

Session 4

C.5 Climate Change Expenditures: Working towards the Guidance Note

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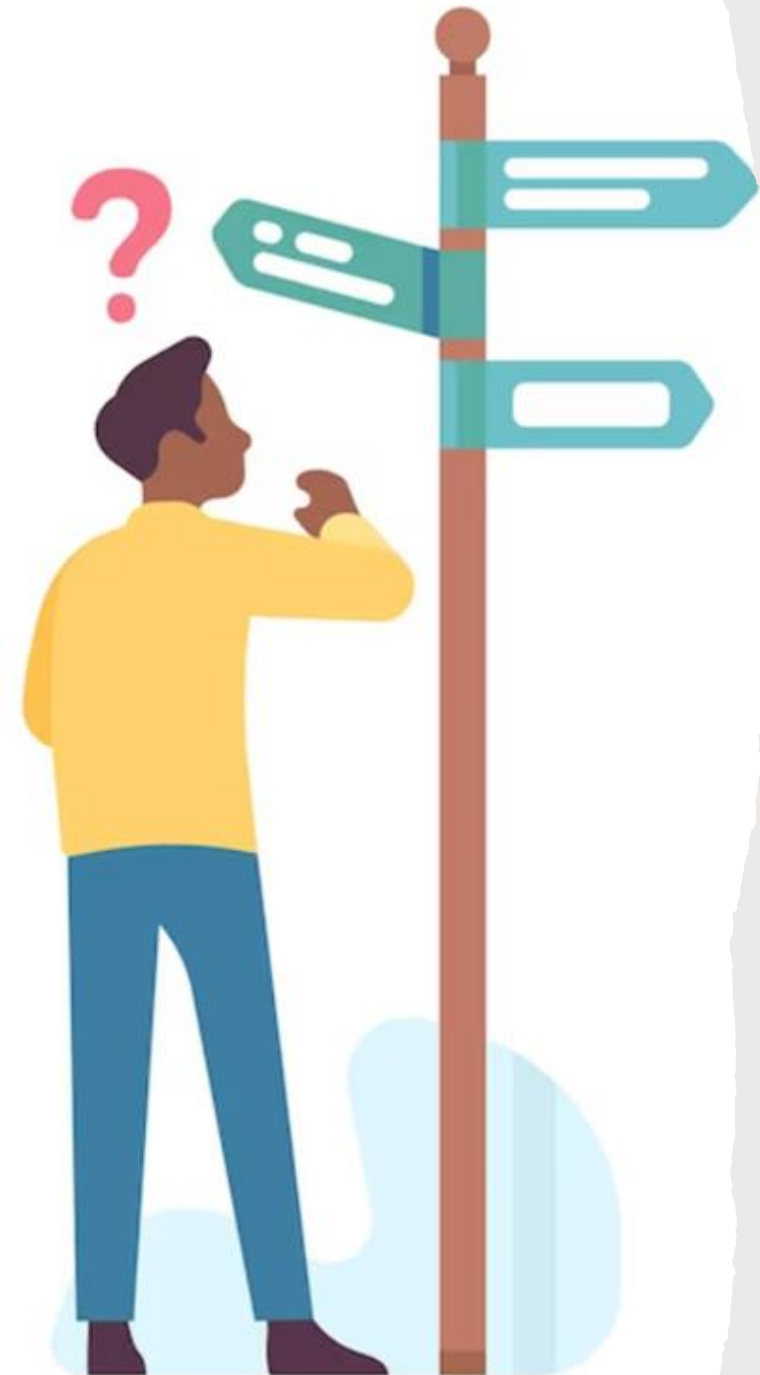
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Who and major milestones

- Issue C.5 GN drafting Team:
 - Julie L. Hass (Lead author) with team including
 - P.Bhanumati & Alessandra Alfieri – IMF & DGI 3, Rec 7
 - Viveka Palm – Statistics Sweden
 - Angelica Tudini – Istat
 - Rosa-Bella Gertz – Destatis
- Task Team C – discussions in meetings & commenting on UN wiki
- SEEA Technical Committee (Nov 17-21)
- Global consultation – 1st tranche in early 2026



Where are we now? ...a bit stuck on adaptation expenditure definition & account structure

- **CC Expenditure Accounts or CC Mit Account and CC Adapt Account? Overlap or additive?**
 - Separate, non-additive accounts, or
 - Additive and assign the common area to either Mit or Adapt, or
 - Have 3 categories, Mit, Mit+Adapt, Adapt?
- Need to decide on the definitions - because they determine many of the remaining parameters
 - CC Mitigation expenditures – with focus on activities and products
 - **Need help with CC Adaptation Expenditures definition**

Background – C.5 Issue

- “The integrated framework describes the general framework for environmental transfers. The EPEA covers part of this, namely the expenditure side. Given the great importance of climate expenditure, it warrants for a **separate description (module)** providing **a definition, scope and account (based on the integrated accounts), separately for mitigation and adaptation**. This issue links to several initiatives, including green budget tagging, GFS [Government Finance Statistics] and preliminary work done through the DGI [G20 Data Gap Initiative].”
- **NOTE: Separate accounts**

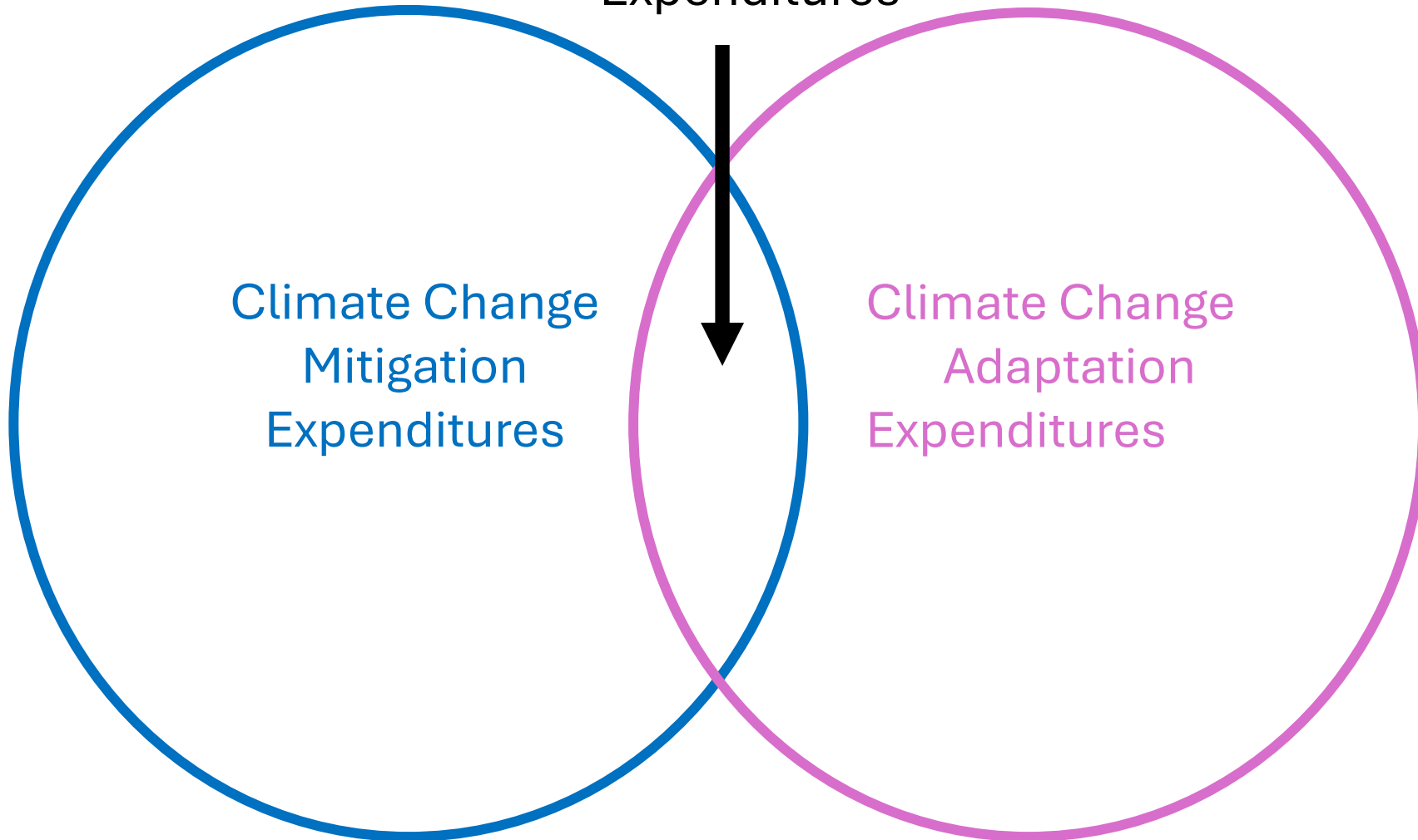
2 separate Climate Change Expenditures Accounts

The diagram consists of two large, empty circles positioned side-by-side. The left circle contains the text 'Climate Change Mitigation Expenditures Account' and the right circle contains the text 'Climate Change Adaptation Expenditures Accounts'. The circles are separated by a gap, visually representing two distinct accounts.

Climate Change
Mitigation
Expenditures
Account

Climate Change
Adaptation
Expenditures
Accounts

Climate Change
Mitigation and Adaptation
Expenditures



Overlap examples:

1. Re-planting Mangroves

Mit: Carbon capture & storage

Adapt: Coastal protection

2. Wetlands restoration

Mit: Carbon capture & storage

Adapt: Flood protection and reduction

A simplified Climate Change Expenditure Account Supply Table (Products x Industries)

		Industries			Imports	Total
		Climate Change mitigation activities	Climate change adaptation activities	Other activities		
Products	Climate Change mitigation products	Output of industries by product			Imports by product	Total supply by industry
	Climate change adaptation products					
	Other products					
Total		Total output by industry			Total imports	Total supply

IMF – Data Gaps Initiative 3, Rec 7
Climate Change Expenditure Accounts

IMF – DGI: Use Table (Products x Industries)

		b. Industries			c. Final Uses			Total
		Climate Change mitigation activities	Climate change adaptation activities	Other activities	Final consumption	Gross Capital Formation	Exports	
Products	Climate Change mitigation products	Intermediate consumption by product and by industry			Final uses by product and by industry	Gross Capital Formation	Exports by product	Total uses by product
	Climate change adaptation products							
	Other products							
Value added		Value Added by component and by industry						Total value added
Total		Total output by industry			Total final uses by category			

Purple = not applicable

Separate accounts – not one Climate Change Expenditure Accounts – implies/opens for...

- Issue statement implies that these are NOT additive
CC Mit. Expenditure + CC Adapt. Expenditure \neq CC Expenditure Total
vs.
DGI 3, Rec. 7 – appears to assume no overlapping, Mit. & Adapt. Additive and can give a total for CC expenditures
- Separate accounts can allow for different system boundaries (scope) for mitigation and adaptation – but not additive
- If separate accounts, potential for including only CC Mitigation Expenditures in the SEEA-CF revision, leaving the CC Adaptation Expenditures for a different status (applications? experimental accounts?)
- To be decided by those managing the SEEA-CF revision but LG can give input

Climate Change Mitigation & Adaptation

Decision: use UN IPCC definitions as starting point

Mitigation of Climate Change

A human intervention to reduce emissions or enhance the sinks of greenhouse gases.

(<https://apps.ipcc.ch/glossary/>)

Adaptation

“In *human systems*, the process of adjustment to actual or expected *climate* and its effects, in order to moderate harm or exploit beneficial opportunities.

In *natural systems*, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects.”

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Climate Change Mitigation (CCM) Expenditures

Eurostat – CCM Investment: Economic activities and products

- **CCM Activities:** *those economic activities that serve the purpose of climate change mitigation.*
They are characteristic activities when they directly serve a climate change mitigation purpose. They are non-characteristic activities when they do not directly serve a climate change mitigation purpose, but they produce specifically designed products whose use serves a climate change mitigation purpose.
- **CCM Products:** *CCM products are produced, designed and manufactured for purposes of CCM.*
They can be categorized by whether they have a primary (“specific products”) or secondary (more “environmentally friendly”) CCM purpose.

Climate Change Mitigation (CCM) Expenditures

IMF – G20 Data Gaps Initiative 3, Recommendation 7 Climate Change Mitigation and Adaptation Expenditures

- Climate change mitigation expenditures are expenditures for preventing, removing or reducing the emissions of greenhouse gases (GHG) into the atmosphere and enhancing sinks of greenhouse gases.
- Economic **activity** or **product** produced
- Primary purpose, secondary purpose & technical nature (considers if the economic activity/product supports mitigation)

Many CC mitigation expenditures can be found in CEP

IPCC Climate Change Mitigation definition

A human intervention to reduce emissions or enhance the sinks of greenhouse gases.

HUMAN SYSTEMS	NATURAL SYSTEMS
<p>CEP categories:</p> <p>0101: Reduction & control of greenhouse gases 0201: Energy from renewable sources 0202: Energy savings and management</p> <p>Climate Change Mitigation activities Include expenditures on:</p> <ol style="list-style-type: none">1) Reducing GHG emissions2) Carbon Capture & Sequestration3) Tradeable permits4) Carbon Taxes6) Energy from non-carbon emitting sources (nuclear)	<p>CEP categories:</p> <p>0501: Protection of soil (excl. surface & ground water) 0502: Protection of biodiversity and landscape 0503: Management of forest resources</p> <p>Climate Change Mitigation activities Include expenditures on:</p> <ol style="list-style-type: none">1) Enhancing natural sinks for carbon: i.e., forests, wetlands, soil2) Preventing & combating losses of natural carbon storage systems: i.e., forest fires, insect infestations

Mitigation definition - includes

- Purpose of climate change mitigation
- Economic activities and products
- Primary purpose and technical nature (which includes secondary purpose)
- System boundary – slightly expanded from Environmental Protection/Resource Management mostly to include other non-carbon emitting energy sources and transportation (public, rail)
- **Currently no agreement on**
 - **CC Mitigation economic activities or products**
 - **Full cost, additional/extra cost**

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Within Resource Management concepts of the SEEA-CF with focus on carbon capture and storage and ecosystem health



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Need to have a broader boundary of the human – environment interface than the current SEEA-CF



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Climate Change Adaptation Expenditures

- Eurostat – no definition for reporting purposes
- IMF – DGI 3, Rec 7: Working Definition:

Climate change adaptation expenditures are expenditures on adapting and building resilience of human and ecological systems to the changing climate conditions and minimizing the negative climate change impacts

- Are there both economic activities and products/services? – see reporting categories for “products”
- Difficult to identify impacts

Climate Adaptation Products – CA1

CA1	<i>Construction, installation, repair and other related products</i>
CA11	<i>Flood Protection and Adaptation Products</i>
CA111	Flood barriers
CA112	Elevated structures
CA113	Wetlands restoration
CA114	Flood warning systems.
CA12	<i>Sea Level Rise Protection and Adaptation Products</i>
CA121	Sea walls
CA122	Mangrove restoration
CA123	Raised walkways and buildings.

Climate Adaptation Products – CA2

CA2

Specifically designed products moderating harm from different types of natural hazards

CA21

Drought Protection and Adaptation Products

CA211

Drought-resistant crops

CA212

Rainwater harvesting systems

CA213

Water recycling and reuse technologies.

CA22

Wildfires Protection and Adaptation Products

CA221

Fire-resistant building materials

CA222

Controlled burn equipment

CA223

Wildfire detection and monitoring systems.

CA23

Disease Outbreak Products

CA231

Vector control products (e.g. mosquito nets)

CA232

Disease monitoring systems and vaccines.

CA24

Extreme Temperatures Protection and Adaptation Products

CA241

Heating and cooling systems

CA242

Reflective roofing materials

CA243

Green roofs

CA244

Efficient HVAC systems.

Climate Adaptation Products – CA3

CA3

Architectural, engineering and other professional products

CA31

Landslides Protection and Adaptation Products

- CA311 Retaining walls
- CA312 Drainage systems
- CA313 Landslide sensors and monitoring equipment.

CA32

Melting Glaciers and Ice Caps Protection and Adaptation Products

- CA321 Glacier monitoring systems
- CA322 Protective barriers for glacier-fed lakes
- CA323 Adaptive water management systems for river flows.

CA33

Ecosystem Shifts Protection and Adaptation Products

- CA331 Restoration of native vegetation and wildlife corridors
- CA332 Invasive species management tools.

CA34

Ocean Acidification Protection and Adaptation Products

- CA341 Water quality monitoring equipment
 - CA342 Alkalinity enhancement techniques
 - CA343 Shellfish farming adaptation methods.
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Hazard Type relevant to Climate Change

- Hazard Type: METEOROLOGICAL and HYDROLOGICAL

- Hazard cluster

- Flood
- Lithometeors
- Marine
- Pressure-related
- Temperature-related
- Terrestrial
- Wind-related

Marine	Storm tides
Marine	Tsunami
Pressure-related	Depression or cyclone (low pressure area)
Pressure-related	Extra-tropical cyclone
Pressure-related	Sub-tropical cyclone
Precipitation-related	Acid rain
Precipitation-related	Blizzard
Precipitation-related	Drought



Hazards Classification used in the Disaster-Related Statistics Framework (DRSF)

- Uses the IRDR Peril and Hazard Glossary (2014)

Hazard Families:

- Geo-physical
- Hydrological
- Meteorological & Climatological
- Biological
- Others

DISASTER-RELATED STATISTICS FRAMEWORK (DRSF)

Expert Group on Disaster-related Statistics in Asia and the Pacific



Adaptation – need to develop further

- Definition of CC Adaptation Expenditures
 - Activities and Products
- Classification of CC Adaptation Expenditures
- Separate accounts or additive for CC mit and CC adapt

Thank you for your attention!

Comments to:
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