CLIMATE WATCH EXPLORE NDCS METHODOLOGY

This document accompanies Climate Watch Explore NDCs module. This is informational only and explains some of the indicators and categories used for presenting NDCs within the module.

The Climate Watch Explore NDCs module builds on an earlier tool (CAIT Paris Contributions Map) by World Resources Institute, and incorporates indicators from World Bank's NDC platform. The dataset has been updated from both tools to reflect more recent submissions.

OVERVIEW

Overview of Commitments

Mitigation contribution type

Mitigation contributions in NDCs can take the form of actions, outcomes (GHG or non-GHG outcomes), or a combination of actions and outcomes.

GHG target type

GHG targets refer to contributions framed as targeted outcomes in GHG terms (including Base year target, Fixed level target, Baseline scenario target, Intensity target, and Trajectory target)

- Base year target: A commitment to reduce, or control the increase of, emissions by a specified quantity relative to a base year.
- Fixed level target: A commitment to reduce, or control the increase of, emissions to an absolute emissions level in a target year. One type of fixed-level goal is a carbon neutrality goal, which is designed to reach zero net emissions by a certain date.
- Baseline scenario target: A commitment to reduce emissions by a specified quantity relative to a projected emissions baseline scenario. A baseline scenario is a reference case that

- represents future events or conditions most likely to occur in the absence of activities taken to meet the mitigation
- Intensity target: A commitment to reduce emissions intensity (emissions per unit of another variable, typically GDP) by a specified quantity relative to a historical base year.
- Trajectory target: A commitment to reduce, or control the increase of, emissions to specified emissions quantities in multiple target years or periods over a long time period (such as targets for 2020, 2030, and 2040 over the period 2020-2050).

Non-GHG target

Non-GHG targets refer to contributions that are framed in terms of specific, quantifiable, desired outcomes in energy efficiency, renewable energy, forestry or other sectors, and that are not expressed in terms of GHG emissions or emission reductions.

Conditionality

An "unconditional contribution" is what countries could implement without any conditions and based on their own resources and capabilities. A "conditional contribution" is one that countries would undertake if international means of support are provided, or other conditions are met.

Comparison with Previous NDC

See further explanation in Enhancing NDCs: A Guide to Strengthening National Plans

Revised from previous submission

Whether the NDC is revised from the previous submission.

Strengthened or added GHG target

Whether the NDC adopts strengthened or added new GHG target compared to previous submission.

Strengthened or added sectoral target

Whether the NDC adopts strengthened or new sectoral non-GHG target compared to previous submission.

Strengthened or added policies and actions

Whether the NDC adopts strengthened or new policies and actions compared to previous submission.

Strengthened adaptation

Whether the NDC includes enhanced adaptation component compared to previous submission. This can be in forms of updating or adding information on trends, impacts and vulnerabilities, current and near-term planning and action; monitoring, evaluation and learning plans; information on national long-term goals or vision; or information on gaps and barriers.

Provided additional information for clarity, transparency, and understanding

Whether the NDC provides additional information for clarity, transparency and understanding compared to the previous submission.

Children and Young People

The following indicators are provided and maintained by UNICEF. The first five are shown under "ACE commitments" category on the map, and rest could be found under "Child and Youth Sensitivity" category on the map.

Inclusion of commitments in at least one of the Action for Climate **Empowerment framework** components

The indicator refers to whether the NDC integrates the Action for Climate Empowerment (ACE) framework by including commitments in at least one of its

components: education, training, public awareness, public access to information, public participation and international cooperation; even if the NDC doesn't explicitly refer to ACE.

Inclusion of child-sensitive commitments on training

The indicator refers to whether the training commitments included in the NDC can be considered child/youth- sensitive. This means that it specifically addresses or considers the training of children and young people, families or the sectors and services on which children depend, such as teachers, health professionals or social institutions.

Inclusion of child-sensitive commitments on public awareness

The indicator refers to whether the public awareness commitments included in the NDC can be considered child/youthsensitive. This means that it addresses or considers specifically the awareness of children and young people, families or the sectors and services on which children depend, such as teachers, health professionals or social institutions through targeted and systematic communications.

Inclusion of child-sensitive commitments on public access to information

The indicator refers to whether the public access to information commitments included in the NDC can be considered child- and youth- sensitive. This means that it specifically addresses or consider the capacities and needs of children and young people to access information, including that information is available in a child-friendly manner in age-appropriate and suitable for the capacities of children of all groups and backgrounds.

Inclusion of child-sensitive commitments on inclusion of children and youth in public participation

The indicator refers to whether the public participation commitments included in the NDC can be considered child- and youthsensitive. This means that it specifically addresses or considers meaningful participation of children and young people

in decision making spaces on the climate agenda.

Criteria 1: References - Explicit and meaningful reference to children and vouth

The indicator refers to the existence of explicit and meaningful references to children and youth within the NDC.

Criteria 2: Rights-Based - Consider children and youth as rights-holders

This indicator refers to whether the NDC considers children and youth as rightsholders, through meaningful references to children rights or intergenerational justice and equity.

Criteria 3: Holistic and Multisectoral -Addresses the specific risks and vulnerabilities of children

This indicator refers to whether the NDC addresses the specific risks and vulnerabilities of children by including child-sensitive multi-sectoral commitments.

Criteria 4: Inclusive - Identifies children and youth as an important stakeholder

This indicator refers to whether the NDC identifies children and youth as an important stakeholder and ensures inclusiveness by having integrated children and youth in the consultation process or committing to enhance child and youth participation and empowerment.

Identification of children as drivers of change

This indicator refers to whether children are identified as important stakeholders or agents of change in climate action.

Identification of young people as drivers of change

This indicator refers to whether young people are identified as important stakeholders or agents of change in climate action.

Included children in the review and update process

The indicator refers to whether the participatory process carried out to develop the new or updated NDC specifically included children or adolescents and is

specifically mentioned in the NDC document.

Included young people in the review and update process

The indicator refers to whether the participatory process carried out to develop the new or updated NDC specifically included young people and is specifically mentioned in the NDC document.

MITIGATION

GHG Target

Single or multi-year target

Whether a target is designed to achieve emission reductions or reductions in intensity by a single target year (Single year target), or over several years of a target period (Multi-vear target).

Target year

The year(s) by when or over which the goal is to be achieved. For actions: Target year refers to the date actions comes into effect and date of completion.

Target level of emissions

Expected emissions in the target year or period if the target is achieved.

Base year

Base year refers to a specific year of historical data against which the emissions are compared over time.

Emissions level in base year

Base year emissions refer to emissions and removals in the base year for all gases and sectors included in the target boundary, including out-of-jurisdiction emissions, if relevant.

Emissions intensity in base year

Base year/period emissions intensity refers to emissions intensity (greenhouse gas emissions per unit of another variable, typically economic output, GDP) in the base year or base period.

Baseline emissions level in target year

Projected baseline emissions refer to estimate of GHG emissions or removals associated with a baseline scenario.

Scope and Coverage

Greenhouse gases covered

Greenhouse gases covered in the GHG target of the NDC. Seven Kyoto gases refer to Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF6), and nitrogen trifluoride (NF3), which was added to the 'basket' of greenhouse gases covered by the Kyoto Protocol in the first commitment period per Decision 4/CMP.7.

Sectors covered

Sectors covered in the GHG target of the NDC.

Overall Assumptions and Methodologies

IPCC inventory methodologies to be used to track progress

IPCC inventory methodologies to be used to track progress in the NDC. For example, 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Global warming potential (GWP) values to be used to track progress

The Global Warming Potential (GWP) values are used to describe the radiative forcing impact of non-CO2 greenhouse gases. The AR2, AR4, and AR5 refer to GWP values provided by the IPCC in its 2nd, 4th or 5th Assessment Reports, respectively.

Planned use of international market mechanisms

Whether the Party intends to use or sell/transfer units from international market mechanisms.

Baseline scenario targets: Static or dynamic baseline scenario

Whether the baseline scenario is static (will be fixed over the period) or dynamic (will change over the period) baseline scenario.

Baseline scenario targets: Cut-off year for policies included in the baseline scenario, and any significant policies excluded from the baseline scenario

The cut-off year for policies included in the baseline scenario, and any significant policies excluded from the baseline scenario.

Baseline scenario targets: Projection method

Projection method (e.g., name and type of models).

Baseline scenario targets: Emission drivers included and assumptions and data sources for key drivers

Emission drivers included and assumptions and data sources for key drivers.

Baseline scenario targets: For dynamic baseline scenario targets, under what conditions will the baseline be recalculated

For dynamic baseline scenario targets, under what conditions will the baseline be recalculated and if applicable, any significance threshold used to determine whether changes in emissions drivers are significant enough to warrant recalculation of the scenario.

Assumptions and methodological approaches for GHG reduction targets relative to emissions intensity

For GHG reduction targets relative to emissions intensity, information such as level of output (e.g., GDP) in the base year. projected level of output in the target year/period (and an uncertainty range, if available), and units and data sources used.

Assumptions and methodological approaches for NDCs that include actions

For NDCs that include actions, information such as estimated impact on GHG emissions or non-GHG indicators; methodologies used to estimate impacts on GHG emissions, including the baseline scenario and other assumptions; uncertainty of estimated impacts (estimate or description); information on potential interactions with other policies/actions.

Accounting for Emissions and Removals from the Land Sector

Treatment of land sector

Treatment of land sector: included as part of the broader target; treated as a separate sectoral target; used to offset emissions within the target boundary; or not included in a target.

Coverage of the land sector as compared to total net emissions from the land sector, as a percentage if known

If the land sector is included, coverage of the land sector (net emissions and removals from land-use activities and/or categories) as compared to total net emissions from the land sector, as a percentage if known.

Assumed accounting approach for the land sector (activity-based or landbased)

The way land sector emissions and removals are accounted for toward the target-from either select land-use categories or select land-use activities. There are two accounting approaches for the land sector: land-based accounting and activity-based accounting.

Assumed accounting method for the land sector (net-net, forward-looking baseline, or gross-net)

Method used to assess emissions and removals within each selected land-use category or activity. Land-use accounting methods include the net-net (accounting relative to base year/period emissions), forward-looking baseline (accounting relative to a projection of net emissions in the target year), and gross-net methods

(accounting without reference to base vear/period or baseline scenario emissions).

Level against which emissions and removals from the land sector are accounted, including policy assumptions and methodologies employed

If the land sector is included, level against which emissions and removals from the land sector are accounted, if known, including policy assumptions and methodologies employed.

Any assumed use of methodologies to quantify and account for natural disturbances and legacy effects

Any assumed use of methodologies to quantify and account for natural disturbances and legacy effects.

Any other relevant accounting approaches, assumptions or methodologies

> Any other relevant accounting approaches, assumptions, or methodologies, such as relevant IPCC guidance, the Party's forest definition, definition of managed land, list of land-use activities and/or categories included and their definitions, or others.

International Market Mechanism

Limit on the percentage of emission reductions that may be achieved through the use of units from international market mechanisms

If units are to be used, any limit on the percentage of emission reductions that may be achieved through the use of units from international market mechanisms.

Assumed types and years of units to be applied

If units are to be used, the assumed types and years of units to be applied, if known.

Whether and how any units purchased/acquired or sold/transferred abroad will ensure environmental integrity and avoid double counting

Description of whether and how any units purchased/acquired or sold/transferred abroad will ensure environmental integrity and avoid double counting.

ADAPTATION

Overview

Adaptation included

Is there an adaptation section/component in the document?

Adaptation revised

Is the adaptation section/component different from the previous version of the document?

Link to Adaptation Communications

Does the NDC have an indication of its relationship to Adaptation Communications

Planning and Coordination Process

Planning process

Does the NDC have a description of the adaptation planning process and the NDC development planning process?

Planning process for NDC development

Description of the planning process for NDC development

Planning process for adaptation planning

Description of the planning process for adaptation planning

Coordination process

Is there a description of institutional arrangements to enhance coordination (sectors, other processes, national development, etc.), planning and implementation?

Coordination process for adaptation planning

Description of coordination process for adaptation planning

Coordination process for other development

Description of coordination process with other development or climate change processes

Climate Change Trends and Impacts

Climate change trends

Does the NDC include short-, medium-, and long-term trends for changes in the climate?

Short term and/or medium term trends

Short term and/or medium term trends in climate change

Long term trends

Long term trends in climate change

Climate change impacts

Does the NDC include information about the impact of climate change on specific sectors*/systems?

Physical climate change impact

Physical climate change impacts on sectors/systems

Vulnerabilities and risks

Vulnerabilities and risks for specific population groups

Climate change included vulnerabilities and risks

Climate change included vulnerabilities and risks for different sectors/systems.

Adaptation Vision and Priorities

Adaptation goal/vision

Does the NDC articulate a vision or a goal for adaptation?

Adaptation plans and policies

Does the NDC identify plans and policies at the national or sub-national level relevant for adaptation?

National/sectoral level plans and policies

Plans and policies relevant for adaptation at national/sectoral level

Sub-national level plans and policies

Plans and policies relevant for adaptation at sub-national level

Adaptation priorities

Does the NDC identify adaptation priorities?

Targets that are not directly linked to adaptation priorities

Does the NDC identify targets for adaptation that are not directly linked to adaptation priorities?

Financial Needs

Financial needs for implementation

Does the NDC identify financial needs for implementing identified adaptation priorities?

Unconditional financial needs

Total unconditional financial needs for adaptation

Conditional financial needs

Total conditional financial needs for adaptation

Other non-financial support needs

Does the NDC identify other non-financial support needs?

Experiences and Barriers

Past commitments

Does the NDC provide details on past planning milestones, outputs, and investments made and planned?

Past planning milestones

Past planning milestones

Outputs of adaptation actions

Outputs of adaptation actions

Adaptation investments made

Adaptation investments made

Adaptation efforts achieved

Does the NDC provide details on adaptation efforts achieved to date for recognition?

Cooperation on enhancing adaptation

Does the NDC provide details on national. regional, and international cooperation on enhancing adaptation, as appropriate?

Barriers

Does the NDC identify barriers, challenges and gaps related to implementation of adaptation?

Lack of climate and risk information. data and knowledge

Lack of climate and risk information, data and knowledge

Lack of access to technology

Lack of access to technology

Lack of capacity (specify what kind)

Lack of capacity (specify what kind)

Lack of financial resources

Lack of financial resources

Other barriers

Other barriers

Good practices and lessons identified

Does the NDC identify good practices and lessons learned?

Good practices identified

Good practices identified

Lessons learned

Lessons learned for adaptation implementation and planning

Monitoring and Evaluation

Monitoring and evaluation

Does the NDC describe a monitoring and evaluation approach for adaptation?

Institutional setup

Institutional set up for M&E of adaptation activities

Indicators, metrics or criteria

Indicators, metrics or criteria for M&E

Alignment with national M&E systems

Alignment with other national M&E systems.

Co-benefits

Mitigation co-benefits

Does the NDC include adaptation actions with mitigation co-benefits?

Emissions reduction potential

Emission reduction potential of adaptation actions identified?

Adaptation actions accounted for in mitigation

Are above adaptation actions accounted for in mitigation section?

Economic diversification plans

Does the NDC include economic diversification plans with links to mitigation and adaptation?

International Frameworks

Other international frameworks and/or conventions

Does the NDC include references to other international frameworks and/or conventions in the adaptation component?

Gender and Indigenous People

Gender

Does the NDC include information on how gender has been/will be mainstreamed into planning and implementation?

Gender differences

Addresses gender differences in adaptation needs, opportunities and capacities

Equitable participation in decisionmaking

Addresses equitable participation and influence by women and men in decisionmaking

Equally distributed adaptation investments

Recognizes that financial resources and other benefits resulting from adaptation investments should be equally distributed between women and men

Gender equality in M&E

Inclusion of gender equality and women's empowerment in adaptation M&E system, including sex disaggregated data collection?

Indigenous and local communities

Does the NDC include reference to the inclusion of indigenous and local communities and/or their knowledge?

Indigenous rights, agency and governance

Does the NDC support increased indigenous rights, agency, and governance systems?

Local knowledge and technologies

Are local knowledge and technologies that preserve culture and indigenous knowledge systems referenced in the NDC?

Rights for indegenous peoples

Are rights to self-determination, and to free, prior, and informed consent for indegenous peoples preserved in the prioritized adaptation actions?

Loss and Damage

Loss and damage mentioned

Does the NDC mention loss and damage?

Definition of loss and damage

Definition of loss and damage?

Economic loss and damage

Does the NDC have a description of current and future economic loss and damage?

Current economic loss and damage figures

Current economic loss and damage figure

Future economic loss and damage figures

Future economic loss and damage figures

Use of climate change scenario

Use of a climate change scenario when calculating future economic loss and damage

Non-economic loss and damage

Does the NDC include non-economic loss and damage?

Loss and damage initiatives

Does the NDC include descriptions of ongoing and/or prioritized loss and damage initiatives?

Slow-onset events

Information around slow-onset events

Risk management approaches

Information on comprehensive risk management approaches (assessment, reduction, transfer, and retention)

Human mobility

Information on human mobility, including migration, displacement and planned relocation

Finance and capacity building

Information on the provision of finance and capacity building for loss and damage

Transformative Adaptation

Transformative adaptation mentioned

Does the NDC include references to transformative adaptation?

Changing the underlying system

Does the NDC have adaptation priorities that include a significant expansion in scale with a view of changing the underlying system?

Expanding geographic area and people impacted

Is the expansion over a larger geographic area or an increase in number of people impacted?

Expanding beyond incremental adaptation

Does the expansion activity go beyond incremental adaptation to address changes in the overall system?

Innovation

Does the NDC include adaptation priorities with innovation?

Shift in location

Does the NDC include adaptation priorities that include a shift in location for the adaptation action being implemented?

Child and Youth Sensitivity

Below lists indicators regarding child and vouth sensitivity. The indicators are provided by UNICEF.

Inclusion of child-sensitive commitments on education

The indicator refers to whether the education sector commitments included in the NDC can be considered child-sensitive. This means that it specifically addresses or considers the educational needs of children including commitments to develop or strengthen curricula (environmental and climate education); to improve learning facilities or associated infrastructure that enable learning (based on resilience, safety, sustainability, adaptation and mitigation of climate change and risks); or to develop skills and knowledge in education staff (on climate, environment and DRR).

Inclusion of child-sensitive commitments on energy

The indicator refers to whether the energy commitments included in the NDC can be considered child-sensitive. This means that it addresses or considers access to energy services at the household or community level or in sectors on which children depend (e.g., energy in health or learning facilities. clean cookstoves).

Inclusion of child-sensitive commitments on health

The indicator refers to whether the health sector commitments included in the NDC can be considered child-sensitive. This means that it addresses or considers actions to improve directly the health of children, young people, family or community (for example, reduction of air pollution and short-lived climate pollutants, promoting the use of more fuel-efficient cook stoves,

etc.); to improve health care facilities (climate-resilience solutions and environmental sustainability) and systems (including their preparedness, response, and monitoring capacity); to develop responsive primary care that incorporates children's environmental health: or to embed environmental health in school programmes.

Inclusion of child-sensitive commitments on food and nutrition

The indicator refers to whether the food production commitments included in the NDC can be considered child- and vouthsensitive, including commitments to enhance food and nutritional security of children, young people or families.

Inclusion of child-sensitive commitments on social protection

The indicator refers to whether the social protection commitments included in the NDC can be considered child/vouthsensitive. This means that it specifically addresses or considers commitments to act against poverty, cash transfers in favour of children and young people, implementation of social insurance to children, youth or families (health, productive, etc.), support for child care services and youth employability, development and strengthening of social services personnel, strengthening of integrated delivery systems, development and strengthening of national social protection systems, among others.

Inclusion of child-sensitive commitments on disaster risk reduction

The indicator refers to whether the DRR commitments included in the NDC can be considered child- and youth- sensitive, including the development and strengthening of preparedness, response and resilience capacity of children, youth, families, and the services and systems on which they depend.

Inclusion of child-sensitive commitments on water

The indicator refers to whether the water commitments included in the NDC can be considered child-sensitive. This means that it addresses or considers water resources from a human right to water perspective, including, for example, commitments to ensure water infrastructure, services and behaviors are sustainable, safe and resilient to climate-related risks: increasing access to drinking water in households, communities, or sectors on which children depend (e.g., health care or learning centers); contributing from WASH systems to building community resilience and increasing capacity to adapt to climate change; or implementing efforts to monitor and manage drinking water resources; among others.

Inclusion of child-sensitive commitments on sanitation

The indicator refers to whether the sanitation commitments included in the NDC can be considered child-sensitive. This means that it addresses or considers water resources from a human right to water perspective, including, for example, commitments to ensure sanitation infrastructure, services and behaviors are sustainable, safe and resilient to climaterelated risks; increasing access to proper sanitation solutions in households, communities, or sectors on which children depend (e.g., health care or learning centers); or contributing from WASH systems to building community resilience and increasing capacity to adapt to climate change; among others.

Identification of children as a vulnerable group

The indicator refers to whether children are identified specifically as a vulnerable group to the impacts of climate change.

Identification of young people as a vulnerable group

The indicator refers to whether young people are identified specifically as a vulnerable group to the impacts of climate change.

SECTORAL MITIGATION

Below lists all sector and subsectors used for NDC sectoral mitigation measure analysis.

Economy-wide

- **Economy-wide: General**
- **Economy-wide: Other**

Gas

- Methane
- N20
- F-gases
- SLCPs
- Black carbon

Other

- Carbon pricing
- Climate planning
- Monitoring, reporting, and verification
- **Procurement**
- Training/capacity-building

Agriculture

- Agriculture: General
- Agriculture: Other
- Agricultural waste
- Fisheries and aquaculture
- Livestock
- Soil carbon sequestration
- Soil fertilization emissions
- **Rice cultivation**
- Agroforestry
- Diets
- Reducing food loss and waste
- **Agricultural productivity**

LULUCF

- **LULUCF: General**
- **LULUCF: Other**

Action

- Restoration
- Conservation
- Management

Biome

- **Forests**
- Grasslands
- **Peatlands**
- Wetlands
- **Mangroves**

Other

- Agroforestry
- REDD+
- **Nature-based solutions**

Energy

- **Energy: General**
- **Energy: Other**

Renewable Energy

- **Renewable Energy: General**
- **Renewable Energy: Other**
- **Renewable Energy: Biofuels**
- **Renewable Energy: Geothermal**
- Renewable Energy: Hydro
- **Renewable Energy: Ocean**
- **Renewable Energy: Off-Grid**
- Renewable Energy: Solar
- Renewable Energy: Waste-to-Energy
- **Renewable Energy: Wind**

Fossil Fuels

- **Fossil Fuels: General**
- **Fossil Fuels: Other**
- **Fossil Fuels: Gas**
- **Fossil Fuels: Gas flaring**

- Fossil Fuels: Crude oil and petroleum products
- Fossil Fuels: Coal and coal products
- **Fossil Fuels: New construction**
- Fossil Fuels: Phase out/down
- **Fossil Fuels: Extraction**
- **Fossil Fuels: Distribution**
- **Fossil Fuels: Power generation**

Transmission & distribution

- Mini-grids
- **Grid improvement**
- Grid construction/expansion
- **T&D: General**

End use

- **End Use: Buildings**
- **End Use: Industries**
- **End Use: Transport**
- **End Use: Other**

Other

- **Energy efficiency**
- CCS
- **Fuel switching**
- **Energy storage**
- Hydrogen
- **Nuclear**

Buildings

- **Buildings: General**
- **Buildings: Other**

Existing vs. New

- **Existing buildings**
- **New buildings**

Use

- Residential
- Commercial
- **Industrial**

End-use

- **End-use: Other**
- **End-use: Heating**
- **End-use: Cooling**
- **End-use: Cooking**
- **End-use: Appliances**
- **End-use: Lighting**
- **End-use: Refrigeration**
- **End-use: Building envelope**

Other

- **Building materials**
- **Building codes**
- Retrofitting
- **Energy efficiency**
- Electrification

Transport

- **Transport: General**
- **Transport: Other**

Action

- Avoid: Land-use planning/TOD
- **Avoid: Transport demand** management

Shift: Public transport

- Shift: Walking/cycling
- **Improve: Electrification**
- **Improve: Fuel efficiency**
- **Improve: Fuels**

Purpose

- **Passenger**
- **Freight**

Mode

- Road
- Rail
- Air
- **Maritime**

Inland waterways

Other

Transport infrastructure

Industries

- Industries: General
- Industries: Other
- Cement and concrete
- Chemicals
- Iron and steel
- Other metals
- Paper
- Industrial F-gases
- Hydrogen
- Industrial efficiency
- Petroleum refining

Waste

- **Waste: General**
- Waste: Other
- Recycling, reuse, reduce
- Solid waste
- Waste-to-Energy
- Wastewater