Global Gateway

INTPA-NEAR Environment & Climate Week

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Brussels, Belgium

NDCs: how to support implementation at country level via our EU cooperation?

Nicola Di Pietrantonio, Programme manager
INTPA F.1 – Climate Change and Sustainable Energy, Nuclear Safety

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Before we start

- **Outline of this session**:
  1. A step-wise approach to NDC analysis
  2. Measuring, reporting and verification (MRV) approaches
  3. Examples from the field: Mozambique and Egypt
- **Climate change is not a stand-alone policy area**. Focusing on climate change will not divert resources from operations in agriculture, transport, energy, forestry, industry, water & waste management, etc.
- Focus on the mitigation component of NDCs only, not adaptation

Step 1: Analyse a country's NDC

- Use the official version (UNFCCC registry) – 2nd generation NDCs
- Deal with a large variety of NDCs
- Focus on the mitigation component (must have)
- What are the baselines and targets for GHG emission reduction?
- Identify the main sectors of intervention
- Are target sectors in line with the Green Deal and the Global Gateway priorities? Are they in line with the MIPs' priorities?

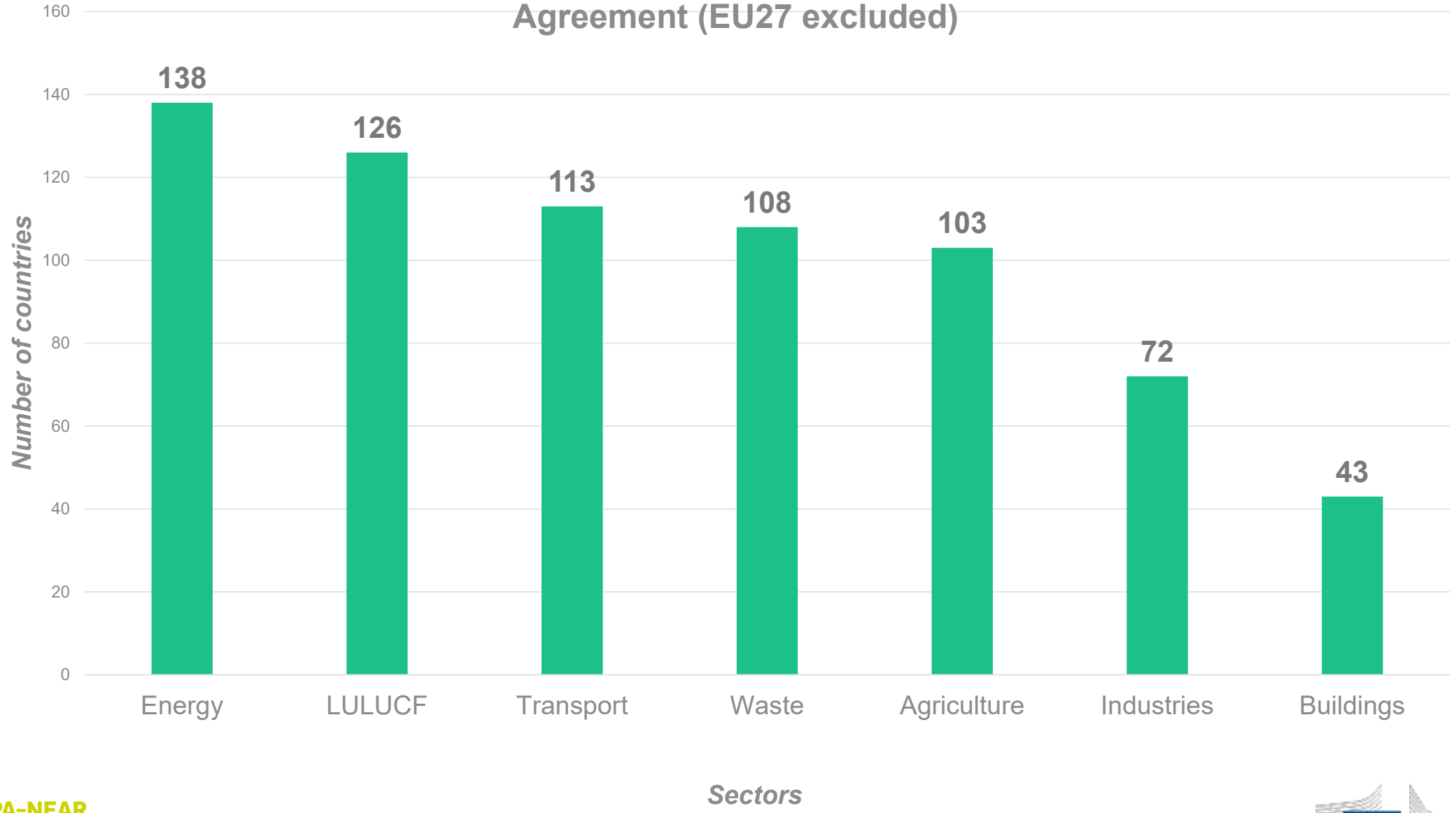
Step 2: Identify potential sectors of intervention

- Main objective: maximising GHG emissions reduction and opportunities to shift to low-carbon, environmentally sustainable development

  ➔ economic growth, decent job creation, reduction in energy dependence, reduction of pollution loads, just transition

- Make use of information from NDCs; country assessments & reports; energy, environmental and socioeconomic data; etc.
- Policy reform and investment agendas in place?
- Other considerations (EU interests, existing financing opportunities, adaptation co-benefits, etc.)

Mitigation sectors covered by the 170 NDCs of the Parties to the Paris Agreement (EU27 excluded)



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Step 3: Assess the potential role of sectors not covered by the NDC

- Sectors not prioritised in an NDC have GHG emission reduction potential which can contribute to a country's overall climate change performance
- Check consistency with the Green Deal, Global Gateway and MIP priorities
- E.g.: green economy and private sector development, urban agenda, governance, health, education, social protection, PFM, etc.

Step 4: Define the appropriate instruments to support NDC implementation

Software…

- High-level political dialogue (green/climate diplomacy)
- Policy dialogue (technical support to formulate policy reform agenda, draft legislation, prepare/revise trade agreements, produce environmental standards, and generally create the enabling environment for public and private investment)

…complemented by hardware

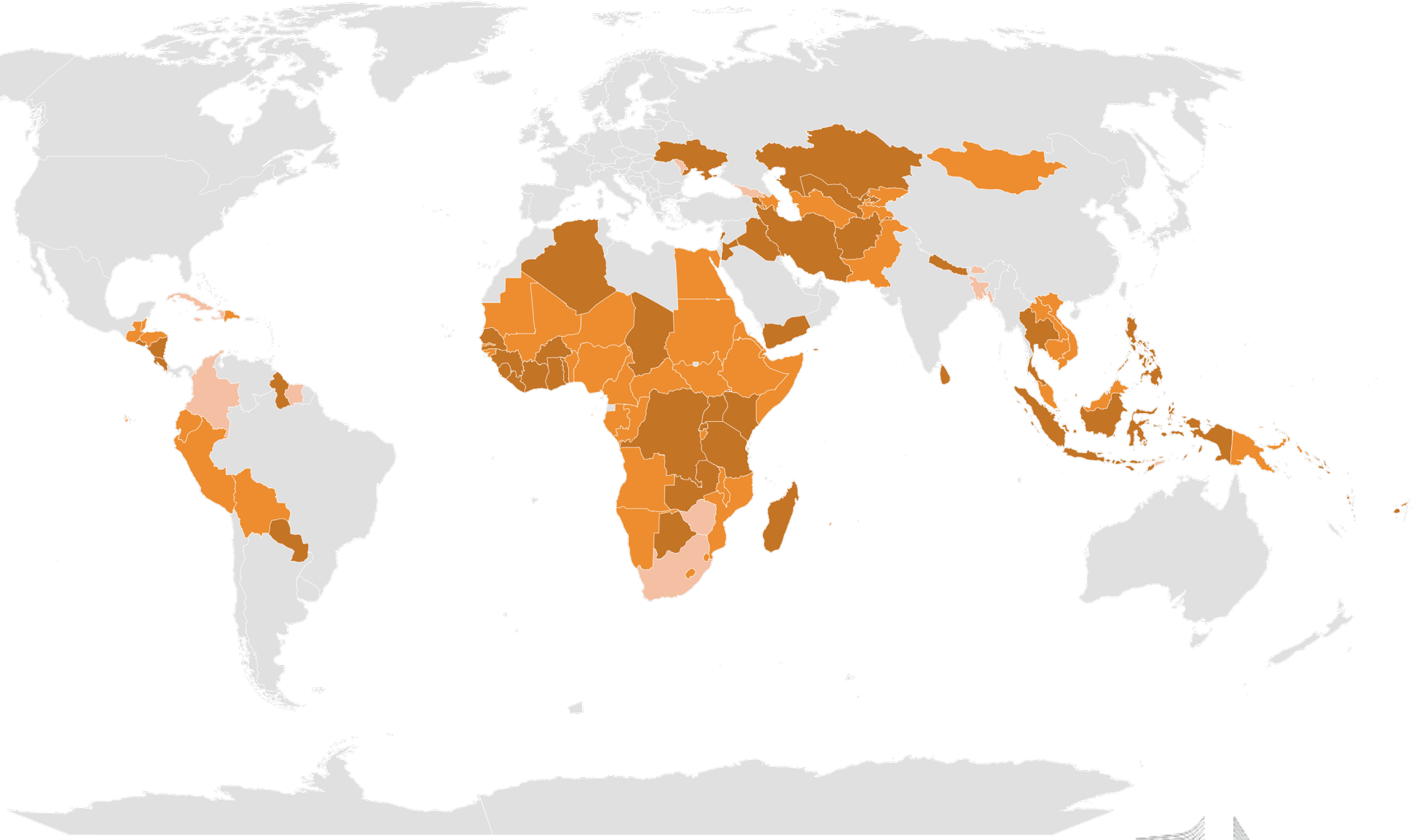
- Budget support (SDG contracts; Sector Reform Performance Contracts)
- Support the investment agenda (EFSD+)
- Project-type interventions to make a country's development path less carbon intensive at an early stage (economic diversification)

MIPs with priorities and planned interventions that could support the implementation of NDC mitigation priorities

Group 1: High alignment between MIP and NDC (>70%)

Group 2: Medium alignment between MIP and NDC (40-70%)

Group 3: Low alignment between MIP and NDC priorities (<40%)



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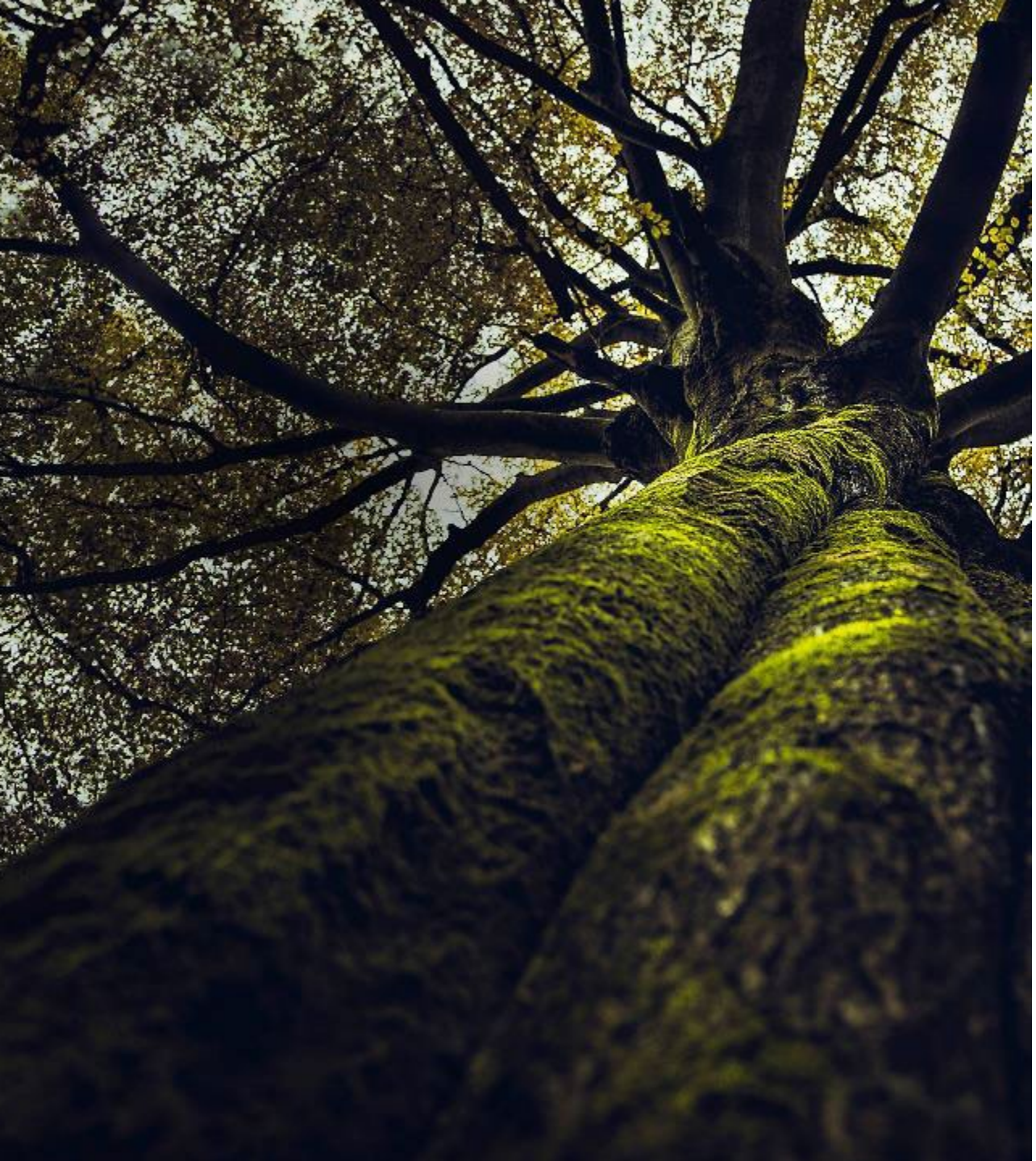
A hands-on example: Bangladesh NDC (2021)



NDC targets

Unconditional contribution

-6.73% below BAU by 2030

- 95.4% from energy
- 0.64% from AFOLU
- 0.6 from waste

Conditional contribution

-15.12% below BAU by 2030

- 96.46% from energy
- 0.4% from AFOLU
- 1.84% from waste

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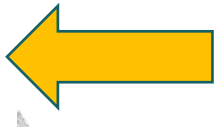
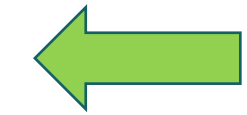
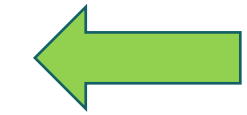
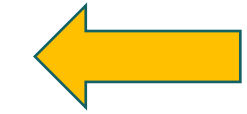
Sector	Description	Actions by 2030
Energy	**Power**	
	Implementation of renewable energy projects	Implementation of renewable energy projects of 911.8 MW grid-connected capacity • Solar: 581 MW • Wind: 149 MW • Biomass: 20 MW • Biogas: 5 MW • New Hydro: 100 MW • Solar Mini-grid: 56.8 MW
	Enhanced efficiency of existing power plants	Installation of new combined cycle gas-based power plant (3208 MW)
	Use of improved technology for power generation	Efficiency improvement of existing gas turbine power plant (570 MW)



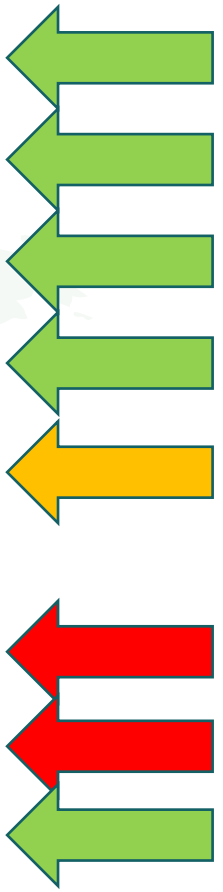
Sector	Description	Actions by 2030
Energy	**Transport**	
	Improvement of fuel efficiency for transport sub-sector	Improvement of road traffic congestion (5% improvement in fuel efficiency) • Widening of roads (2 to 4 lanes) and improving road quality • Construct bicycle lanes • Electronic road pricing or congestion charging • Reduction of private cars and encourage electric and hybrid vehicles • Development of Urban Transport Master Plans (UTMP) to improve transport systems in line with the urban plan for all major cities
	Increase use of less emission-based transport system and improve Inland Water Transport System	Modal shift from road to rail (10% modal shift of passenger-km) through different transport projects: • Purchase of modern rolling stock and signaling system for railway • Electrification of the railway system and double-track construction

Sector	Description	Actions by 2030
Energy	**Industry**	
	Increase energy efficiency in industrial processes	Achieve 10% energy efficiency through measures according to the Energy Efficiency and Conservation Master Plan
	Agriculture	
	Enhanced use of solar energy	Implementation of 5925 solar irrigation pumps (generating 176.38MW) for agriculture
	Brick Kilns	
	Enforcement and Improved technology use	-14% emission through banning fixed chimney kilns, encourage advanced technology and non-fired brick use
	Buildings	
	Enhanced use of energy efficient appliances in household & commercial buildings	Use energy-efficient appliances in household and commercial buildings (achieve 5% and 12% reduction in emission respectively)
	F-gases	
	Implement Montreal Protocol targets	Reduction of Ozone Depleting Gases (HCFCs) use in air conditioning as per Montreal protocol targets by 2025




Sector	Description	Actions by 2030
AFOLU	**Forestry**	
	• Deforestation reduction • Reforestation/ Afforestation • Forest restoration • Increase tree cover	• Increase tree cover from 22.37% (2014) to 24% • Afforestation and reforestation in the coastal areas, islands and degraded areas (150,000 ha) • Restore the deforested forests – 137,800 ha at the hill and plain land sal forest. • Restore the degraded forests – 200,000 ha at the hill and plain land sal forest. • Plantation in roadsides, embankments, private lands etc.
Waste	**Waste**	
	Improved Municipal solid waste management	• Establishment of waste-to-energy plant in Dhaka • Establishment of incineration plant in one city • Regional integrated landfill and resource recovery facility in one city



Enhanced Transparency Framework: key concepts

Leonardo Massai, EU NDC Facility

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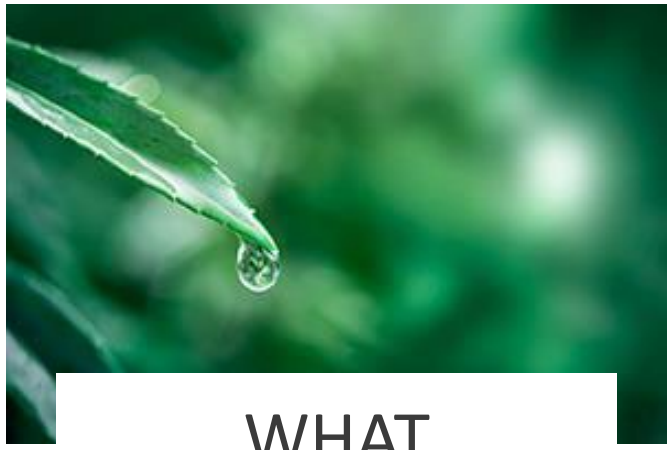
MRV/ETF



WHAT

WHY

HOW

Measuring, reporting and verification

Measurement (M) for developing countries applies both to efforts to address climate change and to the impacts of these efforts. It occurs at the national level and refers to GHG emissions, mitigation actions and their effects, and the support needed and received

Reporting (R) for developing countries is implemented through the national communications and BURs, where Parties report on their actions to address climate change in their national communications

Verification (V) is addressed at the international level, through the ICA of BURs; It can also occur at the national level, but is voluntary

In the framework of the Paris Agreement, MRV is achieved through the **Enhanced Transparency Framework (ETF) of action and support**

ETF – Article 13 PA

WHAT

- Enhanced transparency framework for **action and support**
- Build on and enhance the transparency arrangements under the **Convention**
- **Purpose:** clarity on achieving NDCs and on support provided and received

- Each Party shall provide information on GHG emissions (inventory) and on implementing and achieving its NDC
- Information will be reviewed by technical experts
- FLEXIBILITY for developing countries

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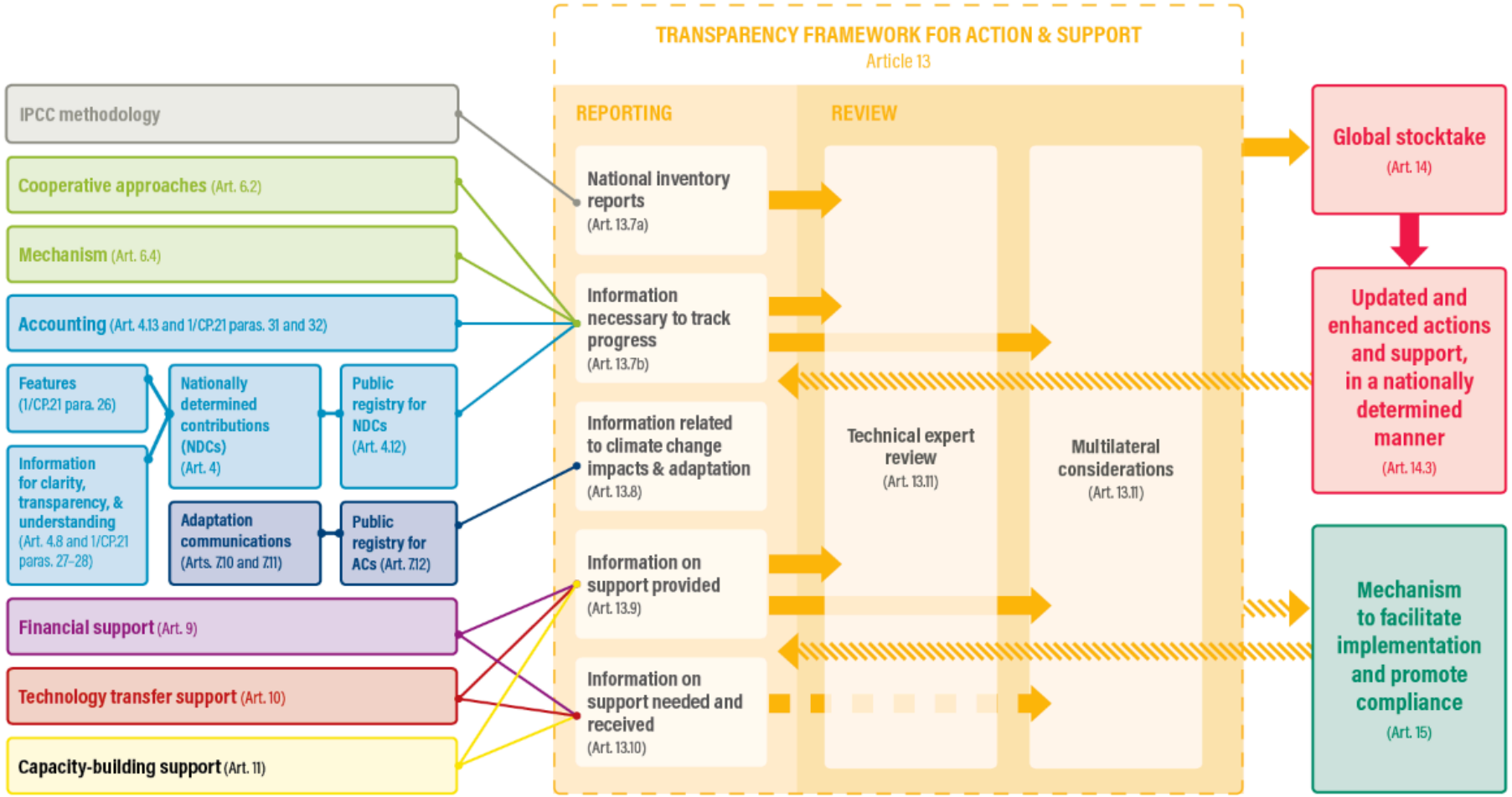
Mapping the Linkages between the Transparency Framework and Other Provisions of the PA

WHY



KEY:

= Article 4 = Article 6 = Article 7 = Article 9 = Article 10 = Article 11 = Article 13 = Article 14 = Article 15

= linkage made explicit in the Paris Agreement between Article 13 and other articles

= linkage within Article 13 = nonmandatory linkage within Article 13

= potential linkage explored in this paper with Article 13 = linkage within Article 14

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ETF modalities

- **Modalities, procedures and guidelines** (MPGs) – Decision 1/CP.18
  - Biennial Transparency Reports from 2024
  - National Communication + BTR as single report
  - 3 groups : 1) developed country Parties – mandatory 2) other countries – self determined flexibility and 3) LDCs and SIDS – at their discretion
- Decisions 4/CMA.1 - facilitate **clarity, transparency and understanding (ICTU)** of nationally determined contributions
- Decision 5/CMA.3 – Guidance **operationalizing** the MPGs

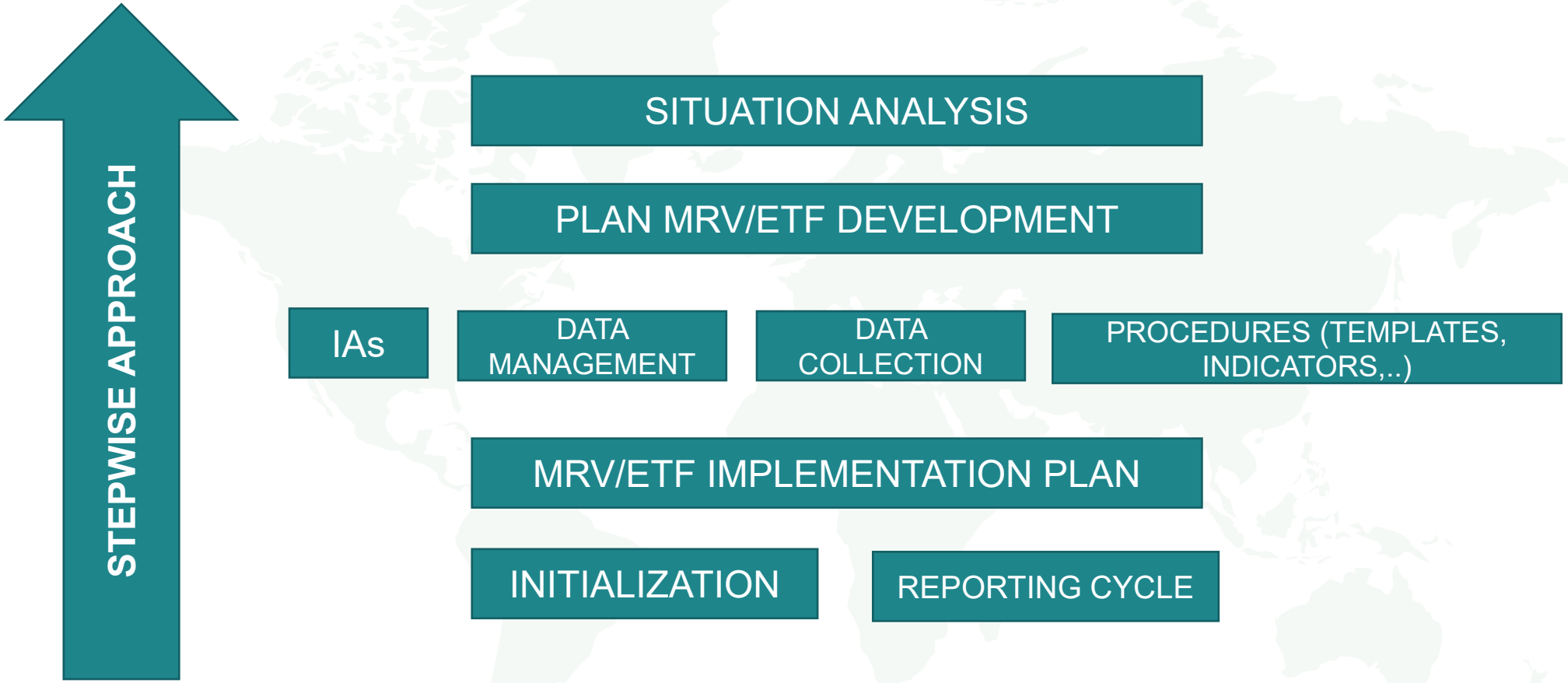
Why it is important

- Fulfilment of Paris Agreement requirements as obligation under international law for all Parties
- Better attract climate finance in particular under Article 6 (high competition on GHG emissions reductions and removals from other developing countries)
- Easy to track and monitor implementation of climate actions to shape future policies

Why developing countries need support

- Lack of high level and political commitment
- Weak coordination and frictions across institutions
- Lack of consistent across reporting documents
- Lack of robust data collection mechanism
- Weak understanding of rules and opportunities

EU support to MRV: step-wise approach



EU support to MRV: step-wise approach

Contribute to:

- Enhancing understanding on Paris Agreement rules and requirements
- Scaling up the quality and accuracy of data through the design of a national MRV system where rules, roles and procedures are clearly defined
- Enhancing the country's readiness and capacity to measure the progress towards the achievement of its NDCs pledges
- Promoting a more analytical approach to data collection and analysis

Coordinate with existing initiatives:

NDC Partnership, ICAT, CBIT, UNDP, World Bank, bilateral cooperation, …

1st round of Q&A

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EU support to NDC Imple-mentation - case of Mozambique

Aude Guignard, Programme Officer

Delegation to Mozambique

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Context

Mozambique is one of the **10 most vulnerable** countries to climate change (2000-2019 period)

Climate related hazards - 2 million people every year (+/- 7% of population)

By 2050 **economic impact** is projected at USD 7.6 billion dollars (or 4 to 14% GDP)

Climate projections scenarios predict: ↗t 3-4°C, more frequent and more intense extreme weather events (droughts, floods, cyclones)

Coastal areas particularly exposed

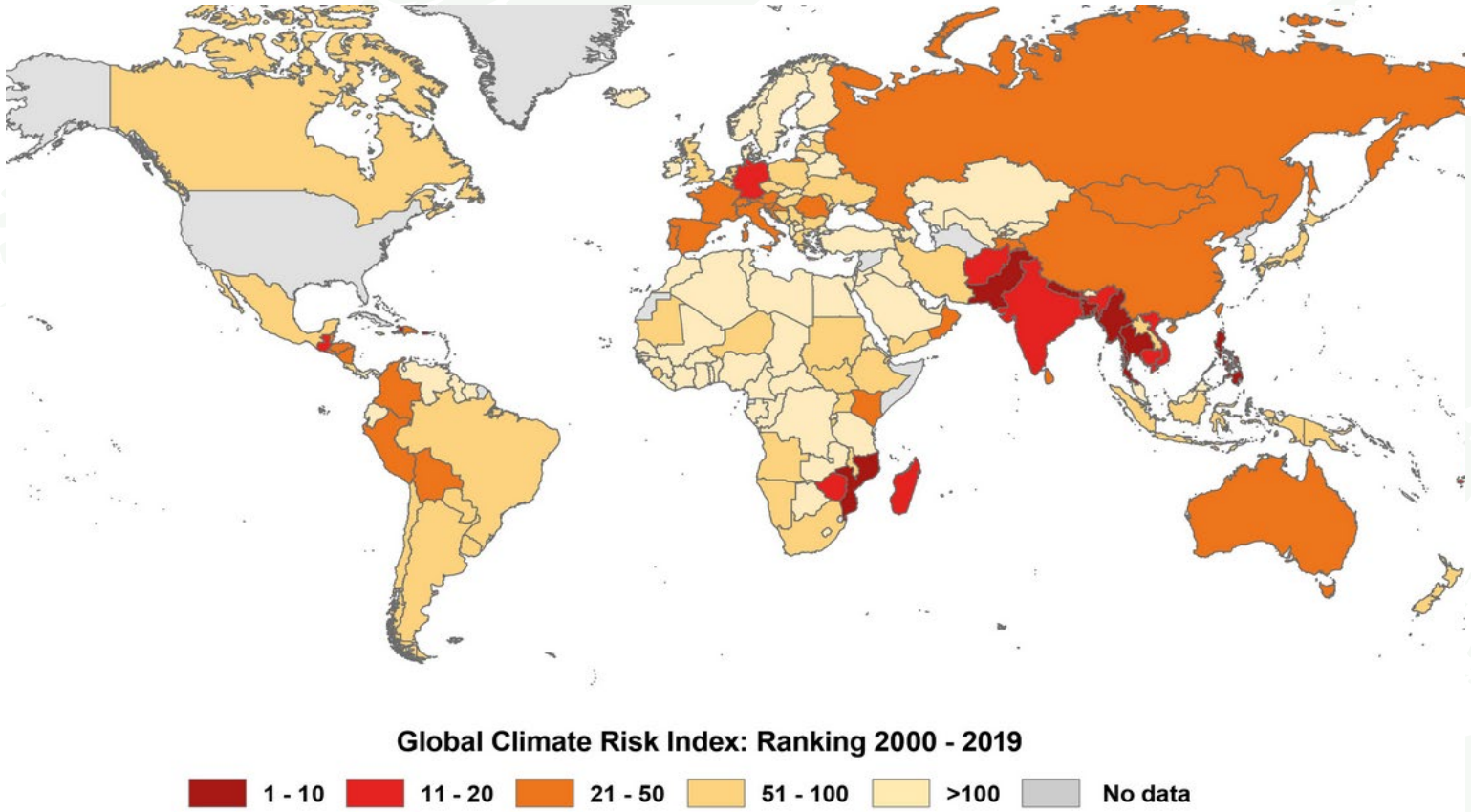
Vulnerability is exacerbated by increasing **depletion** of natural capital and ecosystem degradation

Untapped potential for climate Finance

Insufficient **multi-sectorial** planning, budgeting and coordination of climate change

Policy: Updated **NDC (2021),** National Climate Change **Adaptation** and **Mitigation** Strategy (ENAMMC) & **National Adaptation Plan** (NAP)

Global Risk Index (2021)



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EU MERCIM+ programme (15 M EUR)

1: Establishment of National Enhanced Transparency Framework

National Measurement, Reporting and Verification (MRV) on mitigation, adaptation and climate finance:

Mainstreaming and coordinating climate change action

Increased access to climate finance

2: Implementation Local Adaptation Plans (LAPs)

Main government adaptation instrument

4 provinces (coastal North and Center) – 10 districts and 1 municipality

3: Communities' preparedness, response and adaptive capacities to weather related hazards

EWS / Anticipatory action/Crisis modifier

Access to climate information

NbS

1. Enhanced Transparency Framework system

ETF necessary: (1) fulfil reporting requirements of the Paris Agreement; (2) track and monitor NDC implementation (3)attract public and private climate finance both from private and public sources

Paris Agreement reporting requirements: NDC (5y), NC (4y), BTR (2y) as from 2024

⇒⇒ Essential for evidence-based decision-making and information- sharing

Mozambique ETF Implementation Plan (IP)

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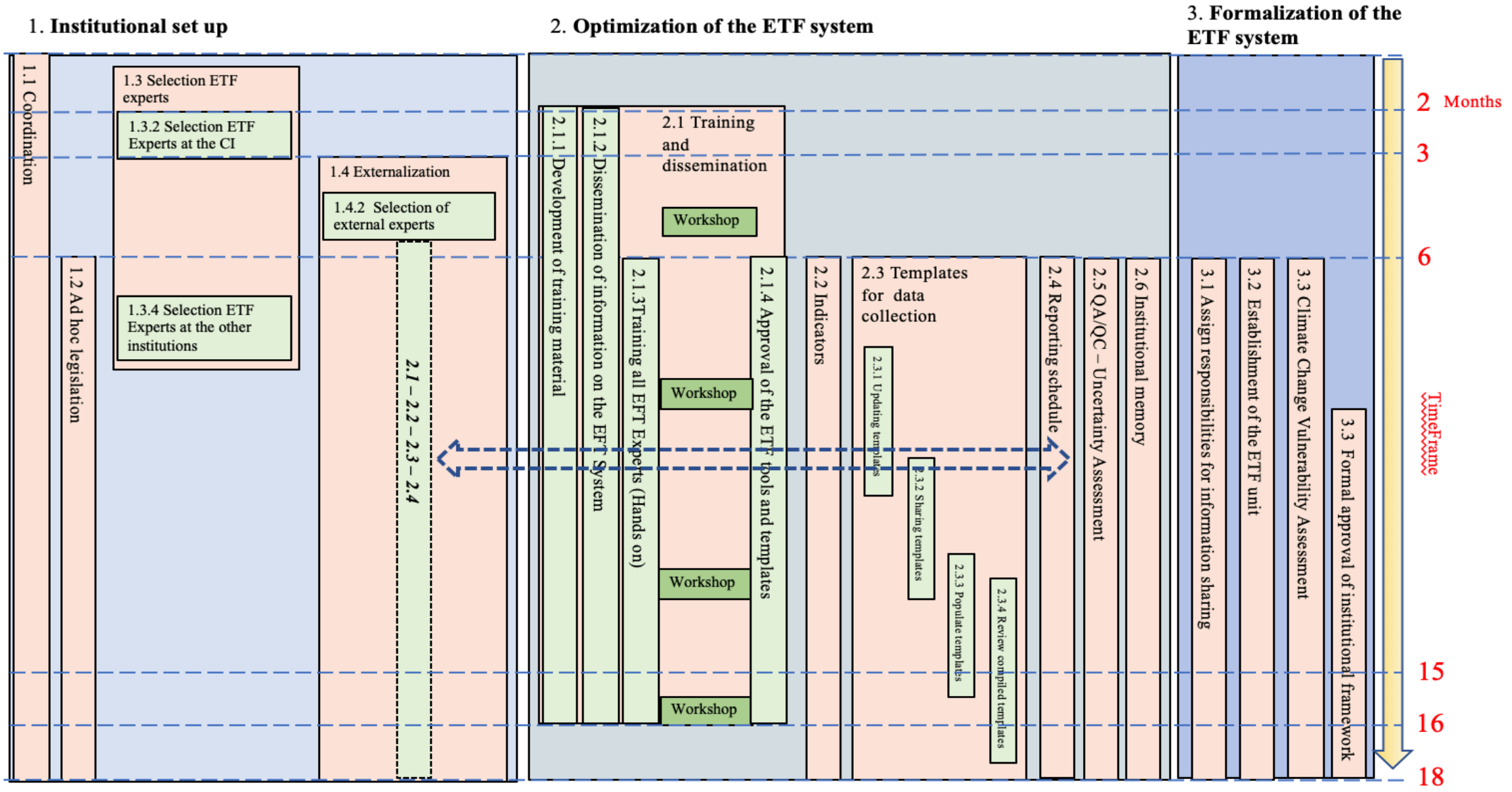
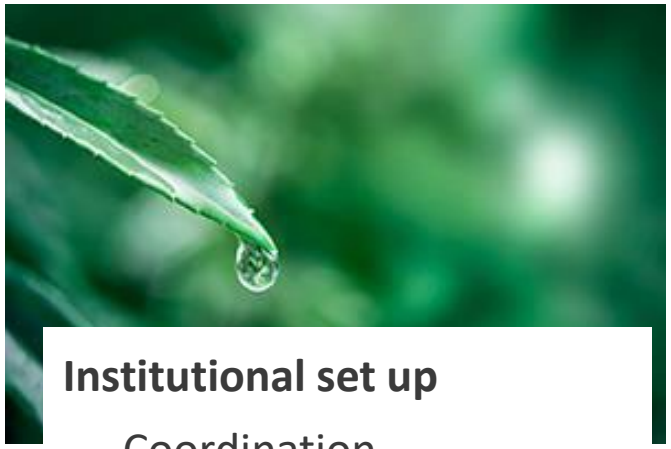

1. Institutional set up
2. Optimization of the ETF system
3. Formalization of the ETF system
1.1 Coordination
1.2 Ad hoc legislation
1.3 Selection ETF experts
1.3.2 Selection ETF Experts at the CI
1.3.4 Selection ETF Experts at the other institutions
1.4 Externalization
1.4.2 Selection of external experts
2.1 – 2.2 – 2.3 – 2.4
2.1.1 Development of training material
2.1.2 Dissemination of information on the EFT System
2.1 Training and dissemination
Workshop
2.1.3Training all EFT Experts (Hands on)
Workshop
Workshop
2.1.4 Approval of the ETF tools and templates
2.2 Indicators
2.3 Templates for data collection
2.3.1 Updating templates
2.3.2 Sharing templates
2.3.3 Populate templates
2.3.4 Review compiled templates
2.4 Reporting schedule
2.5 QA/QC – Uncertainty Assessment
2.6 Institutional memory
3.1 Assign responsibilities for information sharing
3.2 Establishment of the ETF unit
3.3 Climate Change Vulnerability Assessment
3.3 Formal approval of institutional framework
2 Months
3
6
15
16
18
TimeFrame

ETF Implementation Plan (IP): parallel process



Institutional set up

- Coordination
- Ad-hoc legislation
- Selection of experts (Coordinating institution/other sectors)
- Internalization of expertise

Optimization of the MRV system

- Training and dissemination
- Indicators
- Templates for data collection
- Reporting schedule
- QA/QC – Uncertainty Assessment
- Institutional memory

Formalization of the MRV system

- Responsibility for information sharing
- Establishment ETF unit
- Climate Change Vulnerability Assessment
- Formal approval of institutional framework

Just Energy Transition Energy Efficiency – Case of Egypt

Raphael Demouliere, Programme Officer, Social, Rural and Reginal Development

Ayman Ayad, Cooperation Officer

Delegation to Egypt

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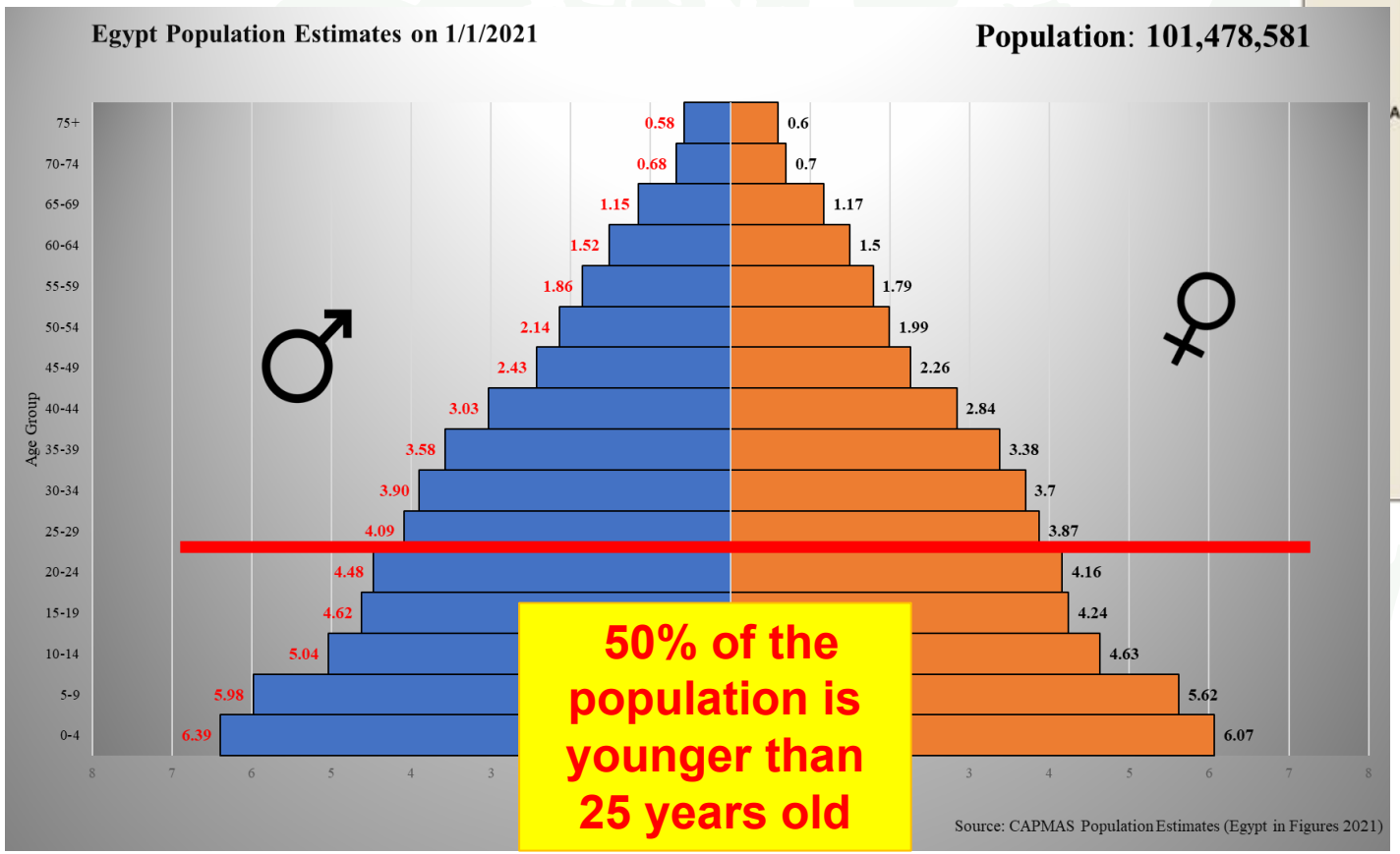
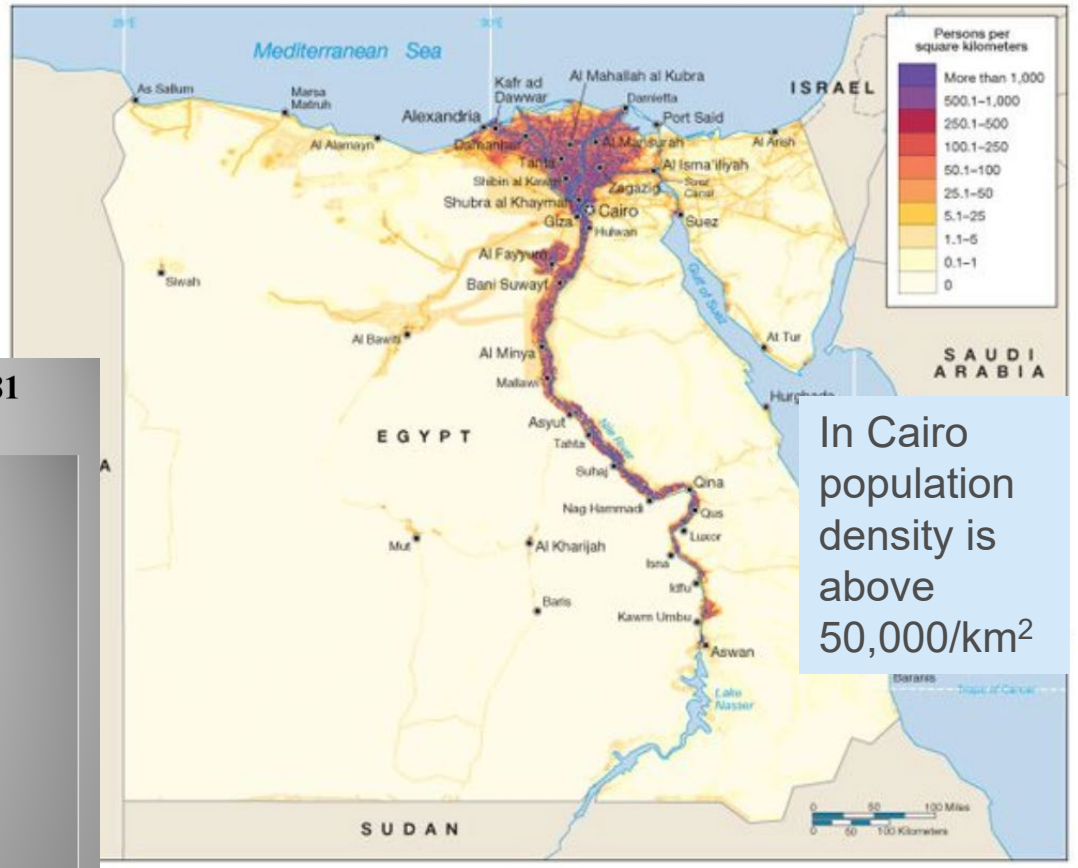
Egyptian challenges





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FEW FACTS ABOUT EGYPT

Fast growing population and economy

- Population of 105M inhabitants -165M expected by 2050
- GDP of 4,300 USD per capita
- Average GDP growth rate of 4.4% (2015-2021)

Highly constrainted natural resources

- Less than 4% of the land is cultivated and 7% inhabited
- 95% population lives in Nile Valley and Delta
- Nile represents 97% of water resources

Country is highly vulnerable to the risks of climate change impacts

- Only 570 m3/capita (2018) expected to fall to 390m3/capita in 2050
- Nile Delta is one of 3 extreme vunerable deltas identified worldwide by IPPC
  - 30% of Delta is lowland (levels lower than 2m)
  - Delta is expected to loose 30% of its food production by 2030
- Agriculture consumes 80% of water available. Any reduction in Nile flow will affect the Egyptian agriculture.

EGYPT's NATIONALLY DETERMINED CONTRIBUTIONS

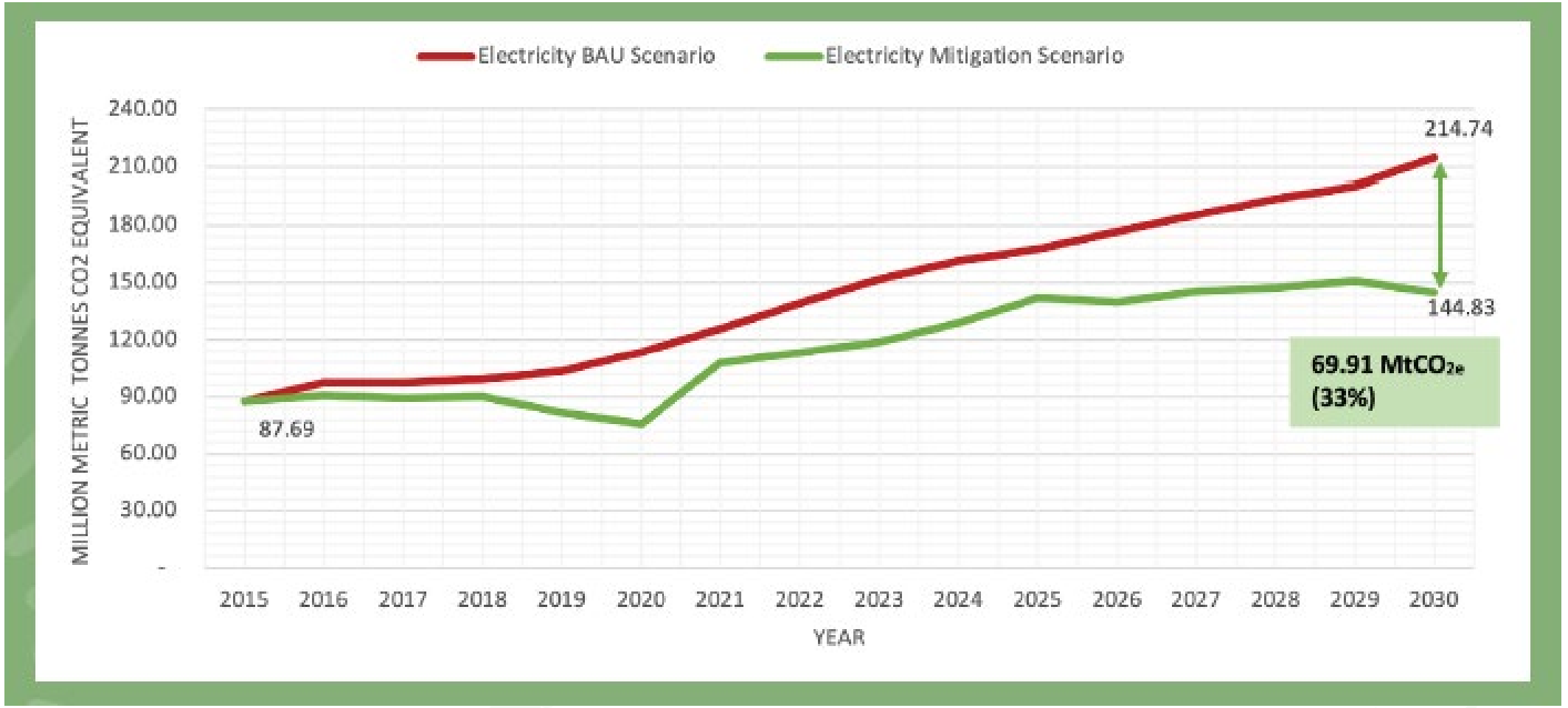
Egypt's NDC

- EG ratified UNFCC in 1994
- EG submitted its Intended Nationally Determined Contribution (INDC) in 2015 to achieve the global targets set out in the UNFCCC's Paris Agreement
- INDC was considered Egypt's first NDC.
- Egypt's NDC was updated in June 2022 prior to COP27

Egypt's NDC objectives to reduce GHG emissions by 2030

- by 33% in the electricity sector (**70 Mt** CO2e),
- 65% in the oil and gas sector (1.7 Mt CO2e)
- 7% in the transportation sector (9 Mt CO2e) by 2030

Electricity sector - scenarios



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What is the EU support

Wind Power

- 2015: 30M€ EU grant blended with 310M€ from EIB and KfW for the construction of the wind farm of El Zayt (240MW) – now operational

Upgrading network to accomodate more renewable energy production

- After COP 27 EU pledged 35M€ grant to the pilar energy of the Nexus Water Food Energy. Grant will most likely used to increase the network capacity.
- A prerequisite to the replacement of 5GW of fossile powered electricity production capacities by 10GW of renewable energy powered production plants

What is the EU support

Policy support

- Energy Sector Policy Support Programme (EUR 60 million) was signed in 2011. It aimed to improve the energy policy and regulatory framework, the sector's financial transparency and performance, and to promote the development of renewable energy and energy efficiency.
- A EUR 3 million technical assistance (TA) is supporting the drafting of the Egyptian Energy Strategy 2035 that is aiming at 60% of the energy mix covered by renewable capacities.

Green hydrogen

- 2022: Signature of an MoU between EU and EG to support the production of green hydrogen in Egypt

NWFE

What is NWFE

- NWFE: Nexus Water Food Energy
- Launched by Egypt in June 2022 prior COP27 to achieve the objectives fo the National Climate Change Strategy 2050

What is the EU doing to support NWFE

- Supporting all dimensions are being supported through exisiting & planned cooperation
- In line with the already exisiting TEI on the food water nexus.
- Specific pledge of 35M€ to support the energy pilar

EGYPT'S NEXUS OF WATER, FOOD & ENERGY
FROM PLEDGES TO IMPLEMENTATION

Example of TEI Project on the food, water and energy nexus

Gabal Asfar Project – wastewater treatment and wastewater reuse

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Gabal Asfar Project Overview

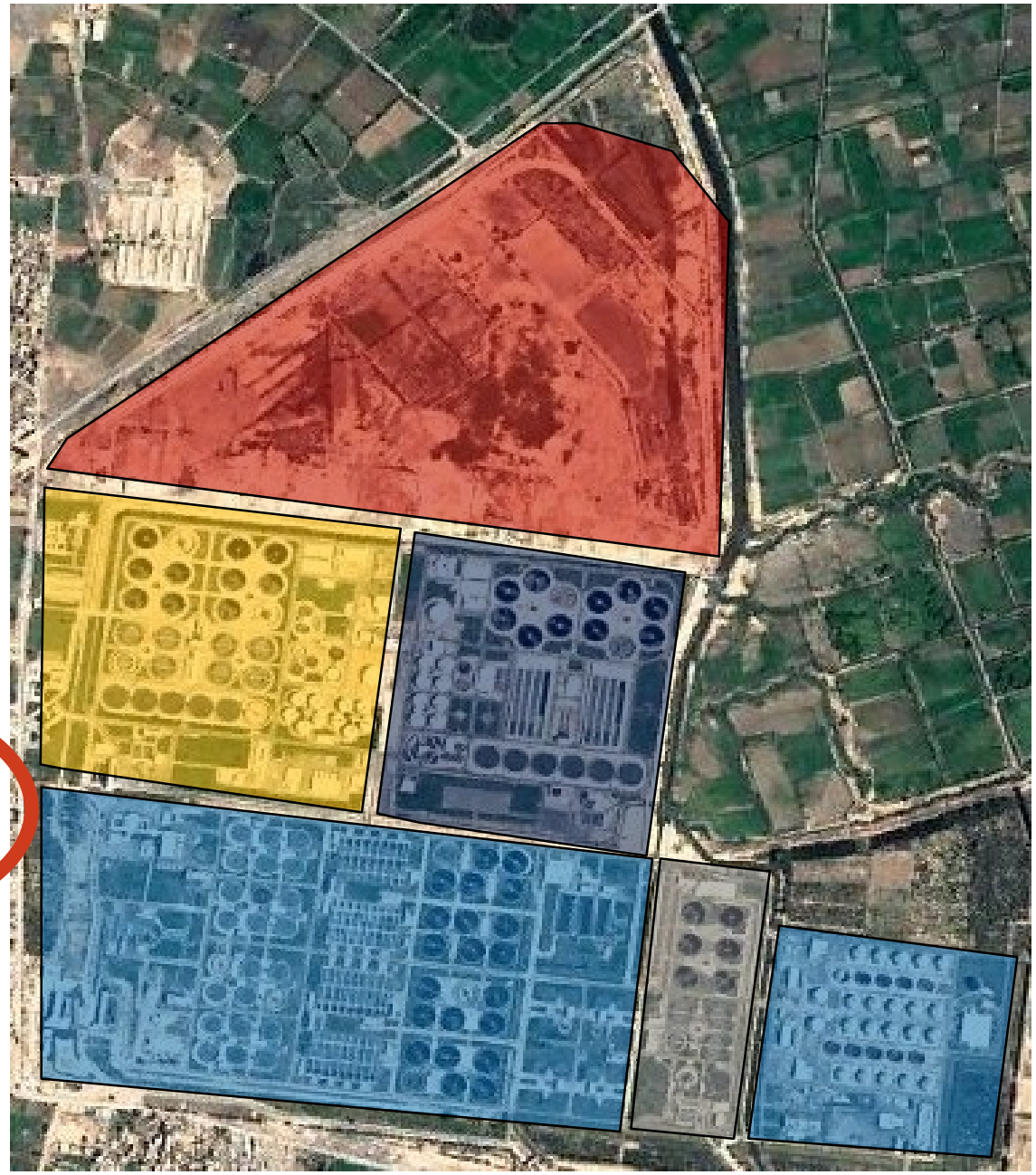
#1
Largest of its kind in Middle East & Africa

2.5
Million m^3/day of treated WW (current)

12
Million persons served (current)

50+%
Energy recovery from digestion

Re-use
of treated WW in irrigation



Stage 3 – *1,000,000 m^3/day*
- Feasibility study completed – in appraisal
- Budget: EUR 375 Million

Stage 2 Ph.2 – *500,000 m^3/day*
- Operating since 2018
- Constructed by HA sons, Acciona, Passavant
- Operated by Suez International (under same contract)

Stage 2 Ph.1 – *500,000 m^3/day*
- Operating since 2005
- Constructed by Degremont (Suez now) & Arab Contractors
- Operated by Suez International

Stage 1 Optimization – *300,000 m^3/day*
- Operating since 2011
- Constructed by Degremont (Suez now) & Arab Contractors
- Operated by iCat

Stage 1 – *1,200,000 m^3/day*
- Operating since 1998
- Constructed Ansalso, A.Contractors, HA sons, Egypt Co. for reinforced conc. work
- Operated by iCat

Stage III Impact – *Added Value*

Component 1 : The investment component for the implementation of Gabal Asfar WWTP

- Installing an additional 1,000,000 m^3/day using the **activated sludge and anaerobic digestors** for sludge treatment,
- Build civil, electromechanical works along with other necessary works to commission the project (including but not limited to finishing works, calibration, piping, etc..)

Component 2 : The Project Management, Engineering, Tendering & Construction Supervision

- Preparation of the tendering documents, assessment of tender proposals and supporting the implementing agency in the award process,
- Construction supervision and project management during the implementation stage,
- Communication and visibility for showcasing Gabal Asfar as a model to replicate.

+5.5
Millions Served
till 2040
(total of 17.5 million)

+785,000
Persons' lives improved
Downstream
(enhanced public health)

80%
Energy Self Sufficiency
Along with improving the full plant's efficiency

+900,000
Tons of CO2 eq annual savings vs "no project" option

+2,000
Jobs created
Between temporary and permanent jobs

Resume
Re-use of treated WW in irrigation
(Post overflow treatment)

+60,000
Tons of marine species
Protected in Manzala lake post de-pollution

Reduced
Burden on Nile river
As the main irrigation source

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2nd round of Q&A

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Thank you

Ayman AYAD – Raphaël DEMOULIERE