



TRABAJO FIN DE MÁSTER (Master's Thesis)

Sustainable Development Goals for local tourism destinations. Insights
from the Canary Islands

Los Objetivos de Desarrollo Sostenible para los destinos turísticos.
Perspetivas desde Canarias

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Abstract:

In recent years sustainability has become an essential aspect when making decisions in favor of the development of society. For this reason, the United Nations approved the Sustainable Development Goals in 2015 to ensure a prosperous future for all. Tourism activity, due to the great weight that it has in many countries, cannot develop its plans without taking sustainable development into account, and therefore it is necessary to establish a relationship between tourism and the Sustainable Development Goals, which is the objective of this work. For this, the monitoring actions carried out by different destinations, both internationally and locally, regarding the application of the SDGs have been analyzed, to later make a proposal of indicators applicable to the area of the Canary Islands and evaluate the performance of the archipelago in terms of to them. The analysis carried out has shown that, although the official discourse insists on the contribution of tourism to the SDGs, measuring this contribution is not at all simple.

- Keywords: Sustainable Development Goals, tourism, indicators, sustainability.

Resumen:

La sostenibilidad se ha convertido en los últimos tiempos en un aspecto esencial a la hora la toma de decisiones a favor del desarrollo de la sociedad. Por ese motivo Naciones Unidas aprobó en 2015 los Objetivos de desarrollo sostenible con la finalidad de asegurar un futuro próspero para todos. La actividad turística, debido al gran peso que tiene en numerosos países no puede elaborar sus estrategias sin tener en cuenta el desarrollo sostenible, y por ello se hace necesario establecer una relación entre el turismo y los Objetivos de Desarrollo Sostenible, lo cual es el objetivo de este trabajo. Para ello se han analizado las acciones de monitorización realizadas por diferentes destinos tanto a nivel internacional como local en cuanto a la aplicación de los ODS, para posteriormente realizar una propuesta de indicadores aplicables al ámbito de las Islas Canarias y evaluar el desempeño del archipiélago en cuanto a los mismos. El análisis realizado ha permitido comprobar, que aunque en el discurso oficial se señala con insistencia la contribución del turismo a los ODS, la medición de dicha contribución no resulta en absoluto sencilla¹.

- Palabras clave: Objetivos de Desarrollo Sostenible, turismo, indicadores, sostenibilidad.

¹ This master's thesis has been written in English as an opportunity for the author to practice and improve her skills in that foreign language. Despite I have revised the text I would like to apologise for the mistakes that may remain.

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1. Introduction

In recent years sustainability has become an important aspect to bear in mind in practically all aspects of society. Institutions, firms, non-governmental organizations, and even the citizens, have taken action on the matter with different initiatives. The United Nations, founded in 1945 with the aim of maintaining international peace and security, provide humanitarian assistance to those in need, protect human rights and uphold international law, has also made its contribution by launching the *Sustainable Development Goals* as part of their development plans.

Tourism has not been left behind either. Many destinations, companies, institutions, and organizations have considered sustainability when elaborating their strategies and policies. The World Tourism Organization, as an organization that takes action to make tourism a sustainable activity in all aspects that concern it, is also giving recommendations and tools.

For this reason, in this master's thesis developed from La Laguna University in the Canary Islands, the relation between Sustainable Development Goals and tourism is going to be analyzed, in order to check if the SDGs are being applied in the tourist activity of different destinations and organizations at the international and local scales (continents, countries, cities, institutions and organizations), and to analyze how the adaptation of SDGs to tourism has been established. Also, in this work a proposal for the measurement of SDGs in local tourism destinations will be proposed, as a contribution to the necessary adaptation of SDs to tourism destinations.

2. SDGs and tourism

The Sustainable Development Goals, also known as SDGs, were approved in 2015 by the Governments of the member countries of the United Nations, as part of the *2030 Agenda* and linked with the Paris Climate Change Agreement. They consist of 17 main goals with 169 targets globally applicable and agreed by all 193 UN member states (World Tourism Organization (UNWTO), 2016). The aims of this initiative are to eradicate poverty, protect the planet and ensure prosperity for all. The intention is that these objectives are reached by 2030. These 17 goals are listed and briefly explained below.

Figure 1. Sustainable Development Goals



Source: United Nations Organization

1. **No poverty:** eradicate extreme poverty, reduce the proportion of poor people, guarantee social protection for all, ensure access to the same resources for all and reduce vulnerability.
2. **Zero hunger:** end hunger and ensure access to healthy food for all, double agricultural production and the income of small-scale producers, investing in rural infrastructure and agricultural research.
3. **Good health and well-being:** reduce the global maternal mortality rate, end preventable child deaths, end epidemics and combat communicable diseases. Reduce mortality from non-communicable diseases, prevent and treat addictive substances, reduce deaths and injuries caused by traffic accidents, chemical products and pollution, and ensure universal access to healthcare.
4. **Quality education:** ensure the completion of primary education for all children, ensure access for all to quality higher education, increase the number of people trained for employment, ensure that students acquire knowledge about sustainable development, and promote more inclusive and safe facilities.
5. **Gender equality:** put an end to discrimination and violence against women, eliminate child marriage and female genital mutilation, recognize unpaid domestic work, ensure

the participation of women in the decision-making levels of politics, ensure reproductive rights and sexual health, promote gender equality and empowerment of women.

- 6. Clean water and sanitation:** universal access to drinking water and sanitation and hygiene services. Improve water quality and management and promote its sustainable use.
- 7. Affordable and clean energy:** universal access to energy services, increase the use of renewable energy, improve energy efficiency and technology.
- 8. Decent work and economic growth:** maintain economic growth and increase GDP in the least developed countries, achieve higher levels of productivity, policies that promote productive activities and the creation of quality employment, improve efficient production and consumption, reduce youth unemployment, protect rights work, promote sustainable tourism.
- 9. Industry, innovation and infrastructure:** develop safe and sustainable infrastructures, promote sustainable industrialization, increase scientific research and improve the technological capacity of all countries especially in developing countries through financial aid.
- 10. Reduced inequalities:** achieve income growth for the poorest, enhance the social inclusion of all people, guarantee equal opportunities, improve the regulation of financial institutions and markets, facilitate migration and orderly mobility.
- 11. Sustainable cities and communities:** ensure access for all to adequate housing and basic services, access to safe transportation systems and improve road safety, increase inclusive and sustainable urbanization, protect cultural and natural heritage, reduce deaths caused by disasters, and reduce negative environmental impact.
- 12. Responsible consumption and production:** achieve sustainable management and efficient use of natural resources, reduce food waste, achieve ecological management of chemical products, reduce waste generation, ensure that everyone has knowledge about sustainable development, and promote sustainable tourism.
- 13. Climate action:** promote awareness of climate change, mobilize resources for its mitigation and strengthen the capacity to adapt to natural disasters.

- 14. Life below water:** protect and conserve marine and coastal ecosystems, promote their sustainable use and reduce the actions that may deteriorate them.
- 15. Life on land:** promote the conservation of ecosystems, habitats and terrestrial species and stop their degradation. Mobilize resources for their sustainable management.
- 16. Peace, justice and strong institutions:** reduce violence and the death rate caused by it, end abuse and exploitation, promote the rule of law, fight crime and corruption, public access to information, apply non-discriminatory laws in favour of sustainable development.
- 17. Partnerships for the goals:** mobilizing resources to improve the ability to collect tax revenues, ensure that developing countries meet their development commitments and support them to do so. Improve regional and international cooperation in science by fostering the exchange of knowledge, promoting the development of rational technologies and their transfusion to developing countries, and setting up a technology bank. Promote an open and equitable universal trade system, increase exports from developing countries.

Although there are three objectives that include the word *tourism* in their targets (World Tourism Organization, UNWTO, 2016), tourism has influence in most Sustainable Development Goals, since tourism is an activity that impacts directly and indirectly in all aspects of the economy, society and environment.

Tourism generated annually before the pandemic about 1,5 billion international arrivals (Gössling, S., 2021), but it is expected that this figure increases to 1,8 billion by 2030 (United Nations World Tourism Organization & United Nations Development Programme, 2017), in addition, it contributed 10,2% of the world GDP (WTTC, 2018).

Given these relevant figures and the economic significance of tourism worldwide, it has become necessary to study its sustainability and impacts considering its three perspectives, economic, socio-cultural and environmental (Rasoolimanesh et al., 2020). For this reason, the World Tourism Organization proposed in 2004 a list of Sustainable Tourism Indicators being aware of these three perspectives with the aim of monitoring tourism impacts, these indicators and recommendations for sustainable tourism development apply to all forms of tourism and destinations (UNWTO, 2004) (see in annex 1).

According to UNWTO the fundamental pillars of sustainable tourism are: 1. Make a correct use of environmental resources, with ecological processes and promoting the conservation of natural heritage and biodiversity, 2. Conserving the socio-cultural authenticity of communities, and their built and living heritage and values, 3. Ensure a viable economy in the long term with benefits to all stakeholders that are fairly distributed, contributing to employment and income earning and social services to host communities (UNWTO, 2004).

3. Scale of analysis of Sustainable Development Goals

The United Nations General Assembly with the support of the Sustainable Development Solutions Network, an initiative for the United Nations, established monitoring for the implementation of the goals and its targets in 2016, for this, they elaborated a list of 230 indicators that can be globally applied. These indicators were mainly created to track the evolution of the performance of SDGs in countries or even in continents, but for the measurement of SDGs in cities or tourist destinations, it will be probably necessary a revision of the indicators.

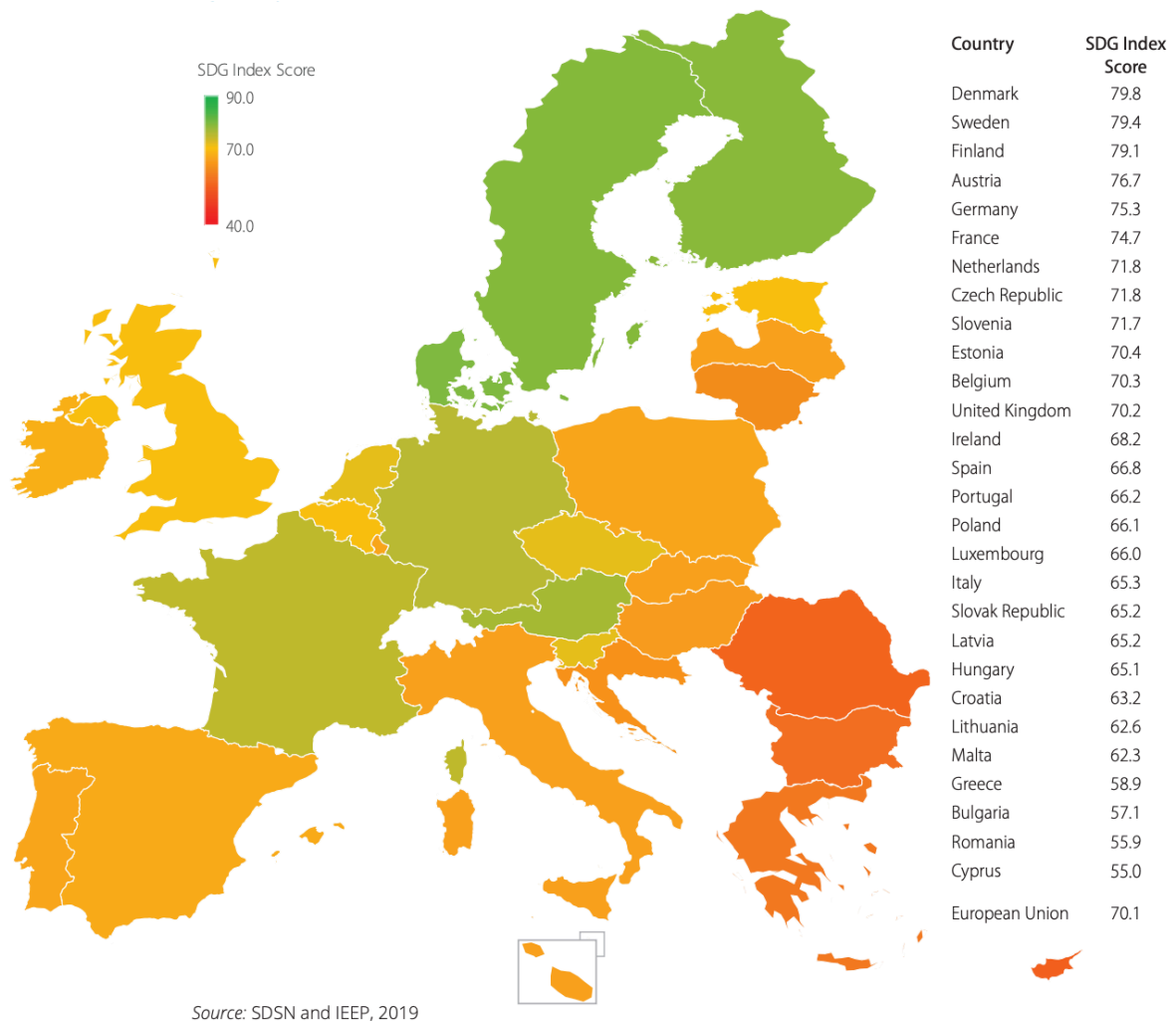
3.1 International experience measuring SDGs at different scales of analysis

3.1.1 Europe

The European Union prepare each year a report to show how are its 27 members states after Brexit dealing with the implementation of SDGs and the Paris Climate Agreement. For the elaboration of this report, they worked together with the civil society, business trade unions and government representatives, including 113 indicators that come from the European Commission and non-official data sources as non-governmental organizations and academies.

The Sustainable Development Solutions Network (SDSN) and the Institute for European Environmental Policy (IEEP) have developed the EU SDG Index and Dashboards, where each country is scored from 0 to 100 according to their achievements regarding SDGs.

Figure 2. European Union's global achievement of the SDGs

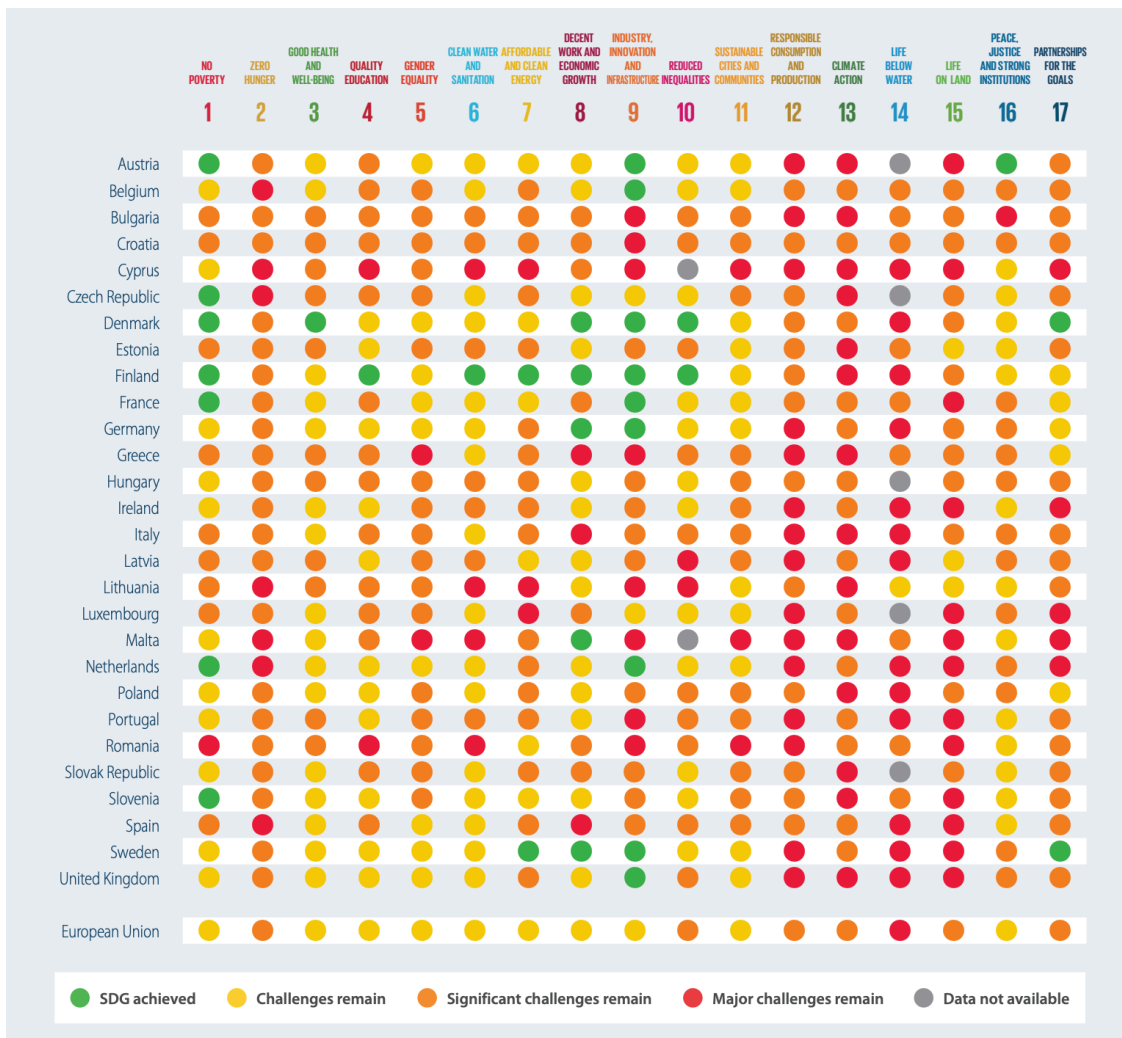


Source: The 2019 Europe Sustainable Development Report

As it can be seen in the image, no EU member state has fully achieved SDGs goals, being Denmark, Sweden, and Finland on the top of the index with a score above 79 out of 100, on the other side are Greece, Bulgaria, Romania, and Cyprus being the countries with more work to do in the following years to achieve the SDGs. Spain is in the middle of the index with a score of 66.8 out of 100, which probably means that Spain has done a good job so far, but still have improvements and changes to be made.

As part of the index, they also made a dashboard that shows the 17 goals in relation to each country achievement, demonstrating how each country is dealing with the SDGs and what are their strong points and which ones they have to improve.

Table 1. European Union's achievement of the SDGs by goals



Source: The 2019 Europe Sustainable Development Report

As it is shown there are few countries with fully achieved goals (green), Denmark, Finland, and Sweden (the countries with the higher scores in the previous image) are the ones with more goals achieved. However the European set hasn't achieved any objective by the moment, so it can be deduced that there is still a long way to go.

3.1.2 United States

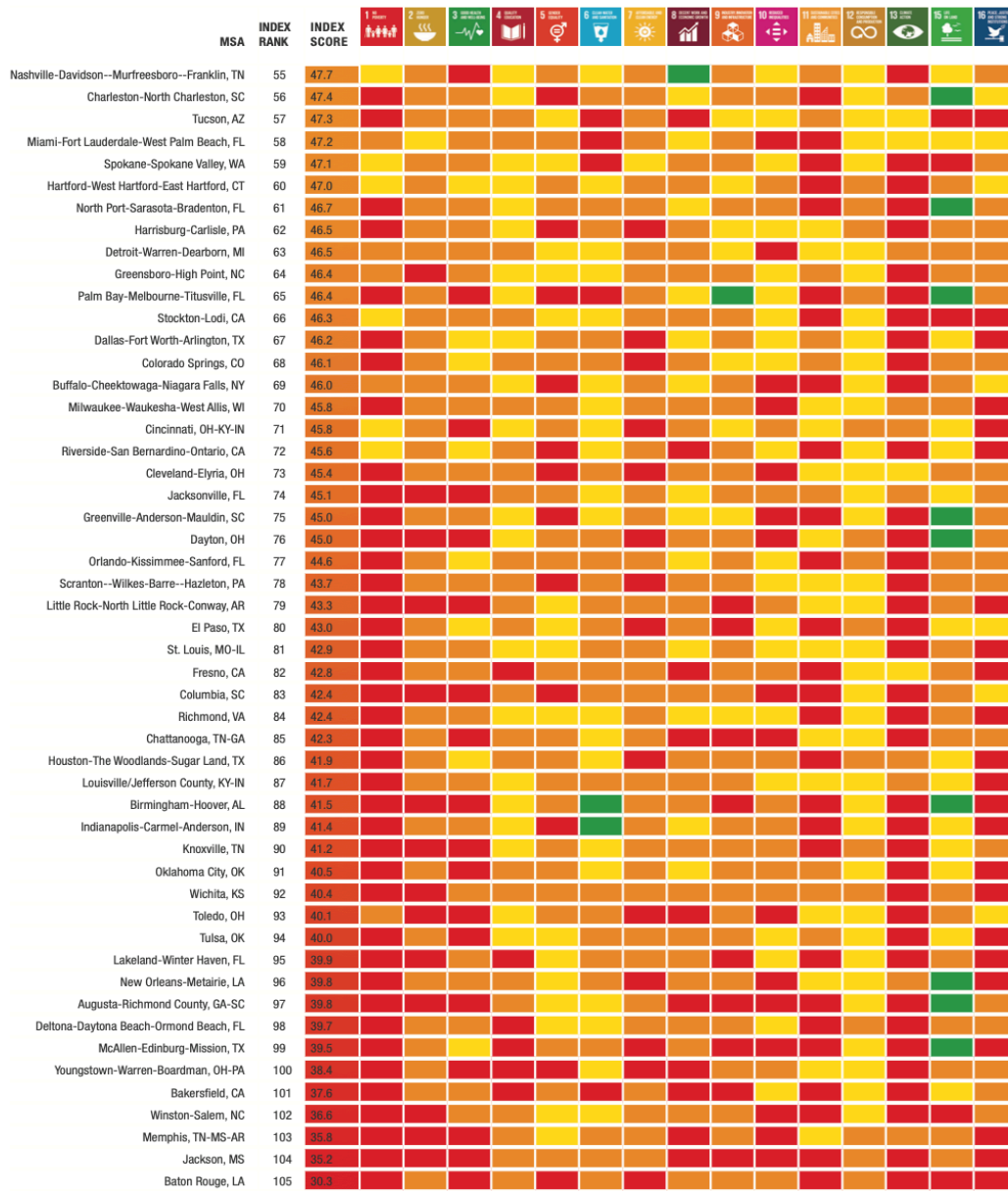
The Sustainable Development Solutions Network of the United States, a network of researchers, knowledge creators and thought leaders with the aim of mobilizing expertise on the SDGs in the United States, prepare each year a report that presents an overview of how cities are performing on the UN's Sustainable Development Goals. They use the same

indicators proposed by SDSN and UN but with some modifications in order to adapt to their analysis and not repeat any indicator. As well as in the European report, each city is given an overall score of 0 to 100, which can be interpreted as the percentual progress a city has made towards achieving the SDGs (Lynch, A. et al, 2019)

The results are shown in a dashboard divided by colours, from red (poor performance), to orange (poor to moderate performance), yellow (moderate to good performance) and green (good performance, best performance, or in some cases, SDG attainment) and are divided by States and goals. (Lynch, A. et al, 2019).

Table 2. United States' achievement of the SDGs by goals

MSA	INDEX RANK	INDEX SCORE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
San Francisco-Oakland-Hayward, CA	1	69.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
San Jose-Sunnyvale-Santa Clara, CA	2	67.9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Washington-Arlington-Alexandria, DC-VA-MD-WV	3	66.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Seattle-Tacoma-Bellevue, WA	4	66.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Madison, WI	5	65.9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Portland-Vancouver-Hillsboro, OR-WA	6	65.6	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
San Diego-Carlsbad, CA	7	63.2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Boston-Cambridge-Newton, MA-NH	8	62.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Austin-Round Rock, TX	9	61.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raleigh, NC	10	59.2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Albany-Schenectady-Troy, NY	11	59.1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Urban Honolulu, HI	12	58.2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Minneapolis-St. Paul-Bloomington, MN-WI	13	58.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Bridgeport-Stamford-Norwalk, CT	14	58.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Des Moines-West Des Moines, IA	15	57.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Oxnard-Thousand Oaks-Ventura, CA	16	57.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
New York-Newark-Jersey City, NY-NJ-PA	17	57.3	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Worcester, MA-CT	18	57.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Los Angeles-Long Beach-Anaheim, CA	19	55.9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Providence-Warwick, RI-MA	20	55.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Grand Rapids-Wyoming, MI	21	55.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Denver-Aurora-Lakewood, CO	22	54.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sacramento--Roseville--Arden-Arcade, CA	23	54.3	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Trenton, NJ	24	54.3	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Salt Lake City, UT	25	53.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Manchester-Nashua, NH	26	53.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Chicago-Naperville-Elgin, IL-IN-WI	27	52.6	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Provo-Orem, UT	28	52.1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
New Haven-Milford, CT	29	51.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Durham-Chapel Hill, NC	30	51.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Springfield, MA	31	50.9	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Akron, OH	32	50.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pittsburgh, PA	33	50.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Syracuse, NY	34	50.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Phoenix-Mesa-Scottsdale, AZ	35	50.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Virginia Beach-Norfolk-Newport News, VA-NC	36	50.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Baltimore-Columbia-Towson, MD	37	50.1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Boise City, ID	38	50.1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Albuquerque, NM	39	50.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	40	49.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Charlotte-Concord-Gastonia, NC-SC	41	49.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Cape Coral-Fort Myers, FL	42	49.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Las Vegas-Henderson-Paradise, NV	43	49.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Omaha-Council Bluffs, NE-IA	44	49.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Kansas City, MO-KS	45	49.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Ogden-Clearfield, UT	46	49.0	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Allentown-Bethlehem-Easton, PA-NJ	47	48.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Atlanta-Sandy Springs-Roswell, GA	48	48.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Modesto, CA	49	48.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Lancaster, PA	50	48.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
San Antonio-New Braunfels, TX	51	48.5	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Columbus, OH	52	48.4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Tampa-St. Petersburg-Clearwater, FL	53	47.8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Rochester, NY	54	47.7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green



Source: The 2019 US Cities Sustainable Development Report

In this case, the cities with higher scores are San Francisco-Oakland-Hayward, San Jose-Sunnyvale-Santa Clara, and Washington-Arlington-Alexandria with a score above 66 out of 100, and the objective more achieved by the cities is objective 15, life on land.

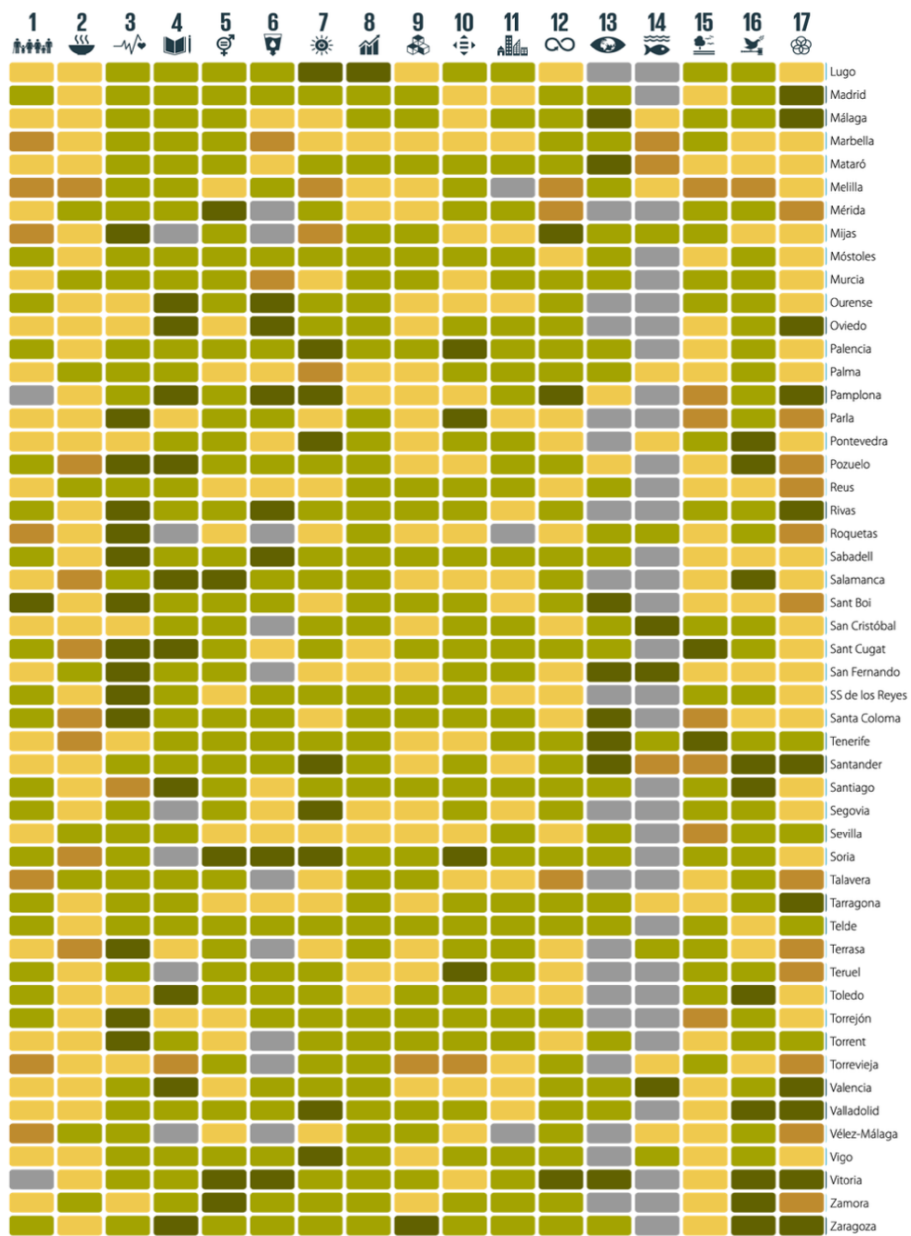
3.1.3 Italy

Each UN state member has the duty of drafting their own National Strategy for Sustainable Development. However, in the case of Italy, the Council of Ministers have considered to delegate this duty to the regions, provinces, and cities, so they can make their own planning agenda, since the heterogeneity of the Italian peninsula makes it difficult to implement one single strategy. As the OECD report says, Italy has only reached 12 of 169 targets, but at the same time, they are close to the achievement of others.

The indicators used for the dashboard were the ones proposed by the SDSN and UN, and it was analyzed by goal in each city, but the cities did not receive a score as it is seen in other reports. The goals are rated from 0% to 100% of achievement and divided into four grades with colours: green (80-100), yellow (50-80), orange (20-50) and red (0-20).

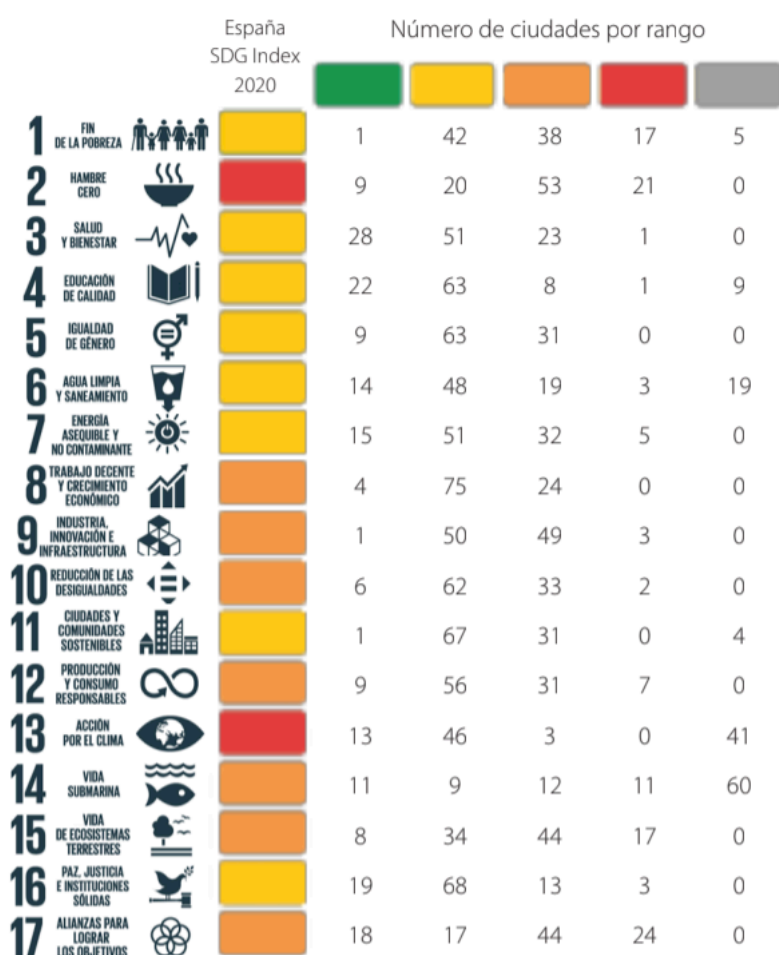
Table 3. Italy's achievement of the SDGs by goals

City	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17
AGRIGENTO	33.5%	4.5%	39.6%	20.7%	45.9%	61.0%	60.9%	32.4%	15.4%	38.3%	74.8%	77.6%	73.7%	60.5%	24.5%	72.8%
ALESSANDRIA	86.2%	60.7%	40.5%	26.8%	60.8%	64.6%	65.7%	38.1%	21.6%	23.3%	45.0%	51.3%	69.1%	52.0%	57.6%	46.0%
ANCONA	88.8%	28.6%	62.2%	52.1%	67.6%	71.5%	42.7%	60.8%	62.8%	54.7%	58.2%	61.6%	81.5%	27.8%	66.5%	61.5%
AOSTA	93.5%	71.2%	43.5%	46.2%	71.2%	87.9%	6.1%	44.0%	7.1%	47.0%	65.7%	77.1%	69.1%	51.5%	63.8%	60.2%
AREZZO	90.2%	84.7%	66.8%	28.5%	67.6%	56.5%	20.8%	56.8%	23.6%	56.3%	68.8%	39.1%	69.9%	53.0%	90.8%	26.9%
ASCOLI PICENO	77.4%	28.0%	67.0%	33.7%	66.3%	80.8%	49.0%	62.7%	29.8%	40.3%	67.6%	73.6%	80.2%	34.7%	55.3%	59.2%
ASTI	84.8%	63.3%	52.4%	42.8%	52.4%	78.9%	15.4%	43.3%	15.4%	45.2%	40.7%	75.4%	68.6%	52.8%	74.2%	70.3%
AVELLINO	63.4%	0.0%	52.7%	29.8%	66.8%	76.5%	38.3%	62.9%	27.8%	51.8%	57.2%	88.4%	93.1%	44.8%	57.3%	82.0%
BARI	51.5%	8.0%	53.7%	37.0%	50.9%	64.9%	38.1%	33.8%	52.5%	55.9%	60.5%	41.2%	49.7%	32.2%	29.8%	72.1%
BELLUNO	100.0%	58.8%	72.2%	42.7%	68.3%	57.4%	7.6%	77.9%	38.1%	24.9%	61.4%	91.9%	67.8%	42.9%	52.2%	50.0%
BENEVENTO	46.4%	0.0%	56.3%	28.3%	65.3%	33.7%	33.1%	41.1%	21.6%	36.3%	63.9%	81.2%	93.1%	45.7%	49.2%	69.4%
BERGAMO	89.1%	50.0%	47.5%	50.5%	66.4%	85.3%	30.4%	73.8%	46.3%	55.9%	52.4%	73.4%	69.3%	52.1%	71.0%	87.8%
BIELLA	86.6%	40.9%	61.5%	50.2%	73.5%	69.2%	25.6%	52.1%	9.2%	50.4%	60.0%	74.2%	69.2%	51.6%	69.9%	80.0%
BOLOGNA	93.3%	71.2%	57.4%	52.8%	88.3%	83.9%	26.8%	70.2%	69.0%	59.2%	61.9%	50.4%	41.2%	2.4%	59.6%	64.9%
BOLZANO	90.1%	51.7%	63.8%	47.0%	75.6%	86.9%	41.2%	69.1%	52.5%	62.7%	60.6%	71.3%	76.4%	51.9%	77.3%	94.6%
BRESCIA	84.4%	50.2%	53.5%	36.9%	59.3%	82.0%	55.9%	63.7%	67.0%	55.9%	44.7%	66.0%	68.1%	38.9%	58.5%	87.5%
BRINDISI	33.9%	8.0%	52.9%	36.0%	42.0%	79.8%	100.0%	22.4%	40.1%	41.5%	65.1%	45.9%	49.3%	50.8%	33.8%	45.7%
CAGLIARI	61.4%	50.0%	69.8%	41.7%	78.6%	65.6%	17.4%	45.0%	100.0%	53.8%	55.2%	40.0%	49.0%	56.0%	28.9%	95.8%
CALTANISSETTA	21.0%	4.5%	28.3%	23.6%	38.9%	63.0%	15.0%	14.5%	0.0%	49.8%	66.2%	48.1%	73.8%	50.4%	37.4%	37.4%
CAMPORBASSO	63.0%	3.4%	75.1%	15.2%	74.2%	40.4%	10.6%	52.6%	31.9%	45.8%	55.4%	47.5%	62.1%	40.6%	46.5%	74.6%
CATANIA	7.6%	4.5%	34.9%	17.0%	44.8%	8.0%	41.6%	6.8%	46.3%	43.5%	60.8%	5.9%	73.6%	51.2%	29.7%	92.3%
CATANZARO	39.7%	6.1%	51.5%	30.3%	61.3%	50.1%	10.3%	45.0%	40.1%	52.0%	54.9%	83.8%	78.6%	37.7%	35.9%	56.1%
CHIETI	75.0%	11.4%	62.1%	31.7%	58.2%	20.2%	38.6%	60.4%	42.2%	58.0%	54.2%	65.1%	82.8%	25.1%	67.9%	49.6%
COMO	84.2%	69.9%	60.4%	47.9%	67.1%	69.9%	8.0%	65.7%	44.3%	55.9%	30.2%	77.0%	68.6%	57.9%	62.2%	77.6%
COSENZA	22.4%	6.1%	48.2%	22.6%	62.8%	81.3%	9.8%	32.2%	48.4%	34.7%	63.9%	75.2%	79.8%	29.4%	25.0%	69.9%
CREMONA	96.9%	71.5%	50.9%	47.3%	63.5%	85.6%	25.9%	64.1%	21.6%	51.9%	52.3%	75.2%	45.4%	52.9%	63.8%	89.8%
CROTONE	1.1%	6.1%	63.9%	20.0%	38.0%	49.9%	15.2%	16.0%	19.5%	41.6%	55.5%	38.9%	74.9%	50.0%	26.7%	41.3%
CUNEO	94.2%	36.7%	51.5%	39.1%	59.9%	61.2%	73.0%	55.8%	29.8%	50.4%	60.7%	73.4%	68.9%	54.1%	84.5%	75.9%
ENNA	49.5%	4.5%	49.0%	23.9%	49.6%	61.2%	27.0%	30.8%	15.4%	44.1%	79.3%	61.1%	73.8%	50.9%	43.1%	79.7%
FERRARA	93.4%	76.9%	56.9%	54.3%	76.0%	60.3%	54.8%	60.2%	21.6%	50.0%	61.7%	68.8%	14.4%	47.0%	81.6%	37.4%
FIRENZE	86.0%	59.1%	59.5%	45.5%	85.2%	69.7%	3.8%	67.8%	71.1%	58.6%	51.6%	43.6%	51.2%	3.3%	63.2%	67.1%
FOGGIA	33.1%	8.0%	55.7%	30.9%	44.8%	90.5%	77.1%	19.5%	36.0%	50.2%	66.6%	40.1%	49.9%	50.3%	29.6%	89.6%
FORLÌ	83.6%	61.4%	68.4%	55.0%	67.0%	78.4%	56.4%	54.8%	29.8%	56.9%	67.3%	29.2%	16.2%	51.5%	64.1%	62.8%
FROSINONE	62.9%	37.9%	60.4%	31.9%	53.6%	52.0%	31.0%	43.7%	27.8%	50.0%	52.0%	25.1%	75.7%	45.1%	49.2%	69.7%
GENOVA	81.1%	35.9%	49.8%	32.5%	69.9%	85.9%	0.9%	49.3%	81.4%	56.2%	46.5%	50.4%	65.5%	35.1%	61.0%	50.0%
GORIZIA	75.4%	33.0%	59.1%	55.5%	67.2%	68.2%	31.8%	48.5%	19.5%	60.8%	59.2%	75.4%	58.7%	66.0%	60.0%	83.3%
GROSSETO	77.6%	38.6%	67.9%	39.7%	68.3%	57.4%	19.5%	52.3%	15.4%	51.7%	61.7%	38.0%	76.2%	53.6%	46.9%	23.5%
IMPERIA	75.6%	35.2%	56.0%	37.6%	55.1%	74.4%	8.4%	32.0%	29.8%	50.5%	44.8%	45.8%	69.2%	50.2%	52.7%	48.4%
ISERNIA	52.5%	3.4%	69.8%	35.4%	72.5%	67.5%	10.4%	47.5%	11.2%	37.2%	60.8%	77.3%	61.7%	23.3%	27.7%	74.1%
LAQUILA	88.5%	11.4%	71.6%	37.9%	76.6%	63.8%	20.2%	60.4%	95.9%	47.7%	68.9%	49.7%	82.0%	50.7%	50.6%	25.6%
LA SPEZIA	86.3%	35.2%	71.9%	38.4%	55.6%	60.6%	12.2%	54.7%	73.2%	53.4%	61.0%	75.0%	62.5%	27.3%	55.8%	84.6%
LATINA	62.7%	31.5%	63.6%	37.0%	50.3%	16.0%	65.1%	47.0%	15.4%	37.9%	62.6%	36.4%	75.1%	50.9%	40.6%	45.6%
LECCE	41.2%	8.0%	61.8%	52.3%	70.4%	57.5%	60.7%	44.7%	19.5%	52.5%	75.0%	69.5%	50.4%	50.5%	39.6%	85.2%
LECCO	96.3%	67.4%	65.8%	45.4%	72.0%	84.3%	9.6%	70.8%	29.8%	55.9%	37.2%	73.1%	69.6%	51.1%	75.7%	86.1%
LIVORNO	84.8%	45.9%	58.9%	41.9%	55.3%	88.1%	11.7%	51.4%	34.0%	56.9%	66.7%	59.9%	75.5%	50.8%	73.7%	41.3%
LODI	100.0%	46.7%	61.9%	43.1%	66.6%	75.4%	28.8%	67.5%	9.2%	55.9%	55.2%	86.7%	65.0%	56.5%	75.2%	90.5%
LUCCA	89.3%	38.6%	57.4%	51.9%	66.6%	39.5%	12.6%	58.8%	25.7%	8.6%	47.4%	66.9%	62.5%	52.0%	59.4%	68.3%



Source: REDS, 2020. Los ODS en 100 ciudades españolas

Table 5. Spain's global achievement of the SDGs by goals



Source: REDS, 2020. Los ODS en 100 ciudades españolas

As it can be seen in the second image, Spain as a unique destination has not achieved fully any SDG, but they show good results in SDGs 3 and 4, being the goals with more green cities and with an important number of yellow ones. These two goals are followed by goals 16 and 17 with 19 and 18 cities that have achieved them respectively.

3.2 Experience measuring SDGs in the Canary Islands

3.2.1 ISTAC

The Institute of Statistics of the Canary Island (ISTAC), the organization in charge of the data compilation, transfer and analysis, has included the SDGs in its agenda in order to establish and measure the SDGs in the Canary Islands scope. The project itself consists in the

application of indicators proposed by the United Nations to the regional level and the compilation of the necessary data from official sources in the Canary Islands. All the indicators can be consulted on their website, however, there are some indicators that are not available yet because they are facing a lack of data, nonetheless, they ensure more information will be available soon, since they are analyzing several official sources and they are disposed to undertake new statistics in order to satisfy this lack of data.

The indicators are divided by goals, there are specifically 48 indicators available out of 249 proposed:

Table 6. ISTAC's SDGs indicators by goals

Goal 1: No poverty	Proportion of the population living below the national poverty line, disaggregated by sex and age
	Proportion of men, women and children of all ages living in poverty, in all its dimensions
	Number of dead, missing and affected people directly attributed to disasters per 100,000 inhabitants
Goal 2: Zero hunger	Prevalence of malnutrition (weight for height, standard deviation > +2 or <-2 from the median of the WHO Child Growth Standards) among children under 5 years of age, disaggregated by type (wasting and overweight)
	Proportion of agricultural area where productive and sustainable agriculture is practiced
Goal 3: Good health and well-being	Maternal mortality rate
	Proportion of births attended by specialized health personnel
	Mortality rate for children under 5 years of age
	Neonatal mortality rate

	Number of people requiring interventions against neglected tropical diseases
	Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory diseases
	Suicide mortality rate
	Death rate from injuries due to traffic accidents
	Adolescent fertility rate (10-14 years and 15-19 years) per 1,000 women in that age group
	Coverage of essential health services
	Mortality rate attributed to involuntary poisonings
	Prevalence of current tobacco use from 15 years of age
	Density and distribution of health personnel
Goal 4: Quality education	Participation rate of youth and adults in academic and non-academic education and training in the last 12 months, broken down by sex
	Proportion of youth and adults with information and communication technology skills, broken down by type of technical skill
	Parity indices (between women and men, rural and urban areas, upper and lower wealth quintiles, and groups such as the disabled, indigenous peoples and those affected by conflict) for all education indicators in this list that can be broken down
Goal 5: Gender equality	Proportion of time spent on unpaid care and domestic work, disaggregated by sex, age and location
	Proportion of women in managerial positions

	Proportion of the total agricultural population with secure property rights or rights to agricultural land, disaggregated by sex
	Proportion of women among owners or holders of agricultural land rights, disaggregated by type of tenure
	Proportion of people who own a mobile phone, broken down by sex
Goal 6: Clean water and sanitation	No indicator available at the moment
Goal 7: Affordable and clean energy	No indicator available at the moment
Goal 8: Decent work and economic growth	Annual growth rate of real GDP per capita
	Annual growth rate of real GDP per person employed
	Average hourly earnings of male and female employees, broken down by occupation, age and persons with disabilities
	Unemployment rate, broken down by sex, age and people with disabilities
	Proportion of young people (ages 15-24) who are not in education, not employed, or receiving training
Goal 9: Industry, innovation and infrastructure	Manufacturing sector added value in proportion to GDP and per capita
	Manufacturing sector employment as a proportion of total employment
	CO2 emissions per unit of added value
	Research and development expenditures as a proportion of GDP
	Number of researchers (in full-time equivalent) per million inhabitants

Goal 10: Reduced inequalities	Per capita growth rates of household income or expenditure of the poorest 40% of the population and the total population
	Proportion of people living below 50% of median income, disaggregated by sex, age and persons with disabilities
	Share of GDP generated by work
Goal 11: Sustainable cities and communities	Proportion of urban population living in slums, informal settlements, or inadequate housing
	Number of dead, missing and affected people directly attributed to disasters per 100,000 people
	Proportion of urban solid waste collected periodically and with an adequate final discharge in relation to the total urban solid waste generated, broken down by city
Goal 12: Responsible consumption and production	National recycling rate, in tons of recycled material
Goal 13: Climate action	Number of dead, missing and affected people directly attributed to disasters per 100,000 people
	Total greenhouse gas emissions per year
Goal 14: Life below water	No indicator available at the moment
Goal 15: Life on land	No indicator available at the moment
Goal 16: Peace, justice and strong institutions	Proportion of the population that feels safe walking alone in their area of residence
Goal 17: Partnerships for the goals	Total government revenue as a proportion of GDP, broken down by source
	Proportion of people using the Internet

Source: Own elaboration from ISTAC

3.2.2 Ashotel

Ashotel, the hotel association of the province of Santa Cruz de Tenerife, has prepared a dashboard with indicators proposed by their Tourism Competitiveness and Sustainable Development Observatory in order to measure the sustainability and competitiveness of the tourism sector of the province of Santa Cruz de Tenerife, as part of this dashboard they have included a section about the SDGs, collecting several indicators previously proposed by United Nations and adapted by ISTAC to measure the accomplishment of the SDGs in the Canary Islands. All the indicators we can find in the SDGs section are the same ones that can be found in ISTAC, since it is the main source of data in the Canary Islands.

3.2.3 Tourism observatory of the Canary Islands – INSTO

At the research institutions, the measurement of SDGs has also been studied in relation to tourist activity. The two public universities of the Canary Islands (Universidad de La Laguna and Universidad de Las Palmas de Gran Canaria) have collaborated to prepare a document for the vice-ministry of Tourism of the Canary Islands that served as a candidature for the approval of the Tourism Observatory of the Canary Islands. In this document, they defined 16 key issues areas that were related to the SDGs, and later several indicators were created and related to each key issue, what helps to analyze the local achievement of the SDGs in tourism indirectly.

Table 7. Tourism Observatory of the Canary Island document’s SDGs indicators by key issues

Key issue areas in the Canary Islands	Indicators related to the key issues	UN Sustainable Development Goals related to the key issues	Targets
1. Local satisfaction with tourism and local well-being	<ul style="list-style-type: none"> - Support for tourism development - Perception of tourism impacts 	Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.9

	- Environmental awareness	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1
		Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.3
		Goal 12. Ensure sustainable consumption and production patterns	12.b
2. Labor skills, entrepreneurship and employment	<ul style="list-style-type: none"> - Tourism employment - Over and under qualification in tourism - Index of creation and survival rate of startups in tourism 	Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.3, 4.4, 4.5
		Goal 5. Achieve gender equality and empower all women and girls	5.5
		Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.3, 8.5, 8.6, 8.8, 8.9
		Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.5
3. Destination innovation,	- Employment conditions	Goal 8. Promote sustained, inclusive and sustainable	8.2, 8.3

economic impacts and benefits	<ul style="list-style-type: none"> - Distribution of local value added related to tourist expenditure - Research, development and innovation investments and results in tourism-related firms 	economic growth, full and productive employment and decent work for all	
		Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1, 9.5
		Goal 12. Ensure sustainable consumption and production patterns	12.b
		Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	17.8, 17.19
4. Tourism seasonality	<ul style="list-style-type: none"> - Tourism demand in high season and low season - Seasonality of inbound countries of residence - Seasonality of islands and municipalities 	Goal 12. Ensure sustainable consumption and production patterns	12.b
		Goal 13. Take urgent action to combat climate change and its impacts	13.1
5. Tourism products, culture, leisure and tourist satisfaction	<ul style="list-style-type: none"> - Overall tourist satisfaction - Satisfaction of tourists with nature, culture, sport and leisure activities 	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1
		Goal 11. Make cities and	11.4

	<ul style="list-style-type: none"> - Supply and demand of nature, culture, sport and leisure activities and events 	human settlements inclusive, safe, resilient and sustainable	
		Goal 12. Ensure sustainable consumption and production patterns	12.2
		Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	All targets
		Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	All targets
6. Digitalization, knowledge and smart tourism	<ul style="list-style-type: none"> - Infrastructure and connectivity - Presence and use of the internet - Key technologies and digital talent 	Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2
		Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.2
		Goal 9. Build resilient infrastructure, promote inclusive and sustainable	9.4, 9.5

		industrialization and foster innovation	
		Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.2, 11.3
		Goal 12. Ensure sustainable consumption and production patterns	12.2
		Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	17.7, 17.8
7. Energy management	<ul style="list-style-type: none"> - Renewable energy share in primary energy utilization - Share of energy consumption by economic sectors 	Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	All targets
8. Water and wastewater management	<ul style="list-style-type: none"> - Total volume consumed and litres per tourist per day - Water awareness among enterprises - Recycled water efforts 	Goal 6. Ensure availability and sustainable management of water and sanitation for all	All targets
		Goal 12. Ensure sustainable consumption and production patterns	12.2
9. Solid waste management	<ul style="list-style-type: none"> - Mixed waste volume produced 	Goal 11. Make cities and human settlements	11.6

	<ul style="list-style-type: none"> by destinations (pressure) - Waste management awareness in tourism - Volume of sorted waste (recycling effort) 	<p>inclusive, safe, resilient and sustainable</p> <p>Goal 12. Ensure sustainable consumption and production patterns</p>	<p>12.4, 12.5</p>
10. Climate change impacts and mitigation	<ul style="list-style-type: none"> - Total greenhouse gases emissions - Per capita greenhouse gases emissions - Share of greenhouse gases emissions by economic sectors 	<p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>	<p>11.b, 11.6</p>
		<p>Goal 12. Ensure sustainable consumption and production patterns</p>	<p>12.4</p>
		<p>Goal 13. Take urgent action to combat climate change and its impacts</p>	<p>All targets</p>
11. Governance and the territorial scale of analysis and policies	<ul style="list-style-type: none"> - Government effectiveness - Participation - Communication and responsibility 	<p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>	<p>11.b</p>
		<p>Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development</p>	<p>17.14, 17.17</p>
12. Air transport connectivity and intermediation	<ul style="list-style-type: none"> - Number and frequency of direct routes from airports 	<p>Goal 9. Build resilient infrastructure, promote inclusive and sustainable</p>	<p>9.1</p>

	<p>in the Canary Islands</p> <ul style="list-style-type: none"> - The share of distribution channels and the number of operators - Monthly airline scheduled capacity 	<p>industrialization and foster innovation</p>	
		<p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>	11.2
13. Overtourism, vacation homes and mass tourism	<ul style="list-style-type: none"> - Level of tourist satisfaction - Level of fidelity - Percentage of holiday rentals in relation to the hotel and non-hotel supply 	<p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>	11.3
14. Maturity of the destination and renovation	<ul style="list-style-type: none"> - Investment in new tourism assets - Tourism renovation investment - Renovated tourist bed places 	<p>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	8.9
		<p>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</p>	11.3
15. Natural capital supporting tourism. Protected areas and fragile Ecosystems	<ul style="list-style-type: none"> - Percentage of protected land exhibiting high conservation status (according 	<p>Goal 6. Ensure availability and sustainable management of water and sanitation for all</p>	6.6
		<p>Goal 12. Ensure sustainable</p>	12.2

	<p>to Natura 2000 criteria)</p> <ul style="list-style-type: none"> - Number and percentage of flagship species for tourism (birds, marine mammals, reptiles) that are threatened - of protected areas having effective management (conservation head and staff, annual plan being assessed) - Number and surface of land and marine spaces managed under social safekeeping schemes - Tourists' satisfaction with landscapes and protected areas 	<p>consumption and production patterns</p>	
		<p>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</p>	<p>14.2</p>
		<p>Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.</p>	<p>All targets</p>
<p>16. Universal accessibility and inclusiveness</p>	<ul style="list-style-type: none"> - Local awareness of the accessibility and inclusiveness importance - Infrastructure accessibility - Transport 	<p>Goal 1. End poverty in all its forms everywhere</p>	<p>1.3</p>
		<p>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</p>	<p>9.1, 9.2</p>

	accessibility - Assistance assured	Goal 10. Reduce inequality within and among countries	10.2
		Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.2, 1.3, 11.7

Source: Tourism Observatory of the Canary Islands. Preliminary report (2020)

3.3 Certifications: Biosphere

Biosphere is an international organization for Sustainable Tourism co-financed by the Canary Islands government, the Spanish government and the European Union. They develop certifications with the aim of guaranteeing the accomplishment of the sustainability requirements and its continuous improvement, through a private, voluntary and independent certification system. Their certifications can be applied to any destination, and all of them are committed to guaranteeing continuous improvement to adequately balance between the areas of fight against climate change, environment, cultural, social and economic, through the 17 United Nations Sustainable Development Goals. They offer several certifications that concerned parties can apply for (accommodation, tour-operators, active tourism, tourist interest sites, commerce, transports, restoration, theme parks, golf, events and destinations) but the one that is more relevant here is the destination certification.

Requirements related to the SDGs to obtain the biosphere destination certificate:

The objectives are divided into five main issues (climate change, environment, social, economy and culture) and each SDGs objective is related to the issue to which they belong.

Table 8. Biosphere requirements to obtain their certification by main issues and SDGs

Climate change	Goal 7: Affordable clean energy	Develop programs and initiatives for the efficient use of energy in the tourism sector of the destination
		Commit to the use of renewable energy sources in the destination and in the sector, including self-production, the acquisition of green energy, passive systems in buildings, as well as the existence of proactive regulatory frameworks and incentives
		Develop awareness campaigns, guides and training and informational resources on energy saving aimed at tourists, visitors and the tourism industry of the destination
	Goal 13: Climate action	Generate programs and initiatives aimed at reducing and / or offsetting the carbon footprint in the destination
		Promote sustainable mobility in the destination, including public transport modes and alternative zero or low emission mobility systems
Environment	Goal 6: Clean water and sanitation	To carry out analysis and periodic safety and quality controls of the bodies of water for use and consumption located in the tourist areas of the destination
		Develop programs and initiatives for the efficient use of water in the tourism sector of the destination
		Develop awareness campaigns, guides and training and informational resources on saving water aimed at tourists, visitors and the tourism industry of the destination
		Have a shopping policy and tourist commercial culture that prioritizes the

	Goal 12: Responsible consumption and production	consumption of local and sustainable productions and services in all its operations
		Guarantee the selective collection and maximum recycling of waste produced by the destination's tourist activity, as well as its proper disposal
		Minimize external inputs and waste generation, reducing dependence on the destination caused by tourism and increasing local consumption
		Develop responsible consumption criteria throughout the tourism supply chain in the public and private spheres: supplies, appliances, lighting, packaging, etc.
	Goal 14: Life below water	Establish criteria, regulations and initiatives related to the control of the state and quality of water bodies and development of instruments for the prevention of pollution of water courses, lakes, wetlands, coastal waters and seas present in the destination
		Guarantee the sustainable use of aquaculture and marine resources, both in terms of exploitation for tourism and for their enjoyment in the different activities
		Have information and awareness resources available to increase the degree of awareness and respect for aquatic ecosystems aimed at the resident and visitor population of the destination
Goal 15: Life on land	Have systems to evaluate the environmental impact of tourism activity on biodiversity, habitats and landscapes, including urban areas, and have the	

		<p>capacity to anticipate environmental risks and correct their adverse effects</p>
		<p>Have an inventory of natural resources (fauna, flora ...), as well as an evaluation of its tourist assets and places of interest, including natural sites and areas of ecological sensitivity, which allows knowing their fragility and levels of responsible use</p>
		<p>Guarantee the maintenance of native flora and fauna, have the capacity to regulate the introduction of invasive species and to control the commercialization and exposure of the Destination's wildlife</p>
		<p>Develop sustainable tourism activities and services that promote the respectful use of natural heritage and that transmit the values of the destination and its identity through the tourist experience</p>
Social	Goal 1: No poverty	<p>Encourage the collaboration of the Administration, the tourist entities and companies of the destination in campaigns and initiatives with social purposes</p>
		<p>Develop measures to maximize the economic benefits of tourism for the host community and create stable links with the local economy of the destination and other economic activities in the environment</p>
		<p>Develop international cooperation projects, solidarity, humanitarian action or assistance in sustainable tourism</p>
		<p>Enable tools to calculate the socio-economic balance of the urban areas with the greatest tourist pressure and establish</p>

		measures whose priority is to maintain the resident population
		Promote measures aimed at maximizing the economic benefits derived from tourist activity and guaranteeing the socio-economic return of the benefits to the city
	Goal 3: Good health and well being	Develop an efficient security system to prevent, control, publicly inform and respond to possible dangers that threaten the health and physical integrity of residents and visitors
		Ensure the development, promotion and prioritization of healthy tourism products and activities
		Reinforce the capacity to contribute to the improvement of the health care offered in the tourist centres of the destination
		Improve the capacity to identify, prevent, plan and respond to real and potential environmental risks and emergencies that threaten the health and physical integrity of residents and visitors
	Goal 4: Quality education	Have quality training capacity, inclusive and adapted to the real needs of the destination, as well as specific training in tourism sustainability
		Develop educational and outreach activities on tourism and sustainable development
		Encourage collaboration with entities, institutions, educational and training centres for the development of initiatives and projects related to Sustainability applied to the tourism sector
	Goal 5: Gender equality	Have quality training capacity, inclusive and adapted to the real needs of the

		destination, as well as specific training in tourism sustainability
		Develop educational and outreach activities on tourism and sustainable development
		Encourage collaboration with entities, institutions, educational and training centres for the development of initiatives and projects related to Sustainability applied to the tourism sector
	Goal 17: Partnership for the goals	Belong to global and regional networks, projects or alliances for sustainable tourism in any of its facets
		Improve the capacity to promote and facilitate the exchange of good practices and knowledge both in the same destination and with external experiences, which allow inspiring the replication of success stories in local sustainable tourism
		Develop cooperation initiatives with academic institutions or other entities, whether public or private agreements, to promote innovation in the sustainable development of tourism in all areas, including the management and valuation of knowledge as a tourist resource
Economy	Goal 2: Zero hunger	Develop actions to promote and support the acquisition of products from local sustainable agriculture by the tourism sector, including the gastronomic offer
		Develop a food safety, hygiene and quality control system duly procedures at the destination
		Develop measures to avoid food waste in the destination by promoting good

		practices and creating mechanisms and incentives for their adoption by the tourism sector
Goal 8: Decent work and economic growth		Develop legal frameworks or agreements that guarantee the protection of labour rights, the safety of workers and the fight against any form of labour discrimination at the international level
		Generate provisions related to work-life balance in the tourism sector, and the incorporation of less favoured groups, including young people
		Develop measures aimed at generating qualified local employment and promoting entrepreneurship in sustainable tourism activities and services
		Have resources and tools to support entrepreneurship in the tourism field and favour the activation of the various economic activities of the city throughout its value chain
Goal 9: Industry, innovation and infrastructure		Develop initiatives, projects and guidelines aimed at the consolidation and promotion of sustainable infrastructures for tourism, including the areas of building and accommodation, communications, mobility, energy or the water cycle
		Guarantee access to the infrastructures and attractions generated by tourism by the resident population
		Develop initiatives and projects capable of mobilizing the use of information technologies to generate responsible tourism activities and smart and sustainable management models in the use of resources

		Periodically evaluate and readapt urban management tools so that they can cope with the effects of the intensive use of resources and the mobility of tourists in the city
	Goal 10: Reduced inequalities	Develop social integration policies that seek to eliminate discriminatory elements and guarantee equal opportunities for the entire population, especially ensuring the integration of the less favoured population of the Destination
		Develop measures aimed at guaranteeing universal accessibility in all links of the tourism value chain, including physical environments, transport systems, and the full range of facilities in the sectors of hospitality, services and tourism activities
Culture	Goal 11: Sustainable cities and communities	Develop strategic territorial planning that favours the sustainability of the tourism model, its territorial, urban, social and environmental integration, and that contemplates the conservation of the natural and cultural heritage of the destination, with special attention to the intangible heritage given its extreme vulnerability
		Generate tourism products and activities based on cultural heritage, respectful of the criteria of authenticity and integrity of the goods
		Transmit, through initiatives and projects related to tourism, local knowledge related to traditions and intangible cultural heritage, so that it is effectively transmitted and integrated into the destination's tourist activity

	<p>Goal 16: Peace, justice and strong institutions</p>	<p>Have a destination governance system that includes all stakeholders, especially at the local level, that encourages public-private partnership, and where the role and responsibilities of each are clearly defined, including the participation system</p> <p>Have a system of indicators adapted to the characteristics of the destination that allows evaluating the continuous improvement in the sustainability of its components, as well as the degree of satisfaction of tourists and local population</p> <p>Offer visitors up-to-date, clear, truthful and respectful information with host communities about the spaces, itineraries, establishments, services and infrastructures of tourist interest in the destination</p> <p>Develop a tourism strategy through which the destination assumes the adoption of sustainable commitments, which is publicly accessible and available in the most common languages among tourists</p> <p>Have mechanisms to control, measure and publicly report data on the satisfaction of the resident and visitor population with respect to the destination's tourist activity</p> <p>Have consolidated policies or practices to avoid any type of exploitation in the tourism sector of the Destination</p> <p>Periodically evaluate and regulate new disruptive tourist activities in the city, and eradicate illegal activities, especially those that endanger the fundamental rights of citizens</p>
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		Integrate the tourism marketing of the city with the communication, reputation and promotion strategy of the city to guarantee the sustainability of the destination
		Seeking the integration of tourism management, financing, communication, and promotion policies so that they all revolve around a shared strategy based on the pillars of sustainability
		Promote the construction of an inclusive and plural tourist narrative of the city, based on the principles of urban sustainability

Source: Biosphere Tourism

Continents and countries have accepted the challenge of applying the SDGs in their development strategies, but they weren't the only ones, despite the Goals were created for countries and continents, local public institutions and non-governmental organizations have done something about it.

Europe, in order to track the development of its country's members, developed its own indicators in collaboration with SDSN and followed the report model of the SDSN network giving colours to each level of achievement.

Secondly, United States applied the indicators previously proposed by SDSN with small changes to adapt to their specifications, they measured the individual performance of each state of the country following the report model of the network.

In respect of Italy, their strategy was to delegate the measurement of SDGs to their towns, states, and provinces to be able to make a more specific analysis, using also the SDSN indicators.

In the case of Spain, they analyzed only 103 cities, the most relevant ones as their criteria, and they used the results of these chosen cities to approximate the average of the whole country. For this task, they used part of the indicators proposed by the United Nations with some incorporations.

None of these reports considered tourism when analyzing the SDGs, despite they are countries/continent where tourism has big importance with an important number of arrivals and consequently an aspect that may affect the development of the country.

In the case of the Canary Islands, where tourism is the main activity, ISTAC either took into account tourism, they used the indicators provided by the UN to then apply them to the local scale. For this reason, they did not use all the indicators applicable, since there are no available data for all of them. However, on the other hand, we find Biosphere and the Tourism Observatory of the Canary Islands which took into consideration the tourism activity in their SDGs contributions. Biosphere does not use indicators. Instead of this, they elaborated a list of requirements aligned with each SDGs that the tourist destinations must comply with to obtain their certification, which is an adaptation of the goals to tourism. In the case of the Tourism Observatory of the Canary Islands, the research team from the universities has defined several key issues related to SDGs and sustainable tourism in the islands, and later they elaborated indicators to each key issue.

These two organizations show that it is possible and necessary to apply and measure the Sustainable Development Goals in local tourism destinations.

4. Monitoring SDGs in local tourism destinations

As it could be seen through the previous pages, there exist no specific indicators which facilitate the measurement and application of SDGs in the tourism activity, all the information available is about SDGs and continents, countries, cities, destinations, etc. but not about SDGs and tourism itself. It makes it difficult to evaluate specifically to what extent does tourism affect the development of SDGs and deprive tourist destinations of the possibility of adapting their tourist strategies to the SDGs in an effective and efficient way.

Even though it is possible to filter the SDGs to those that interact with the tourist activity (will be proposed above), it is very difficult to know the real input of tourism to the achievement of the SDGs since tourism is a transversal activity that in many cases cannot be pulled apart from other economic or human activities.

This section uses as a starting point the Tourism Observatory of the Canary Islands document and ISTAC contributions. Thus, an adaptation of the SDGs to a destination will be performed,

in order to evaluate in which sense the adaptation of the SDGs to tourism activity in destinations may contribute to monitoring their development.

As commented before, the Tourism Observatory of the Canary Islands document and the indicators available on ISTAC are going to be used to create a prototype of indicators, specifically. The indicators proposed by United Nations and adapted by ISTAC are going to be taken and then they are going to be filtered with the “key issues” defined in the Tourism Observatory of the Canary Islands document. In other words, to simplify and clarify the measurement of the contribution of tourism to the SDGs the maximum possible all indicators not related to tourism are going to be avoided. By contrast, the indicators related to tourism are going to be applied to a destination. In this case the Canary Islands, since the data that is needed to apply these indicators to local destinations within the Canary Islands (islands or municipalities) is no available at the moment.

Table 9. ISTAC indicators filtered by the Tourism Observatory key issues

Tourism Observatory document key issues	Targets related to each key issue	Availability of data
Local satisfaction with tourism and well-being	8.9	No available
	9.1	No available
	11.3	No available
	12.b	No available
Labor skills, entrepreneurship, and employment	4.3	Participation rate of youth and adults in academic and non-academic education and training in the last 12 months, broken down by sex
	4.4	Proportion of youth and adults with information and communication technology skills, broken down by type of technical skill
	4.5	Parity indices (between women and men, rural and urban areas, upper and lower wealth quintiles, and groups such as the disabled, indigenous peoples and those affected by conflict) for all education indicators in this list that can be broken down
	5.5	Proportion of women in managerial positions
	8.3	No available

	8.5	Average hourly earnings of male and female employees, broken down by occupation, age and persons with disabilities Unemployment rate, broken down by sex, age and people with disabilities
	8.6	Proportion of young people (ages 15-24) who are not in education, not employed, or receiving training
	8.8	No available
	8.9	No available
	9.5	Research and development expenditures as a proportion of GDP Number of researchers (in full-time equivalent) per million inhabitants
Destination innovation, economic impacts and benefits	8.2	Annual growth rate of real GDP per person employed
	8.3	No available
	9.1	No available
	9.5	Research and development expenditures as a proportion of GDP Number of researchers (in full-time equivalent) per million inhabitants
	12.b	No available
	17.8	Proportion of people using the Internet
	17.19	Proportion of countries that have carried out at least one population and housing census in the last ten years
Tourism seasonality	12.b	No available
	13.1	Number of dead, missing and affected people directly attributed to disasters per 100,000 people
Tourism products, culture, leisure and tourist satisfaction	9.1	No available
	11.4	No available
	12.2	No available
	Goal 14 All targets	No available

	Goal 15 All targets	No available
Digitalization, knowledge and smart tourism	7.2	No available
	8.2	Annual growth rate of real GDP per person employed
	9.4	CO2 emissions per unit of added value
	9.5	Research and development expenditures as a proportion of GDP Number of researchers (in full-time equivalent) per million inhabitants
	11.2	No available
	11.3	No available
	12.2	No available
	17.7	No available
	17.8	Proportion of people using the Internet
Energy management	Goal 7 All targets	No available
Water and wastewater management	Goal 6 All targets	No available
	12.2	No available
Solid waste management	11.6	Proportion of urban solid waste collected periodically and with an adequate final discharge with respect to the total urban solid waste generated, broken down by city
	12.4	No available
	12.5	National recycling rate, in tons of recycled material
Climate change impacts and mitigation	11.b	No available
	11.6	Proportion of urban solid waste collected periodically and with an adequate final discharge with respect to the total urban solid waste generated, broken down by city
	12.4	No available
	Goal 13 All targets	Number of dead, missing and affected people directly attributed to disasters per 100,000 people Total greenhouse gas emissions per year
	11.b	No available

Governance and the territorial scale of analysis and policies	17.14	No available
	17.17	No available
Air transport connectivity and intermediation	9.1	No available
	11.2	No available
Overtourism, vacation homes and mass tourism	11.3	No available
Maturity of the destination and renovation	8.9	No available
	11.3	No available
Natural capital supporting tourism.	6.6	No available
	12.2	No available
	14.2	No available
Protected areas and fragile ecosystems	Goal 15 All targets	No available
Universal accessibility and inclusiveness	1.3	No available
	9.1	No available

Source: Own elaboration from Tourism Observatory of the Canary Islands and ISTAC

In the following table, an effort has been made to apply the system of indicators previously proposed to the tourist destination of the Canary Islands, as already mentioned before. This has been done with the data currently available in ISTAC, which is the main source of data for the destination and is currently working in the compilation of more data related to the SDG indicators.

Table 10. Indicators applied to the Canary Islands

4.4	Proportion of youth and adults with information and communication technology skills, broken down by type of technical skill	Aged 16-74: 69,41% Aged 16-24: 99,56% Aged 25-74: 65,26% (year 2020)
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4.5	Parity indices (between women and men, rural and urban areas, upper and lower wealth quintiles, and groups such as the disabled, indigenous peoples and those affected by conflict) for all education indicators in this list that can be broken down	Male/female aged 18-64: 88,67 Lower/higer income level: 45,52 With/without health limitations: 70,74 Residents in municipalities with less/more than 10,000 inhabitants (year 2016)
5.5	Proportion of women in managerial positions	30,83% (year 2020)
8.2	Annual growth rate of real GDP per person employed	-0,09 (year 2019)
8.5	Average hourly earnings of male and female employees, broken down by occupation, age and persons with disabilities	Male: 13,43 Female: 12,36 People with disabilities: 11,70 People without disabilities: 13,00 (year 2018)
	Unemployment rate, broken down by sex, age and people with disabilities	Male: 18,90% Female: 21,42% People with disabilities: 26,32% People without disabilities: 20,12% (year 2018)
8.6	Proportion of young people (ages 15-24) who are not in education, not employed, or receiving training	19,65% (year 2020)
9.2	Manufacturing sector added value as a proportion of GDP and per capita	2,71% (year 2019)
	Manufacturing sector employment as a proportion of total employment	3,27% (year 2020)
9.4	CO2 emissions per unit of added value	0,29 kg (year 2019)

9.5	Research and development expenditures as a proportion of GDP	0,47% (year 2019)
	Number of researchers (in full-time equivalent) per million inhabitants	1195,10 (year 2019)
11.6	Proportion of urban solid waste collected periodically and with an adequate final discharge with respect to the total urban solid waste generated, broken down by city	608,32 kg per capita (year 2018)
12.5	National recycling rate, in tons of recycled material	1,67 (year 2018)
13.1	Number of dead, missing and affected people directly attributed to disasters per 100,000 people	0,09 (year 2019)
17.8	Proportion of people using the Internet	92,54% (year 2020)
17.19	Proportion of countries that have carried out at least one population and housing census in the last ten years	The Canary Islands carry out a census each year

Source: Own elaboration from Tourism Observatory of the Canary Islands and ISTAC

As it can be seen in the results of the application of the indicators for the SDGs, the Canary Islands does not have the necessary data to apply the indicators and to measure accurately the development and achievement of the goals. For this reason from 78 indicators related to tourism only 17 could be applied, making the results not conclusive and therefore they are not able to show the real progress.

In addition, it is clear that the indicators proposed by the United Nations do not reflect the contribution of tourism to the SDGs, since despite the indicators has been filtered to those which may show a relation with tourism, it is complicated to determine in which proportion these results are due to the tourist activity and no to other activities. It would be necessary to formulate new indicators designed specifically to measure the SDGs in the tourism activity globally applicable, so the performance of different tourist destinations can be analyzed and they can adapt their strategies to the sustainable development marked by the 2030 Agenda.

5. Conclusions

As it could be seen through this master's thesis, sustainability is an important aspect to be considered when talking about tourism development, and many reports and articles have been published in this regard. SDGs play a crucial role regarding sustainable development in all its aspects, and it is important to follow its recommendations (as many countries have done) to ensure a better future for all.

However, despite there has been a lot of discussion on sustainability in tourism and SDGs, tourism has not really been taken into account when elaborating indicators to the measurement and control of them, leaving as result a not very efficient application of them and a very difficult way to monitor the performance of destinations to improve decision-making of private and public organizations.

For this reason, in this master's thesis it is considered necessary to develop an adaptation of the SDGs and its indicators to facilitate the measurement and control of its achievement in the tourism activity, specifically focused on destinations since SDGs were mainly elaborated for countries. It would be convenient to create these new indicators in collaboration with UNWTO since they already have experience measuring sustainability in tourism thanks to the launch in 2004 of their Sustainability Indicators. These indicators should be adapted and combined with those proposed by the United Nations. As a result, an improvement in the quality of information regarding the tourism activity would allow destinations to developed data-based sustainability strategies aligned with the SDGs, which may create benefits to the sector and the society in the future.

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Annex

Annex: OMT Sustainability Indicators

Issue	Components of the issue	Indicators	
Local Satisfaction With Tourism	Level of community satisfaction	Local satisfaction level with tourism	
	Problems or dissatisfaction	Number of complaints by local residents	
Effects of Tourism on Communities	Community attitudes to tourism	Existence of a community tourism plan	
		Frequency of community meetings and attendance rates	
		Frequency of tourism plan updates	
		Level of awareness of local values	
		% who are proud of their community and culture	
	Social benefits associated with tourism	Number of social services available to the community	
		% who believes that tourism has helped bring new services or infrastructure	
		Number (%) participating in community traditional crafts, skills, customs	
		% of vernacular architecture preserved	
	General impacts on community life	Number of tourists per day, per week etc; number per sq km	
		Ratio of tourists to locals	
		% locals participating in community events	
		Ratio of tourists to locals at events or ceremonies	
		Perception of impact on the community using the resident questionnaire – with reference to specific events or ceremonies	
		% of local community who agree that their local culture, its integrity and authenticity are being retained	
	Changes to resident lifestyles, (cultural impact, cultural change, community lifestyle, values and costumes, traditional occupations)	% of residents changing from traditional occupation to tourism over impact, cultural change, community previous year(s); men and women	
		Number or % of residents continuing with local dress, customs, language, music, cuisine, religion and cultural practices	
		Increase/decrease in cultural activities or traditional events	
		Number of tourists attending events and % of total	
		Value of tourist contribution to local culture	
		% of locals who find new recreational opportunities associated with tourism	
		Housing issues	% of housing affordable for residents
			Mode and average distance of travel to work or school
	Number of new housings starts and % for local residents		
	Availability and access to some other services (
	Community demographics	Number of residents who have left the community in the past year	
		Number of immigrants taking tourism jobs in the past year	
Net migration into/out of community			
Access by Local Residents to Key Assets	Retaining access to important sites for local residents	Access by locals to key sites (% of site freely accessible to public)	
		Frequency of visits by locals to key site	
	Economic barriers to access	Cost of access expressed in hours of local wages	
	Maintaining satisfaction with access levels	Perception of change in accessibility due to tourism growth	
Number of complaints by local residents regarding access			
Gender Equity	Stress	% tourism employees (male/female) suffering increased fatigue and stress as a result of work	
	Childcare	% of tourism operators who provide day care and other benefits for employees with children	
	Health and safety	% of tourism operators who have regulations/made commitments regarding equal gender opportunities	

		% of operators who promote staff awareness of occupational health, safety and issues affecting female employees
	Transport	% of tourism operators who provide transport for women returning from night shifts
	Discrimination against women/men	% employees who believe their gender has affected their job advancement, pay or benefits
Sex Tourism	Vulnerable children are at risk of abuse	Numbers of children in vulnerable groups working in the destination, especially in the vicinity of the hotel or other premises
		Number of NGOs or government services located in the destination, especially within the vicinity of the hotel or other premises, to look after the welfare of children
	Lack of knowledge about children's rights and how to protect children	% of staff trained on children's rights and how to protect children from abuse
		Number and frequency of training sessions for staff/managers on how to protect children
		Number of contacts made with specialised NGOs
		Locations of police and relevant authorities' telephone contact numbers within hotel/premises
		Number of times reports made by company to NGOs, police or other authorities about suspected abuse on the premises
		Existence of a person in the company nominated as focal point and responsible for issues about children and community
	Children recruited through adult sex tourism establishments	Number of places where adult prostitution occurs in close proximity to the hotel/premises
		Mechanisms for checking ID of adult sex workers accompanying guests into rooms
		Methods for registering 'Joiners' ("Joiner" is a term used for the 'guest' of a hotel guest who wasn't registered at check-in. It often - but not always - refers to a sex worker)
		Existence of policy on adult prostitution that reflects national laws
	Children have no access to income and education	% of revenue given to support children's charities
		Number of suppliers that create jobs for local people
		Number of staff volunteering to help local communities in skills transfer programmes
		Number of reports available to provide information on the economic and social development of local communities
	Sex offenders go to places where they think they will not get caught	Number of information points showing relevant policy of hotel/premises to protect children. E.g. -posters, information packs, registration forms, in-flight videos, staff rooms, staff bulletin boards
		Number of police stations in the vicinity of the hotel/premises that have trained child protection officers
	The international travel and tourism industry guidelines and declarations to prevent child sex tourism do not often get implemented at the local level	Preparedness of travel and tourism business to openly condemn child sex tourism
		Preparedness of travel and tourism business to develop and implement policies and programmes to protect children
Evidence that travel and tourism business has advocated for children's rights in tourism industry meetings and conferences		
Evidence that travel and tourism business has participated in multi- stakeholder meetings on child protection and children's rights issues		
The risk to children in tourism destinations is documented and shared	Research on child sex tourism is encouraged throughout the business and information provided to government agencies and NGOs for analysis	

		Regular reporting of actions through company reports and websites
Conserving Built Heritage	Legislative basis for protection	Number and type of new legislation or amendments introduced to preserve structures at local, provincial/state/canton or national levels
		Designation
	Funding for protection	Number and type of designation under which historic structures, monuments and districts are recognized
		Percentage of eligible sites and or structures receiving designation
		%/Amount of funds allocated to the restoration, preservation and maintenance of cultural assets on a yearly basis
	Profile of the issue	Voluntary contributions
		Tourism contribution to preservation
	Condition of setting and environment	% change/number of electronic and print articles generated on historic structures, monuments and districts by local, regional, national and international media
		%/change in the development of the surrounding area to a cultural asset, and whether maintenance or improvements have taken place
	Threats to the integrity and authenticity of the property	Condition of the building or site (cost of restoration per annum)
Increase/Decrease in threats and their type to the original purpose and use of a site		
Community Involvement and Awareness	Availability of information	Controlling Use Intensity
		Number and types of avenues/channels used to promote sustainable tourism
	Access to information	Number of places in the destination where information is available
		Number /% of people accessing information
	Analysis of information	Frequency of access
		% of people that have a clear understanding of the role of sustainable tourism planning
	Application of information	% of people that have a clear understanding of the role of sustainable tourism planning
		Number of times information on sustainable tourism is used within the broader community context
		Number of agencies applying information on sustainability aspects to their strategic planning processes
		Degree to which the community is satisfied with the quality and quantity of information it receives re tourism issues and sustainability
		Percentage of partners and key stakeholders who are satisfied with access to appropriate information
	Advocacy of information	Percentage who agree that the right information on sustainable tourism is available to me when I need it
		Number of promotional opportunities relating to sustainable tourism practice
Number of tourism operators offering information on sustainable tourism practice		
Action/impact of the information	% of visitors receiving information on sustainable tourism practices provided prior to their visit to the destination and at the destination	
	Number (%) of tourism operators providing interpretation on sustainable tourism practice	
		Number (%) of tour companies in destination offering tours/guides with trained knowledge of sustainable tourism practice / information on local management plan

		Number of educational programmes / institutions incorporating sustainable tourism learning into curriculum
		Number (%) of self guided opportunities that educate regarding sustainable tourism practice
		% of agencies incorporating sustainable tourism principles into their strategic planning processes
		Number (%) of tourism industry operators applying sustainable tourism concepts within their business
		Number of operators certified by an environmental or sustainability scheme
		% of residents with an understanding of what constitutes sustainable tourism practice
		Number (%) of residents who support sustainable tourism for their destination
		Number of registered/reported incidents in respect to accepted codes of good practice
		% of residents who believe tourism is good for their community
		% who believe that they or their family benefit from tourism
		% actively participating in outreach/advocacy
		% who believe that they understand tourism and its impacts
Sustaining Satisfaction	Tourist	Determining whether tourists were satisfied upon leaving
		Level of satisfaction by visitors on exit
		Perception of value for money
	Measuring the impact of satisfaction levels on the industry and destination	Complaints received
		% of return visitors
		Changes in average price paid per room
Accessibility	Access throughout the destination	
	Existence of disabled-friendly policy	
	Existence of disabled access program including e.g., airports, piers, bus stations, sidewalks, public washroom facilities	
Access to public buildings, hotels and tourist services	Existence of public transport suitable for mobility of persons with disabilities	
	Number of tour companies in destination offering tours/guides trained for persons with disabilities	
	Number/% of hotels with rooms accessible to persons with disabilities	
Access to tourist attractions, including natural and cultural sites, viewpoints	Number(%)of access doors to buildings which have automated openers or attendants on the door	
	% restaurants, hotels and public buildings with wheelchair-accessible restrooms	
	% of attractions with wheelchair access	
Access to tourist experiences, including adventure travel Access to suitable tours, which match the capabilities of the traveller	% of attractions offering alternative access for those with mobility concerns	
	Number of tours to destination with specific program to accommodate persons with disabilities	
	Number of persons with disabilities visiting destination and key sites	
Assistance when needed	% of key sites considered accessible or inaccessible for those with differing levels of mobility or fitness	
	Distance to nearest hospital (Km) or medical facility for longer tours/cruises)	
	Presence of medical personnel (for tours catering to persons with disabilities)	
Satisfaction by those with disabilities with the destination or attraction	percentage of staff with medical or paramedical training suitable to the range of needs of clients	
	See exit questionnaire (the same questionnaire can be provided explicitly to groups of travellers with disabilities to identify their concerns)	

Health	Visitor health and safety	Number of illness and death cases of tourists and the cause	
		Number of visits by tourists to local doctors	
		Reports of food poisoning	
		Types of tourism operations involved in cases/outbreaks of food poisoning	
		Reports of communicable diseases	
	Visitor health and safety: Prevention, regulations	% of food handlers receiving food hygiene training	
		% of commercial food outlets (as above) with adequate temperature control for commercial food storage	
		Food hygiene standards and regulations in place and monitored	
		Incidence of breaches of regulations	
		Provision of awareness campaigns for food regulations and support to owners of food service operations	
		Adequate cleaning procedures	
		% of commercial food outlets including street vendors with provision of adequate hand washing facilities for food handlers	
		Routine pest control	
		Water quality	
		% of tourism businesses included in local tourist guide information complying with all relevant indicators above	
		Accidents	Number of reported accidents involving tourists and their causes
			Number of publications for visitors with health and safety warnings
	% of facilities with adequate safety signage		
	% Staff in tourism businesses with first aid training		
	% establishments with Occupational Health and Safety (OHS) programs standards and regulations in place and monitored		
	% of tourism businesses with a risk management plan		
	Frequency of monitoring or regular checking of OH&S measures and risk management plans		
	Number of licenses and permits for tourism businesses requiring a risk management plan		
	Frequency of staff training on safety procedures		
	% of establishments with training programs		
	% with formal monitoring of safety procedures/equipment		
	% of businesses in government endorsed/produced tourist brochures with good safety procedures, training and equipment		
General community health and safety	% of tourism businesses with effective effluent treatment		
	Frequency of monitoring and compliance of effluent treatment with public health legislation		
	Volume of waste disposal and run off from tourism businesses		
	% arriving international visitors reviewed for health issues – with appropriate quarantine procedures if needed		
	% of local staff working in the tourism industry receiving development and training programs on personal hygiene		
	Evidence of tourism training outcomes on hygiene being taken to the home or village setting		
	Existence of collaboration with public health/promotion units to reinforce health messages		

	Access to health care	% of local tourism sector employees receiving free/subsidised health checkups and clinics for staff and family members
		% of employees with employer sponsored comprehensive health insurance
	Malnutrition	Level of protection of water for irrigation of food crops and food processing
		% of tourism businesses supporting local agriculture and aquaculture to maintain fresh supply of accessible local foods, especially protein foods
		Number /% of employees in hospitality and food service sectors provided with nutrition education
		% of employees in tourism establishments with access to healthy in house food services
		Level of malnutrition in hotel employees
	Quiet and safe neighbourhoods	% of community protected by regulations eg. of noise, congestion, alcohol consumption and loitering, controlling tourist behaviour in proximity to residential and children's play areas
	Substance abuse	Number of education programs and policies on responsible service and use of alcohol
		Number and coverage of health programs on drug abuse
	Smoking	% of workplaces which are smoke free
		% of workplaces with 'Quit' incentive programs
	Family support	% of workplaces providing child care facilities
		% of workplaces with family-friendly rostering
	Education and training	Percentage of employees who are from the local community
		Number of scholarship and training opportunities for local youth
Extent of work programs for at-risk youth		
Access to safe drinking water, power and sanitation	% of large tourism developments which include infrastructure in development to benefit local community	
Coping with Epidemics and International Transmission of Disease	Facilitation, warning and information	Issue of travel advisories
		Travel industry information disseminated on 'safe' and 'at risk' countries
		Warnings about precautions and vaccinations
		Degree of collaboration between industry and health officials in affected destinations
		Public health education to alert travellers and industry staff to effective personal protection and socially responsible behaviour to avoid further transmission
	Contingency planning mitigation and response	Quarantine precautions for air travellers to and from affected regions
		Effectiveness of surveillance and reporting of cases
		In addition to all above; public health education campaigns to be disseminated through consumer channels about symptoms, essential precautions and treatment
		Strategies to support affected nations
		Strategies to build consumer confidence
	Impacts on tourism	% drop in visitor numbers
		Number of staff stood down
		% drop in room occupancies
		Length of time taken to recover back to pre outbreak levels of visitation and room nights
		Number of tourists reporting infection/incidents
% of tourists who fear travel to the destination		
% of travellers who say they changed travel plans because of the epidemic		
Tourist Security	Incidents	Number of incidents
		Number of tourists harmed
		Number of % change in tourist arrivals

	Impacts of incidents on tourism sector	Number of % change in numbers employed in tourism	
		Number of % change in tourism revenues	
		Number of % change in occupancy rates	
		Number of % hotels closed	
		% change in number of direct flights	
	Perceptual effects	Number of incidents reported in international press;	
		Frequency of mention of destination (or region) in international news of incidents	
		Opinion of travellers of safety of destination	
		Rating of destination in magazines, guidebooks and other media dealing with places considered to be dangerous and risky	
		Rating (listing) of site on travel warnings, as part of travel advisories, in principal countries of origin, government websites	
		Rating (listing) of site on travellers advisory in principal countries of origin, government websites	
	Management or response to risks	Level of expenditure on security	
		Level of security at borders	
		Existence of a contingency plan for tourists and visitors to the region in the event of incidents	
		Existence of emergency services	
		Number of tourists helped by tourist aid programs	
		Number of % tourists informed of security levels	
		Number/% of tourism establishments complying with safety and security standards	
		Existence of safety and security standards for attractions and establishments	
	Local Public Safety	Crime	Total number of crimes reported involving visitors
Number of visitors charged with crimes			
Cost of destination security per annum, per visitor/tourist			
Perception of severity of crime problem by visitors			
Harassment of tourists		Number of incidents reported	
		Perception of level of harassment or anxiety	
Health		Number (%) of tourists reporting health problems	
Crime prevention and control		Level of policing (police per tourist)	
		Cost of destination security per annum, per tourist	
		Level of information for tourists regarding crime and prevention	
Tourism Seasonality		Measuring degree of seasonality	Tourist arrivals by month or quarter
			% of annual tourist arrivals occurring in peak month, in peak quarter
	Ratio of number of tourists in peak month to lowest month		
	Occupancy rates for licensed (official) accommodation by month		
	% of all occupancy in peak quarter		
	Inquiries at tourism information centres by month		
	Strengthening shoulder season and low season tourism	% tourism authority budget spent promoting off-peak and shoulder seasons	
		Number of facilities offering alternative activities during shoulder and low season	
		% of main attractions open in shoulder/off seasons	
		Special events (e.g. festivals, conferences) held during shoulder and low season	
	Provision of sufficient infrastructure year-round	% of business establishments open all year	
		% accommodation and services open all year	
		% of water, electricity, sewage and garbage system capacity used for tourism and for locals. Seasonality of use	
		Funding allocated for the operation and maintenance of infrastructure, especially in high seasons	

	Short term and seasonal employment, with related issues of lack of training, retention of good employees, provision of career paths	Number and % of tourist industry jobs which are permanent or full-year % tourist industry jobs which are for less than 6 months Local unemployment rate in off-season	
Leakages	Facility/activity creation	Value of imported goods	
		Value of imported services	
	Facility operation and carrying out of activities	Value of imported goods for visitor use and consumption including of agricultural products, restitution, spare parts, etc.	
		Value of imported services, including insurance	
		Foreign exchange costs of marketing and distribution abroad	
		Remittances abroad by expatriate staff	
		Remittances of profits and dividends	
		Remittances due to foreign debt servicing	
	Invisible leakages	Foreign exchange value of deteriorated resources	
		Quantification of lost market/lost business value	
		Foreign exchange loss due to differences between official and market exchange rates	
		Foreign exchange loss due to sales of non-licensed and un-taxed services	
		Foreign exchange loss equivalent of social costs caused by international visitor consumption of scarce, subsidized and imported resources financed by international aid	
Employment	Number and quality of employment in the tourism sector	Total number employed in the tourism sector, by industry	
		Retention levels of employees	
		Percentage of jobs that are full time, full year	
		Local unemployment rate in off-season	
		Income analysis	
	Professional and personal development	Number (%) of employees qualified/certified	
		Training funds spent per employee, frequency of training programmes and level of participation	
		Possibility of on-the-job training	
	Contentment from work including, type of work, environment, safety, development, etc.	Employee satisfaction	
		Promotion	
		Income levels	
		Ability to influence change/improvements in business processes	
	Lack of skilled labour	Number of workplace accidents	
		Measures of errors, or resulting waste	
		Tourist dissatisfaction	
		Complaints	
	Tourism as a Contributor to Nature Conservation	Measuring potential impact of tourism on the natural environment	Reports on a scientific understanding of potential environmental
			% of projects where tourism impact is evaluated
			% of conservation projects where tourism financial contribution is a component
Source of financing for biodiversity conservation and maintenance of protected areas		% of the protected area, conservation site budget originated from tourism activities	
		Value generated through visitor fees	
		Value of contribution from operators	
		Value of donations received from tourists	
		% of businesses in the destination or near the site contributing to conservation	
		% of tourism products (tours etc) with specific contributions built into the price or surcharges	
		Number and % involvement in support clubs	
Economic alternatives for local people to reduce		Value of receipts or invoices of funding for local groups	
		% of the local community employed in tourism	

	exploitation of wildlife and resources	% of the local community employed in conservation activities	
		Number (membership) in local programs	
		Level of effort to engage locals in protection activities	
		Number and percentage of locals actively involved in conservation programs	
		% of goods and services purchased locally	
		Value of infrastructure investment by tourism enterprises	
		Value and % discounts or incentives for locals	
	Constituency building which helps promote biodiversity conservation by tourists	% of tourists participating in protection activities	
		% of tourists contributing to conservation	
		Level of activity designed to engage tourists in protective activities	
		% of tourists aware of importance of conservation site	
		% of tourists who receive conservation materials, % who read, respond	
		% increase/decline in after visit correspondence from former visitors	
		% of locals who receive conservation materials, % who receive, respond	
	Site-specific regulations	% of stakeholders for whom materials are in their native language	
		Applied codes of conduct	
	Provision of opportunities for participation by tourists in conservation	Percentage compliance	
		Number of conservation organizations coordinating for tourism activities at conservation sites	
		Number of conservation programs/activities open for tourist participation	
		Number of tour operators offering conservation activities as part of tourist programs	
		Survey questionnaire re satisfaction	
		% of tourists receiving marketing materials which provide contribution opportunities	
		Existence of customer code of practice and guidelines	
	Community and Destination Economic Benefits	Employment	Vehicle and other powered equipment user codes
			Level of cultural sensitivity of educational materials
			Number of local people (and ratio of men to women) employed in tourism
			Ratio of tourism employment to total employment
% of tourism jobs held by local residents			
Business investment in tourism		Average tourism wage/average wage in community	
		Ratio of part time to full time employment in tourism	
		Average tourism employee income	
		Number of tourism businesses in the community, and % owned locally	
		Number and type of business permits and licences issued	
Tourism revenue	Ratio of the number of local to external businesses involved in tourism		
	Asset value of tourism businesses and % owned locally		
	Longevity of tourism businesses		
	Tourist numbers		
	Tourist spending/spending per tourist		
	Occupancy rates in accommodation establishments		
	Revenues generated by tourism as % of total revenues generated in the community		
Local GDP and % due to tourism			
Total fees collected by community for access/use of community attractions			
Revenue from business permits, licenses or concessions and taxation			

	Community expenditures	Existence of tourism budget/plan	
		Annual expenditures on tourism	
		Amount and % of infrastructure expenditures for tourism	
		Amount and % of total annual operating expenditures for tourism	
		Cost of tourism advertising and promotion per number of tourists	
		Amount and % contribution of tourism revenues to the cost of water, sewage, roads, food production, energy, waste management, air quality, human resources development, etc	
	Net economic benefits	Net tourism revenues accruing to the community	
		Economic Multipliers: Amount of additional revenue in other businesses for every dollar of tourism revenue	
	Changes in cost of living	% increase/decrease in land and housing prices over time	
		% increase/decrease in average family weekly income	
		% increase/decrease in expenditures	
	Tourism and Poverty Alleviation	Stabilising and improving the community's income	Annual total income generated by the community
Ratio of income attributable to tourism versus traditional income generating activities			
Ratio of time dedicated to tourism versus traditional income generating activities			
Ratio of time dedicated to tourism versus tourism income			
Improving local employment opportunities		Total number of workers in the community	
		Ratio of local to "outsiders" directly employed by tourism	
		% local workers employed at different skill levels	
		Ratio of men to women employed directly by tourism	
		% indigenous people employed directly by tourism	
Operation and support of micro, small and medium sized enterprises (MSMEs), or community based enterprises		Number of tourism-related MSMEs operating in the community	
		Incentives for MSMEs, availability, level provided/used	
		Capacity building for establishment and improvement of MSMEs: number of programmes/events, level of participation	
Achieving equitable distribution of tourism funds / benefits across the community		% workers in the community directly employed by ratio of the top to the lowest paid local tourism worker	
		Annual financial contribution by tourism to community projects	
		Infrastructure development stimulated by tourism also benefiting the poor in the locality, amount of investment, extension of new infrastructure	
		Number and type of development programs in place	
		Community survey assessment of the usefulness and success of the various development programs	
Evaluating less tangible, non- economic, livelihood priorities		Annual audit of the contribution of different activities to household needs	
		Survey of household capacity to fulfil livelihood priorities for the year	
Other related issues		Access by Local Residents to Key Assets	
		Employment	
		Effects of Tourism on Communities	
		Economic Benefits	
Competitiveness of Tourism Businesses		<i>Cost advantages, price and value</i>	Cost/Price ratios (including gross margin) of accommodation, attractions, tours or packages compared to industry norms or ratios for similar products at other destinations
		Input costs: employment, taxes, overheads & premiums, costs of services and supplies, human resources costs	

	(hiring, training, retaining) transportation costs	
	<i>Differentiation.</i> Unique products and experiences, inherent attractions, positioning the destination, branding, quality, standards perceived or psychological advantages	% of tourists attracted to destination because of unique features
		Rating of destination by tourists
		Attractiveness compared to similar destinations
		Expectations met or exceeded
		Value/price rating by tourists
	<i>Specialty niches/focus strategy.</i> Narrowing the focus for tourism products and target markets, Intangibles; tourist “experiences”, destination “appeal”. Business clusters around a theme	Measure of uniqueness;
		- destination is the only location for.....(a specific type of activity, attraction);
		- destination is one of only 2 (or 3,4,5) in the country (in the world) offering.....(specify)
		Number (or %) of tourism businesses and support services within a “cluster”
	<i>Cooperation/overcoming fragmentation</i> Cooperation amongst businesses; common marketing, image, branding of the destination. Research, training, support for small businesses	% of tourism businesses that have integrated their goals and objectives with the destination tourism strategy
		% of tourism business participating in cooperative marketing
		% of marketing expenditures in cooperative initiatives
		Amount and % of public authority budget designated for supporting business development, level of participation in support schemes
	<i>Vitality of the industry</i>	The longevity of tourism businesses
		Re-sale value of tourism businesses
		Level of participation by business in tourism strategy development, and marketing initiatives
		Strength of membership in tourism industry associations
		Tourism revenues
		Annual profit of tourism businesses
		Occupancy rates for Accommodation
Protecting Critical Ecosystems	Area protected, and to what degree	Existence of protected area(s) at the destination
		Extent of protected area(s)
	Intensity of use	Controlling use intensity
	Disturbance to species and fragile systems particularly specific impacts on rare and endangered species	Health of population of key indicator species
		Breeding success rates for selected species
	Costs of maintenance of protection	Cost of protection/restoration
		Tourism contribution to protection and restoration
	Contamination events which may harm the health of bathers or damage coastal ecosystems	Level of contamination of seawater
Level of contamination of seawater		
# days beach/shore closed due to contamination events		
Turbidity of water		

		<p>Alternative proxy indicators where laboratory testing is difficult:</p> <ul style="list-style-type: none"> - frequency of algae blooms; - counts of dead fish or birds on shore; - frequency counts of indicator species which are particularly vulnerable
Energy Management	Measuring energy use and conservation	Per capita consumption of energy from all sources
	Energy management program	Percentage of businesses participating in energy conservation programs, or applying energy saving policy and techniques
	Use of renewable energy sources	% of energy consumption from renewable resources Number, of % of establishments using renewable sources
Climate Change and Tourism	Level of damage related to extreme climatic events	Frequency of extreme climatic events Value of damage to tourism sector
	Level of exposure to risk	Percentage of tourist infrastructure (hotels, other) located in vulnerable zones
	Degree of planning for climate change impacts	Degree to which key tourist zones are covered by contingency or emergency planning
	Impact on seashores	Value of tourism infrastructure in coastal zone below estimated maximum storm surge levels or equivalent
		Value of damage annually due to storm events or flooding
		% of tourist area and infrastructure with sea defences
	Impact on mountains	% ski areas or ski-able terrain with snowmaking equipment
		% of developed ski area which would lack access to ski-able conditions with warming
	Impact on wildlife and biodiversity	% of tourism dependent on viewing species
	Greenhouse gas emissions by the destination and by the tourism component	Total CO ₂ produced due to the community's energy consumption
		Consumption of fossil fuels by the tourism sector
	Transportation fuel use	Total consumption per capita of fossil fuels for transportation
		Total consumption of fossil fuels in the destination for tourist transportation
Energy consumption related to temperature control	Number and % rooms with air conditioning and/or heating	
Coverage of natural areas	% of natural area coverage in the territory of the destination	
Water Availability and Conservation	Overall water use relative to supply	Water use: (total volume consumed and litres per tourist per day)
	Conservation initiatives and results	Water saving
		% waste water or grey water recycled
		Number of establishments participating in water conservation programmes, applying water conservation policies and techniques, recycling treated wastewater
	Seasonal shortages Water shortages	# shortage incidents per year or number of days per year where there are supply shortages
		% loss from reticulated system
		% water supply imported to region
	Allocation of water among users	Total use as percentage of installed capacity
Total use by each sector		

		Note consumption by key users
	Cost and pricing of water	Water price per litre or cubic metre
Drinking Water Quality	Purity of the drinking water supply	Percentage of tourism establishments with water treated to international potable standards
		% of local population with access to treated water
		Number of incidents of violation of water standards
	Impact of contamination on tourist health	Frequency of water-borne diseases: percentage of visitors reporting water-borne illnesses during their stay
	Impact of water related contamination on image of destination	Perception of cleanliness of food and water
Sewage Treatment	Sewage receiving treatment	Percentage of sewage from the destination/site receiving treatment
		% of treated sewage recycled
	Extent of sewage treatment systems	Percentage of tourism establishments (or accommodation) on (suitable) treatment systems
		Percentage of the destination served by storm water systems
	Effect of sewage treatment	Number of reported pollution or contamination events per annum (by month) in watercourses receiving effluents
Solid Waste Management	Managing total waste collected in a destination	Total amount of waste collected
		Waste volume produced by the destination
		Waste disposed by different methods
		Waste attributable
	Reducing waste produced	Volume of waste recycled (m ³) / Total volume of waste (m ³)
		Number of tourism establishments collecting waste separately, capacity of collecting separated waste from local residents
		Number of tourism establishments recycling their own waste
	Providing waste collection services	% of destination area (especially in urban sites) covered by solid waste collection services
		Percentage of tourism establishments covered by waste collection programs
	Hazardous substances (reduction, handling)	Number and volume of hazardous substances in use
		% of these substances for which appropriate management and disposal policies and programs are in place
		% of employees informed and trained in the use and disposal of the substances they use
	Maintaining clean image for the destination	Quantity of waste collected from public areas and streets
Quantity of waste strewn in public areas		
Image of cleanliness of destination		
Air Pollution	Quality of air	Number of days exceeding standards
	Impact of air quality on tourists and residents	Incidence of respiratory problems
		Number of health problems reported by tourists
	Reaction of tourists to air quality	Perception of air quality by tourists
		Number of warnings regarding the air pollution of the destination in major publications and guidebooks
Impact of air pollution on tourist assets	Cost of repair to buildings and cultural sites	
	Impact of tourism sector on air quality	Contribution of the tourism industry to greenhouse gases
Controlling Noise Levels	Actual noise levels	Noise levels at site in decibels
	Impact of noise on tourists and locals	Perception of noise
		Complaints received
Managing Visual Impacts of Tourism Facilities and Infrastructure	Design and construction of infrastructure	Total length of roads
		Total run of overhead electrical cables
		Presence of satellite dishes
		Presence of communications tower
		Height of water tank

		Sewage ponds
		Erosion on the side of roads
		No. and size of signposts
	Night lighting	Number of light fixtures that throw direct light
		Quality in viewing the night sky
	Physical form	Height of buildings
		Number of buildings (area covered) exceeding height of natural vegetation
		Shapes of buildings
		Shapes of signs
		Density of buildings per hectare
	Planning / Building permits	Existence of aesthetic considerations in planning approval process
		Development Control
	Material selection	Color
		Texture
	Siting and orientation	Ridgeline or coastline continuity
		Slopes
		Against the natural light – reflections
		Soil Erosion
	Integration with the landscape	% of site cleared for development
		Number. of indigenous plants removed for development
		% of landscaping done with native species
		% of site covered by indigenous plants
Controlling Use Intensity	Total numbers of tourists visiting the destination or key sites, peak numbers of tourists stressing the limits of capacity	Total tourist numbers
	Measuring and managing the intensity of use of the destination	Number of tourists per square metre of the site
	Measuring and managing use density for specific heavily used sites within the destination	Density counts for vehicle use of site
		Ratio of number of vehicles per parking space
	Levels of use relative to design capacity/other capacity measures	% of total capacity used
Perception of use levels and crowding	Percentage of tourists who believe that the destination is too crowded	
Managing Events	Site environmental sensitivity: - Features of the site including ecological fragility, animal habitat, sensitive periods for flora and fauna	Total area of site used by those at the event
		% of site changed
	Social sensitivities – Impact on local communities - degree of involvement of local citizens and businesses - use of site by area residents - impact on community during the event	Existence of a participatory planning process for events
		% local population who support the event
		Ratio of numbers of spectators to population
		% of site permanently changed by the event
		% increase/decrease in use of the site after the event
	Impact caused by participants in the event -	Number of participants in/at the event
		Number of circuits/repetitions per area or length of track

	intensity of use of site and specific areas	
	Impact caused by spectators - distribution and movements of spectators	Existence of a spectators management plan
		Number of spectators
		Ratio of expected number of spectators to actual
		Density of spectators: over total; at peak viewing areas; at fragile sites
	- damage to natural habitats; disturbance of wildlife	Area cordoned off for/from spectators
		Number of waste bins
		Number of recycle bins for plastic, aluminum, paper products, organic waste
	- damage to built environment	Number of WCs
	- litter	
	- human waste	
	Safety and security	Number of security personnel
		Number of incidents
		Number of medical/first aid posts
		Level of facilitation of information related to safety issues
	Impact caused by vehicles	Number of vehicles
	- types of transportation	% spectators using public transport
		% increase in number of vehicles
	- traffic jams	% increase in number of vehicles
	- air pollution; noise, smell	
	- parking; soil compression	
	- gasoline and oil spills/leaks	
	Catering	% of catering waste which is recyclable and recycled
		Weight/volume of waste produced
	- production of waste	Energy and water demand
	- increased use of water and power	
	- waste water	
	Impact due to infrastructure:	Area impacted/loss of natural habitat/landscape
	- temporary, permanent	Increased use of site after the event
	Select or create courses with respect for the environment	Meters of course affecting environmentally sensitive sites
		% existing, % new, % open country etc
		% accessible to the public after the competition
	Define, apply, audit and review protective measures for important environmental aspects	Number of measures adopted
		Area of protected zones, km of tape, route markings and barriers
		Number of audits carried out
	Establish and implement a traffic plan	Number of parking spaces, dry weather
		Number of parking spaces, wet weather
		% spectators using public transport
		Average distance between parking areas/station and competition sites
		Number/frequency of shuttle buses
	Establish and implement a spectator management	Number of spectators expected
		Size of security service

	plan which respects the environment	
	Catering: favour suppliers who reclaim and recycle their products and waste	Number and type of substances over which agreement is reached with suppliers in the specifications
	Establish and implement a waste management plan	Number of collection points and their position on site
		Amount and type of waste being reclaimed, recycled or re-used; main types: glass, PET, aluminum, wood, plastics etc
		Amount and type of waste with guaranteed reclaiming, recycling or re-use
		Number of fixed/mobile toilet facilities
		% waste water (sewage) treated before disposal
	Restore sites to their original condition	Availability and amount of human and financial resources for restoring the sites
Integration of Tourism Into Local/Regional Planning	Performance of the tourism industry	Tourist Numbers over time/purpose of visit
		Average length of stay
		Visitor expenditure per day
		Revenue generated from tourism
		Leakages from the economy
	Impacts of tourism on the destination	Traffic generated from tourism
		Ratio tourists to locals
		Local satisfaction with tourism
		Visitor/local water usage
		Economic dependency on tourism -Contribution to GDP
	Quality of the tourism product	Attractiveness of sites and facilities
		Satisfaction of tourists
		% returning visitors
	Threats to tourism from other areas	Number of sites damaged by other development;
		Environmental threats
		Environmental vulnerability
		Crime rate per capita
	Existence of tourism plan or strategy	Up to date plan exists
		Plan review completed or scheduled
	Costs of plan	Plan budget
		Budget designated/spent for research and formulation
		Budget designated/spent for plan implementation
		Budget designated/spent for consultation and public participation
		Level of staff resources assigned to planning
	Impact assessment and balance of actions	Impact assessment of environmental, social and cultural aspects of tourism completed
		Number of environmental, social, cultural and economic actions recommended in plan
	Public participation	Degree of stakeholder participation in the planning process
		Degree of stakeholder participation in the process of implementing plans
	Monitoring of plan implementation	Existence of performance indicators designated for evaluating the plan developed and used
% of plan objectives which have been met		
% environmental, social, cultural actions recommended in plan which have been implemented		
Legislation	% of accommodation units using primarily local architecture;	
	% that have completed an Environmental Impact Assessment (EIA)	
	% tourism facilities and service providers regularly inspected for environmental health and safety	
	Number of incidents of non-compliance with regulations	
Monitoring sustainable tourism	Sustainable tourism indicators developed and monitored	

	Public participation	Involvement of stakeholders in tourism development activities of tourism office
	Government understanding of sustainable tourism	% public sector employees with tourism training Level of tourism sector involvement in public policy
	Private sector cooperation for sustainable tourism	% tourism managers with environmental training % Tour operators and hotels with environmental strategy or policy
Development Control	Whether any land use or development planning process exists explicitly incorporating tourism.	Existence of a land use or development planning process, including tourism
		% of area subject to control
		% of area designated for tourism purposes, for buildings
	Extent and effectiveness of monitoring and control processes	Existence of specific criteria for tourism development control in plans, such as maximum numbers of hotels/beds, density standards, design controls, environmental and social, etc
		% building proposals receiving environmental review, or undergo environmental impact assessment (EIA)
		% denied or sent for revision
Whether or not there is systematic enforcement of the plan and its criteria	Existence of review procedures	
	Number of charges for plan, zoning or site plan violations	
Tourism-Related Transport	Knowledge of tourism related mobility patterns	Tourist number visiting site
		Seasonality
		Annual number of same-day visitors
		Total of km traveled per tourist per trip
		Modes of transport used by tourists to reach destination
	Access to the holiday destination	Density of roads
		Density of public transport
		Annual levels of investment in public transport compared with road infrastructure
		Frequency, capacity of services and use levels
		Number of direct flights, , number of cities served by direct flights
		Time of travel by passenger to destination
	Journey time and reliability	Ratio of public passenger transport versus private transport speed to reach destination in peak holiday periods to lowest periods
		Ratio of travel expenses by public versus private transport to reach destination
		Level of air and ground emissions for passenger transport during peak holiday periods to lowest
		Level of noise pollution
	Safety	Number of transport accidents and fatalities during peak holiday periods to lowest periods
		Trends in the number of days per year on which fixed air pollution thresholds are reached
		Impact on local health
		Level of facilitation of information and services
	Spatial and transport planning, management of tourism related transport demand, and improvement of modal split	Implementation of an integrated environmentally sound transport planning strategy
		Strategy translated into an action plan
		Number and extent of issues covered by the action plan
		Action taken to formulate interregional transport plans
	Tourists' demand management regarding mobility within destination	Tourists' and visitors' perceptions and demands of local or regional transport supply and services
		Number of passengers transported by local public transport for tourism / leisure purposes
		% of accommodations, tourism facilities and other tourist attractions accessible by public transport

	Access to the amenities within the holiday destination	Extra means of transport especially set up for tourists: type of transport and number of passenger places available during peak times
	Safety and security - Traffic congestion, stress, fatigue, unfamiliar weather conditions and unfamiliar road layout result in more traffic accidents	% of death, or serious injuries due to road accidents during peak holiday periods
		Total expenditure on building / maintaining dedicated cycle and walking routes
		Level of pedestrian infrastructure
		Parking capacities and use levels
		Ratio of number of incidents including visitors and tourists in peak holiday periods to lowest periods
		Existing safety standards
		Number of staff on duty/surveillance system
		Level of facilitation of access to information on emergency measures and contingency plans
	Intermodality / Integration of services	Existence of multi-modal platforms
		Existence of integrated public transport services
	-Links between long-haul and local transport networks - Seamless journey for the tourists - Use of new technologies to maximise co-ordination between transport modes - Integration of public transport services/fares	Existence of integrated public transport fares
		Provision of park-and-ride and bike-and-ride facilities: number of parking spaces (public and private) for cars or bicycles at public transport stops/stations serving tourist amenities
	Ease of access -Clear, accessible, reliable information about services/ timetables/ ticketing before and during the stay - Door –to-door services	Ratio of annual public expenditure on information services for public transport users to specific information services for holidaymakers, visitors and tourists
		Existence of public transport service information on the Internet or mobility centres
		Use of electronic booking for public transport
		Number of door-to-door services for visitors and tourists
	Promotion of environmentally friendly transport modes as part of the holiday and measures to give public transport priority	Length of cycle and walking paths, availability of bicycle rental services
		Extent and capacity of public transport
		% of travellers using alternative transport
		Level of support for low energy alternatives to vehicle transport
		% of the tourism related vehicle fleet meeting specified air and noise emissions standards by mode of transport
		Energy consumption and emissions per passenger
		Existence, capacity of environmental-friendly vehicles and transport modes
		Availability and % of reserved public transport lanes and parking spaces
		Existing measures of restricting car access or parking spaces
Air Transport - Responding to Changes in Patterns and Access	Environmental impacts of air travel	Energy consumption
	Impacts of airports and related infrastructure	Atmospheric pollution
		Land occupation
		% or number of access roads with severe traffic congestion
		Noise
		Congestion: Number of hours spent by average tourist using airport
	Total public expenditure on airport infrastructure	

	Socio-economic concerns related to air travel	Cost of safety and security measures	
		Number of employees to be trained in the air transport system per tourist	
		Cost of skills and training for airport personnel	
		% of annual costs covered by revenues at airport from different sources	
	Access	Number of cities served with direct flights to/from the destination	
		Number of flights per day and number of passengers	
		%/number tourists who arrive on charter flights	
		Number of airlines serving the destination	
		Seasonality of service	
	Security	Cost of screening of passengers and luggage for issues related to health, crime, terrorism	
		Number of incidents at the airport	
		Level of expenditure on security	
		Guards or officials per traveller	
		Existence of a contingency plan for the airport in the event of incidents	
		Level of emergency services	
#/% tourists informed of security levels at airport			
Creating Trip Circuits and Routes	Integrity of the Route Destination and Product Coherence	Existence of a multi-stakeholder tourism plan;	
		Amount of infrastructure and operational funds	
		Money spent on marketing the route or circuit	
		% of towns and communities along the route participating	
		Tourist satisfaction	
	<ul style="list-style-type: none"> - support and funds for organization - travel on circuits should harmonize with tourism at destinations along the route - common quality standards - complementary not competing attractions - common branding, signage 	% tourists stopping at interim sites along the route versus passing through	
		Community Conflicts or Cooperation	% representation from each community in organizing team
			Number and participation level of coordination meetings and use of other mechanisms
			% of funds/investment allocated to each community
			Number of reports/complaints from tourists and tour operators
			Number of accidents on route
		<ul style="list-style-type: none"> - amongst communities - different modes of transportation - Conflicts on route/circuit - different types of users, 	
		Intensity of Use Environmental issues and impacts; carrying capacity, limits of acceptable change; land-based and water-based circuits	Average and peak seasonal number of users and types of users
Economic Impacts	% of tourists in the region attracted because of the circuit or route		
	Number of stops per tourist on route		
	Average stay per tourist at stops on route		

	- on towns and communities along the routes	Revenue earned attributable to the existence of the route
	- how is tourist spending distributed along the route	% of local business supplying services to tourists along route
	Local Support	% of local populations supporting tourism on the route
		Number, % of tourism and related businesses participating in/ contributing to product development, marketing and other joint activities
Providing Variety of Experiences	Maintaining a variety of experiences	Number of different attractions in or near destination
	Provision of the full range of needed tourism services	Range of tourist services available in the destination
	Determining whether the tourists are satisfied with the variety of the destination	Range of tourist services available year round
Marketing for Sustainable Tourism	Identifying the market for more sustainable	Perception of variety by tourists
		% of visitors who seek environmentally friendly and culturally sensitive experiences
		% of visitors willing to pay extra for these experiences of enhanced value
	Measuring the image of the destination or products considering sustainability aspects	Number of requests to local tourism authorities related to environmentally or culturally sensitive products
		% of establishments and operators marketing sustainable, sensitive or green products or experiences
		% of businesses that include information on environmental and social aspects of their operation
		% of certified businesses that include reference of the certification system in their promotional material
	Meeting client expectations re authenticity of products	% visitors who arrive seeking "green" experiences
		Number of tourists who are satisfied with the environmental and cultural experiences
	Measuring level of marketing effort	Number of complaints
		Volume of marketing products divided by type
		Level of representation/contact
	Targeting the right clientele. Measuring degree of contact and reach of marketing	Cost of marketing
		% of clients who self-identify as "green" or eco tourists
	Measuring response to any marketing	Numbers of potential tourists contacted
		Market penetration, response surveys, or conversion studies
		% clients who arrive in response to specific ads or initiatives
% of clients who participate in activities while at the destination, in response to specific ads or initiatives		
Evaluating client response and satisfaction	Occupancy rates in establishments promoting sustainable products	
	Price per room night	
	Market share	
	% clients who are satisfied with their experience	
	% tourists who agree that the reality matched what was advertised	
	Rank re other competing destinations – re quality, environment, image, satisfaction	
Responding to external demands	% tourists who perceive barriers to visiting the destination	
	Number (%) of operators who request "green" products, % of establishments with green programs (certifications, EMS)	
	Numbers of requests (numbers seeking "green" products)	

		Number of complaints received
		Speed of response to complaints
		% satisfaction with how complaints were handled
Protection of the Image of a Destination	Image held by current tourists	% of tourists who have a positive image of the destination
		% of tourists who would recommend the destination to their peers
		specific responses to key questions re key attractions and activities
	Image held by those who have not visited the destination	% of potential market(s) who have a positive image of the destination
		Rank of destination on list of destinations
	Image in marketplace	% of operators (inbound, outbound) who perceive the destination as a safe, attractive, interesting, good value etc destination
	Brand development	Level of funding allocated to brand development and other branding activities
		Degree of match with the preferred values of the destination's targeted markets and partner organizations
		% of key actors
	Brand refinement	Annual percentage of the tourism-marketing budget allocated to advertisement and promotion
		Reach of advertising - Number of tourists receiving/recognizing, responding. Number reached for the dollar spent
		Percentage of market, operators, local representatives, employees and stakeholders perceiving brand to positively reflect their preferred attributes and values
	Brand effectiveness	Annual value/percentage of the tourism-marketing budget allocated to monitoring satisfaction
		Percentage of visitors who:
		- believe the brand values, attributes and benefits communicated were met during their trips
- think the brand attributes, values and benefits rank more favourably than other similar destinations		
- recall the brand name		
	- are repeat visitors and/or expect to return to the destination	
	- who intend to return specifically to experience key brand values, benefits and attributes	
Indicators of brand protection	Level of protection for key branding tools. Percentage which are patented/copyrighted	
	Perceived value of the branding programs to stakeholders. Percentage of stakeholders surveyed who believe the branding programs help improve the value and performance of their tourism operations	
	Level of effort to monitor public image (print, web, other media)	
	Percentage of stakeholders, consumers and competitors who attribute the brand features solely to the destination	
Sustainability and Environmental Management Policies and Practices at Tourism Businesses	Environmental management systems and environmental initiatives	% of establishments in the destination with formal certification
		Existence of company policy on environmental and sustainability issues
		Existence of designated personnel for environmental and sustainability management issues at the company

		Training of staff on environmental issues
		Application of environmentally friendly technologies and techniques
	Social responsibility	Existence of company policies aiming at social issues of employment and relation with host communities

Source: UNTWO (2004)