DANE
INFORMACIÓN PARA TODOS

Statistical Information for the Circular Economy Colombia

November 2021

El futuro es de todos
Gobierno de Colombia

Content

1. Colombia's Circular Economy Information System (SIEC)

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The Circular Economy Information System in the National Circular Economy Strategy (ENEC)

***ENEC* General Objective:**

"Promote productive transformation to maximize the added value of industrial and agricultural systems and sustainable cities in economic, environmental and social terms, based on circularity, technological innovation, collaboration in new business models."

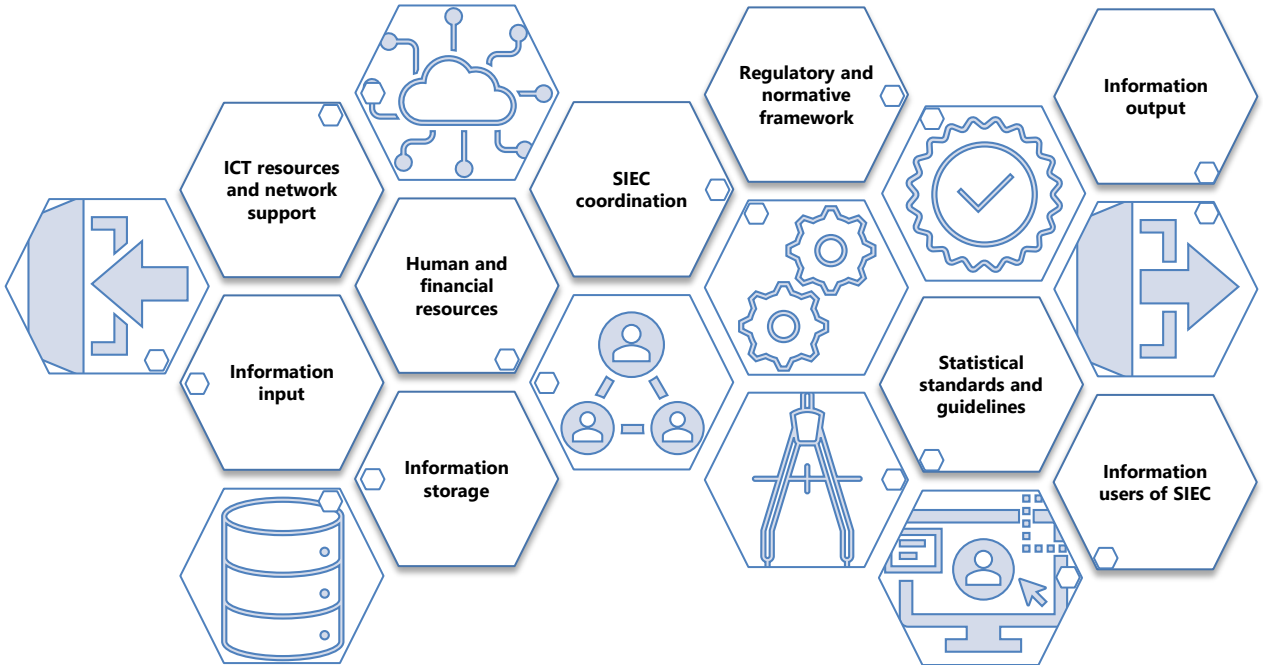
Specific objectives:

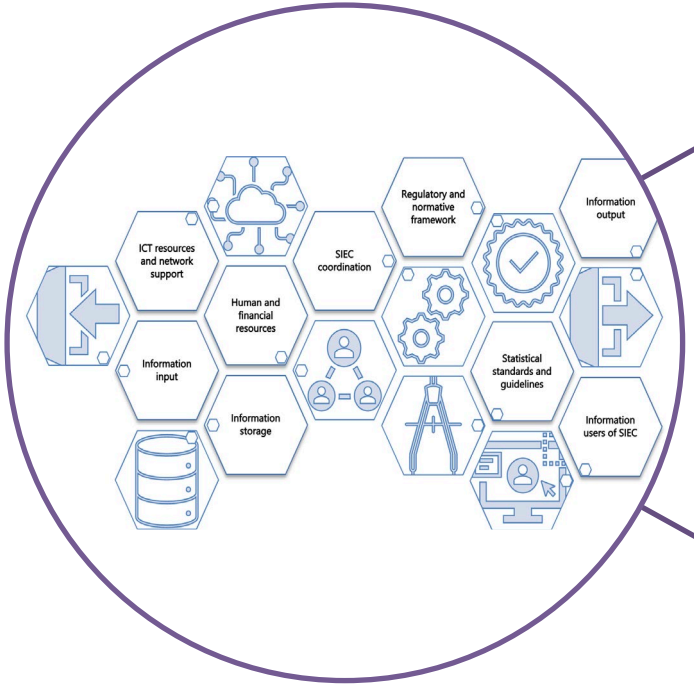
(...)

"5. Develop an information system at the service of the circular economy with indicators based on the accounting of materials, water and energy, and their productivity in terms of added value."

Definition of the Circular Economy Information System (SIEC)

An articulated set of elements that interact with each other to compile, consolidate and disseminate statistical information related to the Circular Economy; with the purpose of facilitating decision-making in public policy and evidencing the country's transition towards this model of circular production and consumption.





General Objective

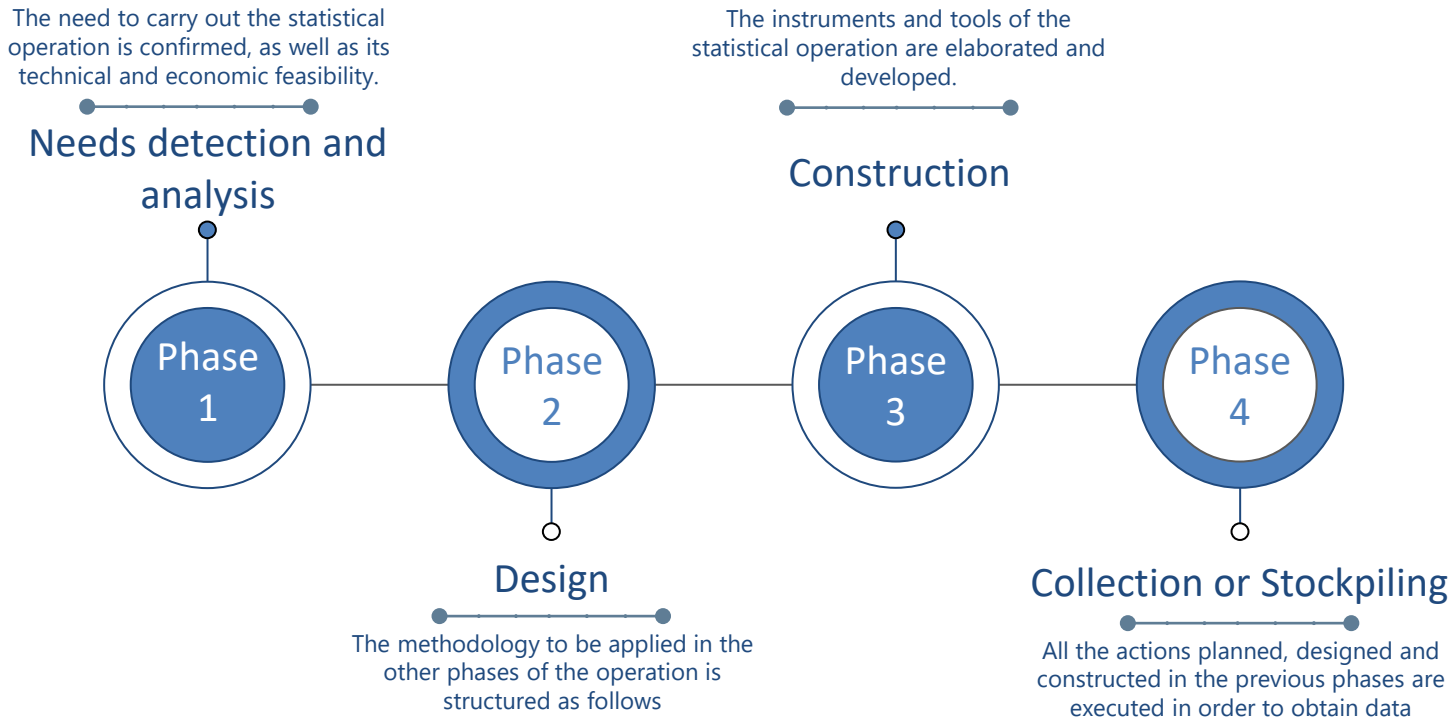
- To integrate statistical information that meets quality requirements, in order to make it available in an adequate manner so that it can be used as an input for decision making and in the evaluation of public policy on circular economy.

Specific objectives

- Consolidate statistical information on the circular economy.
- To periodically make available and facilitate access to information on circular economy for public consultation and decision making.
- Contribute to the construction and appropriation of knowledge on the circular economy in the country.
- Respond to the demands for information on circular economy at the national and international levels.

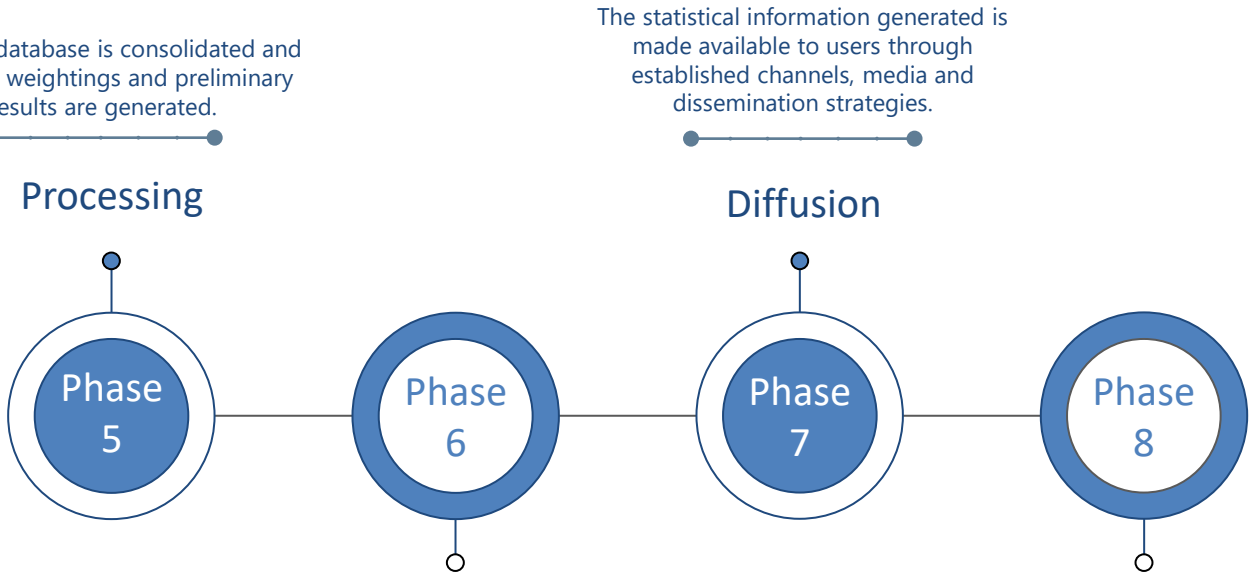
The phases for developing the SIEC are based on the standard model to produce statistics - GSBPM, which consists of the following phases:

Phases of the Statistical Process



Fuente: (DANE). Lineamientos del proceso estadístico. Disponible en: https://www.sen.gov.co/normatividad/lineamientos

Phases of the Statistical Process



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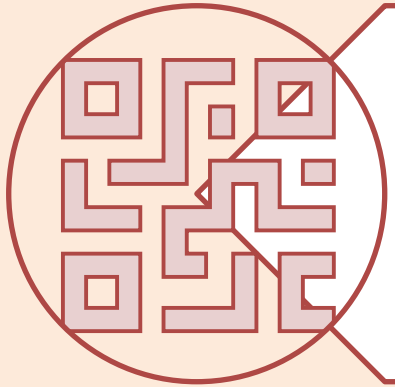
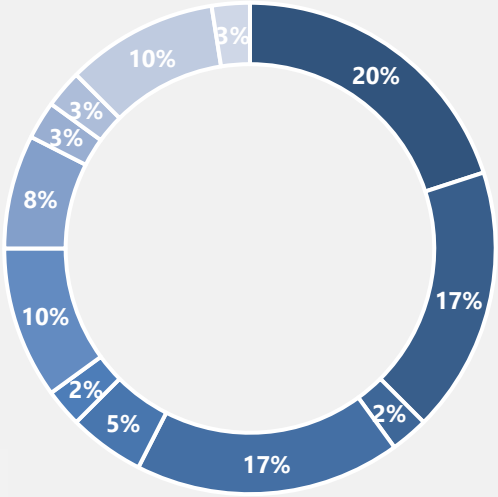


Supply of statistical information related to circular economy in Colombia.

Offer of Statistical Operations related to Circular Economy

The country has **466 statistical Operations (S.O.)** produced by **113 entities.**

40 S.O.
Related to Circular Economy



Subjects of statistical operations:

- Agriculture, livestock and fisheries
- Construction
- Mining and energy sector
- Environmental resources and their use
- Health
- Household public utilities
- Environmental conditions
- Economic accounting
- Standard of living
- Waste
- Services
- Transport

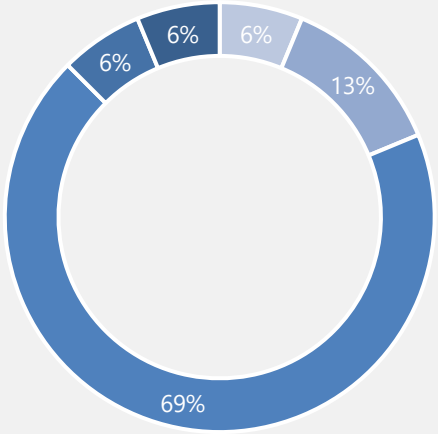
Offer of Administrative Registrations related to Circular Economy

The country has
448 Administrative Registrations
produced by
85 entities.

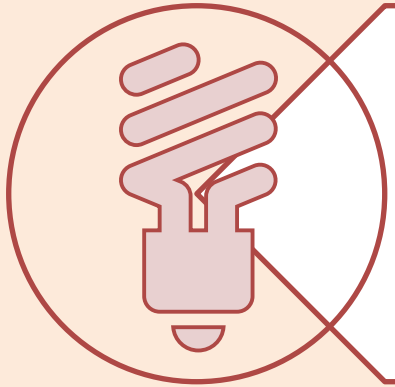
16 AA.RR.
Related to Circular Economy

Subjects of Administrative Registrations

- Mining and energy sector
- Waste
- Household public utilities
- Transport
- Environmental protection, management and citizen participation

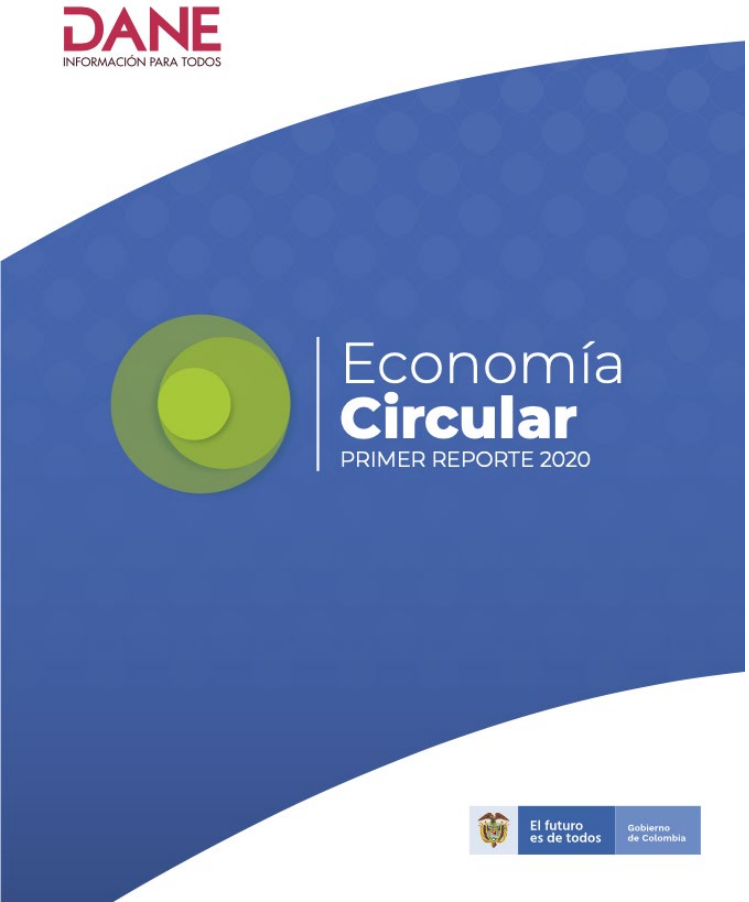


2. Circular Economy Indicators



First and second report

First Circular Economy Report



The report presents **44 indicators** of available statistical information categorized into four components of the Circular Economy from the output or product perspective, the analysis is focused on the agent as a producer or generator of that output.

Published on **August 5, 2020.**

Available here:
https://www.dane.gov.co/index.php/estadisticas-por-tema/ambientales/economia-circular/economia-circular-historicos

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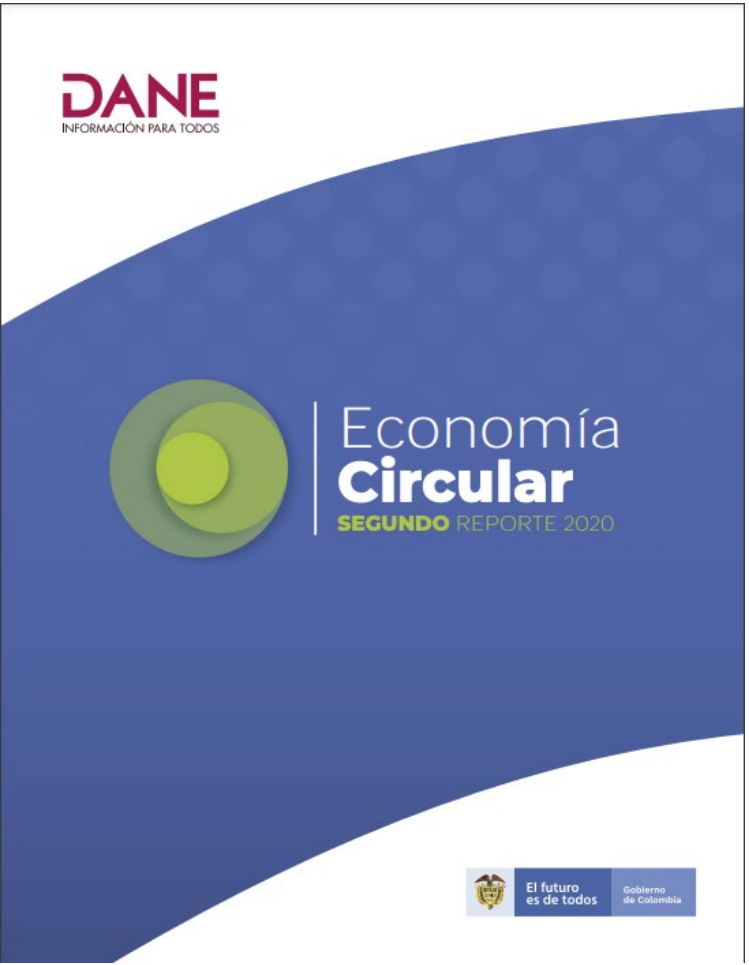
Second Circular Economy Report



The report presents **23 indicators** of available statistical information categorized into four components of the Circular Economy. This version publishes for the first time six Sankey Diagrams, based on information from the Environmental Satellite Account.

Published on **December 11, 2020.**

Available here:
https://www.dane.gov.co/index.php/estadisticas-por-tema/ambientales/economia-circular

What do we monitor?: classification components

Demand for environmental assets and ecosystem services

Refers to the flow of materials and services originating in the environment and extracted or used for the development of economic activities or by households.

Preservation or loss of value of materials in the production system

Contains production or consumption practices that return or reduce the materials used. Among them are the saving and efficient use of water, energy and materials; industrial symbiosis or the recirculation of materials.

Pressure on ecosystems due to waste disposal

Contains the externalities caused by solid, liquid or gaseous wastes that are discarded, discharged or emitted into the environment.

Factors that facilitate the Circular Economy

Management and employment tools used by different sectors and society that favor the transition to a Circular Economy.

What do we monitor?

Demand for environmental assets and ecosystem services

- Water productivity in the Manufacturing Industry
- Percentage of households according to the fuel (energy) they use for cooking
- Main means of transportation used by workers
- Intermediate consumption of energy products by economic activity
- Availability of mining reserves
- Rate of extraction of mining-energy resources
- Change in the stock of mining reserves
- Intermediate consumption of forest products by economic activity
- Water use distributed by economic activity
- Socioeconomic characterization of the head of household of the households that carry out some environmental practice in waste, energy and water resource management for household consumption.
- Energy intensity by economic activity
- Household energy consumption
- Energy consumption per capita
- Per capita consumption of firewood
- Per capita consumption of forest products
- Decoupling in the use of resources (forests)
- Wood log flow
- Flow of energy products
- Water flow
- Water intensity by economic activity

What do we monitor?

Preservation or loss of value of materials in the production system

Cogeneration and self-generation of energy with energy from wastes

Percentage of buildings with water-saving systems

Percentage of buildings with energy-saving systems

Percentage of buildings using an alternative energy system

Percentage of households that have practices at home to reduce water and electric energy consumption

Thousands of tons of raw materials from waste used by the manufacturing industry.

Percentage of households that have practices at home to reduce water and electric energy consumption

Share of value added of the materials recovery activity in total national value added

Share of renewable energy consumed by economic activity (optical utilization)

Intermediate consumption of residual products by economic activity

Solid waste recovery rate (economic activities and households)

Recycling rate and reuse of solid waste generated (National total)

Share of renewable energies (supply-side perspective)

What do we monitor?

Pressure on ecosystems due to waste disposal

Proportion of waste for final disposal from the Manufacturing Industry

Production efficiency by industrial division group

Percentage of industrial wastewater treated in a safe manner

Percentage of households that separate waste at source

Household waste disposal method

GHG emissions generated per unit of energy consumed

Solid waste flow to the environment

Solid waste generation per capita

Intensity of GHG emissions, by economic activity

Decoupling of emissions generation

Decoupling of waste generation impact from households

Decoupling of the impact of waste generation from manufacturing industries

GHG emissions generation by economic activity

Flow of solid waste materials and waste products

Air emissions material flow

What do we monitor?

D

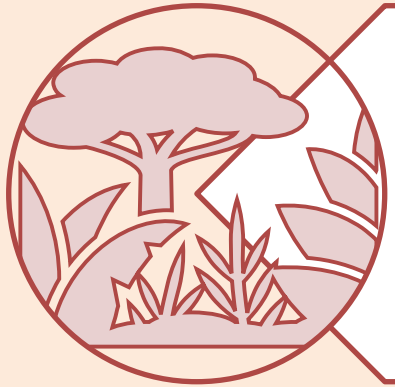
Factors that facilitate the Circular Economy

Green jobs and jobs associated with environmental activities

Share of environmental taxes as a percentage of total taxes

Share of government spending on environmental activities as a percentage of total government spending

Share of government spending on environmental protection and resource management activities



Third Report

Third Circular Economy Report Indicator Battery

The latest published edition, the Third Circular Economy Report, presents 24 indicators, categorized into the four components, which facilitate the understanding and analysis of the circular economy model

Demand for environmental assets and ecosystem services

11

Preservation or loss of value of materials in the production system

9

Pressure on ecosystems due to waste disposal

4

Factors that facilitate the Circular Economy

0

+ 2 Sankey Diagrams

3. Fourth Circular Economy Report

To be published on December 2nd

Forth Circular Economy Report Indicator Battery

- Four sankey diagrams
  - Emissions flow
  - Solid waste flow
  - Water flow
  - Government funding and spending on environmental activities

A

Demand for environmental assets and ecosystem services

- Water use distributed by economic activity
- Water intensity by economic activity
- Fishing pressure indicator
- Average fishing catch size and size distribution

To be published on December 2nd

Forth Circular Economy Report Indicator Battery

B

Preservation or loss of value of materials in the production system

- Percentage share of value added of the materials recovery activity in total national value added.
- Intermediate consumption of residual products from economic activities of the manufacturing industry, by product
- Rate of utilization of solid waste generated (economic activities and households)
- Recycling and reuse rate of solid waste generated (National total)
- Decoupling of individual household final consumption expenditure from waste generated by households.
- Decoupling of value added by manufacturing industry from waste generated by industry.
- Percentage of buildings with water-saving systems.
- Percentage of buildings with energy saving system
- Percentage of buildings using alternative energy systems
- Percentage of buildings with energy-saving systems by department
- Percentage of households that have practices at home to reduce water and electric energy consumption
- Socioeconomic characterization of the head of household of the households that carry out some environmental practice in waste, energy and water resource management for household consumption.
- Percentage of households according to the fuel (energy) they use for cooking
- Main means of transportation used by working people

To be published on December 2nd

Forth Circular Economy Report Indicator Battery

C

Pressure on ecosystems due to waste disposal

- Flows of solid waste to the environment
- Per capita generation of solid waste and waste products
- Percentage of households that sort their garbage at the national level
- Households that sort their waste according to departments
- Percentage of households that sort their garbage by type of waste, by department
- Type of waste disposal by households
- Generation of GHG emissions by economic activity
- GHG emissions intensity, by economic activity
- GHG emissions generated per unit of energy consumed
- Decoupling of emissions generation

To be published on December 2nd

Forth Circular Economy Report Indicator Battery

D

Factors facilitating the circular economy

- Percentage share of green jobs with respect to environmental jobs
- Percentage share of environmental taxes as a percentage of total taxes
- Percentage share of general government spending on environmental activities as a percentage of total general government spending
- Percentage share of general government environmental spending on environmental protection and resource management activities
- Share of manufacturing industry expenditure on environmental protection and resource management activities

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