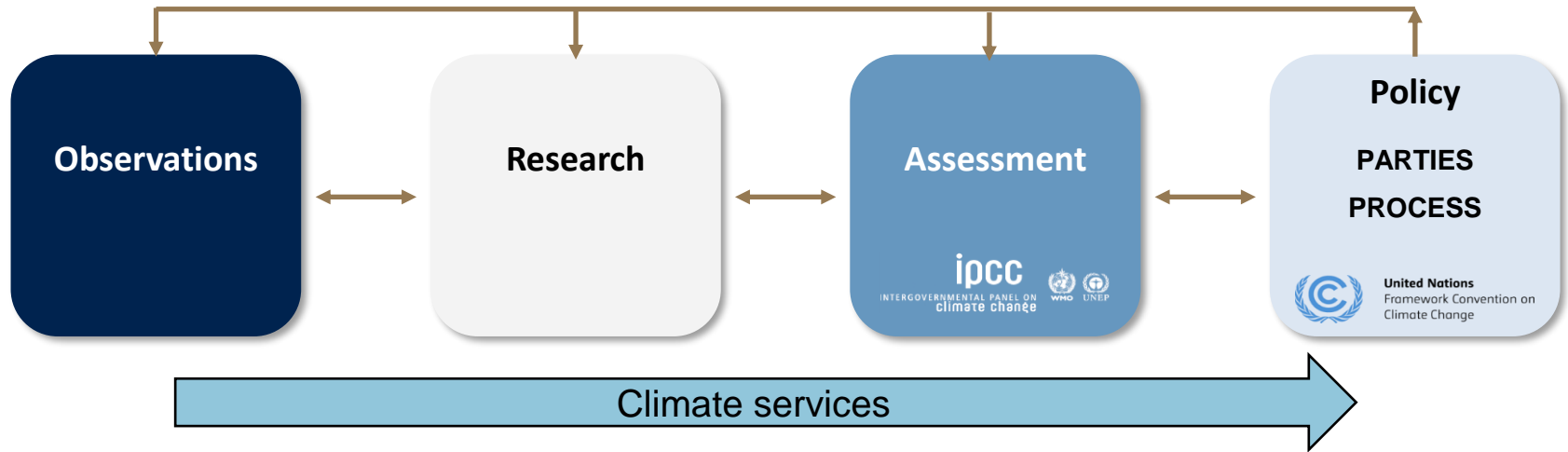


# Earth observations in support of the UNFCCC and Paris Agreement

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# Observations - the foundation for commitments and decision making on climate change



## UNFCCC

Article 4.1(g,h)  
Commitments  
Article 5  
Research and  
systematic observation

## Paris Agreement

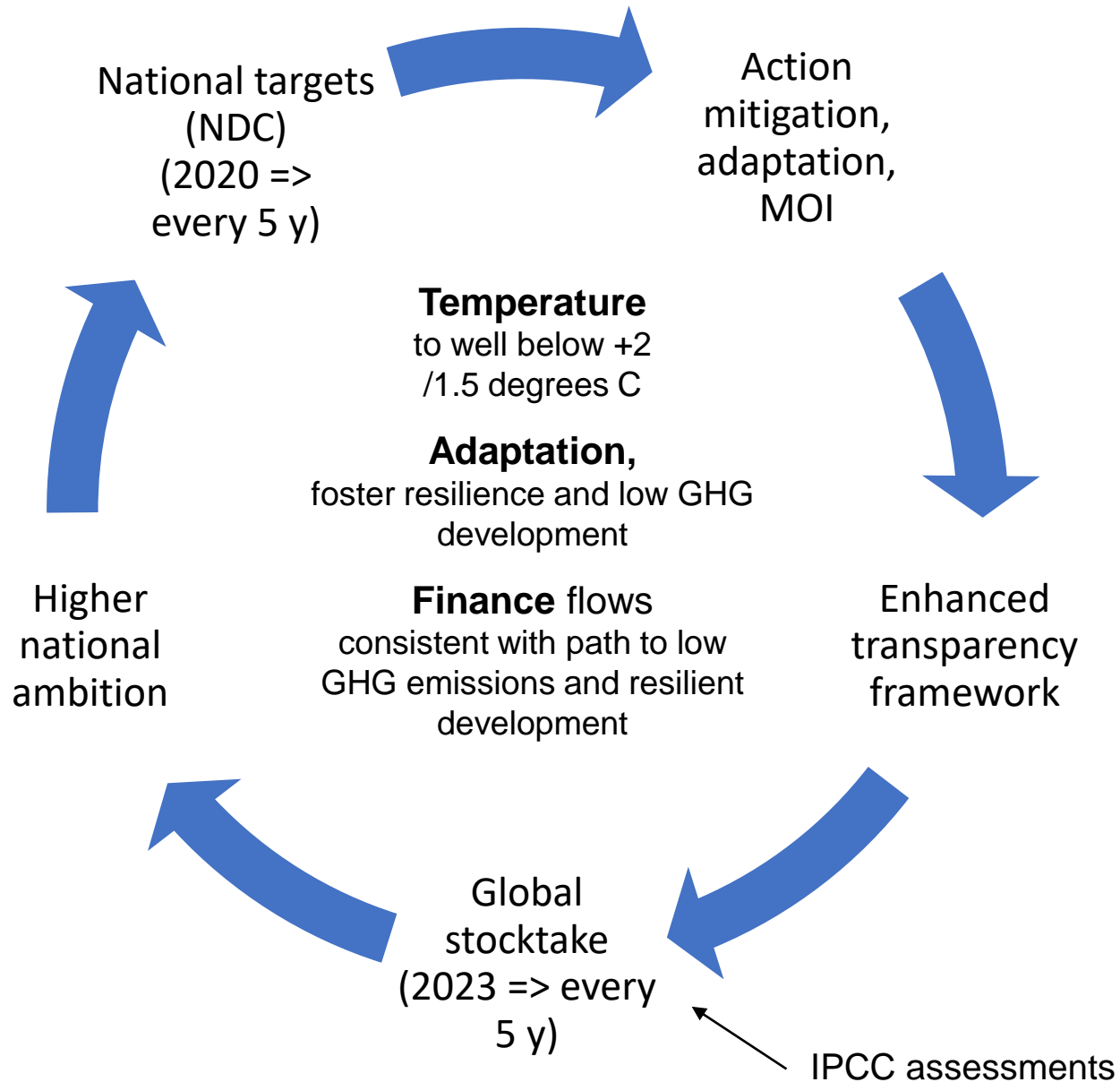


## Glasgow Climate Pact



# Paris Agreement

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## EO support for Paris Agreement Implementation

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In on-going efforts targeting systematic observations of climate and its manifestations

- GCOS, CEOS/CGMS WG Climate, GEO and others
- What is needed to understand the climate system and support action on climate change?
- Continue to identify needs, gaps and support sustained observations and support access to data
- Increase understanding of relevant global weather phenomena and attribution of climate change

**Importance of EO / ECVs / indicators / services for CC Understanding and Action**

- Scale-up regional and national activities (regional centers, GHG emissions, climate services, downscaling, reanalysis)
- Support data exchange between national – regional – global (top-down v bottom-up)
- Support planning, implementation and monitoring and evaluation

**Continue to strengthen regional and national support for mitigation / adaptation / loss and damage**

- Increasing ambition:
  - Facilitate transition to the objective of achieving net-zero emissions by 2050
  - Support long term GHG emission reduction strategies and short term mitigation action (IG3IS, land use, REDD+, blue carbon)
  - Estimating emissions in cities and identifying opportunities for further reductions
  - Estimating emissions of specific sectors and identifying opportunities for further reductions
- Monitoring, reporting and verification by Parties on GHGs
  - Transparency framework - first biennial transparency report by end of 2024 (LDCs and SIDs submit at their discretion) – together and flexible
  - Reducing the uncertainties of national GHG inventories
  - Working with statistical offices, UN and others on inventories and indicators

**Assist countries reduce uncertainties to provide accurate GHG inventories (PA 13.7) and long-term low GHG emission development strategies (PA 4.19)**

Glasgow: Work programme to urgently scale up mitigation ambition and implementation



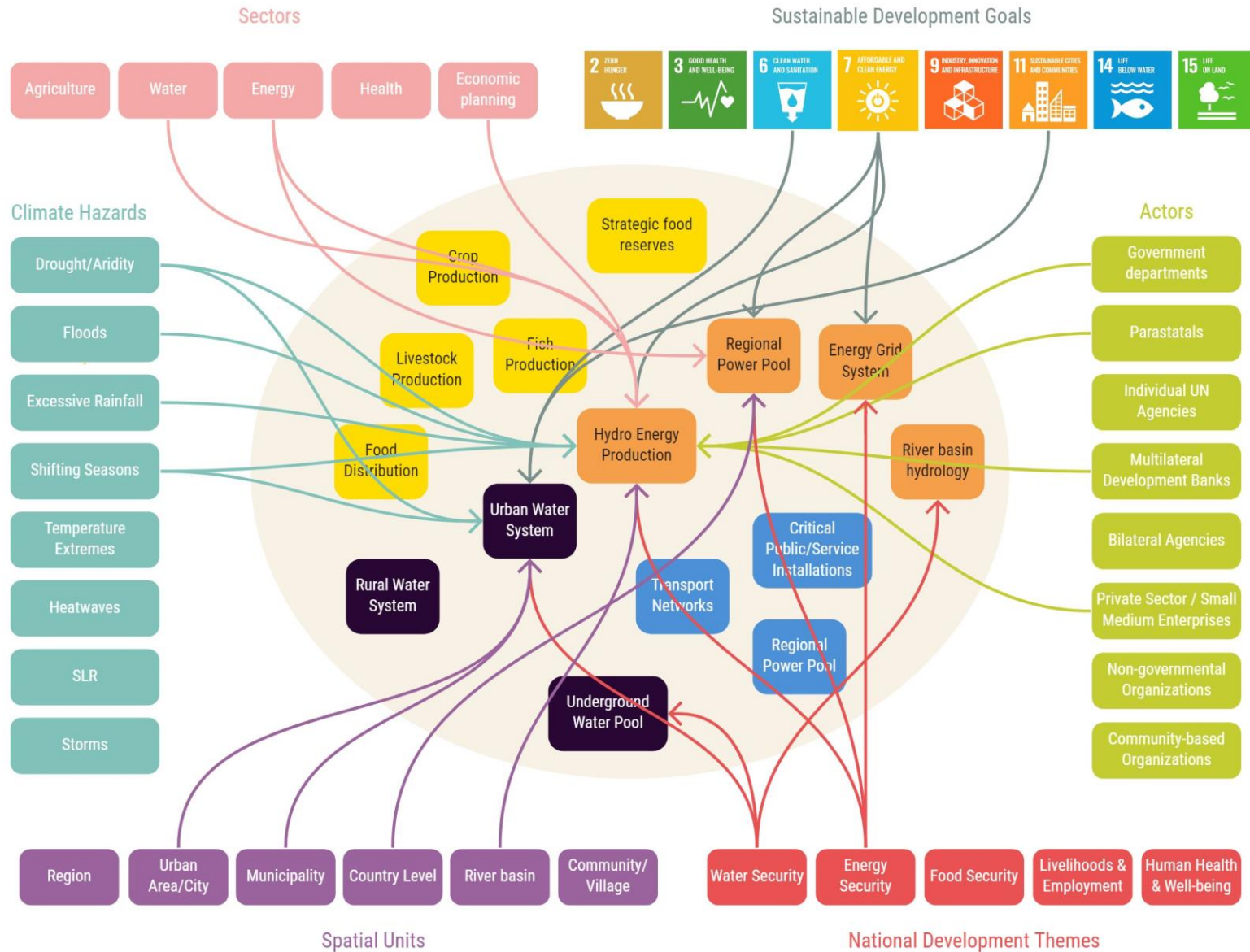
❑ **Objectives of the NAP process (decision 5/CP.17) are:**

- a) To **reduce vulnerability** to the impacts of climate change, by **building adaptive capacity** and **resilience**;
- b) To **facilitate the integration of climate change adaptation**, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.

❑ **Global goal of adaptation (Article 7 of the Paris Agreement)**

**Enhancing adaptive capacity, strengthening resilience and reducing vulnerability** to climate change, with a view to contributing to **sustainable development** and ensuring an adequate adaptation response in the context of the **global temperature limit of less than 2°C**.

A systems approach in NAPs focuses on essential systems deemed important for a national/local context. Data should align to specifics



### EO for adaptation and EO on adaptation

- **Baseline:** Establish exposure to climate impact drivers in past years
- **Trends over time:** Identify vulnerable areas and regions and changing vulnerability and risk, and estimation of losses
- **Data fusion to quantify risk, vulnerability, exposure:** Improve assessment of risk with better spatial and temporal coverage in data, including regional aspects
- **Decision support:** Support active decision-making through early warning systems such as the Crop Monitors
- **Replace point measurements:** Many countries are now transitioning to remotely sensed data to overcome limited ground measurements for weather data
- **Required outreach and capacity-development:** human capacity-development and concrete examples to show decision/policy-makers how EO can transform their operations

Assist countries track adaptation (PA 7.10-14)

Glasgow: Work programme on global goal on adaptation



## Paris Agreement Article 14

- a) Take stock of the implementation of the Paris Agreement – assess collective progress towards achieving its purpose and its long-term goals
- b) First GST in 2023 and then every 5 years
- c) Outcome shall inform Parties in updating and enhancing NDCs and enhancing international cooperation for climate action

### Mitigation

- Overall effect of NDCs
- State of GHG emissions and removals and mitigation efforts undertaken by Parties

### Adaptation

- Observed and projected risks
- State of adaptation efforts, support, experiences and priorities

### Finance flows and means of Implementation and support

- Finance flows and financial support
- Technology
- Capacity-Building

### Cross cutting:

- Fairness consideration including equity as communicated by Parties in their NDCs

### RM and L&D

- Address the social and economic consequences and impacts of response measures;
- Avert, minimize and address loss and damage associated with the adverse effects of climate change

- 1. Information collection and preparation** 2021/2022 - 2023
  - SBSTA/SBI joint contact group
  - Sources of input (inc. synthesis reports)
- 2. Technical assessment** 2022 - 2023
  - Technical dialogue guided by 2 co-facilitators
  - Consider IPCC assessments
  - Separate SBSTA-IPCC special events
- 3. Consideration of outputs** 2023
  - identify opportunities for enhancing efforts, challenges, good practices, and political messages
  - HL events to communicate messages

SB Chairs provide guiding questions for each of the 3 stages above

GST modalities: Decision 19/CMA.1 <https://unfccc.int/documents/193408>



## EO support for assessing progress: Global Stocktake

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- EO is the foundation for action on the Paris Agreement
- Provide input to the GST themes with a pledge and review approach in five year cycles
  - Mitigation – GHG and temperature trends/projections - support to Parties for their GHG monitoring and reporting
  - Adaptation – observed/ projected impacts and risks – information/indicators for and on adaptation to measure progress
  - MOI – state of progress to support developing countries
  - Cross- cutting – support to NDCs/NAPs
  - Loss & Damage – information on loss and damage (managing risk)
- Aggregation of information, preparation of a coordinated input – via a synthesis report
  - a) At Party-level to improve accuracy / detail / identification of how many/who/what
  - b) At global level to support understanding of where we are and what is possible in the future
  - c) EO has a large role to play moving forward
  - d) **Deadline for inputs February 2022**

EO can support the GST including through  
Assessment of progress towards the long-term goals -  
Provision of information on GHG concentrations, global warming,  
vital signs / climate indicators, ecosystems  
Consistency in base lines / methodologies

**Thank you!**

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