ASSESSMENT REPORT

SUSTAINABLE DEVELOPMENT IMPACT OF THE CITIES FOOTPRINT PROJECT ON THE SUSTAINABLE DEVELOPMENT GOALS IN FIVE CITIES OF BOLIVIA

DISCLAIMER

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, photocopying, recording or otherwise, for commercial purposes without prior permission of UNOPS. Otherwise, material in this publication may be used, shared, copied, reproduced, printed and/ or stored, provided that appropriate acknowledgement is given of UNOPS as the source. In all cases the material may not be altered or otherwise modified without the express permission of UNOPS.

This publication has been produced as part of a component of the Initiative for Climate Action Transparency project (ICAT) implemented by UNEP DTU Partnership (UDP). The views expressed in this publication are those of the authors and do not necessarily reflect the views of UDP.

PREPARED UNDER

Initiative for Climate Action Transparency (ICAT) project supported by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, the Children's Investment Fund Foundation (CIFF), the Italian Ministry of Ecological Transition (IMET) and ClimateWorks.

The ICAT project is managed by the United Nations Office for Project Services (UNOPS)

Content

List of Tables

List of Figures

List of Acronyms

CO2	Carbon Dioxide
AFD	French Development Agency
CAF	Latin American Development Bank
CAP	Climate Action Plan
CF	Carbon Footprint
CFP	Cities Footprint Project
CNDC	National Distribution Office Committee
COSAALT	Co-op for water services and sanitation Tarija
CRI	City Readiness Index
EF	Emission Factor
EPSAS	Public Social Enterprise of Water and Sanitation of La Paz
GDP	Gross Domestic Product
GHG	Green House Gases
GPC	Global Product Classification
ICAT	Initiative for Climate Action Transparency
LAC	Latin American
ODA	Official Development Assistance
PNDIC	National Policy for the Comprehensive Development of Cities
SAGUAPAC	Drinking Water and Sanitary Sewer Service - Santa Cruz
SASA	Servicios Ambientales S.A.
SDGs	Sustainable Development Goals
SEMAPA	Municipal service of drinking water and sanitation Cochabamba
TWW	Total Freshwater Withdrawal
UN	United Nations
UNDP	United Nations Development Programme
WF	Water Footprint
WHO	World Health Organisation
WRI	World Resources Institute

Chapter 1: General information

The following document compiles the results and outcomes of the assessment developed by Servicios Ambientales S.A.[1] (SASA) under the framework of the Initiative for Climate Transparency (ICAT) guidelines for Sustainable Development for the Cities Footprint Project (CFP). The assessment has been conducted by Estefania Arteaga, Project Coordinator from SASA, with the guidance and support of Karen Holm Olsen (UNEP-DTU Partnership) and David Rich (WRI).

The scope of the assessment is to identify and evaluate the impact of the implementation of the CFP in the generation of information to address/report progress towards the Sustainable Development Goals (SDGs) and the City Readiness Index[2] (CRI) in five cities of Bolivia (La Paz, Santa Cruz, El Alto, Cochabamba and Tarija) part of the CFP project.

The assessment period ranges at each city, as the CFP initiated at different periods of time in each city as outlined in Table 1. Nonetheless, the variation on the evaluation timeframes does not show a significant impact according to the objectives of the assessment, as the evaluation criteria considers each city current/present situation (2019) as a main reference for impact estimation.

TABLE 1 GENERAL INFORMATION ABOUT THE ASSESSMENT

General information	Assessment information
Name of the policy or action assessed	Cities Footprint Project (CFP)
Person(s)/organisation(s) that did the assessment	Estefania Arteaga – Servicios Ambientales S.A.
Date of the assessment	14 January
Whether the assessment is an update of a previous assessment, and if so, links to any previous assessments	NA
Objective(s) of the assessment	Identity and evaluate the impact of the implementation of the CFP in the generation of information to address the Sustainable Development Goals (SDGs) and a Resiliency Index in the cities of La Paz, Santa Cruz, El Alto, Cochabamba and Tarija part of the CFP project.
Intended audience(s) of the assessment	• SASA team • Municipal Governments of La Paz, Santa Cruz, El Alto, Cochabamba and Tarija • Stakeholders identified in the process
Whether the assessment consists of a qualitative impact assessment, quantitative impact assessment and/or tracking progress of indicators over time	Tracking progress of indicators over time
Opportunities for stakeholders to participate in the assessment	Semi-structured interviews on site and online
Whether the assessment applies to an individual policy/action or a package of related	Individual policy/action

[1] Servicios Ambientales S.A. (SASA) is a Bolivian company with 20 years of experience in the development of projects related to climate change in the LAC Region. More info http://www.sasa-bolivia.com

[2] Metodologhy developed by Servicios Ambientales S.A.

policies/ actions, and if a package is assessed, which policies and actions are included in the package	
Whether the assessment is ex-ante, ex-post, or a combination of ex-ante and ex-post	Ex-post Assessment
The assessment period	La Paz, 2012 - present Santa Cruz, 2016 - present El Alto, 2017 - present Cochabamba 2018 - present Tarija 2018 - present

Objectives

The assessment was developed according to the methodology and steps outlined in the ICAT Sustainable Development Guidance with the objective to identify and analyse the impact of the CFP implementation in the cities of Bolivia in generating/collecting information to report their progress towards the SDGs and the CRI. Accordingly, the assessment, aims to develop a SDGs' baseline (current progress) of each city to initiate their monitoring and reporting process towards the SDGs, and align their current development efforts to achieve them.

On the other hand, the assessment also provides with meaningful inputs to inform adjustments and improve the CFP's methodology and implementation process.

It is important to mention that at the initial phases of the assessment, its original scope had to be modified due to context limitations, such as information availability and stakeholder involvement. In various cases, information in regards to projects status was not available as the project failed to be implemented or was interrupted due to lack of funding; and/or stakeholders did not respond to our requests (interviews and/or information). Furthermore, based on multiple observations and considering the interlinkages between SDGs, the assessment team was advised to broaden it evaluation scope to all 17 SDGs. Therefore, the original objective of *identity and evaluate actions developed in the CFP that address multiple priorities, contribute to multiple goals and lead to multiple benefits such as the alignment of its results towards the Sustainable Development Goals (SDGs) with particular emphasis on the SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable, and other relevant SDGs,* was modified to provide useful results suited to the context and current situation of the cities.

Overview of key steps

Under this goal, the study identified environmental, social and economic impacts mostly assessed with qualitative methods (semi-structured interviews with stakeholders) to track the progress of SDGs and CRI indicators after the implementation of the CFP in five cities of Bolivia. The process to identify the dimensions, impacts and indicators, and the impact assessment for this study followed the steps and methodology outlined in the ICAT Sustainable Development Guidance, which are described in detail in chapters 3 to 5 of this report.

This study considered an ex-post assessment approach as the CFP has been implemented and finalized in 2018. This perspective was selected as the main objective of the study is to assessing historical impacts of a policy or action, as defined by the ICAT Sustainable Development Guidance.

Stakeholder participation

The active participation and involvement of stakeholders in the assessment was essential, as they are the main source of information to identify the impacts of the CFP towards the SDGs and CRI. Furthermore, as highlighted by the ICAT Stakeholder Participation Guidance, *there is an increasing need to assess and communicate the multiple impacts of policies and actions to ensure they are effective in delivering a variety of sustainable development.* Considering this guidance, the assessment was developed in close coordination with stakeholders of each city which have participated of the CFP or now are involved in areas influenced by the SDGs.

The participation of stakeholders was planned following the steps and principles outlined in the ICAT Stakeholder Participation Guidance, therefore, it considered local governance structures, Local governmental services in areas such as education, health, environment, planning and forestry, and Staff and consultants of relevant projects and programs, who are directly or indirectly influenced by the CFP, SDGs and CRI at each city. The level of participation can be categorized as mid-level, as the assessment was developed directly with stakeholders throughout the process to ensure that stakeholder perceptions and inputs are consistently understood and considered.

The process of stakeholder's participation during this assessment was developed through the following steps:

- Make initial identification of stakeholder groups and establish a first contact (via email, phone call)
- Provide all relevant information to stakeholders
- Stablish meeting and field-visit schedules
- Conduct semi-structured interviews
- Use information to improve the impact assessment
- Provide feedback to stakeholders on how their input has been used

This scheme provides with multiple opportunities for stakeholders to participate in the assessment. A complete list of stakeholders engaged in the assessment and field visits records is attached in Annex 1.

Chapter 2: Describing the policy or action

The Cities Footprint Project (www.citiesfootprint.com) developed by SASA[3]., and financed by the Latin American Development Bank - CAF and the French Development Agency – AFD, has the ultimate goal of promoting low-carbon and climate-resilient development in Latin American (LAC) cities, applying a three-step methodology:

[3] Servicios Ambientales. S.A., is a Bolivian private consultant firm that mainly prepare inventories of the Carbon Footprint and Water Footprint and action plans for their reduction and compensation in different areas (geographical, organizational, products and events), based on internationally recognized methodologies. SASA also participates in the implementation of mitigation and adaptation projects and provides technical training and advice on various topics, including climate finance. Retrieved from: http://www.sasa-bolivia.com/nosotros.html

1. Assessing carbon and water footprints of local governments and cities (Using GPC - GHG emission inventories)
2. Developing City Climate Action Plans for footprints' reduction establishing goals, and implementing pilot projects to reduce cities footprints.
3. Engaging relevant stakeholders (private sector, national governments, civil society groups, etc.) in the collective effort to reduce cities footprints (through footprints calculators as mobile apps, online platforms, etc.)

The CFP developed an integrated assessment of the Carbon and Water Footprints of each city, thus based on the results it develops a Climate Action Plan, in order to provide a holistic approach to carbon and water management. The Plan establishes reduction targets and initiatives to address climate change impacts within the approach of the Carbon Footprint (CF) and the Water Footprint (WF) assessments methodology and results. The composition of the Action Plan varies depending on the relevance of the impact categories addressed over the footprint's assessment of each city (more information in Table 2 and Table 3). For the purpose of this assessment, it was considered the five cities in Bolivia where the project was implemented, as shown in Figure 1.

TABLE 2 DESCRIPTION OF THE POLICY OR ACTION

Information	Assessment information
Title of the policy or action	Cities Footprint Project (CFP)
Type of policy or action	**Research, development, and deployment (RD&D) policies** **Implementation of new technologies, processes or practices**
Status of the policy or action	Implemented
Date of implementation **Date of completion (if applicable)**	La Paz Phase 1: Dec. 2012 - May 2014 Santa Cruz Phase 2: Jan 2015 - Apr 2016 Tarija Phase 3: Mar 2016 - Apr 2017 El Alto, Cochabamba Phase 4: Feb 2018 - Oct 2018
Implementing entity or entities	SASA team Municipal Governments of La Paz, Santa Cruz, El Alto, Cochabamba and Tarija
Level of the policy or action	City Level
Geographic coverage	Bolivia, each city´s geographical area
Sectors targeted	Transportation Energy (electric and fuels) Waste Management Water Management (supply, contamination and treatment) Environment (emissions generation)
Other related policies or actions	National Policy for Resilient Cities (under elaboration) Cities Municipal Development Plan (each city)

The results of the carbon and water footprints present a comprehensive overview of the environmental impacts; measured by single or collective pressures arising from production and consumption activities, and other anthropogenic activities[4]. Both footprints can be regarded as complementary to each other as each of them focuses on different aspects of environmental issues. The methodologies are standardized and scientifically robust[5]; they measure the environmental impacts derived from natural capital appropriation by consumption of biological resources and water, generation of Greenhouse Gas (GHG) emissions, and discharge of the resulting waste. The usefulness of the footprints facilitates the allocation of responsibilities for global warming to consumers and communities within a given region. Furthermore, a remarkable advantage of this integrated assessment is that it offers policy makers an overall vision of the combined effects of various human pressures which then enables a deeper understanding of environmental complexity.

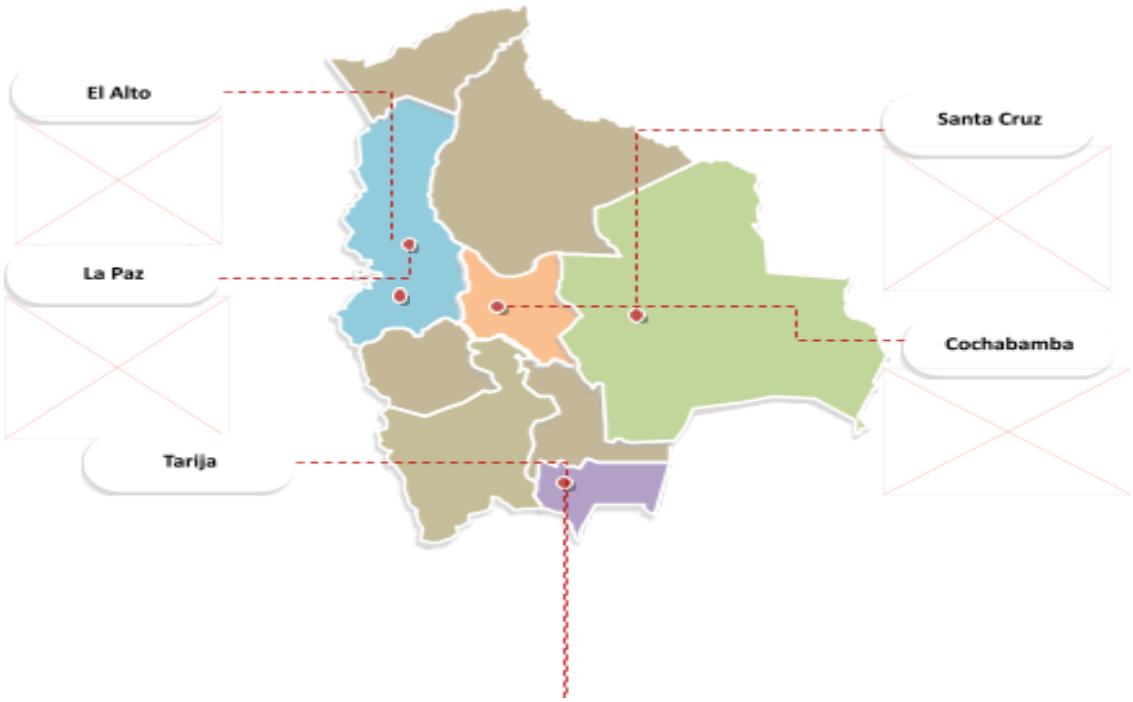

FIGURE 1 BOLIVIAN CITIES CONSIDERED IN THE ASSESSMENT

Considering the positive outcome of the carbon and water footprints assessment, the Action Plan contains actions and projects focused, for the most part, in the reduction of GHG, and reduce the contamination and improve the management and use of water in the metropolitan area of Cuenca. The Plan identifies opportunities and initiatives considered in the municipality´s Agenda moreover, develops them and adds prospects ideas that can be included. The methodology also considers the development of increase or reduction scenarios for the CF and WF of each city to establish targets and strategic actions to achieve them. The Action Plan establishes targets in accordance with government and stakeholder's development goals and implementation capacity, moreover, evaluates their viability and

[4] Cumulative energy demand as predictor for the environmental burden of commodity production. Environ. Sci. Technol. 44, 2189–2196. Huijbregts, M.A.J., Hellweg, S., Frischknecht, R., Hendriks, H.W., Hungerbuhler, ¨ K., Hendriks, A.J., 2010.

[5] "Integrating ecological, carbon and water footprint into a "footprint family" of indicators: definition and role in tracking human pressure on the planet." Ecological Indicators, Galli, A., et al. (2012).

relevance. Prioritized actions were weighed and ranked based on a cost-benefit evaluation that pondered economic aspects (investment, operational costs, among others) in contrast to reduction potential (CO_2e emissions, m^3 of treated water, among others). In addition, the Plan further develops an outline for two Pilot Projects, selected in coordination with the Municipality, and prepares a preliminary form for funding request.

The CFP planning framework considers as fundamental the participation of stakeholders, non-government institutions and the civil society. It recognizes the role of the municipal government in working with individuals and groups to strengthen sectors cooperation and support in the elaboration of the climate action plans (CAP). Therefore, the participatory process in the elaboration of the CAP included meetings with stakeholders and decision makers from the influenced areas or sectors identified in the evaluation of the footprints from the City. Personal meetings were held with companies from transport, energy, water, and waste sectors, as well as with the private and public sector, in addition, there were also held online meetings via Skype with the stakeholder's prior and after the development of the CFP.

Past July 2018, the CFP has been recognized by the Cities Alliance organization as one of five best sustainable initiatives of the world that promotes the progress towards the achievement of the 2030 Agenda and the SDGs – emphasized on the SDG 11 Sustainable cities and communities-. Taking this into account, the CFP implementation team recognized the need to determine the influence of the project in achieving the SDGs in cities. As for, this study provided with an internationally recognized methodology to evaluate the influence of CFP development phases (information collection, stakeholders engagement, among others), and results (Footprints reports, CAP, among others) towards each city report to the SDGs, as shown in Table 3.

TABLE 3 ADDITIONAL INFORMATION ON POLICY OR ACTION

Information	Assessment information
Relevant SDGs	The policy is focused primarily on SDG 1 (End poverty in all its forms everywhere) SDG 3 (Good health and well-being), SDG 4 (Ensure inclusive and equitable quality education) SDG 6 (sustainable management of water and sanitation) SDG 7 (Affordable and clean energy), SDG 8. (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all) SDG 9 (Industry, innovation and infrastructure), SDG 11 (Sustainable cities and communities), SDG 12 (Responsible consumption and production) SDG 13 (Climate action), and SDG 15 (sustainably manage forests)
Specific intended targets, such as intended level of indicators	The CFP is aimed to support municipal governments and decision makers in the development and implementation of municipal mitigation and adaptation strategies to address climate change, through the assessment of the Carbon Footprint and the Water Footprint of their cities (as territories), and the preparation of portfolios of potential investment projects aimed at the reduction of Footprints (Action Plans), the implementation

	of pilot actions with scaling potential, and the involvement of the relevant actors of society in search of synergies to address the problem collectively. A transversal and strategic element of the Project is the creation and strengthening of local capacities within the municipal governments for the management of Footprints.
Title of establishing legislation, regulations, or other founding documents	Not relevant
Monitoring, reporting and verification procedures	A monitoring and evaluation mechanism were not established for the Project. Nonetheless, it was advised that the municipal government from each city should follow up the implementation of the Action Plan and the actions to reduce the Footprints.
Enforcement mechanisms	No enforcements procedures
Reference to relevant documents	For more information, see: http://www.huelladeciudades.com/citiesfootprint/index.html
The broader context or significance of the policy or action	Cities are the main contributors to climate change although they represent less than 2% of the earth's surface, cities consume 78% of the world's energy, and produce more than 60% of the total CO2 as well as a significant amount of energy. emissions of GHG gases (UN-Habitat, 2016); mainly through the generation of energy, vehicles, industry and use of biomass. Likewise, cities and towns are highly vulnerable to climate change. In Bolivia, of a total of 11 million, 67.5% of the population lives in cities and it is expected that by the year 2030, 80% of the population will populate urban areas. Under this framework, the New Urban Agenda built from the Third United Nations Conference on Housing and Sustainable Urban Development - Habitat III, the Bolivia's Report "Building Urban Communities to Live Well in the 21st Century", instructs the design of the Integrated Cities Development Policy by the Vice Ministry of Urbanism and Housing in order to build / strengthen the long-term State strategic vision of the new urban agenda. In response to this challenge, the National Government, at the head of the Vice Ministry of Housing of the Plurinational State of Bolivia, is formulating the National Policy for the Comprehensive Development of Cities (PNDIC), which responds to the international context of the SDGs and the New Urban Agenda. The contribution of the Footprint of Cities Project to the national context, provides with actionable information of the 5 most important cities in the country, which holds 55% of the current urban population. The experience of the project, as well as the data generated by it, contribute with relevant information and analysis to understand the present and future urban dynamics, and can contribute to the construction and implementation of more comprehensive, sustainable and resilient urban interventions within the framework of the PNDIC, the Regional Urban Agenda and the SDGs.
Key stakeholders	Municipal Governments (Divisions of Environment, Transport, Waste, Planning) International Organizations and NGOs (Funding sources) National Regulatory Authorities (Water, Energy)
Other relevant information	The information resulting from the Project has helped the cities to develop local climate change strategies and align their development processes towards achieving the 2030 Agenda.

Chapter 3: Impact categories and indicators assessed

This study focusses the identification of impact categories according to the set of 231 indicators part of the 169 targets addressed by the 17 SDG goals. The impact categories were chosen based on the principles of Relevance, Completeness, and Comparability; Relevance with the CFP scope and the local context; Completeness at assessing positive and negative impacts from the CFP implementation towards SDGs, and at assessing all three sustainable development dimensions (environmental, economic and social); and, Comparability between all five cities and other level or scales as the indicators are consistent in their computation methodologies.

During the assessment process, the metadata established for each of the 231 indicators was carefully pre - evaluated and analysed considering their relation with the CFP scope. The criteria to carry on this pre-selection was based on the principle of significance (positive or negative), e.g. the targets and indicators part of the SDG Goal 2. *End hunger, achieve food security and improved nutrition and promote sustainable agriculture* are not directly affected by any of the CFP activities or outcomes, therefore, was discarded for further analysis. As a result of this pre-selection process, SDGs 5, 10, 14, 16 and 17 targets and indicators were excluded from the assessment. Additionally, with an in-depth analysis of the remaining indicators' metadata, there were pre-selected 44 indicators from the remaining SDGs, as shown in Table 4. On the other hand, the same procedure was taken with the 50 indicators part of the CRI, resulting in a pre-selection of 9 indicators.

Once this pre-selection was made, the indicators were assigned a dimension and an impact category based on the characteristics of each pre-selected indicators following the criteria and examples given in the ICAT Sustainable Development Guidance.

Table 4 Impact categories included and excluded from the assessment boundary

Dimension	Impact category	Relevant?	Significant?	Included?	Brief description and justification for exclusions	Indicator(s) selected for each impact category included in the assessment
Environmental	Air quality and health impacts of air pollution (SDG 3)	Yes	No	No	The project is not expected to identify/elaborate the data related to the impact category. Nonetheless, the CFP partially generated this information as part of the process of data collection and context elaboration.	3.9.1 Mortality rate attributed to household and ambient air pollution
	Water quality (SDG 3)	Yes	No	No	The project is not expected to identify/elaborate the data related to the impact category. Nonetheless, the CFP partially generated this information as part of the process of data collection and context elaboration.	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)
	Water quality (SDG 6)	Yes	Yes	Yes	The CFP generated this information as it was part of the scope of the Water Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	6.3.1 Proportion of wastewater safely treated
	Water quality (SDG 6)	Yes	Yes	Yes	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated at the National Statistics Office	6.3.2 Proportion of bodies of water with good ambient water quality
	Sustainable water management (SDG 6)	Yes	Yes	Yes	The CFP generated this information as it was part of the scope of the Water Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	6.4.1 Change in water-use efficiency over time
	Availability of freshwater (SDG 6)	Yes	Yes	Yes	The CFP generated this information as it was part of the scope of the Water Footprint Assessment and the Sustainability Assessment, and it is information needed for the elaboration of the City Action Plan	6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
	Sustainable water management (SDG 6)	Yes	Yes	Yes	The CFP generated this information as it was part of the scope of the Water Footprint Assessment and the Sustainability Assessment, and it is information needed for the elaboration of the City Action Plan	6.5.1 Degree of integrated water resources management implementation (0–100)
	Sustainable water management (SDG 6)	Yes	Yes	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated by the National Authorities	6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation
	Sustainable water management (SDG 6)	No	No	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated at the National Statistics Office	6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management
	Renewable energy (SDG 7)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the information need to develop the Carbon Footprint Assessment and the elaboration of the emission factor for the country	7.2.1 Renewable energy share in the total final energy consumption
	Energy efficiency (SDG 7)	No	No	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated at the National Statistics Office	7.3.1 Energy intensity measured in terms of primary energy and GDP
	Climate change mitigation (SDG 9)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the scope of the Water Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	9.4.1 CO2 emission per unit of value added
	Treatment of solid waste (SDG 11)	Yes	Yes	yes	The CFP generated this information as it was part of the scope of the Carbon Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities
	Air quality and health impacts of air pollution (SDG 11)	No	Yes	No	The CFP used as reference this information to develop an analisys between the results of the Carbon Footprint and air quality monitoring results	11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)

	Waste generation and disposal (SDG 12)	Yes	Yes	No	The CFP generated this information partially as it was part of the scope of the Carbon Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment
	Waste generation and disposal (SDG 12)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the scope of the Carbon Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	12.5.1 National recycling rate, tons of material recycled
	Land use change, including deforestation, forest degradation, and desertification (SDG 15)	Yes	Yes	No	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	15.1.1 Forest area as a proportion of total land area
	Land use change, including deforestation, forest degradation, and desertification (SDG 15)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	15.3.1 Proportion of land that is degraded over total land area
	Sustainable planning (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Climate Change Indicators (GHG emissions inventory, water resources inventory) ● Inventory of emissions (city) ● Evaluation of the use and pollution of the city's water resources ● Analysis of sustainability of water resources (city) ● Risks and vulnerabilities (city) - Analysis of risks and vulnerabilities of the city
	Land use change, including deforestation, forest degradation, and desertification (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Green Areas per capita
	Infrastructure creation, improvement and depreciation (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to gather this information as part of the formulation of the Action Plan of the city	Water Losses in distribution systems
Social	Liveability and adequate standard of living (SDG 1)	Yes	Yes	No	The project is not expected to identify accessibility to basic services at population level. Nonetheless it partially generated this information as it is needed to identify the consumption of water, electric energy and waste collection.	1.4.1 Proportion of population living in households with access to basic services
	Resilience to dangerous climate change and extreme weather events (SDG 1)	Yes	Yes	No	The project is not expected to identify/elaborate the data related to the impact category. Nonetheless, the CFP partially generated this information as part of the process of data collection and context elaboration.	1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
	Climate change education, public awareness, capacity-building and research (SDG 4)	No	Yes	No	The project is not expected to identify/elaborate the data related to the impact category. Nonetheless, the CFP partially generated this information as part of the process of data collection and context elaboration.	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
	Accessibility and quality of education (SDG 4)	Yes	Yes	No	The project is not expected to identify/elaborate the data related to the impact category. Nonetheless, the CFP partially generated this information as part of the process of data collection and context elaboration.	4.a.1 Proportion of schools with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)
	Access to safe drinking water (SDG 6)	Yes	Yes	Yes	The CFP generated this information as it was part of the scope of the Water Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	6.1.1 Proportion of population using safely managed drinking water services

	Access to adequate sanitation (SDG 6)	No	Yes	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated at the National Statistics Office	6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water
	Access to energy (SDG 7)	Yes	Yes	No	The CFP generated this information partially as it was part of the information need to develop the Carbon Footprint Assessment and the elaboration of the City Action Plan	7.1.1 Proportion of population with access to electricity
	Transport (SDG 9)	Yes	Yes	Yes	The CFP generated this information as it was part of the scope of the Water Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	9.1.2 Passenger and freight volumes, by mode of transport
	Transport (SDG 11)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the scope of the Water Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
	Dimensions of space, population and land (SDG 11)	Yes	Yes	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently been generated at national level	11.3.1 Ratio of land consumption rate to population growth rate
	Access to land (SDG 11)	Yes	Yes	No	The CFP generated this information partially as it was part of the scope of the Carbon Footprint Assessment, and it is information needed for the elaboration of the City Action Plan	11.7.1 Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities
	Community/rural development (SDG 11)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	11.a.1 Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city
	City and community climate resilience (SDG 11)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
	City and community climate resilience (SDG 11)	Yes	No	No	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	11.c.1 Proportion of financial support to the least developed countries that is allocated to the construction and retrofitting of sustainable, resilient and resource-efficient buildings utilizing local materials
	Sustainable planning (SDG 12)	Yes	Yes	No	The CFP is not expected to significantly affect these impact categories.	12.7.1 Number of countries implementing sustainable public procurement policies and action plans
	Sustainable planning (SDG 13)	Yes	Yes	No	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies
	Sustainable planning (SDG 13)	Yes	Yes	No	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)
	Sustainable planning (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Policies and strategies of climate change at local level
	Sustainable planning (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Mitigation Goals
	Sustainable planning (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Adaptation Goals
	Sustainable planning (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Sectorial Municipal Government Strategies Existence of sectoral strategies / policies / municipal plans that contribute to mitigation and / or adaptation (e.g. sustainable transport, sustainable building codes, land use planning plan, etc.)

	Access to information and public awareness (Readiness Indicator)	Yes	Yes	Yes	The CFP is expected to generate this information as part of the formulation of the Action Plan of the city	Generation and transfer of information on climate change Existence and functioning of institutionalized mechanisms (technical committee, work tables, etc.) for exchange of information, knowledge and experience between the GM and scientific institutions and universities that see CC issues
Economic	Government budget (SDG 6)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the elaboration of the City Action Plan	6.a.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan
	Energy independence, security or sovereignty (SDG 7)	Yes	No	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated at the National Statistics Office	7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems
	Economic activity (SDG 8)	Yes	Yes	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently updated at the National Statistics Office	8.1.1 Annual growth rate of real GDP per capita
	Balance of trade (imports and exports) (SDG 8)	Yes	No	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently been generated at national level	8.4.1 Material footprint, material footprint per capita, and material footprint per GDP
	Balance of trade (imports and exports) (SDG 8)	Yes	No	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently been generated at national level	8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
	Balance of trade (imports and exports) (SDG 12)	Yes	Yes	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently been generated at national level	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP
	Balance of trade (imports and exports) (SDG 12)	Yes	Yes	No	The CFP is not expected to significantly affect these impact categories. This data was not collected during the CFP. Furthermore, data is not currently been generated at national level	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP
	Government budget surplus/deficit (SDG 12)	Yes	No	No	The CFP is not expected to significantly affect these impact categories.	12.c.1 Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels
	Sustainable planning (SDG 13)	No	No	No	The CFP is not expected to significantly affect these impact categories.	13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities
	Economic diversification (Readiness Indicator)	Yes	Yes	Yes	The CFP generated this information partially as it was part of the information needed for the elaboration of the City Action Plan	Knowledge of funding sources (international or national)

Subsequently, the evaluating team proceeded with the interviews and on-field visits to develop an in-depth analysis of the pre-selected indicators. These consultations were an important source of information for the analysis of the data the CFP developed to answer the SDGs and CRI selected indicators, and provided with additional inputs and recommendations from the stakeholders to improve the CFP's methodologies and implementation process. Furthermore, these served as a reflective process for the stakeholders (mostly municipal government' and services companies' authorities) about their current efforts towards monitoring, reporting and achieving the SDGs; consequently, stakeholders committed to initiate this process and recognized this assessment as a "first step" to carry through this process. The participation of stakeholders varies at each city, nonetheless, it was guaranteed the participation of key staff that was able to provide with an appropriate input for the assessment. The complete list of participants can be found in Annex 1.

Additionally, consultations were also held with the SASA team (technical experts and coordinators) that participated in the development of the CFP at each city, as they have collected and processed the information and specific numerical data from each city. This process was developed over a workshop day where the SASA team and the assessment evaluator analysed each indicator and its metadata to accurately identify their significance, relevance and comprehensiveness with the CFP. This procedure was developed with the stakeholders as well, nonetheless, the metadata was explained in simpler terms for better comprehension and time-efficient. The outcome of these consultations is shown in Table 4, compiling the answers from each city stakeholders and the SASA team.

As an outcome of the evaluation of indicators and impact categories, a final selection process was carried on prioritizing those indicators that were included in the assessment boundary, as these are in line with the assessment objective. The impact categories were selected considering both positive and negative impacts affected by the CFP. As evidence for determining the significance of impact categories, the assessment includes consultation with experts and stakeholders, prior experience and expert judgment. The justification for exclusion of impact categories is described in Table 4. As a result of this process, the impact assessment was developed based on 25 indicators comprised in 16 impact categories significantly affected by the CFP. This final list was validated with the stakeholders and the SASA team.

Chapter 4: Assessing impacts framework

Once the impact categories to be evaluated have been identified, the next step in the assessment was to identify specific impacts within each impact category. A variety of methods may be used to identify specific impacts resulting from the implementation of the CFP, as for this study the impacts -positive or negative- were assessed on the concept of the CFP either assisting or not the cities to report their progress towards SDGs through stakeholder consultation, literature review, and expert judgment.

Description of baseline and policy scenarios

In order to estimate the impact of the CFP, the study chose the comparison group method, defined by the ICAT Sustainable Development Guidance *as one group or region affected by the policy or action with an equivalent group or region not affected by the policy or action.*

To this end, each specific impact was characterized as positive or negative in relation to a baseline scenario compared to a policy scenario. As part of the qualitive assessment, it was necessary to establish a baseline scenario to conclude whether a value estimated for the policy scenario (CFP scenario) represents an improvement or not towards the reporting of SDGs and CRI selected indicators. Therefore, to establish the baseline scenario of each indicator, the criteria used considered the data availability at the initial stage when each city participated of the CFP. For example, the city of La Paz baseline scenario was determined for 2012, contrary to the city of El Alto, which baseline scenario was calculated for 2018. The baseline scenario timeframe for each city is described in Table 2 and Table 5.

The baseline for this assessment showed that, in most of the indicators and impact categories selected, information or data was not available and/nor computed before the implementation of the CFP. In the remaining indicators, data was scattered across the municipal government and/or service companies directorates, and in some cases the data and information were lost or the authorities were not aware of their existence. This appraisal is the most likely scenario as it demonstrates the real conditions at each city was before the implementation of the CFP.

TABLE 5 BASELINE SCENARIO ASSUMPTIONS

Impact categories	Baseline scenario assumptions
General baseline assumptions	
Description of the baseline scenario and a justification for why it is considered to be the most likely scenario	Due to the scope of the assessment, the baseline was established according the following criteria: ● Data and information existent or available at the time the CFP was implemented that answers to the SDGs. ● Processed information that answers to the SDGs in absence of the CFP.

	• Policies and actions already in place that answers to SDGs before the implementation of the CFP This scenario was selected because it will allow to show the impact of the CFP on generating information to respond to the SDGs and the Readiness Index. This assessment is based on a comparison between the baseline scenario and the scenario post-implementation of the CFP. As for the indicators, evaluation is based on the concept of information generated and/or SDG's/ Readiness Index indicators that can be answered partially by data generated by the CFP. Based on information resulting from the interviews held with CFP experts and Municipal Governments' authorities, we were able to create and validate the baseline suggested of "Non-existent data /scattered data /unprocessed data". This baseline assures that information was either not formulated, processed or collected when the CFP was implemented. The baseline year varies from each city, in the following order: La Paz Phase 1: Dec. 2012 Santa Cruz Phase 2: Jan 2015 Tarija Phase 3: Mar 2016 El Alto, Cochabamba Phase 4: Feb 2018 The impact to be assessed is based on the contribution the CFP gave to the cities by centralizing, processing, and generating data to report to the SDGs and the Readiness Index.
Policies, actions and projects included in the baseline scenario; justification for any implemented or adopted policies, actions or projects with a potentially significant impact that are excluded from a baseline scenario; any planned policies included in the baseline scenario	All the information gathered to establish the baseline described, was validated via interviews and review of the CFP data base. This helped us verify that, at the early stages of implementation of the CFP, there were not policies, actions and projects focussed on generating or reporting data towards SDGs' and the Readiness Index.
Non-policy drivers included in the baseline scenario; justification for any relevant non-policy drivers that are excluded	Not relevant
Rationale for the choice of whether to estimate new baseline values and assumptions or to use published baseline values and assumptions	The new baseline scenario for the CFP presents the information that has been created, collected and processed that respond to SDGs and the Readiness Index indicators' and impact categories chosen. This rationale is based on the concept of constant baseline estimation suggested in the guidance. Therefore, the process of impact evaluation is based on a comparison of baselines and the rationale of existence or non-existence of values.
Impact category specific baseline assumptions	
Access to information and public awareness (Readiness Indicator)	Most municipal governments didn't not produced information relevant to environmental conditions, such as water quality, GHG emissions, among others. This information is usually generated and centralized by National Regulatory Agencies and Statistics Institute. In the case of information shared, it is assumed that no information was shared or communicated with the citizens.

Access to safe drinking water (SDG 6)	Information was generated but no processed and compiled in regards to the city geographical boundaries. Information is generated and processed by water companies outside of the municipal government tuition.
Availability of freshwater (SDG 6)	Information was generated but no processed and compiled in regards to the city geographical boundaries. Information is generated and processed by water companies and national government, which it is outside of the municipal government tuition.
City and community climate resilience (SDG 11)	Information generated and centralized by each municipal government
Climate change mitigation (SDG 9)	Sectors involved in the cities' economy are transport, industry and commerce. Therefore, the baseline and assessment were based under de category Non-specified [ISIC Divisions 22, 31 and 32] considering fuels consumed under these sectors and their activities. The information concerning CO2 emissions for an economy sector was not calculated at local levels (municipal governments), this is available at a national scale based on energy consumption data for all sectors. The GDP is only available at a national scale.
Community/rural development (SDG 11)	Information generated by municipal governments previous to the implementation of the CFP
Economic diversification (Readiness Indicator)	No previous knowledge of alternative source of economic resources at local level
Government budget (SDG 6)	Information was not processed at local level to answer the specifications of the indicator
Infrastructure creation, improvement and depreciation (Readiness Indicator)	The information is not under the tuition of the municipal governments but under the responsibility of the water companies at each city. Nonetheless, specific information about water losses is scattered and needs further processing.
Land use change, including deforestation, forest degradation, and desertification (Readiness Indicator, SDG 15)	Scattered and/or not processed information to answer the indicators of degraded land and green areas.
Renewable energy (SDG 7)	Scattered and/or not processed information to answer the indicators
Sustainable planning (Readiness Indicator)	No information available
Sustainable water management (SDG 6)	No information available
Transport (SDG 11, SDG 9)	Scattered and/or not processed information to answer the indicators
Waste generation and disposal (SDG 6) (SDG 12)	Scattered and/or not processed information to answer the indicators
Water quality (SDG 6)	Scattered and/or not processed information to answer the indicators

As for the elaboration of the CFP scenario, the values considered are based on data collected, formulated or processed during the time the CFP was implemented. In order to ensure the consistency in the methods used to elaborate the CFP scenario and the baseline scenario, the criteria used considered the data availability collected from affected stakeholders, facilities or other affected actors. The CFP scenario as well as the baseline scenario was designed through interviews and on-site visits where each indicator metadata was examined and analyzed to identify the differences between them, thus to identify the impact of the CFP on each impact category. The findings are outlined in detail in the upcoming chapter.

Chapter 5: Estimating impacts ex-post

The estimated net impact of the policy or action will be described in detail for each impact category

Access to information and public awareness

The CFP has definitely positively impacted the generation of information relevant to climate change and communicate the cities' current situation and strategies to address it. Over the interviews with stakeholders, it was possible to validate this impact, where the municipal governments possess reports, scientific data (GHG emissions and water management), action plans and pilot projects. This set of tools are under the tuition of the municipal government given as an outcome of the implementation of the CFP.

It has been noticed that the cities of La Paz and Tarija has used the information generated to establish mitigation and adaptation targets and communicate their strategies to reduce their footprints. On the contrary, the cities of Santa Cruz and El Alto have shown no further progress or use of the information generated as informative material.

Currently, the city of Cochabamba is elaborating an informative brochure that highlights the main results and outcomes of the CFP, as well as the next steps the city will take to manage their footprints.

Access to safe drinking water

The information to answer the indicators part of this category required specific data in regards to water services, access and quality. These data are available at the water companies of each city, as described:

- La Paz - EPSAS: Public Social Enterprise of Water and Sanitation of La Paz
- Santa Cruz - SAGUAPAC - Drinking Water and Sanitary Sewer Service
- El Alto - EPSAS: Public Social Enterprise of Water and Sanitation of La Paz
- Cochabamba - SEMAPA - Municipal service of drinking water and sanitation
- Tarija - COSAALT LTDA - Co-op for water services and sanitation Tarija

These companies have the responsibility to provide a safe-water access to the population of each city, and compiling data in regards to water accessibility and quality. Therefore, the municipal governments don't have this data under their direct administration and its access is limited, only under official channels. Under these circumstances, the CFP has streamlined to collect and process information in regards to water quality, access and services; and provide with an analisys of the current situation of water resources quality and management in the city.

The CFP provides with specific data on:

- Urban drinking water accessible and free from contamination
- Wastewater enters network and reaches treatment plant
- Urban sanitation services improved and sewage access

Availability of freshwater

The CFP has collected information in regards to the basin from where each city's water is sourced. The information was gathered from national government water authorities and water companies of each city to elaborate a sustainability analysis of the freshwater available for each city, developed under the

framework of the Water Footprint methodology. Therefore, the impact of the CFP is positive in regards to generate this information and process the data to answer the indicator.

The information retrieved through the implementation of the CFP answers to the requirements of the computation method established to determine the water stress; accordingly, the CFP database provides with values of the total freshwater withdrawal (TWW) and the total renewable freshwater resources (TRWR), which for the purpose of this SDG indicator, enables the water volumes to be expressed in the same units as the TWW, and then as percentages of the available water resources.

The data retrieved by the CFP compiles the volumes of freshwater extracted from its source (rivers, aquifers) for municipalities and the main sectors of consumption (households, industry and commerce), discharged wastewater and agricultural drainage water. These information answers to both TRWR and TWW indicators.

Accordingly, the CFP impact on this category and its indicator has been positive by generating and processing the information needed to answer this indicator.

City and community climate resilience

Over the interviews, it was validated that the CFP was able to gather and centralize information from cities' governments, independent studies, and other sources, in relation to risk and vulnerabilities to climate change and reduction strategies in the cities. The information, in some cases, was not available through the main sources, nonetheless the CFP was able to determine if local governments have developed local disaster risk reduction strategies under planning instruments such as the Development Territorial Plan.

The city of La Paz has elaborated a disaster risk strategy and structured a directorate under tits organizational structure responsible of risk management and response. The cities of Cochabamba, Santa Cruz, Tarija and El Alto have a directorate responsible of risk management, nonetheless, they have not elaborated a strategy to address them; the Regional Government of each city is in charge of the response towards risk management and the elaboration of the strategy.

The National Government has elaborated a National Risk Management Strategy that addresses all 9 regions of Bolivia, comprising the cities part of this study, nonetheless, the study has a broad scope and fails to provide specific strategies appropriate to each city context.

Additionally, the CFP was able to gather external sources of information such as risk and vulnerability studies and technical reports elaborated outside of the municipal governments' tuition for the cities of Cochabamba and Tarija, as part of the research and baseline elaboration.

Climate change mitigation

The CFP, under the analisys of the Carbon Footprint evaluation of the city, has calculated the GHG emission for the sectors of transport, industry, commerce and households, and performed an analysis of their influence at national level. Before the implementation of the project, this data was not available in the cities, thus the CFP developed it including the emission factors for each emission source. As a result, the cities -who have participated of the CFP- are able to report CO_2 emissions from fuel consuming activities involving manufacturing, transportation, commerce and residential sectors. These data answer partially this indicator (economy intensity), as the computation method requires the GDP at local level; which is only available at a regional level. Under this circumstance, to calculate the total intensity of the

economy, defined as the ratio of total CO_2 emissions from fuel combustion and GDP, the CFP has partially answered to this particular indicator.

Nonetheless, the efforts made to generate the CO2 emissions data and provide the municipal governments with the methodology and capacity to update them, establish a solid base to answer this indicator in the future.

Community/rural development

The metadata for this indicator is not available in the SDGs metadata website, nonetheless UN-HABITAT have elaborated the metadata for its calculation. The indicator is based on the evaluation of three qualifiers: a) responds to population dynamics, b) ensures balanced regional and territorial development, and c) Increase local fiscal space, which have been analysed over the development of the CFP. In particular, these qualifiers were analysed in detail over the elaboration of the Action Plans for each city; the information gathered included Territorial Development Plans at urban scale elaborated according to population projections and needs and budgetary room to provide resources for public purposes, considering regional and national development objectives.

Thus, the CFP was able to identify and collect information about urban and regional plans in line with the requirements of the indicator. In most cases, the cities had development plans that included population projections and resource needs. Furthermore, the Action Plan includes an update of the population projection in line with the geographical boundaries of each city. Most of the time, this data is not available at the National Statistics Institute, it is rather centralized at local level.

Economic diversification

This category is related to Cities Readiness Index developed by SASA

As a result of the implementation of the CFP, the working team was able to transfer capacities and knowledge to the cities authorities about new sources of funding and/or economic aid. As for, the impact of the CFP was highly positive, as it was corroborated during the interviews, now government authorities are aware of them and actively applying to access them.

As an example of this positive impact, the governments of Tarija and Santa Cruz were able to access to funding sources for the implementation of projects from the portfolio identified in the Action Plan.

Government budget

The CFP has compiled information regarding water- and sanitation- Official Development Assistance (ODA), based on an extensive research and interviews with city planners, authorities from water companies and funding stakeholders for the elaboration of the Action Plan project portfolio. As a result of this process, the CFP was able to collect, compile and process economic information in regards to each municipal government and water companies' budget, present and forecasted, considering the Action Plan project portfolio. The CFP developed an analysis of the funding sources identifying their origin and availability. This input for the Action Plan of each city is highly valuable and impact positively the municipal governments authorities, as it provides with a clear overview of current influence of ODA in their development budget. This allows the municipal authorities to promote the research and application to available ODA and/or request funds from national authorities to be assign for their city.

Under this process, the CFP compiles information about the amount of development assistance part of each city yearly development budget assign for the water (availability and distributions services), transport, energy and waste sector.

Infrastructure creation, improvement and depreciation

This category is related to Cities Readiness Index developed by SASA.

The CFP has collected information in regards to water losses from where each city's water supply system. The information was gathered from national government water authorities and water companies to elaborate a sustainability analysis of the freshwater available for each city, developed under the framework of the Water Footprint methodology. The analysis resulting of the CFP provides with a specific data related to the state of basic infrastructure and the percentage of losses in the system of distribution of drinking water.

Therefore, the impact of the CFP is positive in regards to generate this information and process the data to answer the indicator.

Land use change, including deforestation, forest degradation, and desertification

It was recognized that the CFP was able to gather information scattered over various directions in the cities' governments administration that partially answers to this indicator metadata. As the quantifying methodology for this indicator is based on the evaluation of Land cover, Land productivity and Carbon stock in order to determine the extent of land that is degraded over total land area. Considering the requirements of each sub-indicator, the CFP was able to generate information about the distribution of land resources according to its purposes (forestry, human settlements) which answers the Land cover sub-indicator rationale. The data requirement for the rest of the sub-indicators can be only found at national level, which doesn't apply to each city context and characteristics. Furthermore, the CFP was able to generate information about green areas available at the cities, as a source of information for reforestation rates and establish reforestation goals. Therefore, this data answer partially the indicator of this category.

On the other hand, the Action Plan project portfolio contains actions that promote the reduction of land degradation, conservation of urban forest and reforestation which at a long-term will positively influence the progress of the city towards reducing land degradation, and report progress towards this indicator.

Renewable energy

The CFP developed the emission factor for electric energy at national level, during this process it was identified the share of renewable energy part of the electric mix of the country and the cities connected to it.

The share of renewable energy in the Bolivian mix was calculated based on the reports from the National Distribution Office Committee (CNDC), which is responsible for the administration of the energy generation in the country. The value was calculated under the methodology requirement established in the metadata of this indicator. Under this evaluation rationale, the indicator can be answered with the information generated by the CFP.

Sustainable planning

This category is part of the Cities Readiness Index developed by SASA.

The Project shows a highly positive impact in this category, as all the indicators are answered by the products of the CFP, which includes:

- Mitigation and adaptation goals
- Inventory of emissions (city)
- Evaluation of the use and pollution of the city's water resources
- Analysis of sustainability of water resources (city)
- Risks and vulnerabilities (city) - Analysis of risks and vulnerabilities of the city
- Sustainable water management

This category compiles 2 indicators from the SDG 6: 6.4.1 and 6.5.1. The impacts on each indicator varies, therefore the impact will be described separately for each indicator.

For the 6.4.1 indicator of Change in water-use efficiency over time, the CFP was able to compute the water use over its use for the service sectors (categories ISIC E and ISIC G-T). The rationale behind this indicator consists in providing information on the efficiency of the economic and social usage of water resources, i.e. value added generated by the use of water in the main sectors of the economy, and distribution network losses, being services sectors one of the three main sectors (1.agriculture; forestry; fishing (ISIC A), hereinafter “agriculture”; 2.mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; constructions (ISIC B, C, D and F), hereinafter “MIMEC”;, and 3. all the service sectors (ISIC E and ISIC G-T), hereinafter “services”)

The water use for the services sectors was calculated considering the definition given of annual quantity of water used primarily for the direct use by the population. The data compiles water used for distribution, water collection, treatment and supply volumes. This information was gathered mainly from water companies’ annual reports. Considering this, the impact of the CFP on this indicator is partial, as it does not provide with all the data requires to calculate its value.

In regards to 6.5.1 indicator, degree of integrated water resources management implementation (0-100), the CFP gathered information at national and sub-national level to answer the 32 questions part of the UNEP questionnaire to assess the degree of implementation of Integrated Water Resources Management (IWRM). The information was gathered to elaborate the Water Footprint and Sustainability analysis for each city, where it was considered data at national, regional and local level. Therefore, it is considered that the CFP has a positive impact for the indicator of this category.

Transport

This category compiles 2 indicators from the SDG 11 and 9: 11.2.1 and 9.1.2. The impacts on each indicator varies, therefore the impact will be described separately for each indicator.

For the indicator 11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities, the CFP was able to analyse the transport sector at each city. As a result of this analysis, the CFP was able to identify the accessibility to convenient transportation and study the availability of different types of public transportation. Nonetheless, the methodology appointed by UN-HABITAT requires data and calculations that were not evaluated under the CFP scope.

On the other hand, for the 9.1.2 indicator, the CFP was able to gather information to answer transport statistics by transportation type and freight volumes by mode of transport, under urban the context.

Nonetheless the information partially answers the requirements of the indicators such as number of passengers by sex, age and persons with disabilities.

Waste generation and disposal

As part of the evaluation of the Carbon Footprint of the waste sector, the CFP collected and analysed information regarding treatment of solid waste and disposal. The information generated comprises waste generation and collection rates, type of treatment and disposal, and referential recycling rates which answers the requirements to estimate the percentage of urban solid waste regularly collected and with adequate final discharge with regards to the total waste generated by the city.

Water quality

The CFP has collected information in regards to water quality and wastewater treatment at each city, compiling indicators 6.3.1 and 6.3.2 from the SDG 6. The information was gathered from national government water authorities and water companies from each city to develop the Water Footprint indicator and the Water Sustainability Assessment. Therefore, the impact of the CFP is positive in regards to generate this information and process the data to answer the indicator.

The data compiles volumes of wastewater safely treated and water quality of water body types according to the standards required by each indicator metadata.

Overall impact of the CFP in the progress of cities towards reporting the SDGs

Considering the process undertaken to achieve the results described previously, the impact of the CFP in the cities has been significant and beneficial towards initiating the cities process of reporting their progress towards the SDGs. The assessment showed that the 5 cities considered on this evaluation have not started to align and report their progress towards SDGs and CRI previous the implementation of the CFP, therefore, after the implementation of the CFP municipal governments have started indirectly to localize 44 SDG indicators and 9 CRI indicators.

Furthermore, through this process, stakeholders were familiarized with the SDGs, their goals, targets and indicators, and the methodology to quantify them. This has motivated the stakeholders to start collecting numerical data to establish a baseline and goals for the city to each indicator considered in this study.

Chapter 6: Monitoring and reporting

Considering the high-level of influence this assessment had in the stakeholders, and the efforts made to localize the SDGs indicators, the assessment focussed on providing with a monitoring scheme adequate to each city context and environment to initiate the process of cities to operationalize these ambitious global goals.

The monitoring mechanism is a result of a localization procedure of the SDGs selected, which refers to the process of adapting, implementing, and monitoring the SDGs at the local level. Nearly all the SDGs have targets that will depend on local government action; therefore, this process allows local authorities and local stakeholders to adapt and implement these targets within their cities.

In order to develop this process, it was necessary to contextualize the metadata of each indicator according to the city's condition and establish a monitoring frequency suitable to the city's administrative processes. These were identified and established in coordination with the stakeholders

and municipal government authorities. The monitoring scheme provides the local authorities with the Source of data, Monitoring frequency, Measurement method and Responsible entity or institution.

It was intended to establish a Baseline value and a Goal value for each indicator, nonetheless, the municipal governments remain in the process of gathering data to establish the baselines values. On the other hand, the municipal governments procedures to set goals involve bureaucratic procedures including various municipal directorates that take long periods of time.

In view of all of these aspects and results from interviews an SDG monitoring scheme was elaborated for the pre-selected indicators, therefore, the municipal governments can broaden the scope of their SDG reporting. The monitoring scheme can be found in Annex 2. As for the CRI, the indicators selected are included in the monitoring scheme, nonetheless, the rest of the indicators can be found in Annex 3, in case the municipal government chooses to report all of the set of indicators part of the index.

Chapter 7: Observations and recommendations to report progress towards SDGs at city level

Cities and local governments, in addition to other non-government stakeholders, are now recognized as key implementers of the SDGs as the core of the 2030 Agenda for Sustainable Development, therefore, cities and human settlements will be key to achieving the global SDGs. The ICAT Guidance for Sustainable Development is informed by and compatible with the SDGs and has been proved to help users to assess the impact of policies and actions in relation to SDGs, as the CFP.

Over this assessment, the SDGs have shown to be practical and useful political agenda for mayors and city leaders to increase prosperity, promote social inclusion, and enhance resilience and environmental sustainability. In this way the SDGs can capture large parts of the political agenda in virtually every city. When aligned with existing planning frameworks and development priorities, they can strengthen development outcomes and provide additional resources for local governments.

As a result of this assessment, the cities are advised to follow these basic steps for getting started with SDG implementation, reporting and monitoring in cities:

i. Initiate an inclusive and participatory process: Raising awareness of the SDGs and engaging stakeholder collaboration to achieve the goals and targets.
ii. Set the local SDG agenda: Translating the global SDGs into an ambitious yet realistic agenda that is tailored to the local development context.
iii. Planning for SDG implementation: Deploying goal-based planning principles and mechanisms for more sustainable social, economic and environmental outcomes.
iv. Monitoring and evaluation: Ensuring that SDG implementation remains on track, and developing local capacity for more responsive and accountable governance.

Concentrating sustainable development efforts in cities is not only a practical imperative, it is also a strategic choice. Urban areas occupy a tiny proportion of the global land mass but have a disproportionate impact on development that can be leveraged for large gains in the fight against poverty, inequality and climate change. As clearly recognized in the report of the High-Level Panel of

Eminent Persons for the Post-2015 Development Agenda[6], “cities are where the battle for sustainable development will be won or lost.”

[6] http://www.post2015hlp.org/thereport/)

ANNEX

Annex 2

SDGs or other goals	Corresponding targets	Indicator(s)	Source of data		Monitoring frequency	Measurement method
Goal 1. End poverty in all its forms everywhere	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	1.4.1 Proportion of population living in households with access to basic services	General Sources	Household surveys including DHS, MICS, LSMS, the censuses and administrative data at regional level. World Bank stadistics report Annual reports from Water, Energy and Fuels control and regulatory authorities	The monitoring and reporting of the indicator can be repeated at regular intervals of 3 to 5 years each. Measurement and reporting need to be feasible on a global basis, i.e. not so expensive that the costs are unreasonable particularly at country level.	Proportion of Population with access to basic services two computation stages that we have applied depending on the level at which data is collected. Step 1 is getting proportion of population that have access to ALL the basic services mentioned bellow from primary data sources such as household surveys and census. Drinking water service Sanitation service Hygiene facilities Electricity Clean fuels Mobility Waste collection Health care Education Broadband internet Total population with access to ALL BS
			La Paz	Municipal Annual Stadistics Report Territorial Integral Development Plan for the Municipality of La Paz PTDI GAMLP 2016-2020 Annual Report EPSAS		
			Cochabamba	Territorial Integral Development Plan for Cochababa PTDI GAMC 2016-2020 Annual Report SEMAPA		
			Santa Cruz	Territorial Integral Development Plan for Santa Cruz PTDI GAMSC 2016-2020 Annual Report SAGUAPAC		
			El Alto	Territorial Integral Development Plan for the Municipality of El Alto PTDI GAMEA 2016-2020 Annual Report EPSAS		
			Tarija	Territorial Integral Development Plan for the Municipality of El Alto PTDI GAMEA 2016-2020 Annual Report COSSALT		
Goal 1. End poverty in all its forms everywhere	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce	1.5.4 Proportion of local governments that adopt and implement local	General Sources	The official counterpart(s) at the country level will provide National Progress Report of the Sendai Monitor Vice Ministry of Civil Defense - VIDECI National Risk Management Program Report NATIONAL REPORT ON DISASTER REDUCTION IN BOLIVIA	Every year	By city (applying sub-national administrative units) Target A: Number of [deaths / deceased] and [missing [persons] / presumed dead] due to hazardous events per 100,000.] Target B: Number of directly affected people attibuted to disaster, per

	their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters	disaster risk reduction strategies in line with national disaster risk reduction strategies	La Paz	Annual Report from Secretariat/Directorate responsible		100.000 population Direct economic loss = (a) Number of physical assets affected (e.g. number of facilities damaged) * (b) Size of the physical assets * (c) Unit Cost (e.g. per square meters, per kilometres, per hectare) Target C: [Direct economic loss due to hazardous events [in relation to global gross domestic product.] Target D: Index of Critical Infrastructure Damage and Service Interruptions = number of times interruption or damage occurs/ population * 100,000 Target E: [Number of countries and local governments conducting (independent) periodic outcome reviews of the implementation of national and local DRR strategies.] Target G: [Multi-hazard risk information system capable of providing information in a simple and usable format to common people] [Number of programmes to enhance awareness, disaster risk information and risk assessment.] [Percentage of local communities trained in community based multi hazard early warning management system and response.] By city (applying sub-national administrative units) Target A: Number of [deaths / deceased] and [missing [persons] / presumed dead] due to hazardous events per 100,000.] Target B: Number of directly affected people attibuted to disaster, per 100.000 population Direct economic loss = (a) Number of physical assets affected (e.g. number of facilities damaged) * (b) Size of the physical assets * (c) Unit Cost (e.g. per square meters, per kilometres, per hectare) Target C: [Direct economic loss due to hazardous events [in relation to global gross domestic product.] Target D: Index of Critical Infrastructure Damage and Service Interruptions = number of times interruption or damage occurs/ population * 100,000 Target E: [Number of countries and local governments conducting (independent) periodic outcome reviews of the implementation of national and local DRR strategies.] Target G: [Multi-hazard risk information system capable of providing information in a simple and usable format to common people] [Number of programmes to enhance awareness, disaster risk information and risk assessment.] [Percentage of local communities trained in community based multi hazard early warning management system and response.]
			Cochabamba	Annual Report from Secretariat/Directorate responsible Vulnerability study developed for the city of Cochabamba - BID		
			Santa Cruz	General Sources		
			El Alto	Annual Report from Secretariat/Directorate responsible		
			Tarija	General sources and Departamental Government Risk Agencies report		
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to household and ambient air pollution	General Sources	Reports from the World Health Organization Reports form the National Ministry of health National Stadistic Report from INE Reports from RED MONICA	Yearly	The mortality attributable to the joint effects of household and ambient air pollution can be expressed as: Number of deaths, Death rate. Death rates are calculated by dividing the number of deaths by the total population (or indicated if a different population group is used, e.g. children under 5 years). Attributable mortality is calculated by first combining information on the increased (or relative) risk of a disease resulting from exposure, with information on how widespread the exposure is in the population (e.g. the annual mean concentration of particulate matter to which the population is exposed, proportion of population relying primarily on polluting fuels for cooking). This allows calculation of the 'population attributable fraction' (PAF), which is
			La Paz	Reports from the Municipal Government Health Directorate		
			Cochabamba			
			Santa Cruz			
			El Alto			
			Tarija			

						the fraction of disease seen in a given population that can be attributed to the exposure (e.g in that case of both the annual mean concentration of particulate matter and exposure to polluting fuels for cooking). Applying this fraction to the total burden of disease (e.g. cardiopulmonary disease expressed as deaths), gives the total number of deaths that results from exposure to that particular risk factor (in the example given above, to ambient and household air pollution).
Goal 3. Ensure healthy lives and promote well-being for all at all ages	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contaminatio n	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)	General Sources	Reports from the World Health Organization Reports form the National Ministry of health National Stadistic Report from INE	Ongoing	The methods with agreed international standard have been developed, reviewed and published in various documents: http://www.who.int/water_sanitation_health/gbd_poor_water/en/ http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4255749/
			La Paz	Reports from Municipal Government Health Directorate Report from EPSAS		
			Cochabam ba	Reports from Municipal Government Health Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Health Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Health Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Health Directorate Report from COSSALT		
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development , including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development , including gender equality and human rights, are mainstream ed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	General Sources	UNESCO Member States report on the implementation of the 1974 Recommendation following the revised guidelines for the 6th Consultation (2016) which includes a questionnaire. Reports from the Ministry of Education and reports from the Social-productive projects - PSP	Periodic reports every 4 years,	The method of reporting this indicator has still to be defined. It will be based on an evaluation of reports submitted by countries describing how they are mainstreaming global citizenship education and education for sustainable development in their education policies and systems.
			La Paz	Reports from Municipal Government Education Directorate		
			Cochabam ba	Reports from Municipal Government Education Directorate		
			Santa Cruz	Reports from Municipal Government Education Directorate		
			El Alto	Reports from Municipal Government Education Directorate		
			Tarija	Reports from Municipal Government Education Directorate		

Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all	4.a.1 Proportion of schools with access to (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)	General Sources	Administrative data from schools and other providers of education or training. Reports from the Ministry of Education and reports from the Social-productive projects - PSP	January each year (for electricity, water, sanitation and handwashing facilities). End of year (for Internet and computers).	The percentage of schools by level of education (primary education) with access to the given facility or service The number of schools in a given level of education with access to the relevant facilities is expressed as a percentage of all schools at that level of education. PSn,f = Sn,f Sn where: PSn,f = percentage of schools at level n of education with access to facility f Sn,f = schools at level n of education with access to facility f Sn = total number of schools at level n of education
			La Paz	Reports from Municipal Government Education Directorate		
			Cochabamba	Reports from Municipal Government Education Directorate		
			Santa Cruz	Reports from Municipal Government Education Directorate		
			El Alto	Reports from Municipal Government Education Directorate		
			Tarija	Reports from Municipal Government Education Directorate		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Proportion of population using safely managed drinking water services	General Sources	The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) National statistics offices, Ministries of water, sanitation, health, environment. Regulators of water and sanitation services.	biennial data collection cycle begins in October during an even year	Proportion of population using safely managed drinking water services proportion of population using an improved basic drinking water source 'Improved' drinking water sources include: piped water into dwelling, yard or plot; public taps or standpipes; boreholes or tubewells; protected dug wells; protected springs; packaged water; delivered water and rainwater.
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of	6.2.1 Proportion of population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water	General Sources	The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) National statistics offices, Ministries of water, sanitation, health, environment. Regulators of water and sanitation services.	biennial data collection cycle begins in October during an even year	Population with a basic handwashing facility: a device to contain, transport or regulate the flow of water to facilitate handwashing with soap and water in the household
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		

	women and girls and those in vulnerable situations		Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally	6.3.1 Proportion of wastewater safely treated	General Sources	National statistics offices, Ministries of water, sanitation, health, environment. Regulators of sanitation services Data on volumes of industrial wastewater can be estimated from inventories of industries, which will be available in the majority of Member States disaggregated by ISIC classifications. The breakdown of treated wastewater can be calculated based on compliance records, related to national standards. Unless verified otherwise, through audited compliance records, the waste generated will be considered untreated	monthly	Proportion of wastewater generated by households and by economic activities which is safely treated based on treatment ladders as defined by the SEEA: (http://unstats.un.org/unsd/envaccounting/water.asp, and International Recommendations for Water Statistics and IRWS: http://unstats.un.org/unsd/envaccounting/irws/irwswebversion.pdf) compared to total wastewater generated by households and economic activities.
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and	6.3.2 Proportion of bodies of water with good ambient water quality	General Sources	GEMS/Water National Focal Points in relevant Ministries, Water Authorities, etc. or their nominated representative. water quality monitoring data from research or monitoring programmes	monthly	Proportion of water bodies in the country that have good ambient water quality "Good" indicates an ambient water quality that does not damage ecosystem function and human health according to core ambient water quality parameters. The indicator can be disaggregated by water body type (river, lake, groundwater) and river basin district. This disaggregated data can support informed decision-making at the national and sub-national scale to monitor and improve water quality management measures.
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		

	safe reuse globally		El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1 Change in water-use efficiency over time	General Sources	National Statistical Office (INE), particularly for the economic data. administrative data collected at country level by the relevant institutions, either technical (for water and irrigation) or economic (for value added). Those data are then compiled by FAO, World Bank, UNSD and other international institutions, harmonized and published in sectoral databases such FAO's AQUASTAT, WB's Databank and UNSD's UNdata.	monthly	Water Use Efficiency (WUE) is defined as the volume of water used divided by the value added of a given major sector The unit of the indicator is expressed in Value/Volume, commonly USD/m3 Services water supply efficiency is calculated as the service sector value added (ISIC 36-39 and ISIC 45-98) divided by water used for distribution by the water collection, treatment and supply industry (ISIC 36), expressed in USD/m3
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.2 Level of water stress: freshwater withdrawal as a proportion of available freshwater resources	General Sources	ministries of water resources, agriculture, or environment national ministries and institutions having water-related issues in their mandate, such as ministries of water resources, agriculture, or environment. Data are mainly published within national water resources and irrigation master plans, national statistical yearbooks and other reports (such as those from projects, international surveys or results and publications from national and international research centres)	monthly	Freshwater withdrawal as a proportion of available freshwater resources is the ratio between total freshwater withdrawn by all major sectors and total renewable freshwater resources, after taking into account environmental water requirements The indicator is computed as the total freshwater withdrawn (TWW) divided by the difference between the total renewable freshwater resources (TRWR) and the environmental water requirements (Env.), multiplied by 100 All variables are expressed in km3 /year (109 m3 /year) water withdrawa intensity
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		

			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.1 Degree of integrated water resources management implementation (0–100)	General Sources	National focal points selected by each country Ministry of Water in coordination with Ministry of Environment, Ministry of Finance, Ministry of Planning, Ministry of Lands and Agriculture, Ministry of Industry and Mining etc As water issues, and water management issues in particular, cut across a wide number of sectors, often overseen by different ministries and other administrative bodies at national or other levels, the process should be inclusive. Major stakeholders should be involved in order to contribute to well informed and objective answers to the questionnaire.	Yearly	Degree of implementation of Integrated Water Resources Management (IWRM), measured in per cent (%) from 0 (implementation not yet started) to 100 (fully implemented) is currently being measured in terms of different stages of development and implementation o Integrated Water Resources Management (IWRM) The survey contains 32 questions divided into the four main components described above To further aid interpretation and comparison, the indicator results can be categorized in a similar way to the survey questions: Degree of implementation = • Very low (0-9.9) • Low (10-29.9) • Medium-low (30-49.9) • Medium-high (50-69.9) • High (70-89.9) • Very high (90-100)
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate	6.5.2 Proportion of transboundary basin area with an operational arrangement for water cooperation	General Sources	Regular reporting contributing to the information collection available to all countries at the ministries or agencies responsible for water resources	Yearly	The proportion of transboundary basin area with an operational arrangement for water cooperation is defined as the proportion of transboundary basins area within a country with an operational arrangement for water cooperation. It is derived by adding up the surface area in a country of those transboundary surface water catchments and transboundary aquifers (i.e. 'transboundary' basins) that are covered by an operational arrangement and dividing the obtained area by the aggregate total area in a country of all transboundary basins (both catchments and aquifers). The result is multiplied by 100 to obtain it expressed as percentage share.
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 6. Ensure availability and sustainable management of water and sanitation for all	6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting,	6.a.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan	General Sources	UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) provides information on governance, monitoring, human resources, and financing in the water, sanitation, and hygiene (WASH) sector	UN-Water GLAAS survey is currently conducted on a biennial basis	Amount of water- and sanitation-related official development assistance that is part of a governmentcoordinated spending plan is defined as the proportion of total water and sanitation-related Official Development Assistance (ODA) disbursements that are included in the government budget
			La Paz	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		

	desalination, water efficiency, wastewater treatment, recycling and reuse technologies		Cochabamba	Reports from Municipal Government Water and Sanitation Directorate Report from SEMAPA		
			Santa Cruz	Reports from Municipal Government Water and Sanitation Directorate Report from SAGUAPAC		
			El Alto	Reports from Municipal Government Water and Sanitation Directorate Report from EPSAS		
			Tarija	Reports from Municipal Government Water and Sanitation Directorate Report from COSSALT		
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1 Proportion of population with access to electricity	General Sources	Global Tracking Framework report (2013) World Bank household surveys (and occasionally censuses), Annual report from Distribution Committee of Energy Annual report from Authority of Regulation and Social Control of Electricity (AE)	monthly	Proportion of population with access to electricity is the percentage of population with access to electricity Disaggregation of access to electricity by rural or urban place of residence is possible for all countries.
			La Paz	Reports from energy company DELAPAZ		
			Cochabamba	Reports from energy company ELFEC		
			Santa Cruz	Reports from energy company EMDEECRUZ S.A.		
			El Alto	Reports from energy company DELAPAZ		
			Tarija	Reports from energy company SETAR		
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	General Sources	Global Tracking Framework report (2013) World Bank INE	annual basis	The renewable energy share in total final consumption is the percentage of final consumption of energy that is derived from renewable resources.
			La Paz	Reports from energy company DELAPAZ		
			Cochabamba	Reports from energy company ELFEC		
			Santa Cruz	Reports from energy company EMDEECRUZ S.A.		
			El Alto	Reports from energy company DELAPAZ		
			Tarija	Reports from energy company SETAR		
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all	7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology	7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems	General Sources	OECD: annual data from 1960 onwards (see above). IRENA: annual data from 2009 onwards	Data for a year is collected during the following year	Total ODA and OOF flows to developing countries quantify the public financial effort (excluding expor credits) that donors provide to developing countries for renewable energies. The additional flows (from the IRENA database) capture the flows to non-ODA Recipients in developing regions, flows from countries and institutions not currently reporting to the DAC and certain other types of flows, such as export credits.
			La Paz	Report from Municipal Secretariat of Planning and Territorial Development		
			Cochabamba	Report from Municipal Secretariat of Planning and Territorial Development		
			Santa Cruz	Report from Municipal Secretariat of Planning and Territorial Development		
			El Alto	Report from Municipal Secretariat of Planning and Territorial Development		
			Tarija	Report from Municipal Secretariat of Planning and Territorial Development		

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries	8.1.1 Annual growth rate of real GDP per capita	General Sources	The underlying annual GDP estimates in domestic currency are collected from countries or areas annually through a national accounts questionnaire (NAQ), while the underlying population estimates are obtained from the UN Population Division on https://esa.un.org/unpd/wpp/Download/Standard/Population/	Each year	Annual growth rate of real Gross Domestic Product (GDP) per capita is calculated as the percentage change in the real GDP per capita between two consecutive years. Real GDP per capita is calculated by dividing GDP a constant prices by the population of a country or area. The data for real GDP are measured in constant US dollars to facilitate the calculation of regional and global aggregates
			La Paz	Report from Municipal Secretariat of Planning and Territorial Development		
			Cochabamba	Report from Municipal Secretariat of Planning and Territorial Development		
			Santa Cruz	Report from Municipal Secretariat of Planning and Territorial Development		
			El Alto	Report from Municipal Secretariat of Planning and Territorial Development		
			Tarija	Report from Municipal Secretariat of Planning and Territorial Development		
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with developed countries taking the lead	8.4.1 Material footprint, material footprint per capita, and material footprint per GDP	General Sources	The global material flows database is based on country material flow accounts from the European Union and Japan and estimated data for the rest of the world. Estimated data is produced on the bases of data available from different national or international datasets in the domain of agriculture, forestry, fisheries, mining and energy statistics. International statistical sources for DMC and MF include the IEA, USGS, FAO and COMTRADE databases.	Yearly	Material Footprint (MF) is the attribution of global material extraction to domestic final demand of a country. The total material footprint is the sum of the material footprint for biomass, fossil fuels, metal ores and non-metal ores.
			La Paz	Municipal Annual Stadistics Report Territorial Integral Development Plan for the Municipality of La Paz PTDI GAMLP 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			Cochabamba	Territorial Integral Development Plan for Cochababa PTDI GAMC 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			Santa Cruz	Territorial Integral Development Plan for Santa Cruz PTDI GAMSC 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			El Alto	Territorial Integral Development Plan for the Municipality of El Alto PTDI GAMEA 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			Tarija	Territorial Integral Development Plan for the Municipality of El Alto PTDI GAMEA 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-Year Framework of Programmes on Sustainable Consumption and Production, with	8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	General Sources	Estimated data is produced on the bases of data available from different national or international datasets in the domain of agriculture, forestry, fisheries, mining and energy statistics	Yearly	Domestic Material Consumption (DMC) is a standard material flow accounting (MFA) indicator and reports the apparent consumption of materials in a national economy. It is calculated as direct imports (IM) o material plus domestic extraction (DE of materials minus direct exports (EX) of materials measured in metric tonnes. DMC measure the amount of materials that are used in economic processes. It does not include materials that are mobilized the process of domestic extraction but do not enter the economic process. DMC is based on official economic statistics and it requires some modelling to adapt the source data to the methodological requirements of the MFA. The accounting standard and accounting methods are set out in the EUROSTAT guidebooks for MFA accounts in the latest edition of 2013. MFA accounting is also part of the central framework of the System of integrated Environmental-Economic Accounts (SEEA).
			La Paz			
			Cochabamba			
			Santa Cruz			
			El Alto			
			Tarija			

	developed countries taking the lead					
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all	9.1.2 Passenger and freight volumes, by mode of transport	General Sources	International Transport Forum (ITF) collects data on transport (rail and road) statistics on annual basis from all its Member countries Reports from the Ministry of transportation	Every year	For road and rail transport statistics Passenger and freight volumes is the sum of the passenger and freight volumes reported for the air carriers in terms of number of people and metric tonnes of cargo respectively. Sum of the passenger and freight volumes reported for the air carriers through ICAO Air Transport Reporting Forms and grouped by Member States of ICAO
			La Paz	Transportation Development Plan for the city Studies from GIZ, CAF		
			Cochabamba	Transportation Development Plan for the city Studies from GIZ, CAF		
			Santa Cruz	Transportation Development Plan for the city Studies from GIZ, CAF		
			El Alto	Transportation Development Plan for the city Studies from GIZ, CAF		
			Tarija	Transportation Development Plan for the city Studies from GIZ, CAF		
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities	9.4.1 CO2 emission per unit of value added	General Sources	International Energy Agency (IEA) database Fuel and Energy National Autorities Data on total CO2 emissions from fuel combustion, also disaggregated by sector, are taken from the International Energy Agency (IEA) database (IEA CO2 Emissions from Fuel Combustion, 2017 Statistics: https://www.iea.org/statistics/relateddatabases/co2emissionsfromfuelcombustion/). The IEA produces the indicator on total CO2 emissions/GDP, based on secondary sources for GDP (OECD National Accounts and World Bank Development indicators). UNIDO maintains MVA database. Figures for updates are obtained from national account estimates produced by UN Statistics Division (UNSD).	Data for a year is collected during the following year	Carbon dioxide (here after, CO2) emissions per unit value added is an indicator computed as ratio between CO2 emissions from fuel combustion and the value added of associated economic activities. The indicator can be computed for the whole economy (total CO2 emissions/GDP) or for specific sectors, notably the manufacturing sector (CO2 emissions from manufacturing industries per manufacturing value added (MVA). CO2 emissions per unit of GDP are expressed in kilogrammes of CO2 per USD constant 2010 PPP GDP. CO2 emissions from manufacturing industries per unit of MVA are measured in kilogrammes of CO2 equivalent per unit of MVA in constant 2010 USD. CO2 emissions from fuel combustion are estimated based on energy consumption and on the IPCC Guidelines. The total intensity of the economy is defined as the ratio of total CO2 emissions from fuel combustion and GDP. The sectoral intensity is defined as CO2 emission from manufacturing (in physical measurement unit such as tonnes) divided by manufacturing value added (MVA) in constant 2010 USD.
			La Paz	Reports from Secretariat of Planning and Territorial Development Reports from Secretariat of Sustainable Development		
			Cochabamba	Reports from Secretariat of Planning Reports from Secretariat of Sustainable Development		
			Santa Cruz	Reports from Secretariat of Planning Reports from Secretariat of Environment and Sustainable Development		
			El Alto	Reports from MUNICIPAL SECRETARIAT OF Urban PLANNING AND INFRASTRUCTURE Reports from MUNICIPAL SECRETARIAT OF WATER, SANITATION, ENVIRONMENTAL AND RISKS MANAGEMENT Reports from MUNICIPAL SECRETARIAT OF SUSTAINABLE URBAN MOBILITY		
			Tarija	Reports from SECRETARIAT FOR THE ENVIRONMENT AND TERRITORIAL MANAGEMENT		

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities	General Sources	City administration or service providers, Census The actual and recommended data sources for this indicator are the following: - Data on location of public transport stops in city: city administration or service providers, GIS data - Dwelling units within 500m of public transport stops: Census, GIS data - Number of residents per dwellings unit: Census/household survey - Household surveys that collect information on the proportion of households that declare they have access to public means of transport within 0.5 km. These surveys can also collect information about the quality of the service.	annual interval,	This indicator will be monitored by the proportion of the population that has convenient access to public transport. The access to public transport is considered convenient when an officially recognized stop is accessible within a distance of 0.5 km from a reference point such as a home, school, work place, market, etc. Additional criteria for defining public transport that is convenient include: a. Public transport accessible to all special-needs customers, including those who are physically, visually, and/or hearing-impaired, as well as those with temporary disabilities, the elderly, children and other people in vulnerable situations. b. Public transport with frequent service during peak travel times c. Stops present a safe and comfortable station environment Quantifiable Derivatives: - Proportion of urban area that has convenient access to public transport. - Proportion of population/urban area that has convenient access to public transport stop with universal accessibility for people with disabilities. - Proportion of population/urban area that has frequent access to public transport during peak hours. - Proportion of population/urban area that has frequent access to public transport during off-peak hours. - Proportion of urban central/suburban area that has convenient access to public transport
			La Paz	Transportation Development Plan for the city Studies from GIZ, CAF		
			Cochabamba	Transportation Development Plan for the city Studies from GIZ, CAF		
			Santa Cruz	Transportation Development Plan for the city Studies from GIZ, CAF		
			El Alto	Transportation Development Plan for the city Studies from GIZ, CAF		
			Tarija	Transportation Development Plan for the city Studies from GIZ, CAF		
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries	11.3.1 Ratio of land consumption rate to population growth rate	General Sources	Data for this indicator is available for all cities and countries (UN DESA population data) and satellite images from open sources	intervals of 5 years,	It is also used to capture various dimensions of land use efficiency: economic (proximity of factors of production); environmental (lower per capita rates of resource use and GHG emissions); social (reduced travel distance and cost expended) The formula to estimate the ratio of land consumption rate to population growth rate (LCRPGR) is provided as follows: LCRPGR=(((LN(Urb_(t+n)/Urb_t))/y))/((LN(Pop_(t+n)/Pop_t)/y))) two components of population growth and land consumption rate
			La Paz	Report from Municipal Secretariat of Planning and Territorial Development		
			Cochabamba	Report from Municipal Secretariat of Planning and Territorial Development		
			Santa Cruz	Report from Municipal Secretariat of Planning and Territorial Development		
			El Alto	Report from Municipal Secretariat of Planning and Territorial Development		
			Tarija	Report from Municipal Secretariat of Planning and Territorial Development		
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities	General Sources	Municipal Solid Waste Municipal Solid Waste Regularly Collected with Adequate Final Treatment and Disposal Municipal Solid Waste Generation Per Capita	updated annually or biennially	Proportion of municipal solid waste regularly collected and with adequate treatment and disposal out of total municipal solid waste generated. The numerator of this indicator is 'municipal solid waste regularly collected with adequate final treatment and disposal' and the denominator is 'total municipal solid waste generated by the city'. X = municipal solid waste regularly collected with adequate final treatment and disposal/ Total municipal solid waste generated by the city × 100 (%)
			La Paz	Report from Municipal Waste Company		
			Cochabamba	Report from Municipal Waste Company		
			Santa Cruz	Report from Municipal Waste Company		
			El Alto	Report from Municipal Waste Company		
			Tarija	Report from Municipal Waste Company		
Goal 11. Make cities and human	11.6 By 2030, reduce	11.6.2 Annual	General Sources	Sources of data include ground measurements from monitoring networks, collected for 3,000 cities and localities (WHO 2016)	annual interval,	Data collection process for ground measurements include official

settlements inclusive, safe, resilient and sustainable	the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	La Paz	around the world, satellite remote sensing, population estimates, topography, information on local monitoring networks and measures of specific contributors of air pollution (WHO, 2016b) Reports RED MONICA		reporting from countries to WHO (after request), and web searches. Measurements of PM10 or PM2.5 from official national/sub-national reports and websites or reported by regional networks such as Clean Air Asia for Asia and the European Environment Agency for Europe or data from UN agencies, development agencies, articles from peer reviewed journals and ground measurements compiled in the framework of the Global Burden of Disease Project.
			Cochabamba			
			Santa Cruz			
			El Alto			
			Tarija			
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning	11.a.1 Proportion of population living in cities that implement urban and regional development plans integrating population projections and resource needs, by size of city	General Sources	Data Sources: Several data sources could be used 1. Official documents such as National Urban Plan, Frameworks, Strategies, etc. available in national or regional administrations. 2. Other supporting tools such as: baseline spatial data mapping,benchmarking, point-of-service surveys, performance monitoring and reporting, gap and content analysis. 3. Database of national urban policies by United Nations3 - and other international organizations, UN-Habitat has developed a National Urban Policy Database as a repository of official urban policies documents and related; UN-Habitat has also developed the UrbanLex, a database of laws and policies on urban matters Municipal Governments Stadistics and Planning Branch	Every two years	Population-based: expressed as a proportion of the overall urban population, and then as a proportion of the urban population in specific city class sizes Develop a policy evaluation framework that assesses and tracks progress on the extent to which national urban policy or regional development plans are being developed and implemented and satisfy the following criteria as qualifiers: a. responds to population dynamics b. ensures balanced regional and territorial development c. Increase local fiscal space These categories correspond to a progressive evaluation of the extent that national and regional policies and plans integrate positive elements that contribute to the realization of the Target Further refinement of these 5 categories will be undertaken as necessary. § Category 1: policy document does not refer to the qualifier or the country is not developing or implementing a policy. § Category 2: policy document refers to the specific qualifier, but this qualifier is not integrated in the diagnosis and recommendations of the policy. § Category 3: policy document integrates the specific qualifier, but this qualifier is poorly understood or misinterpreted. § Category 4: policy document integrates in a cross cutting perspective the specific qualifier without clear policy recommendations § Category 5: policy document integrates and mainstreams the specific qualifier with clear policy recommendations derived from the qualifier. The policy analysis evaluation for each one of these 3 qualifiers (a, b and c) is classified and assessed into one of the five categories described above. Due to the progressive nature of the categories, the score obtained for each of them is as follows: § Category 1: 0 per cent § Category 2: 1-25 per cent § Category 3: 26-50 per cent § Category 4: 51-75 per cent § Category 5: 76-100 per cent
			La Paz	Report from Municipal Secretariat of Planning and Territorial Development		
			Cochabamba	Report from Municipal Secretariat of Planning and Territorial Development		
			Santa Cruz	Report from Municipal Secretariat of Planning and Territorial Development		
			El Alto	Report from Municipal Secretariat of Planning and Territorial Development		
			Tarija	Report from Municipal Secretariat of Planning and Territorial Development		
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable	11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation	11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	General Sources	The official counterpart(s) at the country level will provide National Progress Report of the Sendai Monitor Vice Ministry of Civil Defense - VIDECI National Risk Management Program Report NATIONAL REPORT ON DISASTER REDUCTION IN BOLIVIA	Every year	By city (applying sub-national administrative units) Target A: Number of [deaths / deceased] and [missing [persons] / presumed dead] due to hazardous events per 100,000.] Target B: Number of directly affected people attibuted to disaster, per 100.000 population Direct economic loss = (a) Number of physical assets affected (e.g. number of facilities damaged) * (b) Size of the physical assets * (c) Unit Cost (e.g. per square meters, per kilometres, per hectare) Target C: [Direct economic loss due to hazardous events [in relation to global gross domestic product.]
			La Paz	Annual Report from Secretariat/Directorate responsible		

	and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels		Cochabamba	Annual Report from Secretariat/Directorate responsible Vulnerability study developed for the city of Cochabamba - BID		Target D: Index of Critical Infrastructure Damage and Service Interruptions = number of times interruption or damage occurs/ population * 100,000 Target E: [Number of countries and local governments conducting (independent) periodic outcome reviews of the implementation of national and local DRR strategies.] Target G: [Multi-hazard risk information system capable of providing information in a simple and usable format to common people] [Number of programmes to enhance awareness, disaster risk information and risk assessment.] [Percentage of local communities trained in community based multi hazard early warning management system and response.] By city (applying sub-national administrative units) Target A: Number of [deaths / deceased] and [missing [persons] / presumed dead] due to hazardous events per 100,000.] Target B: Number of directly affected people attibuted to disaster, per 100.000 population Direct economic loss = (a) Number of physical assets affected (e.g. number of facilities damaged) * (b) Size of the physical assets * (c) Unit Cost (e.g. per square meters, per kilometres, per hectare) Target C: [Direct economic loss due to hazardous events [in relation to global gross domestic product.] Target D: Index of Critical Infrastructure Damage and Service Interruptions = number of times interruption or damage occurs/ population * 100,000 Target E: [Number of countries and local governments conducting (independent) periodic outcome reviews of the implementation of national and local DRR strategies.] Target G: [Multi-hazard risk information system capable of providing information in a simple and usable format to common people] [Number of programmes to enhance awareness, disaster risk information and risk assessment.] [Percentage of local communities trained in community based multi hazard early warning management system and response.]
			Santa Cruz	General Sources		
			El Alto	Annual Report from Secretariat/Directorate responsible		
			Tarija	General sources and Departamental Government Risk Agencies report		
Goal 12. Ensure sustainable consumption and production patterns	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.1 Material footprint, material footprint per capita, and material footprint per GDP	General Sources	The global material flows database is based on country material flow accounts from the European Union and Japan and estimated data for the rest of the world. Estimated data is produced on the bases of data available from different national or international datasets in the domain of agriculture, forestry, fisheries, mining and energy statistics. International statistical sources for DMC and MF include the IEA, USGS, FAO and COMTRADE databases.	Yearly	Material Footprint (MF) is the attribution of global material extraction to domestic final demand of a country. The total material footprint is the sum of the material footprint for biomass, fossil fuels, metal ores and non-metal ores.
			La Paz	Municipal Annual Stadistics Report Territorial Integral Development Plan for the Municipality of La Paz PTDI GAMLP 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			Cochabamba	Territorial Integral Development Plan for Cochababa PTDI GAMC 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			Santa Cruz	Territorial Integral Development Plan for Santa Cruz PTDI GAMSC 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			El Alto	Territorial Integral Development Plan for the Municipality of El Alto PTDI GAMEA 2016-2020 Report from Municipal Secretariat of Planning and Territorial Development		
			Tarija	Territorial Integral Development Plan for the Municipality of El Alto PTDI GAMEA 2016-2020		

				Report from Municipal Secretariat of Planning and Territorial Development		
Goal 12. Ensure sustainable consumption and production patterns	12.2 By 2030, achieve the sustainable management and efficient use of natural resources	12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP	General Sources	Estimated data is produced on the bases of data available from different national or international datasets in the domain of agriculture, forestry, fisheries, mining and energy statistics	Yearly	Domestic Material Consumption (DMC) is a standard material flow accounting (MFA) indicator and reports the apparent consumption of materials in a national economy. It is calculated as direct imports (IM) o material plus domestic extraction (DE) of materials minus direct exports (EX) of materials measured in metric tonnes. DMC measure the amount of materials that are used in economic processes. It does not include materials that are mobilized the process of domestic extraction but do not enter the economic process. DMC is based on official economic statistics and it requires some modelling to adapt the source data to the methodological requirements of the MFA. The accounting standard and accounting methods are set out in the EUROSTAT guidebooks for MFA accounts in the latest edition of 2013. MFA accounting is also part of the central framework of the System of integrated Environmental-Economic Accounts (SEEA).
			La Paz			
			Cochabamba			
			Santa Cruz			
			El Alto			
			Tarija			
Goal 12. Ensure sustainable consumption and production patterns	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment	12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment	General Sources	UNSD Environment Statistics Section collects data from official national sources for water and waste statistics	Yearly	Methodooghy developed by the United Nations Environment Programme (UNEP), UNSD R2.2 Hazardous waste generated R2.5 Hazardous waste treated or disposed of during the year R2.6-10 Amounts going to the different types of treatment: o Recycling o Incineration o Incineration with energy recovery o Landfilling o Other Hazardous waste generated per capita = R2.2/Population Hazardous waste recycled = R2.6/R2.7 Hazardous waste incinerated = R2.7/ R2.5
			La Paz	Reports from Municipal Regulation and Supervision System - La Paz (SIREMU)		
			Cochabamba	Reports from Municipal Waste Management Company Cochabamba (EMSA)		
			Santa Cruz	Reports from Municipal Waste Management Company of Santa Cruz (Emacruz)		
			El Alto	Reports from Municipal Waste Company El Alto (EMALT)		
			Tarija	Reports from Municipal Waste Management Company Tarija (EMAT)		
Goal 12. Ensure sustainable consumption and production patterns	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1 National recycling rate, tons of material recycled	General Sources	It can be attempted to report data in regards to recycling activities from the Municipal Government	Yearly	Methodooghy developed by the United Nations Environment Programme (UNEP), UNSD R1.8 Total waste generation Indicator = Total waste recycled/ R1.8
			La Paz	Reports from Municipal Regulation and Supervision System - La Paz (SIREMU)		
			Cochabamba	Reports from Municipal Waste Management Company Cochabamba (EMSA)		
			Santa Cruz	Reports from Municipal Waste Management Company of Santa Cruz (Emacruz)		
			El Alto	Reports from Municipal Waste Company El Alto (EMALT)		
			Tarija	Reports from Municipal Waste Management Company Tarija (EMAT)		

Goal 12. Ensure sustainable consumption and production patterns	12.c Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities	12.c.1 Amount of fossil-fuel subsidies per unit of GDP (production and consumption) and as a proportion of total national expenditure on fossil fuels	General Sources	corporations involved in energy production or transformation may sometimes be found in their annual reports	Annual	report on the subsidy categories listed below as sub-indicators. - Direct transfers; - Induced transfers (reporting on regulated prices and calculation of the total amount); - Tax expenditure, other government revenue foregone and under-pricing of goods and services, including risk (optional). The methodology used for the calculation of the regional/global aggregates from the country values is available at http://pre-uneplive.unep.org/media/docs/graphs/aggregation_methods.pdf.
			La Paz	General Sources		
			Cochabamba	General Sources		
			Santa Cruz	General Sources		
			El Alto	General Sources		
			Tarija	General Sources		
Goal 13. Take urgent action to combat climate change and its impacts4	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries	13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies	General Sources	The official counterpart(s) at the country level will provide National Progress Report of the Sendai Monitor Vice Ministry of Civil Defense - VIDECI National Risk Management Program Report NATIONAL REPORT ON DISASTER REDUCTION IN BOLIVIA	Every year	By city (applying sub-national administrative units) methodologies range from a simple quantitative assessment of the number of these strategies to a qualitative measure of alignment with the Sendai Framework as well as population coverage for local strategies. number of local governments that adopt and implement local DRR strategies in line with the national strategy and express it as a percentage of the total number of local governments in the country.
			La Paz	Annual Report from Secretariat/Directorate responsible		
			Cochabamba	Annual Report from Secretariat/Directorate responsible Vulnerability study developed for the city of Cochabamba - BID		
			Santa Cruz	General Sources		
			El Alto	Annual Report from Secretariat/Directorate responsible		
			Tarija	General sources and Departamental Government Risk Agencies report		
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems	15.1.1 Forest area as a proportion of total land area	General Sources	For countries and territories where no information was provided to FAO for FRA 2015 (79 countries and territories representing 1.2 percent of the global forest area), a report was prepared by FAO using existing information from previous assessments and literature search.	intervals of 5-10 years	Forest area as a proportion of total land area Forest area (reference year) / Land area (2015) * 100 This indicator can be aggregated to global or regional level by adding all country values globally or in a specific region
			La Paz	Reports from DIRECTION OF PROTECTED AREAS, FORESTS AND URBAN REFORESTATION EMAVERDE		

halt biodiversity loss	and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements		Cochabamba	Reports from SECRETARIAT OF SUSTAINABLE DEVELOPMENT		
			Santa Cruz	Reports from Municipal Secretariat of Parks, Gardens and Works for Social Equipment		
			El Alto	Reports from DIRECTorate OF GREEN AREAS AND FORESTATION		
			Tarija	Reports from DIRECTORATE OF THE ENVIRONMENT		
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	15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world	15.3.1 Proportion of land that is degraded over total land area	General Sources	The indicator can be aggregated to the regional and global level by summing the spatial extent of land that is degraded over total land area for all countries reporting in a specific region or globally. National data on the three sub-indicators is and can be collected through existing sources (e.g., databases, maps, reports), including participatory inventories on land management systems as well as remote sensing data collected at the national level.	every four years	As detailed in the Good Practice Guidance for SDG indicator 15.3.1, deriving the indicator for the baseline and subsequent monitoring years is done by summing all those areas where any changes in the sub-indicators are considered negative (or stable when degraded in the baseline or previous monitoring year) by national authorities. This involves the: (1) assessment and evaluation of land cover and land cover changes; (2) analysis of land productivity status and trends based on net primary production; and (3) determination of carbon stock values and changes, with an initial assessment of soil organic carbon as the proxy The area degraded in the monitoring period tn within land cover class i is estimated by summing all the area units within the land cover class determined to be degraded plus all area units that had previously been defined as degraded and that remain degraded
			La Paz	Reports from DIRECTION OF PROTECTED AREAS, FORESTS AND URBAN REFORESTATION EMAVERDE		
			Cochabamba	Reports from SECRETARIAT OF SUSTAINABLE DEVELOPMENT		
			Santa Cruz	Reports from Municipal Secretariat of Parks, Gardens and Works for Social Equipment		
			El Alto	Reports from DIRECTorate OF GREEN AREAS AND FORESTATION		
			Tarija	Reports from DIRECTORATE OF THE ENVIRONMENT		