragraph Reference	Compliance in Iceland
1.	To include a specific expenditure module in surveys of inbound visitors.	4.28	Yes
2.	Border surveys to be carried out on an ongoing basis (monthly, quarterly, annually), or conducted only at certain moments (high season, low season).	4.29	Partially
3.	For domestic and outbound tourism expenditure, either a tourism-specific household survey or a periodic module (monthly, quarterly, annually) attached to general household expenditure survey can be used.	4.31	None
4.	In the measurement of domestic tourism expenditure the economy from which services and goods are delivered / acquired should be identified in order to assign the economic effects associated with the movement of visitors to the economies concerned.	4.32	None
5.	To consider alternative estimations methods based on different types of administrative data (such as bank reporting systems, credit card reports, transportation expenditure provided by travel agencies, companies or transportation regulatory authorities).	4.33	Yes
6.	Special attention to be paid to ensure an adequate degree of accuracy when asking visitors to report in detail their expenditure, especially when recall bias can occur.	4.34	None
7.	Identifying clearly the key characteristics of visitors and their trip in order to be linked with the universe of visitors observed in other statistical procedures and to expand properly the data that have been collected.	4.36 a)	Partially
8.	Identifying the country of residence of visitor and of the provider of service in order to allocate to inbound, domestic and outbound tourism expenditure (this is very important for acquisition made before trip, especially the case of air transport).	4.36. b)	None
9.	Only for tourists travelling on a package tour to collect information on total amount paid and the components of the package tour and the country of residence of the tour operator or travel agent from whom the package was purchased.	4.36. c)	Partially
10.	The modes of transport used to arrive, travel within and leave the country should be clearly stated.	4.36 d)	Partially
11.	To make frequent measurement of flows of visitors and their characteristics (i.e. on monthly basis), but to survey their expenditure less frequently and to use a modelled approach using price indexes and extrapolations in order to estimate tourism expenditure.	4.36 e)	None
12.	To obtain also the expenditure made by others for the benefit of visitors.	4.36. f)	None
13.	To present separately the expenditure on accommodation and transport by visitors on business and professional trips, because the national accounts considers these a part of intermediate consumption.	4.36 g)	Yes
14.	To present separately the acquisition of valuables and consumer durables whose value is above the country's customs threshold.	4.36 h)	None
15.	To pay attention to travel parties when reporting expenditure.	4.36 i)	None

## 3.2. Conformance analysis for TSA

The strictly TSA compliance analysis refers to the classification of products and activities, the so called “TSA special issues”, TSA tables and TSA aggregates. These can be considered the main components of the conformance assessment which are specific to TSA.

### 3.2.1. Classification of products and industries

It should be noted that in assessing the compliance with TSA:RMF 2008 in terms of classifications, only tourism industries are envisaged as there is no separate product classification presented in the Icelandic TSA publications.

The starting point is to compare the Icelandic TSA classification of tourism industries with its counterpart in TSA:RMF 2008 and in this endeavour only tourism industries for international comparability are considered (see table 3). However, as a consequence of this investigation there are some issues that will be discussed here referring to all tourism industries included in Icelandic TSA.

The inclusion of “cultural services” and “recreation and entertainment” industries to the “tourism connected industries” category is not correct as they are considered tourism characteristic industries according to the TSA:RMF 2008. These two industries should belong to tourism characteristic industry categorization.

Another remark refers to “Automotive fuel and maintenance industry”. The retail trade of automotive fuel should be separated from maintenance service as in the first case one deals with selling of a good, which is fuel, while in the second case it is a service.

Regarding the category “Other supportive transport activities” it is questionable whether this should be considered connected to tourism and if it has relevance for tourism analysis in Iceland (excepting the toll charged to pass through the Hvalfjörður Tunnel). However, these types of activities are not classified anymore as tourism industries for international comparability in the international standard (see IRTS 2008, p. 111-112). Moreover, the existence of “Other supportive transport activities” as separate tourism connected industry in Icelandic TSA is rather problematic as it does not meet the criteria of a tourism industry to provide services directly to tourists (excepting the operation of Hvalfjörður Tunnel).

**Table 3:** Classification of tourism industries in Icelandic TSA and its conformance with international standards.

*Source:* based on TSA:RMF, 2008 and Statistics Iceland, 2011

No.	Icelandic TSA classification of tourism industries	Conformance with TSA:RMF 2008 classification of tourism industries for international comparability (Yes/No)
<b>Tourism characteristic industries</b>		
1.	Accommodation services	Yes
1.1	Hotel services	Yes
1.2	Other accommodation services	Yes
2.	Food and beverage serving services	Yes
3.	Passenger transportation services	Yes
3.1	Land passenger transportation	Yes
3.2	Ocean passenger transportation	Yes
3.3	Air passenger transportation	Yes
3.4	Transport equipment rental	Yes
4.	Travel agencies services	Yes
<b>Tourism connected industries</b>		
5.	Automotive fuel and repairs	Not applicable
6.	Other supportive transport activities	Not applicable
7.	Cultural services	Yes (but this should have been defined as a tourism characteristic industry)
8.	Recreation and entertainment	Yes (but this should have been defined as a tourism characteristic industry)
9.	Miscellaneous tourism services	Not applicable
10.	Miscellaneous tourism retail services	Not applicable

Regarding the categories “Miscellaneous tourism services” and “Miscellaneous tourism retail services” one might assume that these are residual category of all other services and goods provided for tourists and not mentioned before. Nevertheless, including them in the category of “tourism connected industries” (seen as producing “tourism connected products”) would be justified only by the “relevance for tourism analysis” (TSA:RMF 2008, 2008, p. 24) which is questionable as they are residual categories.

In fact, the usage of term “connected tourism industries” should be avoided as “tourism connected products” are not very clearly identified in Iceland and can hardly be at this stage of TSA development. Only after the list of “country specific” characteristic goods and services is identified, can one further differentiate between characteristic and connected products and by extension industries.

### 3.2.2. TSA special issues

In the TSA compilation there are some issues which need to be further clarified as they are somehow particular cases specific to TSA. Eight such cases will be presented (see table 4). Excepting same-day visitor expenditure and valuables, all of them are considered by TSA:RMF 2008 as being a “TSA special issues” (see TSA:RMF 2008, pp. 15-17, 25-27).

Again, in this section three levels of compliance are judged: Totally compliant, Partially compliant and Not compliant (see table 4). These levels have the following meanings:

- “Totally” means that the respective TSA issue is completely and separately treated in the Icelandic TSA.
- “Partially” means that only some (partial) features of the respective TSA issue are treated in the Icelandic TSA and/or this was not done in a complete manner (i.e. by presenting separate estimates).
- “Non-compliant” means that there is no evidence that the TSA issue is included in Icelandic TSA even if a mentioning (in a declarative format) is found.

One can see that only one TSA special issue (tourism consumption as intermediate consumption of producers) was judged as being totally compliant with international standards. Two TSA special issues were found partially compliant while for the rest of four TSA special issues no compliance was identified.

**Table 4:** The case of TSA special issues: Evaluating conformance with international standards for Icelandic TSA

Source: author

No	TSA special issue	Level of compliance for Icelandic TSA		
		Totally	Partially	Non-compliant
1.	Tourism consumption as intermediate consumption of producers	√		
2.	Services provided by the households for the benefit of their guests			*
3.	Housing services provided by vacation homes on own account		√	
4.	Timesharing			*
5.	Tourism single-purpose consumer durables			√
6.	Valuables			√
7.	Separate valuation for reservation services – the case of package tours		√	
8.	Same-day visitors expenditure			√

\* - no level of compliance is assessed since this phenomenon is not very characteristic in Iceland for the time being

Iceland did not separately approach the cases of Same-day visitors' expenditure, Tourism single-purpose consumer durables and Valuables although for some of them some mentioning in declarative format were found; one can assume that these are important elements for Icelandic TSA which have to be separately estimated in the future compilations.

In the same time, some issues like Services provided by the households for the benefit of their guests or Timesharing could were not included in Icelandic TSA probably due to the fact that their relevance is rather low (or insignificant). So it is questionable to consider these as being as non-conformances. Therefore, a flexible approach is required in judging these cases.

### 3.2.3. TSA tables

The presentation of TSA results is made through a set of tables. These are an essential part of any TSA and assessing their compliance with international standards is a core issue.

TSA:RMF 2008 proposes ten tables whose purpose is promoting “homogeneity among countries” (TSA:RMF 2008, p. 31). From these 10 tables only 8 are considered a priority and should be developed in a first stage in order to have a real TSA. The other two tables (TSA:RMF 2008 table 8 and table 9) should be considered only in a further stage of development as they face “some specific conceptual challenges” (TSA:RMF 2008, para. 4.6). This is the reason why the compliance analysis does not include these two tables, for the time being.

In the last TSA publication for Iceland eleven TSA tables were presented (Statistics Iceland, 2011). An important remark refers to the fact that nine Icelandic TSA tables are in time series format. Moreover, what could be rather confusing for users is the fact that the numbering of the tables in the annex of the Icelandic TSA publication does not begin with 1 but with 7 (as the tables were seen as a continuation of other tables presented in the text of publication<sup>2</sup>). So we have Icelandic TSA tables numbered from 7 to 17 which are in fact the tables for whom a sort of correspondence with TSA:RMF 2008 will be established (see table 5).

In a similar manner with TSA special issues three levels of compliance were used: Totally compliant, Partially compliant and Non-compliant. In judging the first two of three levels the

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<sup>2</sup> The other six tables presented in the text of the 2011 TSA publication (see Statistics Iceland, 2011) are in fact small tables used for analysing the data. Under no circumstances these could not be seen as TSA tables.

“Frent and Frechtling approach” was applied: Fully compliant means that the table “conforms completely or nearly completely in content and format to its counterpart” in TSA:RMF 2008 while Partially compliant table is a table that „display the content and show at least one row or column equivalent to a table in TSA:RMF 2008.” (Frent and Frechtling, 2013b, p. 20). Non-compliant are considered tables which in fact have no counterpart in TSA:RMF 2008 and/or the scope of measurement (of the aggregate derived from the table) is out of TSA:RMF 2008.

Overall, out of eleven Icelandic TSA tables three were found as being in non-compliance with international standards while for the rest of eight Icelandic tables only “partially” compliance was judged. So, unfortunately there is no Icelandic TSA table “totally” compliant with TSA:RMF 2008.

**Table 5:** Assessing the compliance with international standards for the Icelandic TSA tables

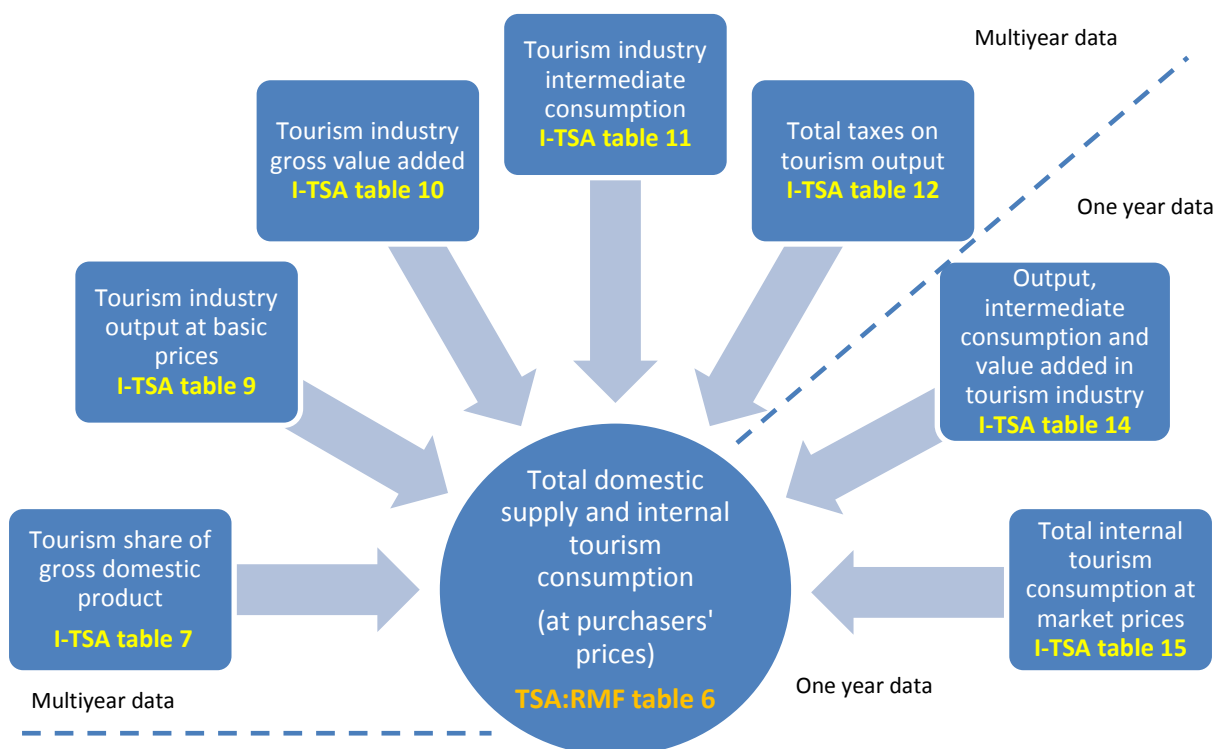
Source: author

Icelandic TSA tables	Level of compliance			Corresponding TSA:RMF 2008 table(s)
	Totally	Partially	Non-compliant	
Table 7. Tourism share of gross domestic product		√		Table 6. Total domestic supply and internal tourism consumption (at purchasers’ prices)
Table 8. Total internal tourism consumption at market prices (multiyear data table)		√		Table 4. Internal tourism consumption by products
Table 9. Tourism industry output at basic prices		√		Table 6. Total domestic supply and internal tourism consumption (at purchasers’ prices)
Table 10. Tourism industry gross value added		√		Table 6. Total domestic supply and internal tourism consumption (at purchasers’ prices)
Table 11. Tourism industry intermediate consumption		√		Table 6. Total domestic supply and internal tourism consumption (at purchasers’ prices)
Table 12. Total taxes on tourism outputs		√		Table 6. Total domestic supply and internal tourism consumption (at purchasers’ prices)
Table 13. Tourism industry output at market prices			√	None. There is no TSA:RMF table to include such calculation.
Table 14. Output, intermediate consumption and value added in tourism industry		√		Table 6. Total domestic supply and internal tourism consumption (at purchasers’ prices)
Table 15. Total internal tourism consumption at market prices (one year data table)		√		Table 4. Internal tourism consumption by products
Table 16. Employment in tourism			√	Table 7. Employment in the tourism industries (major difference in the scope of measurement)
Table 17. Factor income in tourism			√	None. There is no TSA:RMF table calculating this kind of aggregate.

Icelandic TSA does not respect the tabular format recommended by TSA:RMF 2008. As it is, the TSA:RMF table 6, the core TSA table is not found in Iceland. Instead, there are seven (6+1) tables that correspond to TSA:RMF table 6 (see figure 2).

In the same time, there are two levels identified here: on the one hand, there are multiyear tables and on the other hand there are one year tables. There are five multiyear Icelandic TSA tables respectively 7, 9, 10, 11 and 12 (see figure 2). There is one year table that relates to TSA:RMF table 6 and this is Icelandic TSA table 14 “Output, intermediate consumption and value added in tourism industry” (see figure 2). Also, Icelandic TSA table 15 could also be added in this correspondence as a one year table that provides data for internal tourism consumption (which is also included as one column in TSA:RMF 2008 table 6).

**Figure 2:** The correspondence between Icelandic TSA tables and TSA:RMF 2008 table 6



### 3.2.4. TSA aggregates

The size of tourism within the economy is characterized by aggregates which have to be “consistent with similar aggregates for the total economy and for other productive economic activities and functional areas of interest” (TSA:RMF 2008, para. 1.15). In fact, TSA might be considered “an ideal instrument to measure a number of macro-economic aggregates” (Vanhove, 2011, p. 41).

The aggregates are classified by TSA:RMF 2008 in two large categories: the “main aggregates” and “other aggregates” (see TSA:RMF 2008 p. 45 and 48).

The “main aggregates” proposed are: Internal tourism expenditure, Internal tourism consumption, Gross value added of tourism industries, Tourism direct gross value added and Tourism direct gross domestic product. The “other aggregates” recommended are: Tourism employment, Tourism gross fixed capital formation, Tourism collective consumption and Tourism internal demand. Referring to “other aggregates”, it should be reminded that “with the exception of tourism employment, they should be the object of a more advanced development of the Tourism Satellite Account” (TSA:RMF 2008 para 4.99). Consequently, excepting employment they will not be treated in this paper and will not be included in the conformance assessment.

A correspondence between the TSA:RMF aggregates and the ones found in the Icelandic TSA can be established (see Table 6).

**Table 6:** Establishing a general correspondence between TSA aggregates

*Source:* author based on TSA:RMF, 2008 and Statistics Iceland, 2011

TSA:RMF 2008	Icelandic TSA
Internal tourism expenditure	...
Internal tourism consumption	Total internal tourism consumption (at market prices)
Gross value added of tourism industries	...
Tourism direct gross value added	Tourism gross value added (at basic prices )
Tourism direct gross domestic product	Tourism gross value added (at market prices)
Tourism employment - Employment in the tourism industries	Employment in tourism
...	Tourism industry output (at basic and at market prices)
...	Tourism industry intermediate consumption
...	Total taxes on tourism outputs

... - lack of correspondence



One can see that out of six aggregates proposed by TSA:RMF 2008 only four are found in the Icelandic TSA publication. There are two aggregates that are not found in the Icelandic TSA namely Internal tourism expenditure and Gross value added of tourism industries. On the other hand, three additional “specific” Icelandic TSA aggregates (which are not found in TSA:RMF 2008) were identified<sup>3</sup>: “Tourism industry output (at basic and at market prices), “Tourism industry intermediate consumption” and “Total taxes on tourism outputs”.

It should be noted that in Iceland Internal tourism expenditure is not separately identified and it is embedded in the Internal tourism consumption. According with international standards Tourism consumption is conceptually larger than Tourism expenditure as includes also other elements such as “services associated with vacation homes on own account, tourism social transfer in kind and other imputed consumption” (TSA:RMF 2008, p. 12).

Also, it is important to mention that the aggregate of Gross value added of tourism industries exists in fact in the Icelandic TSA compilation but this was not separately presented in the publication.

## 4. Conclusions

It has to be admitted that the major output of such study consists of a series of recommendations – in Iceland’s case there were 52 (see Frent, 2013 and Icelandic Tourism Research Centre website for the forthcoming study<sup>4</sup>). These were made in order to improve the measurement of tourism in Iceland according to international standards. In principle, where major gaps or non-conformances were observed, then recommendations were prepared. If implemented, the belief of the author is that these will provide the basis for making Icelandic TSA more compliant with international recommendations. As a consequence, Iceland might have significantly better tourism statistical data and a more reliable statistical characterization of the tourism sector.

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<sup>3</sup> These were considered separate aggregates since for each of them the share in the corresponding aggregate for total economy is included in Icelandic TSA tables. However, this was not the case of “Factor income in tourism” identified in Icelandic TSA table 17 where only volume indices are presented in the Icelandic TSA publication (see Statistics Iceland, 2011 p. 26).

<sup>4</sup> There is no space here to present all these recommendations but the reader can consult the complete study. The first part is available online (see Reference section) while the second part will be also available in the next months at the same webpage.

This paper is also an example of how a country having a TSA has been coping with conformance with international standards through a sort of audit specially focused on analysis of conformance. This is an option for countries already developing TSA in a regular manner. Iceland is a country that developed only three TSA exercises in the period 2008 - 2011 and this was after TSA:RMF 2008 had been published.

The conformity analysis with international standards can also raise awareness on the “deficiencies” the TSA has in the compiling country. It has to be kept in mind that such an assessment will also reveal the major gaps in terms of data sources.

In the same time, at international level a sort of awareness can be raised about the importance of having a TSA in compliance with international recommendations. This can stimulate other countries to perform such a conformance analysis. Moreover, international organizations such as UNWTO, OECD and Eurostat can encourage similar exercises for their members.

In a certain perspective the study fully supports the objective of having international comparability of data. It is without any doubt that if one country’s TSA is constructed in compliance with international standards this could further contribute to achieving a better comparability of TSA figures between countries. This is one of the major challenges for TSAs worldwide in the future years.

## **5. Limitations & Future perspectives**

The analysis undertaken in this paper has been focused on conceptual and methodological aspects of TSA without examining the influence of non-conformances to the TSA results. This was not the purpose of the paper. Rather by providing recommendations to assure conformance with United Nations standards, such analysis has brought solutions for improving the existing system of TSA compilation in Iceland.

Also this paper also did not undertake a centralised quantitative analysis of conformances vs. non-conformances with international standards. However, instead it has summarized the author’s judgment on the conformance for each of the main TSA topics (tourism expenditure, TSA special issues, TSA tables, TSA aggregates). While one can be aware of the existence of

a sort of subjectivism in the assessment process, the author's belief is that the TSA expertise of the person auditing a TSA remains a crucial factor for the success of any similar project.

As a future issue, one can also imagine elaborating an “**evaluation scheme**” in which some grades (points) would be awarded for fulfilling conformance for each topic of TSA. A final grade can be computed based on this. Thus, a sort of **rating system** can be finally developed in which each TSA can be rated in terms of the adherence to international standards. For instance, a TSA rated A would mean it conforms mostly with international standards while a country's TSA rated F would mean there is no conformance with UN standards.

At the same time one must be aware of the huge efforts such an exercise would imply both from financial and human resources point of view. One solution is to share costs between the countries producing TSAs and international organizations who might promote such an assessment system.

Anyway, these are only theoretical proposals for the future and if they are found feasible they can be implemented. If not, some alternatives could also be considered for TSAs to be developed in a more uniform and standardized manner (i.e. by developing a TSA Compilation Manual). These might constitute good ways to strengthen the capacities for having TSAs respecting international recommendations.

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