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SECRETARÍA DE MEDIO AMBIENTE
Y RECURSOS NATURALES

Monitoring and evaluation of adaptation: An approach from Mexico

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Seoul, Korea
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GOALS

GENERAL CLIMATE CHANGE LAW (2012-2018)

LOW-CARBON DEVELOPMENT

To achieve a competitive, sustainable, and low-carbon emissions economy

RESILIENT MEXICO

To reduce vulnerability of people, ecosystems, and infrastructure from adverse effects of climate change

INCLUSIVE POLICY

To ensure coordination among all levels of government with transparency and participation of all sectors of society

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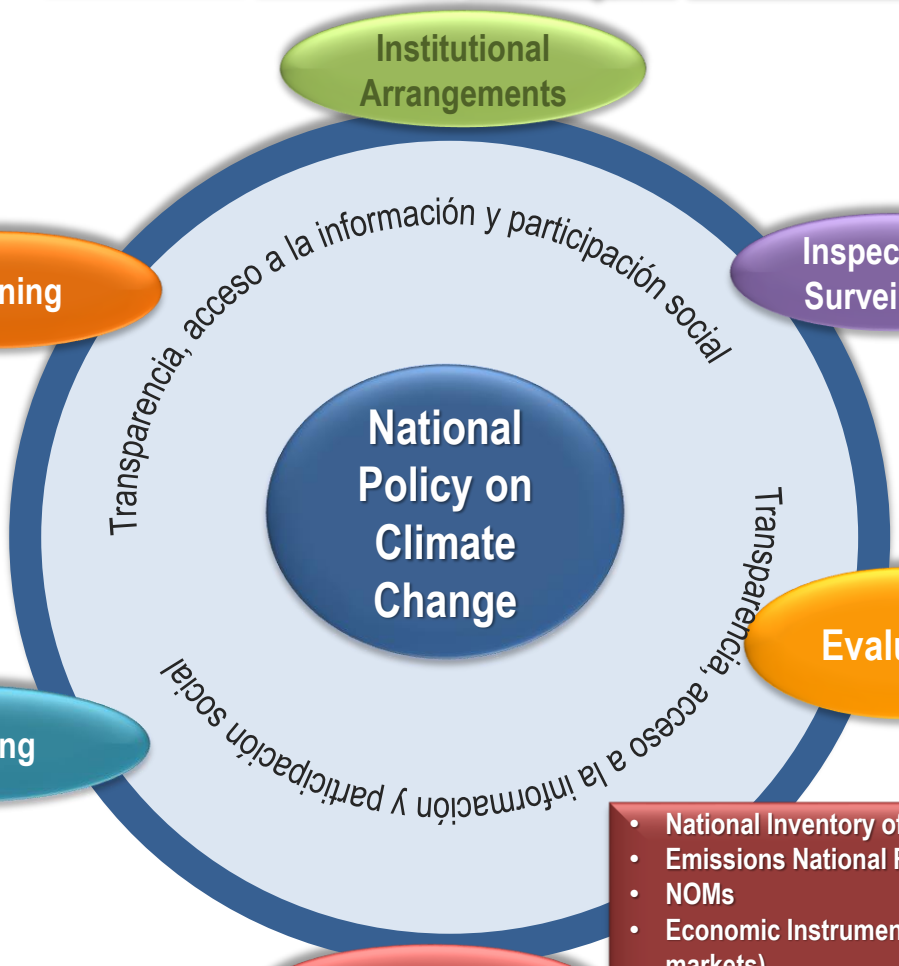
NATIONAL SYSTEM ON CLIMATE CHANGE

ICCC | INECC | Council Climate Change | 32 State Entities | Municipal Autorities | Congress



- National Strategy on CC 10, 20 y 40 years
- SPCC
- Local Programs
- NDC
- Mid Century Strategy
- National Adaptation Policy

Evaluation Coordination INECC **Reinforced**

Climate Change Fund
Privileges Adaptation and the most vulnerable municipalities (320)

- National Inventory of GHG Emissions
- Emissions National Registry (SLPC)
- NOMs
- Economic Instruments (fiscal, finances, markets)
- Information System on CC
- Atlas of Risks
- Atlas of Local Risks
- Atlas of Vulnerability
- ETS (Carbon Markets / Offsets)
- Early Warning Systems

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NATIONAL CLIMATE CHANGE STRATEGY

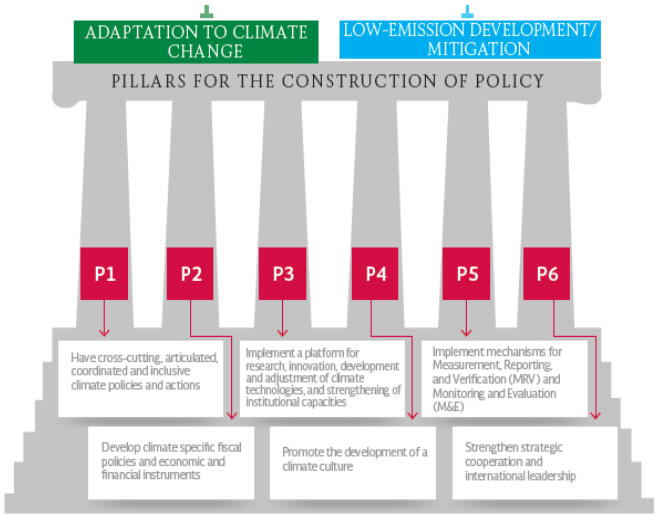
Some principles of climate change policy instruments in the framework of M&E for the adaptation process.

- **Art. 26, Fracc. VII.- Citizen participation** in the formulation, execution, monitoring and evaluation of the **National Strategy, mitigation and adaptation plans and programs**

- **Art. 77. The Information System on Climate Change** should generate, with the support of government agencies, a set of **key indicators that will address at least the following topics:**

  - **The vulnerability of human settlements, infrastructure, islands, coastal zones and river deltas, economic activities and environmental damage, attributable to climate change;**

  - **The protection, adaptation and management of biodiversity**



10 / 20 / 40 VISION **MCS**

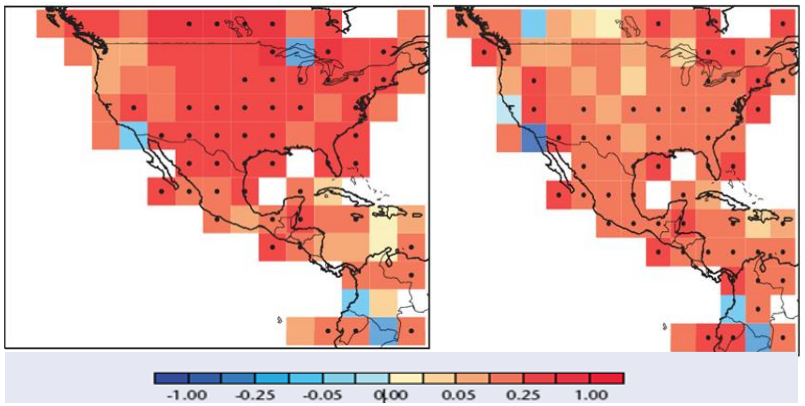
P5 IMPLEMENT MECHANISMS FOR MEASUREMENT, REPORTING, AND VERIFICATION (MRV) AND MONITORING AND EVALUATION (M&E).

SOME CONSIDERATIONS ABOUT MEXICO VULNERABILITY TO CLIMATE CHANGE

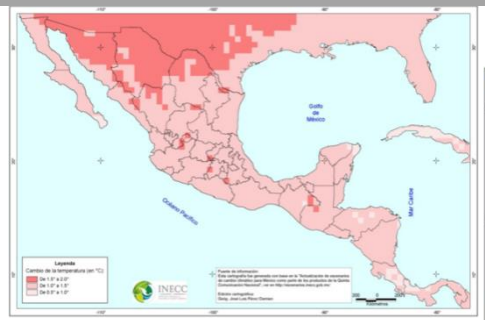
- Its localisation between two oceans, its latitude and reliefs, make of this country a place particularly **exposed to hydrometeorological phenomena**

Increase of the temperature in Mexico in the last fifty years

- Since the 60's, Mexico has become warmer.
- **Mean temperature in a national level has raised 0.85°C**, which is coincidence with the global increase reported by the IPCC.
- Precipitation has decreased in the South East of the country for half a century.



Climate change scenarios for Mexico

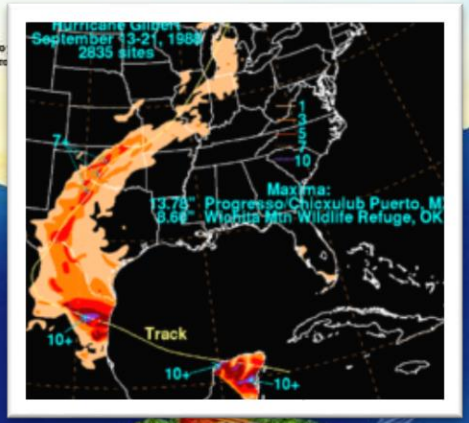


For the period 2015-2039 **is projected an increase in temperature from 1°C to 1.5°C in most of the country, while in the North could raise until** 2°C.

The trend of decreasing precipitation varies in a range between 10 and 20%.

LA BIODIVERSIDAD DE MÉXICO

Hurricane Patricia (Oct 2015)
Presión mínima: 872 hPa;
Daños: $407,4 billones; (estimación, 2015)
Vientos máximos: 345 km/h
Duración: 20 de octubre-24 de octubre de 2015
Deaths 6



Tropical Storm Gilberto (1988)
Presión mínima: 888 hPa
Deaths: 341 directos
Duración: 3 de septiembre de 1988-19 de sept...
Vientos máximos: 295 km/h (durante 1 minuto)
Daños: 5000 millions dolars

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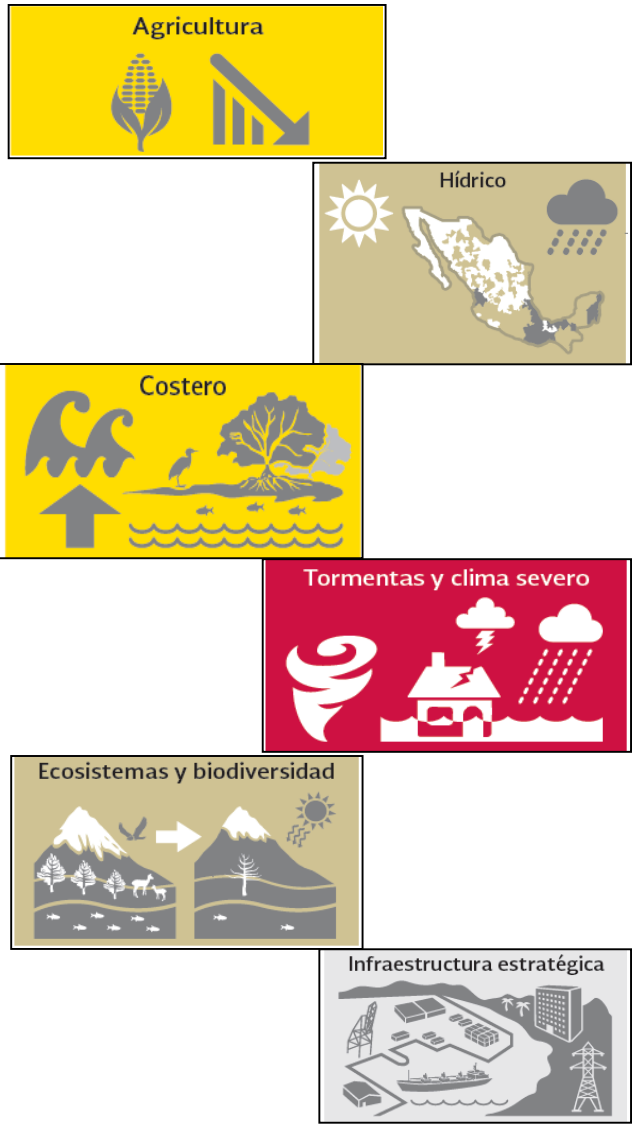
PROJECTED IMPACTS OF CLIMATE CHANGE IN PRIORITY SECTORS



DECREASE

- Corn productivity
- Coniferous trees fields and marine populations

INCREASE

- Drought
- Precipitation could be more severe and frequent increasing the risk of floods
- Sea level
- Oceans temperature

The infrastructure may be affected by the raise in number and intensty of tropical cyclones and more intense storm surges

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PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

NATIONAL DETERMINED CONTRIBUTION MÉXICO

2020-2030

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FIRST COUNTRY TO INCLUDE ADAPTATION GOALS AND ACTIONS AS PART OF NDC

SOCIAL SECTOR (AbS)	ADAPTATION BASED ON ECOSYSTEMS ((AbE)	STRATEGIC INFRASTRUCTURE AND PRODUCTIVE SECTORS (AbIPS)
✓ **Reduce by 50% the number of vulnerable municipalities (160)**	✓ **Achieve a 0% rate of deforestation in 2030**	✓ **Guarantee and monitor the treatment of urban and industrial wastewater in human settlements larger than 500,000 inhabitants.**
✓ Incorporate a climate, **gender and human rights approach** into all instruments of territorial planning and risk management	✓ **Reforest the upper, middle and lower basins** considering native species of the area.	✓ Ensure **strategic infrastructure security**
✓ Increase **financial resources** for prevention vs. disaster attention.	✓ Increase **ecological connectivity** and carbon capture through **conservation and restoration**.	✓ **Incorporate climate change criteria into agricultural and livestock** programs.
✓ Establish the **regulation** of land use in risk areas. Integral management of watersheds to guarantee access to water	✓ Increase **carbon capture and coastal protection** through the conservation of coastal ecosystems.	✓ Apply the standard of environmental protection and adaptation specifications **in coastal tourism** real estate developments.
✓ Ensure **training and social participation** in the adaptation policy.	✓ **Synergies of REDD** + actions ✓ Guarantee the **integral management of water** in its different **uses** (agricultural, ecological, urban, industrial, domestic).	✓ Incorporate **adaptation criteria into public investment projects** that consider infrastructure construction and maintenance

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STRENGHTS FOR M&E OF DAPTATION MEXICO'S SITUATION

Mexico has the capacity of getting **periodical information** with solid methodology.

Common view at the Federal level regarding adaptation concept, general objectives and main challenges; however, we keep working on identifying **adaptation indicators**. (GT ADAPT)

As in LGCC "national policy on climate change **adaptation** will be based **on *diagnosis, planning, measuring, monitoring, reporting, verification and evaluation*** instruments.

CHALLENGES FOR M&E OF ADAPTATION MEXICO'S SITUATION

- Linkages between vulnerability conditions but also wuth capacity building and technology transfert on adaptation (ecosystems, social system, economical system)

- **Adaptation** has a local expression with a huge diversity of ecosystems, cultures and social conditions, adaptation has very specific situations and that is why, the planning, design and execution of actions have to do with the knowledge of different contexts.

- The actual knowledge of how adaptative capacities are increased has to do with knowing, acting, and evaluating changes in a local context.

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Adaptation MRE at different scales

Monitoring, Reporting and Evaluation occur at different scales and in different sectors

But not always at the same time or through a single system or mechanism

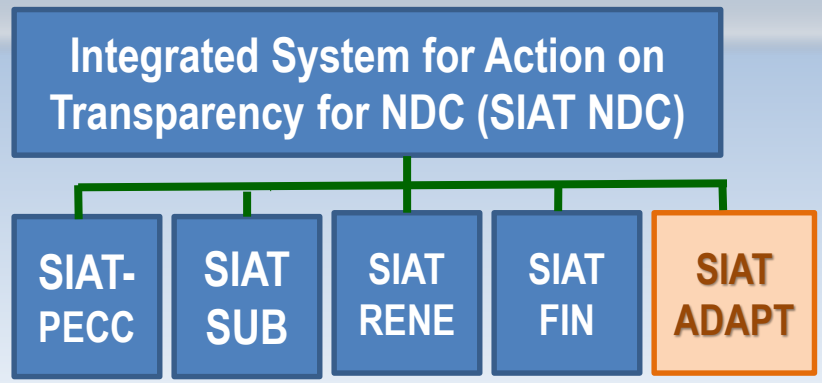
We want to understand adaptation progress and performance at a range of scales

EXAMPLES OF M&E PROCESSES IN MEXICO

An **indicators system** has been built for the identification of key topics on adaptation and monitoring.

System objective: Identification of key information that allows to periodical analysis on **vulnerability** reduction, **resilience** increase and strengthening of **adaptative capacities**, in a structured process.

Scale: national with special focus on indicators information at a State (local) level.



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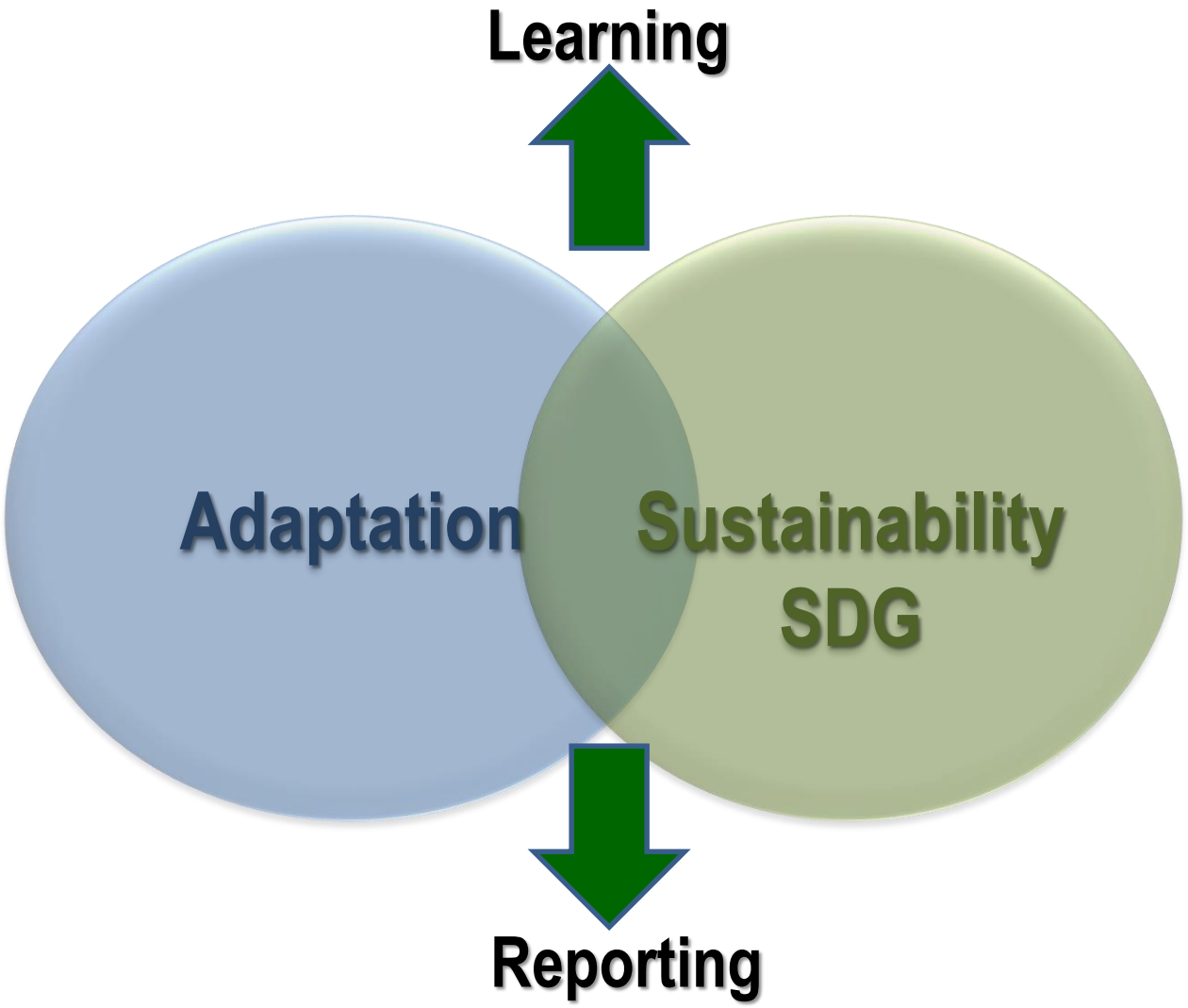
TOOLS FOR M&E, LEARNING ON CLIMATE ADAPTATION ,



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TOOLS FOR M&E, LEARNING ON CLIMATE ADAPTATION

Characteristic	Mitigation	Adaptation
Ultimate outcomes to be measured	• Increase in global average surface temperature • GHG emissions • GHG concentration of the atmosphere	• Avoided negative impacts of CC • Reduced climate vulnerability • Increased climate resilience • Is development on track?
What is being measured?	**Physical** parameters and conditions	Combination of **socio-economic** and physical parameters and conditions
Can it be objectively measured?	**Yes,** the underlying units (°C and tons of CO_2) are based on **objective scales**	**No,** vulnerability and resilience is subject to definitions and operationalisation. **Yes**, with good counterfactuals developmental effects of climate change risks can be measured.
Are units of measurement generic?	**Yes**, one ton of avoided GHG emissions has **the same global effect** no matter where it was avoided.	**No**, changes in adaptive capacity and resilience of a particular population group at a particular place are **not directly comparable**. **Yes**, if standard development parameters are used and normalised for climate effects.

Adapted from: GIZ (2017): Climate Change Policy Brief: Adaptation metrics and the Paris Agreement.

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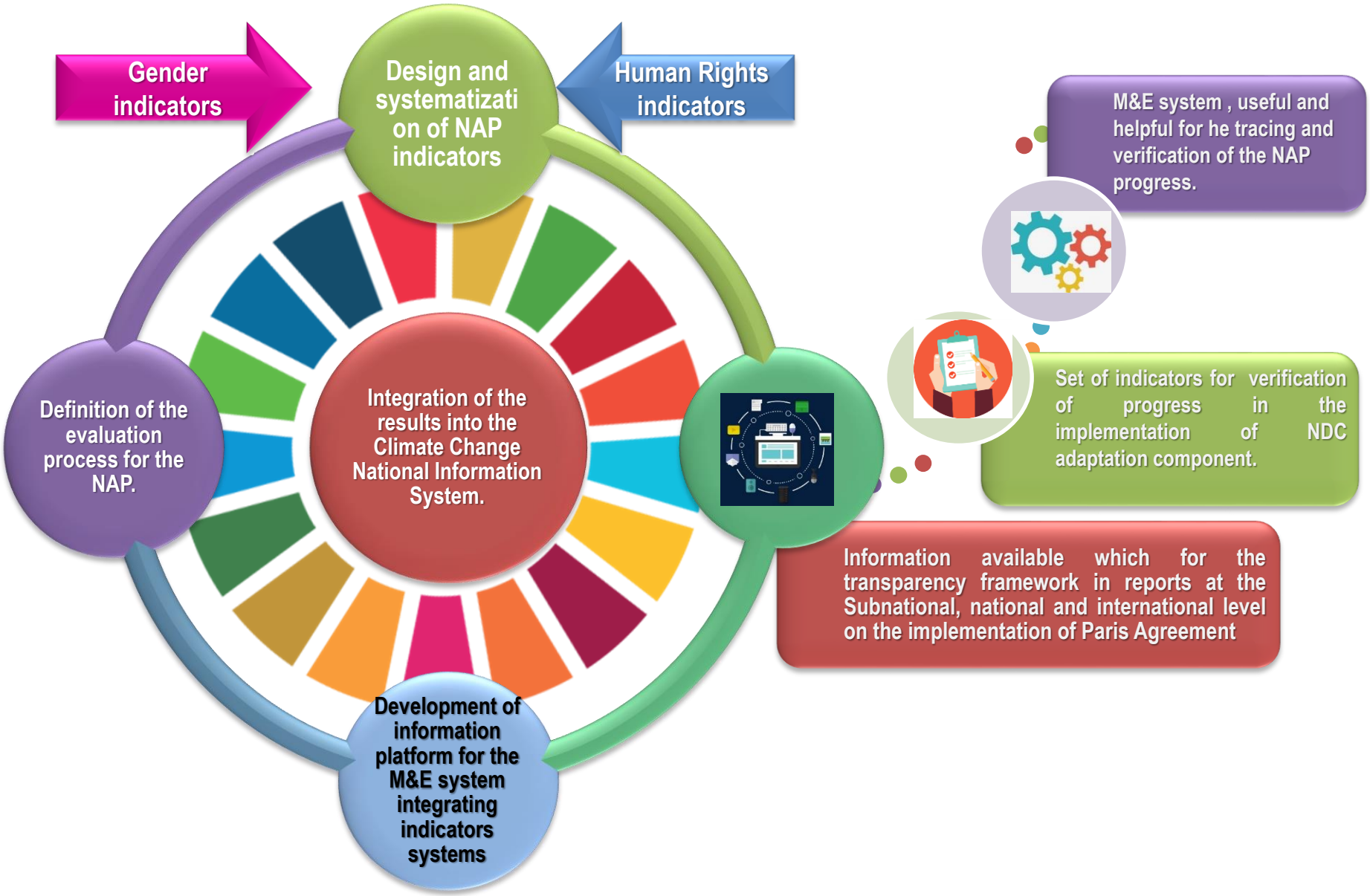
INDICATORS SYSTEM AS PART OF A M&E SYSTEM FOR NAP



BENEFITS FROM M&E

- **Increases the knowledge and comprehension of** climate change impacts dimensions and vulnerability conditions, as **basic elements for planning and decision making**
- **Better distribution of material, financial and human resources in an effective way**, looking fort the atention of he **most vulnerable groups, sectors and regions**.
- **Monitors and follow up of adaptation plans and actions**
- **Improves the adaptation and communication reports with national and internationals actors** and the **effective use of financial** ressources**.**
- **Contributes to adaptation on knowledge and learning based on evidence.**

MÉXICO

GOBIERNO DE LA REPÚBLICA

POR SU ATENCIÓN

GRACIAS

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