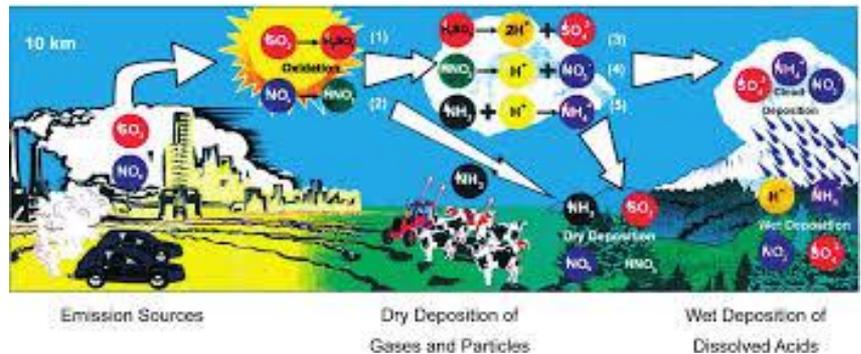


CLIMATE CHANGE AND GREENHOUSE GAS (GHG) STATISTICS BASED ON FDES

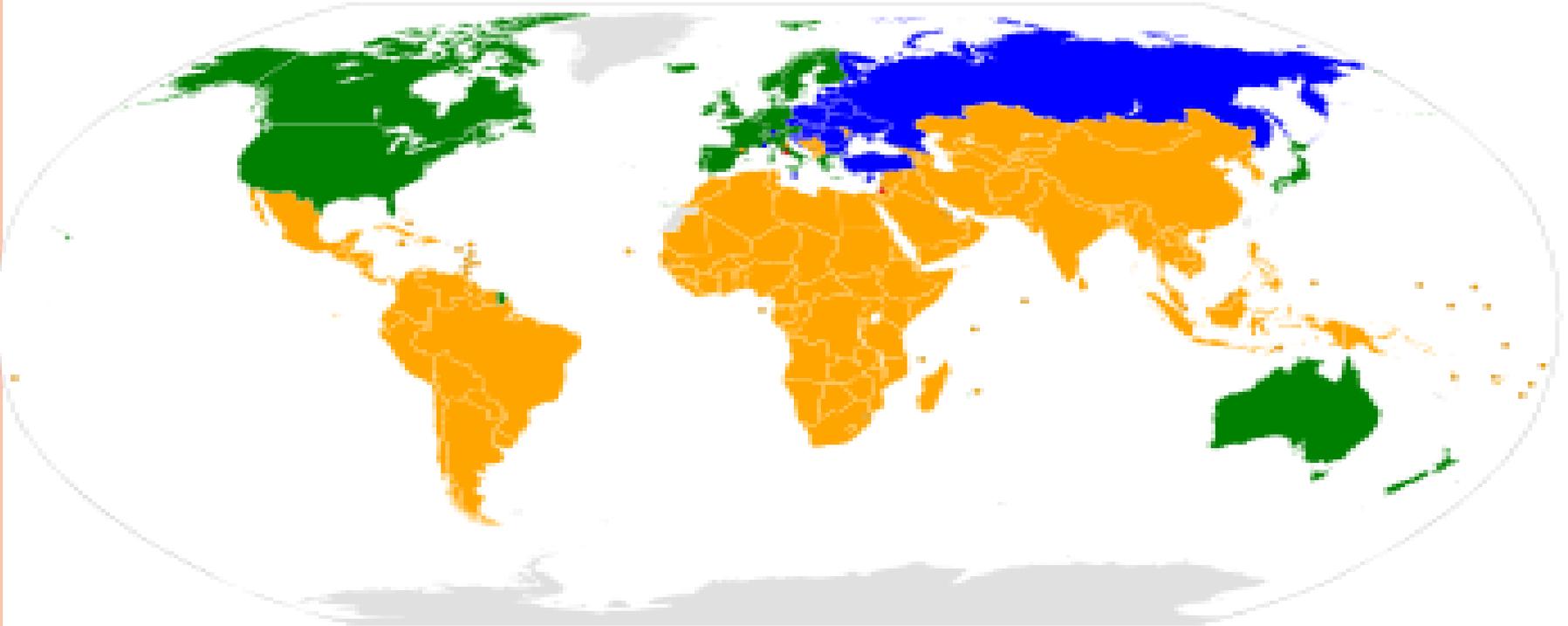
EGM on FDES 2016

CONTENT

- Reporting requirements on CC
- GHG Inventories
 - Extensive data requirements for
 - Energy and its sub categories
 - Industrial processes
 - AFOLU/LULUCF
 - Agriculture
 - Forestry
 - Land use and land use change
 - Waste: solid and liquid
- Adaptation: by sector –e.g. agriculture, coastal zone, etc
- Mitigation – based on GHG emission scenarios
- Others: education, information, national circumstances, research, etc



PARTIES TO THE UNFCCC



Parties to the UNFCCC

Annex I parties - **Green**

Non-annex parties - **Yellow**

Observer states - **Blue**

- Percentage (on average) will climate change negatively affect the GDP of poor countries (the group that will be most greatly affected)



REPORTING REQUIREMENTS

- Different reporting requirements for Annex I (AI) and Non Annex I (NAI) countries
 - Annex I: mandatory annual with national communications (NCs) + National Inventory Reports (NIRs) for GHG inventories
 - Non Annex I: Occasional NCs - recommended NCs every 5 years or earlier+ optional NIRs
 - Additionally a bi-annual update report (BUR) every 2 years –flexible for SIDS



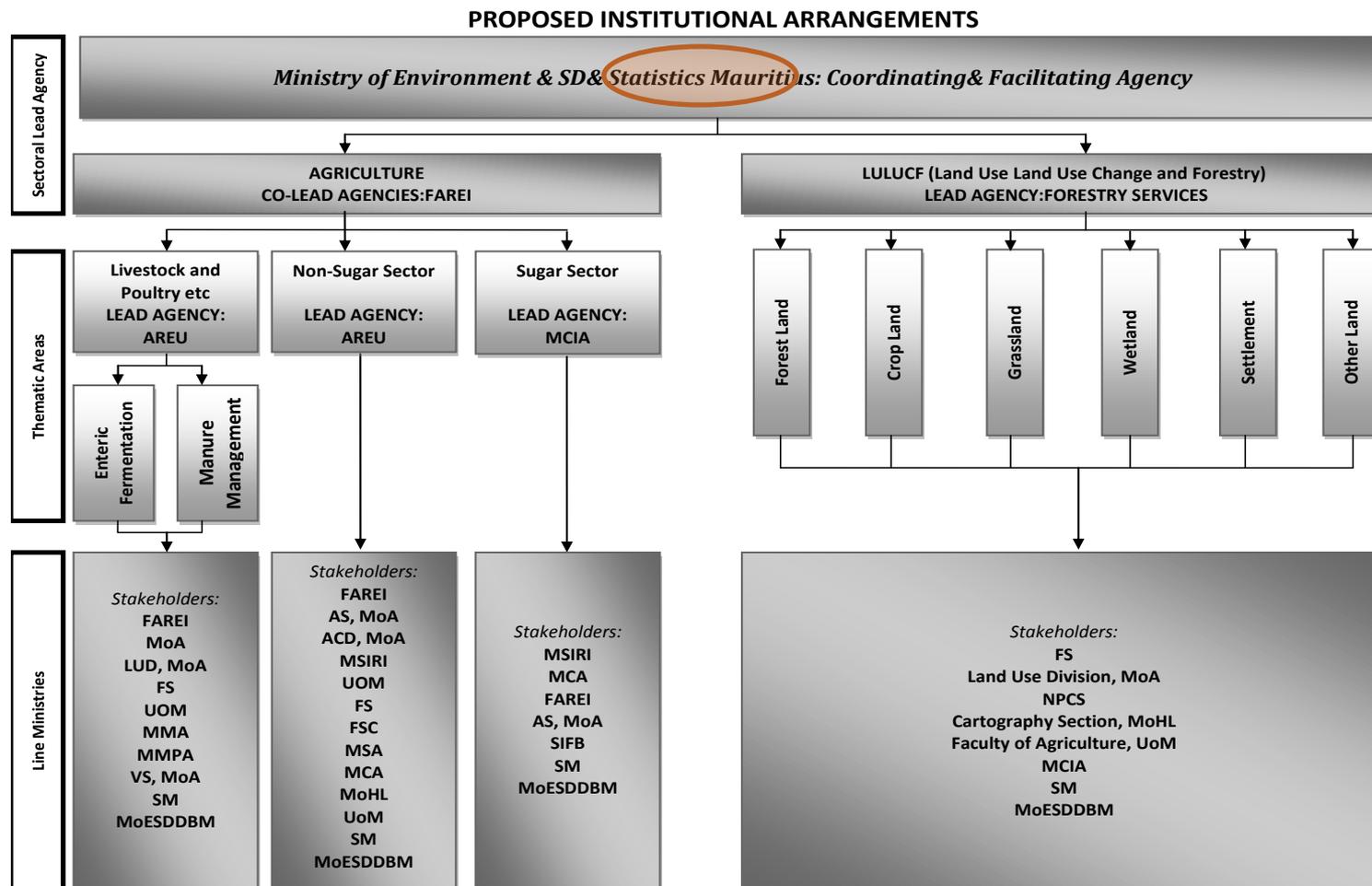
GHG INVENTORIES

- GHG Inventories – using IPCC Guidelines (GLs) now AI countries require to use the 2006 IPCC GLs which slightly changes the sectors by merging the Agriculture and LULUCF sectors
- Additionally, there are some added sub sectors or categories
- Extensive data requirements for
 - Energy and its sub categories
 - Industrial processes
 - AFOLU/LULUCF
 - Agriculture
 - Forestry
 - Land use and land use change
 - Waste: solid and liquid



GHG INVENTORIES

o Institutional requirements –AFOLU Example



Legend: ACD: Agricultural Chemistry Division, AREU: Agriculture Research and Extension Unit, AS: Agricultural Services, CSO: Central Statistics Office, FS: Forestry Services, FSC: Farmers Service Corporation, LUD: Land Use Division, MCA: Mauritius Chamber of Agriculture, MMPA: Mauritius Meat Producers' Association, MoA: Ministry of Agro-Industry and Food Security, MoESD: Ministry of Environment and Sustainable Development, MoHL: Cartography Section, Ministry of Housing and Lands, MSA: Mauritius Sugar Authority, MSIRI: Mauritius Sugar Industry Research Institute, NPCS: National Parks and Conservation Service, SIFB: Sugar Insurance Fund Board, UoM: University of Mauritius, VS: Veterinary Services.

(Note: Other institutions will be co-opted as the need may be).

THE GHG INVENTORY CYCLE



GHG INVENTORY SECTORS

- **Energy and its sub categories**
- Basically follows the national energy balances and statistics – FDES could be used as support
- Fuel combustions in
 - Energy industries, including electricity generation
 - Transport, incl. road, railways, navigation and aviation
 - Incl. also some pipeline transport
 - Manufacturing and construction
 - Commercial and residential
 - Agricultural
 - Others
- Fugitive emissions – e.g. from oil drilling, mining, oil transport etc



GHG INVENTORY SECTORS

- **Industrial Processes and Product Use (IPPU)**
- Non fuel combustion processes
 - Mineral manufacturing
 - Metals
 - Chemicals
- Ozone Depleting Substances substitutes – manufacture and use



GHG INVENTORY SECTORS

- **AFOLU/LULUCF**
- Agriculture
 - Livestock heads by type (cattle, sheeps, pigs etc) and other factors such as average live mass, feed intake, etc
 - Manure management for each livestock type
- Land use, land use change and Forestry (LULUCF)
- Land areas and their changes between two time points
 - Forest land by type, climate, soil etc
 - Cropland
 - Wetland
 - Grassland
 - Settlements
 - Others
- Soils and emissions



HOW FDES CAN BE USED -EXAMPLE

Definitions for terrestrial pools used in the LULUCF sector

DEFINITIONS FOR TERRESTRIAL POOLS USED IN CHAPTER 3		
Pool ²		Description (see also notes below in italics)
Living Biomass	Above-ground biomass	All living biomass ³ above the soil including stem, stump, branches, bark, seeds, and foliage. <i>Note: In cases where forest understorey is a relatively small component of the above-ground biomass carbon pool, it is acceptable for the methodologies and associated data used in some tiers to exclude it, provided the tiers are used in a consistent manner throughout the inventory time series as specified in Chapter 5.</i>
	Below-ground biomass	All living biomass of live roots. Fine roots of less than (suggested) 2mm diameter are often excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead Organic Matter	Dead wood	Includes all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
	Litter	Includes all non-living biomass with a diameter less than a minimum diameter chosen by the country (for example 10 cm), lying dead, in various states of decomposition above the mineral or organic soil. This includes the litter, fomic, and humic layers. Live fine roots (of less than the suggested diameter limit for below-ground biomass) are included in litter where they cannot be distinguished from it empirically.
Soils	Soil organic matter	Includes organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series. Live fine roots (of less than the suggested diameter limit for below-ground biomass) are included with soil organic matter where they cannot be distinguished from it empirically.

GHG INVENTORY SECTORS

○ **Wastes**

- Solid

- Solid waste generation and disposal
- By type of wastes – municipal, industrial
- By categories from the above types – food, paper, garden, etc – degradables and others
- Biological treatments – e.g. composting
- Open burning
- Incineration



GHG INVENTORY SECTORS

○ **Wastes**

- Liquid

- Liquid waste generation, treatments by type
- By type of solid wastes – municipal, industrial
- By categories from the above types – sludges, etc – degradables and others
- Biological treatments – e.g. aerobic and anaerobic
- Sewerage
- Non sewerred disposal

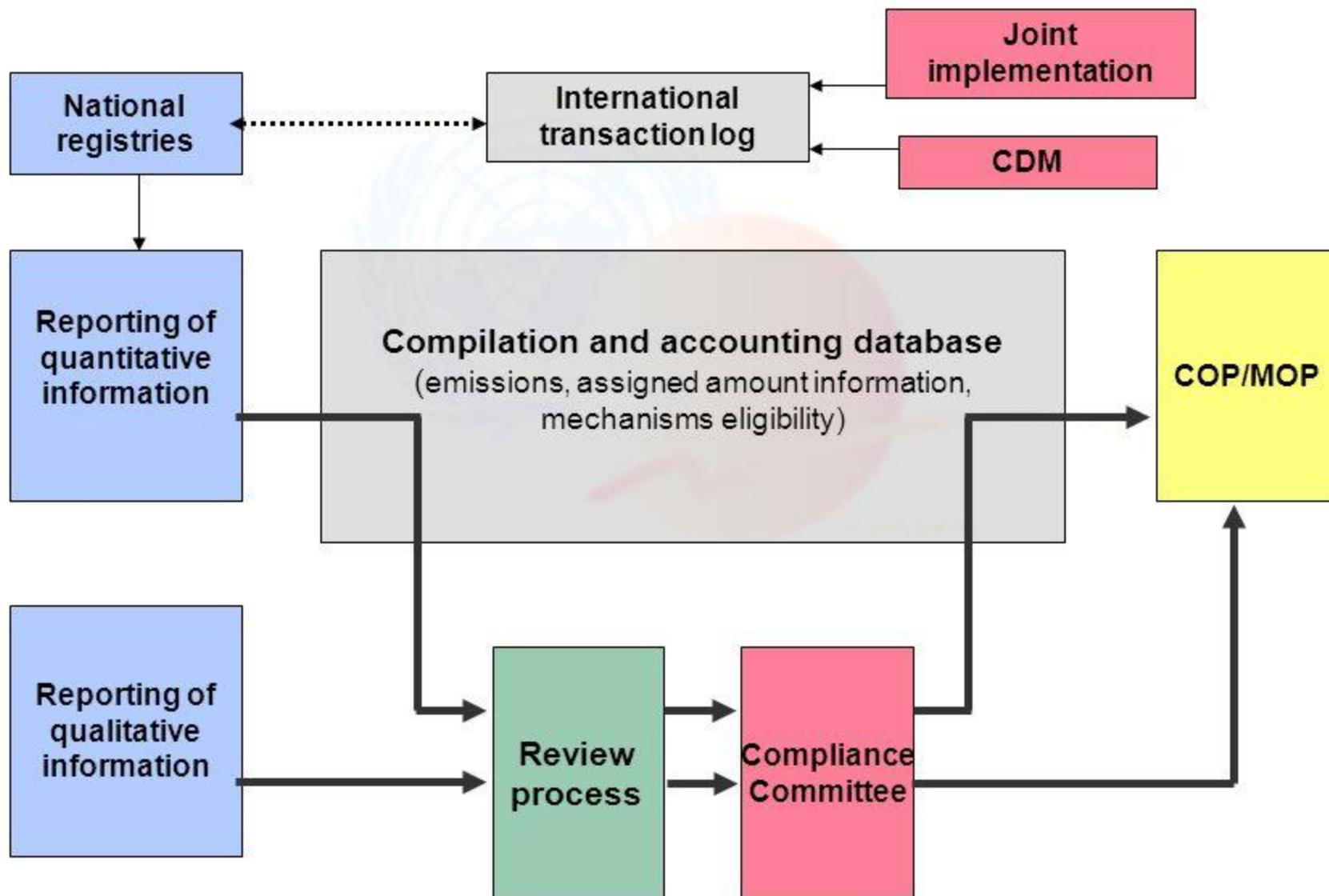


GHG INVENTORIES

- **Requirements for quality inventories**
- TACCC
 - Transparent
 - Accurate
 - Complete
 - Consistent
 - Comparable
- The inventories are subject to reviews – mandatory for AI countries and flexible for NAI – for BUR – requires an international consultation and analysis (ICA)
- Both by designated experts



Kyoto compliance architecture



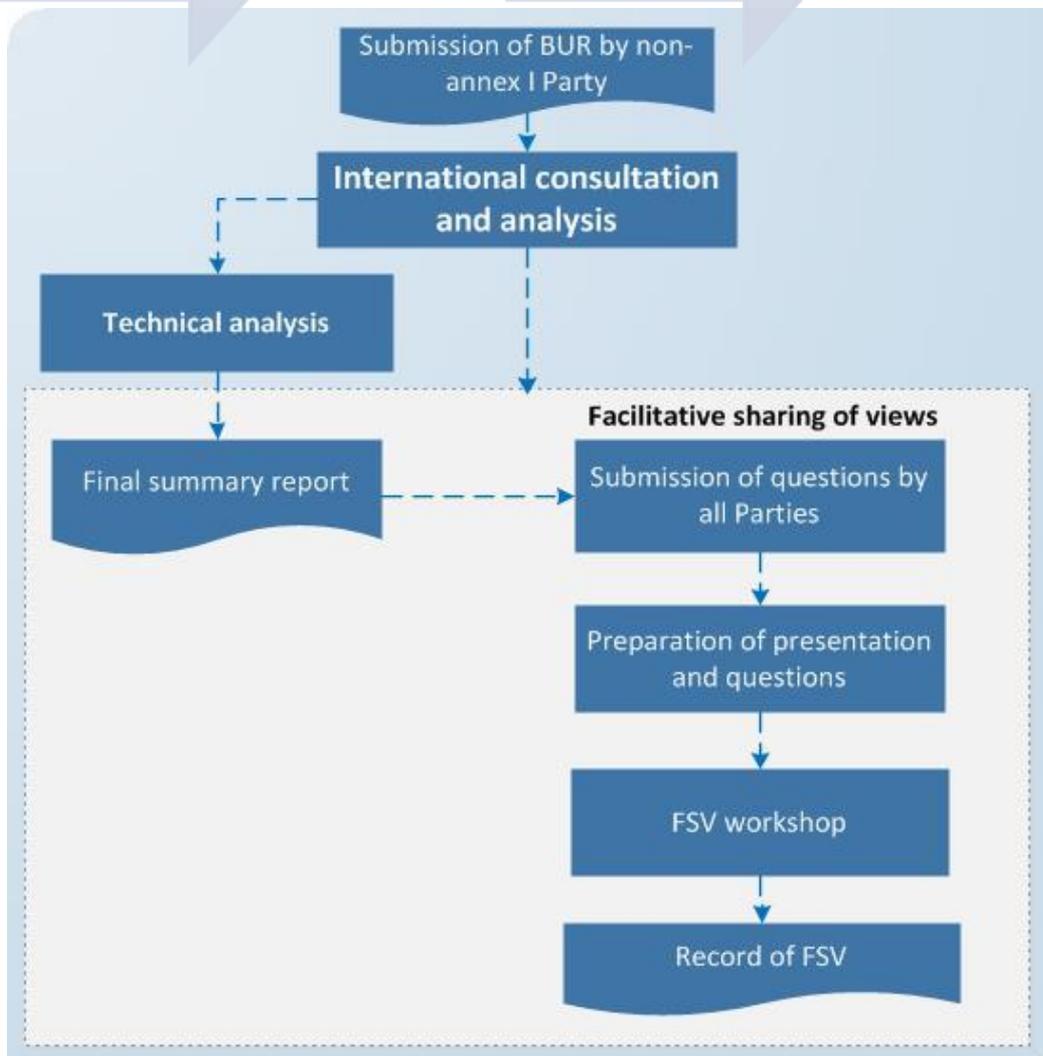
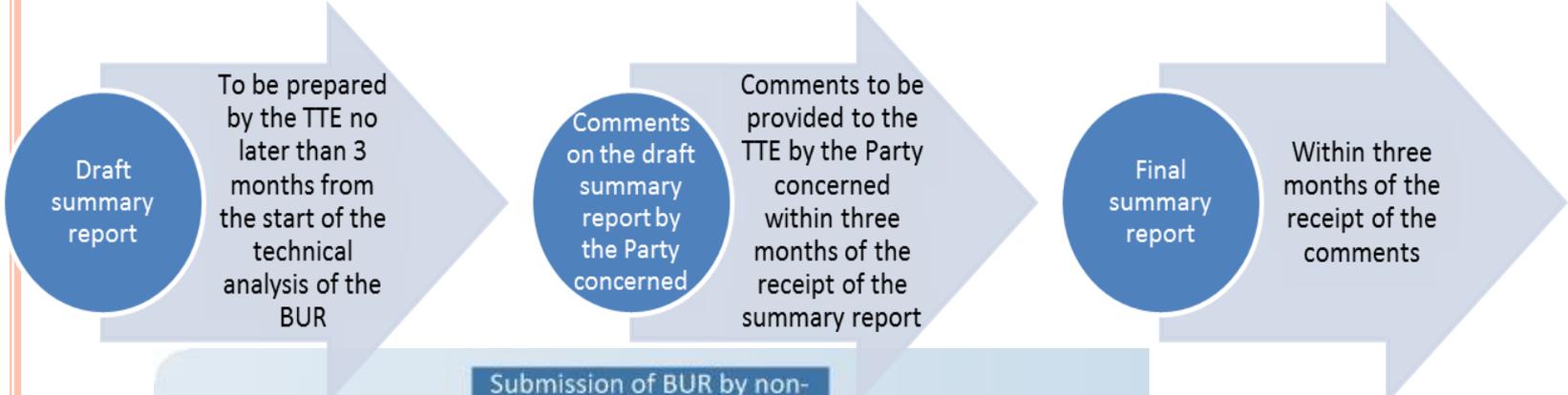
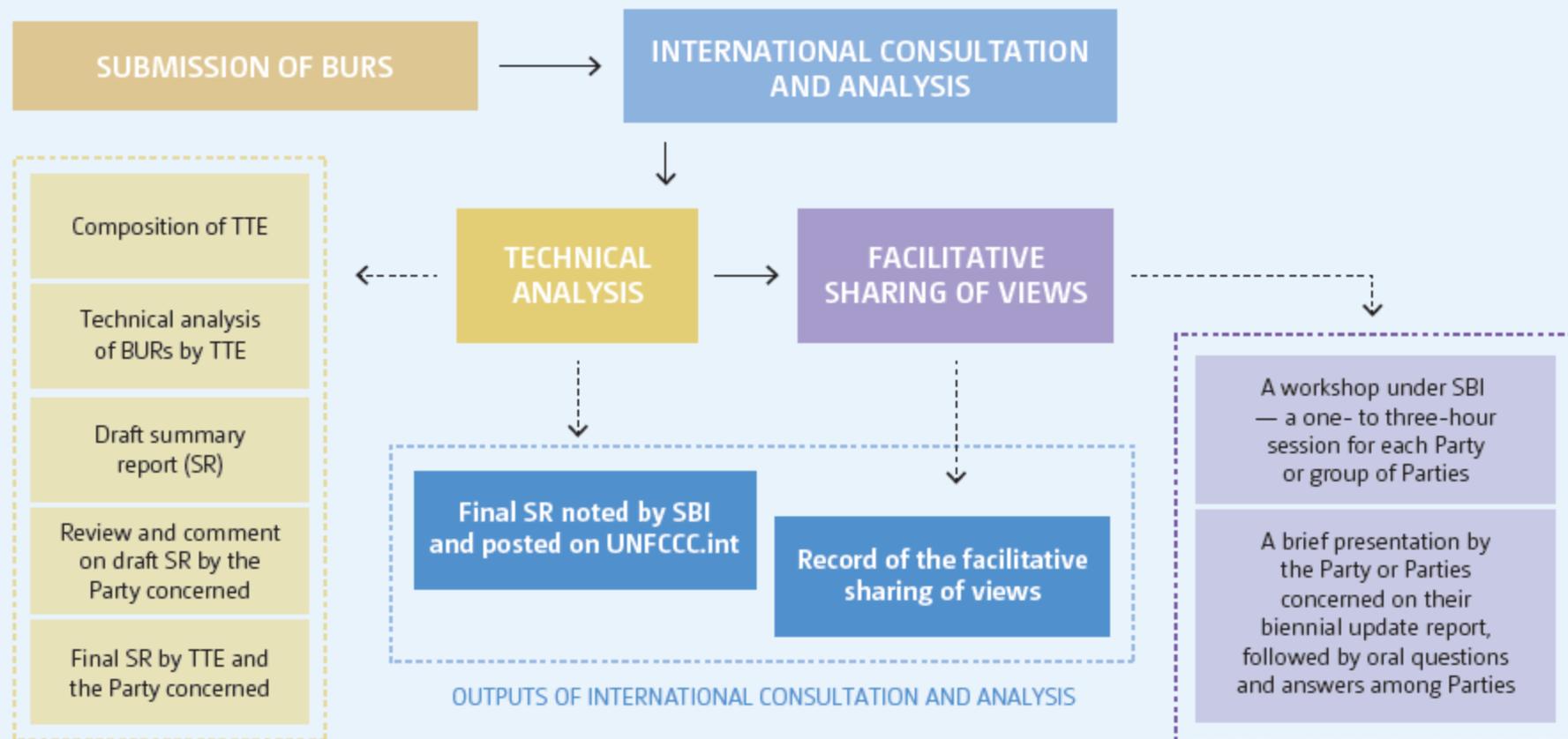


Figure 10:

Key elements of the International Consultation and Analysis process



OTHER CC REPORTING REQUIREMENTS

- **Adaptation:** by sector –e.g. agriculture, coastal zone, etc
 - Modeling used in certain cases, e.g. to predict future CC in particular areas and anticipate adaptation measures to be taken
- **Mitigation** – based on GHG emission scenarios
 - Projections based on auxiliary statistics, e.g. GDP, Populations, energy needs, etc
- **Policies** etc
- **Others: education, information** – sensitisation of population, students, etc
- **National circumstances** - climate, population, economy etc
- **Research and systematic observations** – climate, water, agriculture, etc



REPORTS SUBMITTED BY COUNTRIES

unfccc climate change ad... Submitted BURs from non... Google Translate... Grand Central - Apple Sto... Microsoft Surface 3 - 10.8...

unfccc.int/national_reports/non-annex_i_natcom/reporting_on_climate_change/items/8722.php

Climate Change

Home CDM JI CC:Net TT:Clear

Your location: Home > National Reports > National Communications (Non-Annex I)

Submitted biennial update reports (BURs) from non-Annex I Parties

[Go to submitted national communications](#)

Total number of submitted BURs from non-Annex I Parties	Most recent submissions
First BUR: 30 (as of 18 April 2016)	Israel (18 April 2016) Republic of Moldova (5 April 2016) Serbia (28 March 2016) Indonesia (18 March 2016) Mauritania (14 March 2016) Malaysia (3 March 2016) India (22 January 2016) Montenegro (13 January 2016) Paraguay (30 December 2015) Thailand (29 December 2015)

NEWSROOM
Get News on the Latest Climate Action

KEY STEPS
The Convention
Kyoto Protocol
Paris Agreement

NEGOTIATIONS
Meetings
Documents & Decisions
Bodies

FOCUS
NDC Registry
INDC Portal

Overview
Adaptation
Climate Finance
Mitigation

MRV for Developing Countries
National Reports from non-Annex I countries
Consideration of Reports
Technical and Financial Support
Tools and Training Materials

Support for the Preparation of National Reports
E-Network Collaboration
E-Learning Courses
GHG Inventory Software
Guidelines and Manuals
Consultative Group of Experts (CGE)
External Links and Information

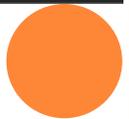
COP decisions / SBI conclusions
Key COP decisions relevant to non-Annex I Parties
SBI conclusions relevant to non-Annex I Parties

UNSD 2016FDESInw...pdf

Show all downloads...

Search the web and Windows

5:36 PM



GHG REVIEW TRAINING

unfccc climate change ad x Search x Inventory Review Training x Google Translate x Grand Central - Apple Store x Microsoft Surface 3 - 10.1 x

unfccc.int/home/items/6078.php?q=ghg+training&cx=009772925632828311246%3Agjvsnghto1u&ie=UTF-8&sa=

Apps Save to Mendeley GHG and Carbon Acc How to write an article LanguageTool Style ar Writing in Science SCLgen - An Automat CAST Science Writer MicroStrategy | Desk Other bookmarks

KEY STEPS

- The Convention
- Kyoto Protocol
- Paris Agreement

NEGOTIATIONS

- Meetings
- Documents & Decisions
- Bodies

FOCUS

- NDC Registry
- INDC Portal

- Overview
- Adaptation
- Climate Finance
- Mitigation
- Technology

PROCESS

- Essential Background
- Kyoto Protocol
- Cooperation & Support
- Science
- Adaptation
- National Reports

Search for UNFCCC official documents only is available here.

Search Results

About 187,000 results (0.35 seconds)

[Inventory Review Training](#)

14/CP.20 requests the secretariat to implement the **training** programme for review experts for the technical review of GHG inventories of Annex I Parties reported ...
unfccc.int/national_reports/training_for...of...i.../2763.php?...

[GHG Inventories](#)

The materials contained in this CGE **training** package, on national **greenhouse gas** (GHG) inventories, intends to provide the reader with the best possible ...
unfccc.int/resource/cd_roms/na1/ghg_inventories/

[CGE Training materials for the preparation of NCs](#)

Updated **Training** Materials on Vulnerability and Adaptation Assessment*. **Training** Materials on National GHG Inventories ...
unfccc.int/national_reports/non-annex_i.../training.../349.php

[Draft decision -/CP.15 Updated training programme for greenhouse ...](#)

File Format PDF/Adobe Acrobat
Updated **training** programme for **greenhouse gas** inventory review experts for the technical review of **greenhouse gas** inventories from Parties included in.
https://unfccc.int/files/meetings/cop_15/.../pdf/cop15_tp_auv.pdf

[Details of the training programme for review experts of GHG ...](#)

Details of the **training** programme for the review experts of GHG inventories. The courses of the **training** programme

UNSD 2016FDESInw...pdf Show all downloads...

Search the web and Windows 5:59 PM 1/21/2016

CONCLUSIONS AND WAY FORWARD

- CC statistics need to be developed as agreed in Stats Comm. 2016
- GHG included
- FDES to underpin such efforts to develop CC stats

