

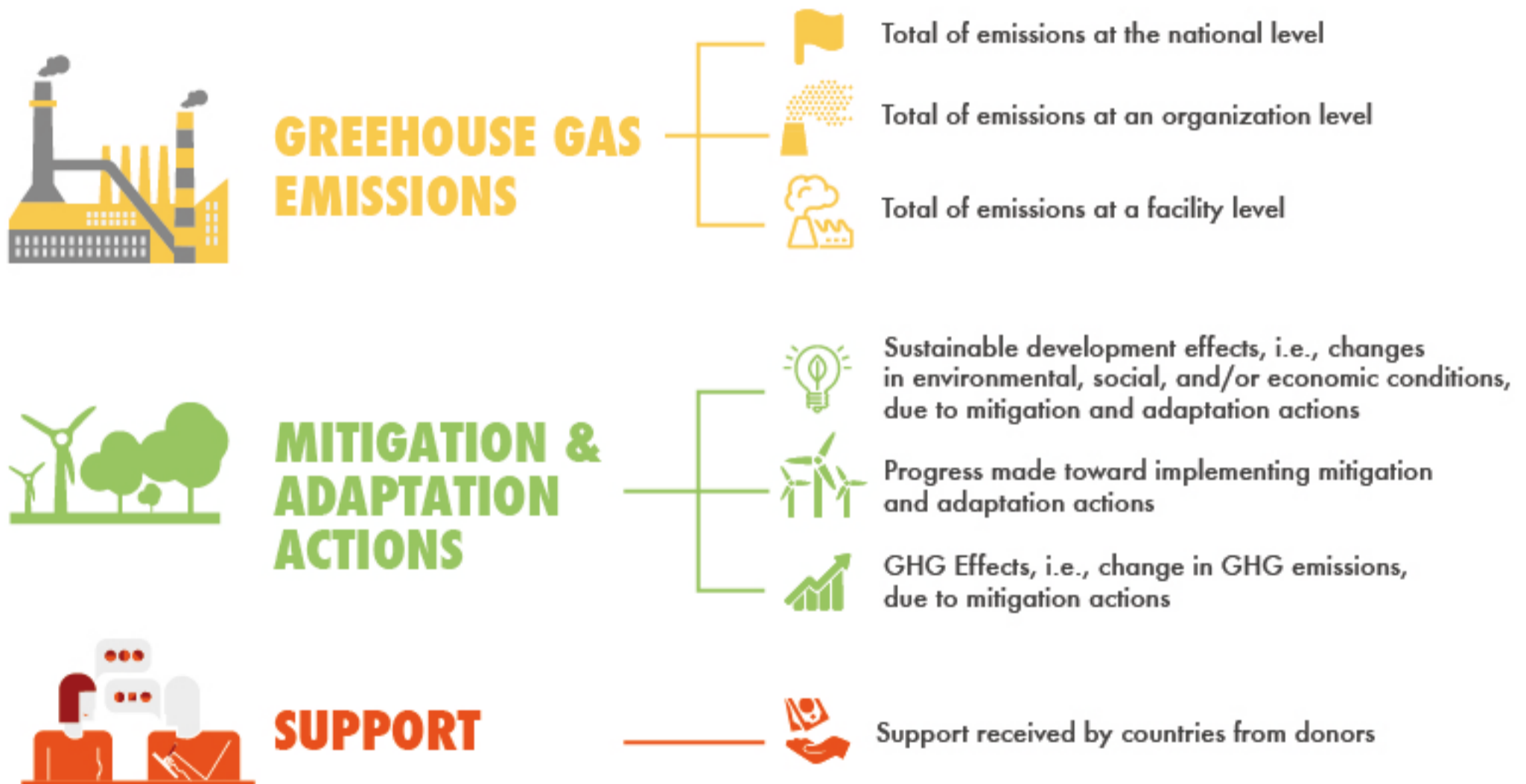
MEASUREMENT, REPORTING AND VERIFICATION - FOR DEVELOPING COUNTRIES

Parties to the United Nations Framework Convention on Climate Change are obliged to communicate to the Conference of the Parties (COP), through the secretariat, information on the actions they have taken or envisage they will take to implement the Convention. This allows Parties to inform one another of their national level actions and serves as a basis to assess the implementation of the Convention.



WHAT IS MEASUREMENT, REPORTING, & VERIFICATION?

1. MEASUREMENT



2. REPORTING

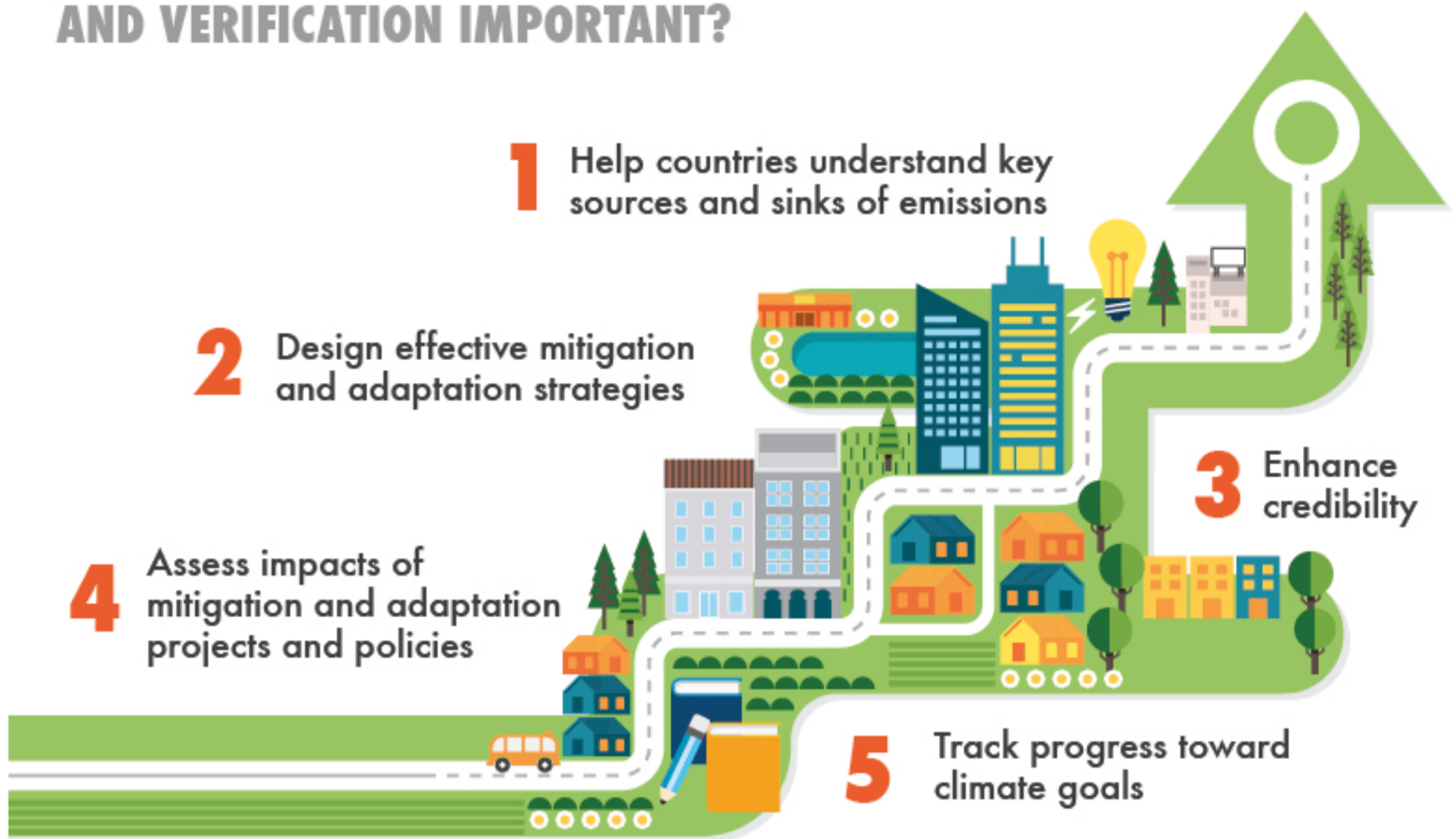
- National Communication (every 4 years)
- Biennial Update Reports (every 2 years)

3. VERIFICATION

- Submitted BURs undergo the international consultation and analysis process

MEASUREMENT, REPORTING AND VERIFICATION - FOR DEVELOPING COUNTRIES

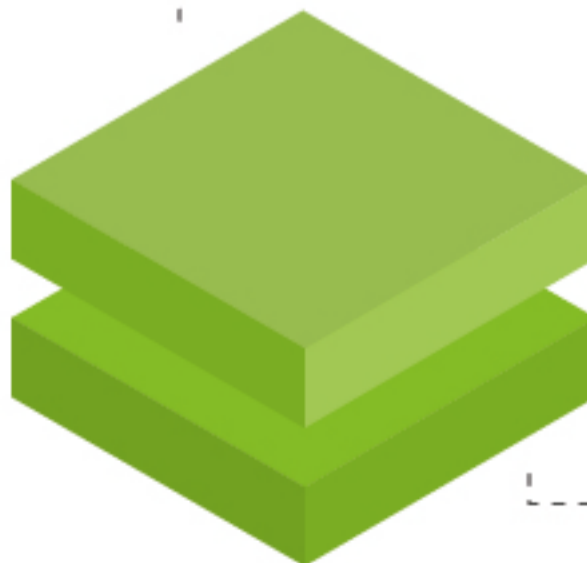
WHY IS MEASUREMENT, REPORTING, AND VERIFICATION IMPORTANT?



HOW CAN IT BE FUNDED?

BIENNIAL UPDATE REPORT

- PREPARING A PROJECT PROPOSAL TO SEEK FUNDING FROM GEF
- RECEIVING 352.000 USD



NATIONAL COMMUNICATIONS

- PREPARING A PROJECT PROPOSAL TO SEEK FUNDING FROM GEF
- RECEIVING 500.000 USD

GREENHOUSE GAS (GHG) INVENTORIES

This is a report that contains the measurements of all emissions and removals of greenhouse gases from given sources or sinks in a country over a specific period of time.

WHY ARE GHG INVENTORIES IMPORTANT?



Gain scientific understanding



Formulate policy & implementation



Understand the link between environmental pollution and effects



Identify the sectors, sources, and activities responsible for GHG emissions



Help develop cost effective mitigation policy



Monitor progress towards policy goals

ENTITIES' ROLES AND RESPONSIBILITIES

Inventories require coordination between people with different skills and access to a wide variety of data necessary for the estimation of GHG emissions and removals. Therefore, there is a need to designate an entity with overall responsibilities of your inventory.



Establishing agreements with collaborating entities that contribute data and expertise



Defining and establishing legal or other authority to collect and disseminate data



Ensuring inventory processes are following the proper IPCC Guidelines



Ensuring the implementation of Quality Control and Quality Assurance

HOW DO WE ENSURE THE QUALITY OF THE INVENTORY?

The most recent IPCC 2006 Guidelines encourage a continuous improvement through Quality Assurance/Quality Control and verification activities. Several tools are provided by the IPCC to support quality inventory management.



TRANSPARENCY

Provide sufficient and clear documentation such that individuals or groups other than inventory compilers can understand how the inventory was compiled.



CONSISTENCY

Calculate inventory trends using the same method and data sources and aim to reflect the real annual fluctuations in emissions and removals



COMPARABILITY

Report GHG inventories in a way that allows it to be compared with other similar inventories. This comparability should be reflected in the use of reporting guidance and tables, in the use of standardized classification, and definition of emissions and removals.



COMPLETENESS

Report all relevant categories of sources, sinks, and gases. Where elements are missing, their absence should be documented and justified.



ACCURACY

Make all endeavors to remove any bias from the inventory estimates.

GREENHOUSE GAS (GHG) INVENTORIES



WHAT SHOULD AN INVENTORY INCLUDE?



DESCRIPTION OF THE INVENTORY GEOGRAPHIC BOUNDARY AND TIME PERIOD



DATA ON EMISSIONS:

- Greenhouse gases (GHG)
- GHG emission sources
- GHG emissions by scope



INFORMATION ON METHODOLOGIES AND DATA QUALITY:

- Methodologies used to calculate or measure emissions
- An assessment of data quality for activity data and emission factors used in quantification



INFORMATION ON EMISSION CHANGES AND GOALS:

- Methodologies used to calculate or measure emissions
- Managing Inventory quality and verification

WHAT IS THE PROCESS OF MAKING A GHG INVENTORY?



STEP 1

- Define and allocate specific responsibilities in the inventory development process
- Establish processes for the review and approval of the inventory
- Identify ways to improve the quality of activity data
- Establish a Quality Assurance/ Quality Control plan



STEP 2

- Collect activity data
- Include methodological choice
- Prepare/develop key category analysis
- Calculate estimates
- Calculate uncertainties
- Implement Quality Control / Quality Assurance procedures
- Verify & report



STEP 3

- Report all activity data and emission factors with an explanation of how the data was generated
- Describe how the Quality Control procedures have been implemented and your findings from their implementation
- Include the findings of the internal and external Quality Assurance reviews and description of planned inventory improvement

GREENHOUSE GAS (GHG) INVENTORIES



AS PER THE MOST RECENT 2006 IPCC GUIDELINES, GHG INVENTORIES SHOULD INCLUDE THE EMISSIONS FROM ALL SECTORS:

1. ENERGY

FUGITIVE EMISSIONS



SOLID FUELS



OIL & GAS INDUSTRIES

CARBON CAPTURE AND STORAGE



TRANSPORT OF CO₂



PIPELINES



SHIPS



INJECTIONS AND STORAGE



ENERGY SECTOR

FUEL COMBUSTION



ENERGY INDUSTRIES



MANUFACTURING INDUSTRIES



COMMERCIAL & RESIDENTIAL



TRANSPORT



ROAD



RAIL

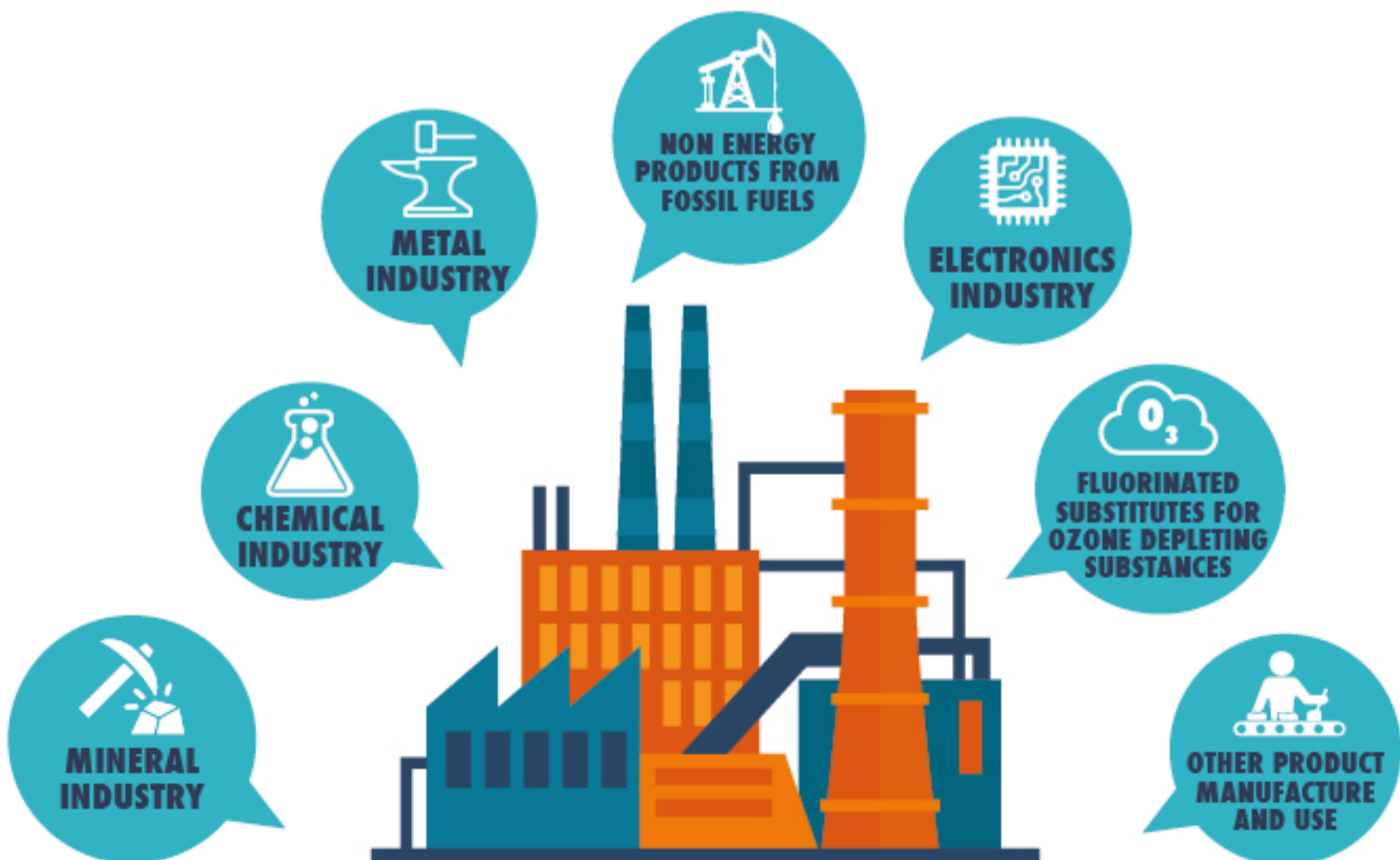


AVIATION



NAVIGATION

2. INDUSTRIAL PROCESSES & PRODUCT USE



GREENHOUSE GAS (GHG) INVENTORIES



3. AFOLU



LIVESTOCK

- Enteric fermentation
- Manure management



LAND

- Forest Land
- Cropland
- Grassland
- Wetlands
- Settlements
- Other land



AGGREGATE SOURCES & NON CO₂ EMISSIONS SOURCES ON LAND

- Burning Biomass
- Liming
- Urea application
- Direct N₂O emissions from managed oils
- Indirect N₂O emissions from managed oils
- Indirect N₂O emissions from manure management
- Rice cultivations
- Harvested Wood Products
- Other



4. WASTE



SOLID WASTE DISPOSAL



INCINERATION AND OPEN BURNING OF WASTE



BIOLOGICAL TREATMENT OF SOLID WASTE



WASTEWATER TREATMENT AND DISCHARGE

5. OTHER

NO₂ & NH₃



INDIRECT N₂O EMISSIONS FROM THE ATMOSPHERIC DEPOSITION OF NITROGEN IN NO₂ AND NH₃

BIENNIAL UPDATE REPORTS (BURs)



WHAT ARE BIENNIAL UPDATE REPORTS?

BURs are reports which developing Parties should submit every two years with additional flexibility for least developed countries and small island developing states. These reports provide more frequent and further information and enhance reporting in national communications.

WHY ARE THEY IMPORTANT?



Promotes mutual trust and confidence amongst Parties



Facilitates implementation of climate action



Increases transparency of mitigation actions and their effects



The process of preparation of BURs promotes wider stakeholder engagement

WHAT SHOULD BE INCLUDED IN THESE REPORTS?

1 National circumstances and institutional arrangements



2 National inventory of emissions of all greenhouse gases which shall be no more than 4 years prior to the date of submission



3 Mitigation actions and their effects



5 Any other information that the countries considers relevant to the achievement of the objective.



4 Constraints, gaps, and a description of support needed and received

INTERNATIONAL CONSULTATION AND ANALYSIS (ICA)



WHAT IS THE ICA?

Submitted BURs undergo a two-step verification process that aims to increase the transparency of mitigation actions and effects, **in a non-intrusive, non-punitive manner, and respectful national sovereignty.**

THIS PROCESS CONSISTS OF TWO STEPS:

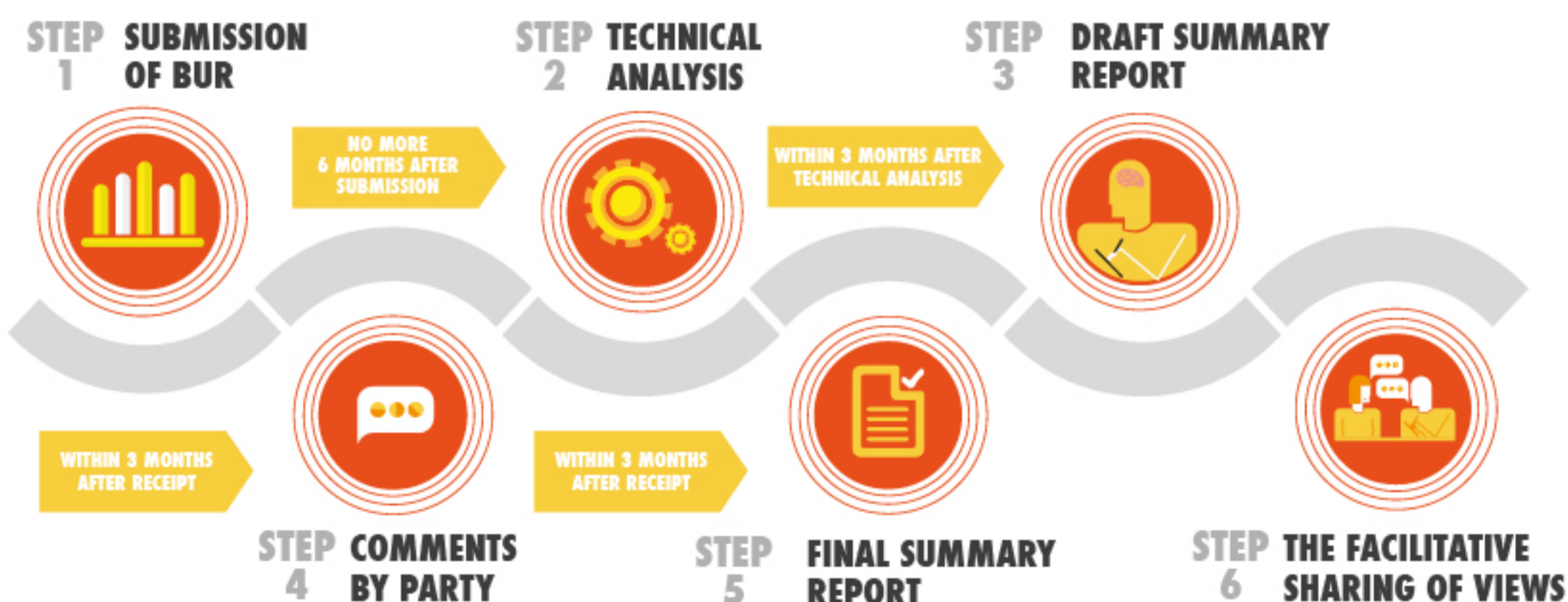


1 A TECHNICAL ANALYSIS OF THE BUR BY A TEAM OF TECHNICAL EXPERTS



2 A FACILITATIVE SHARING OF VIEWS IN THE FORM OF A WORKSHOP

WHAT ARE THE STEPS OF THE ICA?



INTERNATIONAL CONSULTATION AND ANALYSIS (ICA)

PART 1

A TECHNICAL ANALYSIS OF THE BUR BY A TEAM OF TECHNICAL EXPERTS (TTE)

The technical analysis starts within six months of the submission of the BURs.

WHAT ARE THE CRITERIA FOR CHOOSING TTE MEMBERS?



EXPERTS ARE DRAWN FROM THE UNFCCC ROSTER OF EXPERTS.



EXPERTS SHOULD SUCCESSFULLY COMPLETE THE TRAINING PROGRAM DEVELOPED BY THE CONVENTION



THE EXPERTISE OF THE TEAM SHOULD COVER THE AREAS OF INFORMATION CONTAINED IN THE BUR



THE MAJORITY OF EXPERTS SHOULD BE FROM DEVELOPING PARTIES



EXPERTS SHOULD NOT BE A NATIONAL OF THE PARTY WHOSE BUR IS UNDER ANALYSIS



THE SAME TTE SHALL NOT BE INVOLVED IN UNDERTAKING THE TECHNICAL ANALYSIS OF SUCCESSIVE BURs

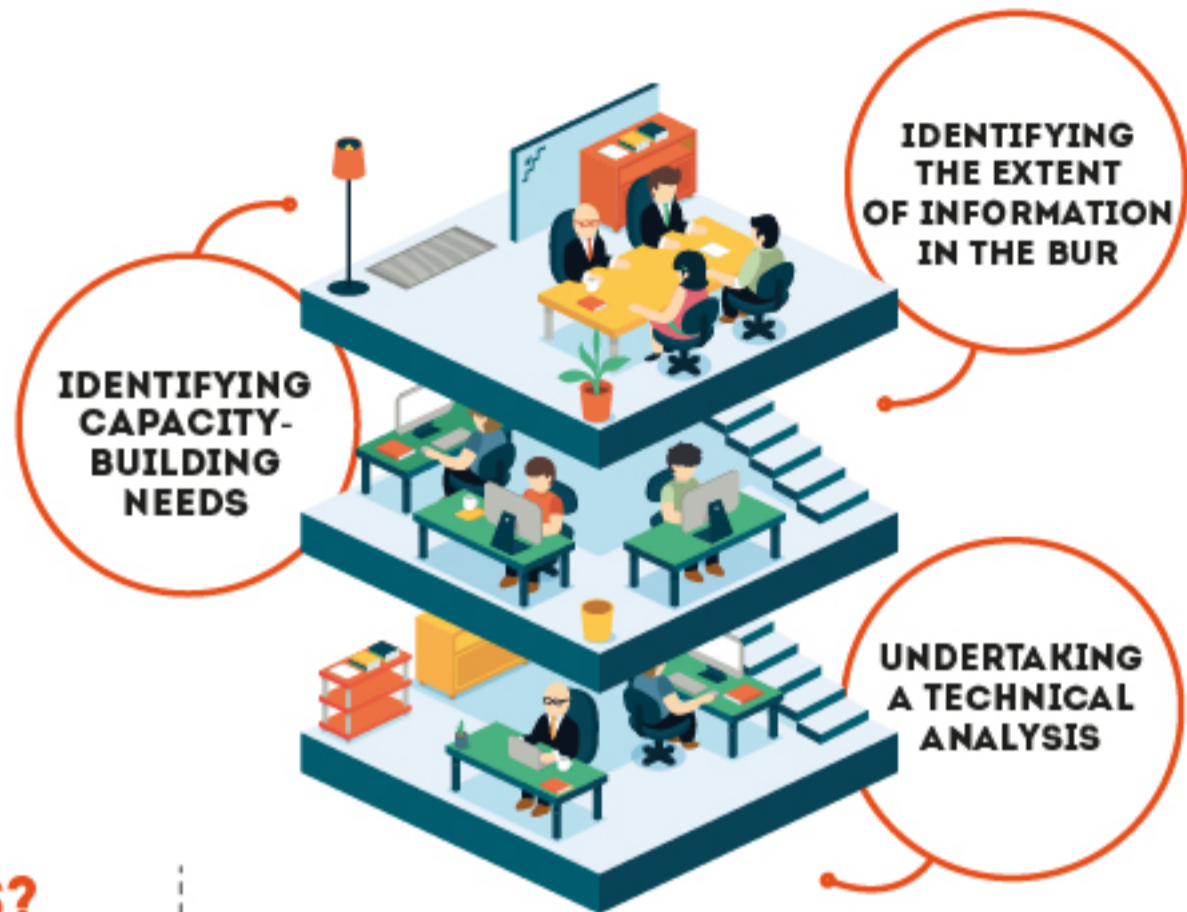


EXPERTS SHOULD NOT BE NOMINATED BY THE PARTY WHOSE BUR IS UNDER ANALYSIS



EXPERTS SHOULD NOT HAVE BEEN INVOLVED IN THE PREPARATION OF THE BUR

THE GOALS OF THE TTE



WHAT WILL THE ANALYSIS OF THE BUR ENTAIL?

During the analysis, the TTE shall identify the extent to which the BUR of the Party concerned reported information as per the BUR guidelines on the following:



NATIONAL CIRCUMSTANCES AND INSTITUTIONAL ARRANGEMENTS



THE NATIONAL GHG INVENTORY REPORT

INFORMATION ON MITIGATION ACTIONS, INCLUDING:



1. A DESCRIPTION OF SUCH ACTIONS,
2. AN ANALYSIS OF THEIR IMPACTS AND THE ASSOCIATED METHODOLOGIES AND ASSUMPTIONS
3. THE PROGRESS MADE IN THEIR IMPLEMENTATION



INFORMATION ON DOMESTIC MRV



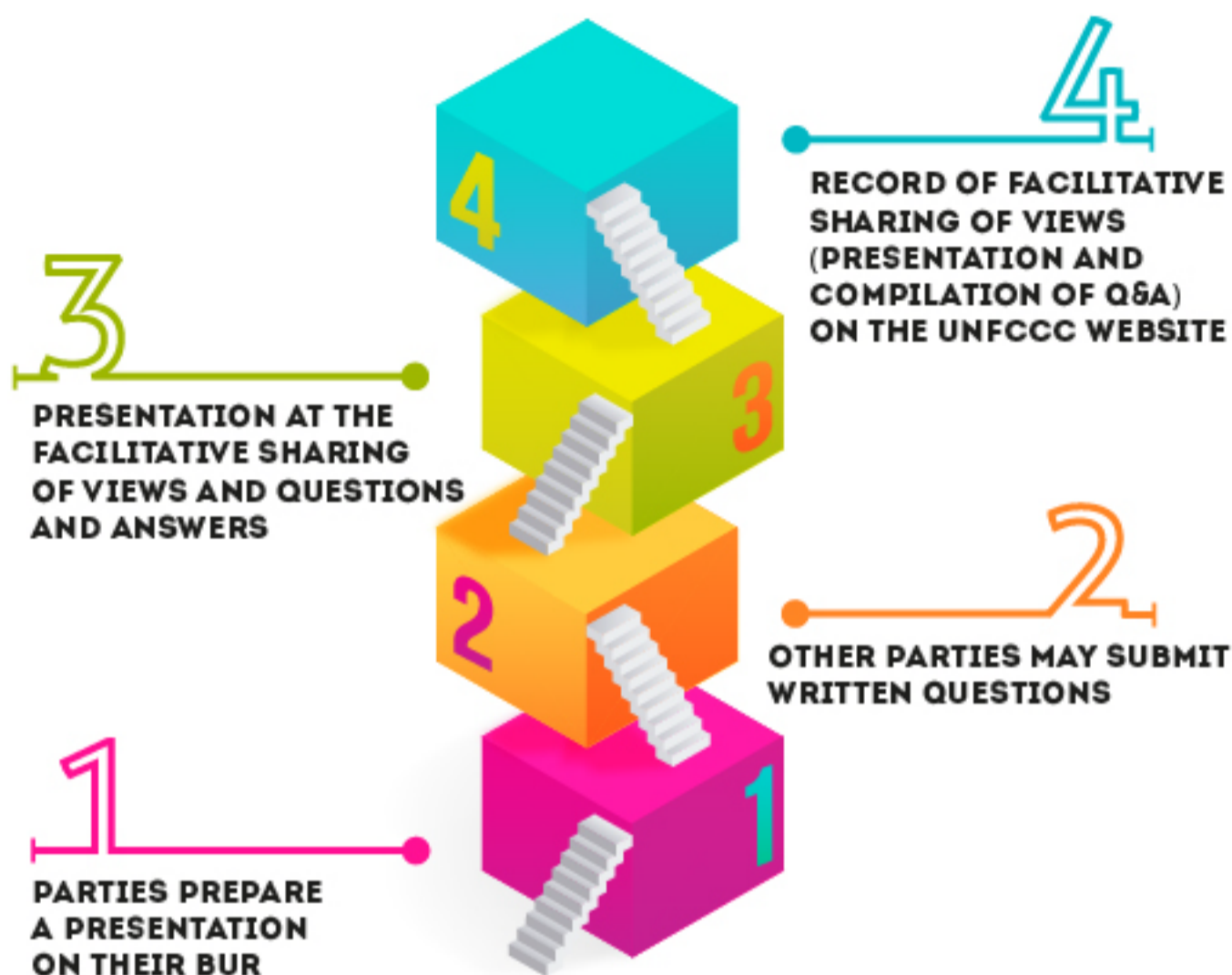
INFORMATION ON SUPPORT RECEIVED

INTERNATIONAL CONSULTATION AND ANALYSIS (ICA)

PART 2

A FACILITATIVE SHARING OF VIEWS

It is conducted in the form of a workshop, and consists of 1-3 hours session for each Party.



HOW TO PREPARE FOR THE FACILITATIVE SHARING OF VIEWS?



IDENTIFY INSTITUTIONS AND STAFF MEMBER(S) WHO SHOULD PARTICIPATE AND FAMILIARIZE WITH THE COUNTRY'S BUR



DECIDE WHETHER TO PARTICIPATE INDIVIDUALLY OR AS A GROUP OF COUNTRIES (IF APPLICABLE)



IDENTIFY THE KEY MESSAGES FOR YOUR PRESENTATION



ANTICIPATE POTENTIAL QUESTIONS AND PREPARE ANSWERS



LEARN FROM THE PROCESS THROUGH DOCUMENTATION, EVALUATION AND IMPROVEMENTS TO THE BUR

NATIONAL COMMUNICATIONS (NCs)



WHAT ARE NATIONAL COMMUNICATIONS?

Climate change report that are prepared periodically in accordance with the guidelines developed and adopted by the Conference of the Parties (COP) and submitted to the Convention every four years.

WHY ARE THEY IMPORTANT?



Informing policies, plans, strategies, and programs



Political buy-in



Improving access to support



Capacity building



Increasing awareness

WHAT SHOULD BE INCLUDED IN THESE REPORTS?

2. NATIONAL GREENHOUSE GAS INVENTORY



3. GENERAL DESCRIPTION OF STEPS TAKEN OR ENVISAGED TO IMPLEMENT THE CONVENTION:

- . PROGRAMMES CONTAINING MEASURES TO FACILITATE ADEQUATE ADAPTATION TO CLIMATE CHANGE
- . PROGRAMMES CONTAINING MEASURES TO MITIGATE CLIMATE CHANGE

4. CONSTRAINTS AND GAPS, AND RELATED FINANCIAL, TECHNICAL AND CAPACITY NEEDS



1. NATIONAL CIRCUMSTANCES AND INSTITUTIONAL ARRANGEMENTS



5. OTHER INFORMATION CONSIDERED RELEVANT TO THE ACHIEVEMENT OF THE OBJECTIVE TO THE CONVENTION:

- . TRANSFER OF TECHNOLOGIES
- . RESEARCH AND SYSTEMATIC OBSERVATION
- . EDUCATION, TRAINING AND PUBLIC AWARENESS
- . CAPACITY-BUILDING
- . INFORMATION AND NETWORKING



NATIONAL COMMUNICATIONS (NCs)

BEST PRACTICES



ESTABLISHING NATIONAL LEGAL/ FORMAL ARRANGEMENTS

Facilitate the various stages of the approval process

Enhance the coordination and supervisory role and high-level authority of the appointed institutions

Help to facilitate the coordinating body to mobilize necessary expertise



CHOOSING AND MAINTAINING APPROPRIATE COORDINATING BODY

Avoid loss of experience, skills, institutional memory and information, by ensuring the continuity of staff and planning of the national coordinating body

Ensure that dedicated and skilled national staff is appointed to the coordinating body, by assigning clear roles and responsibilities



IN-COUNTRY INSTITUTIONAL AND TECHNICAL CAPACITY BUILDING

Improve capacity of institutions and their staff, enhance the country ownership of the process of the preparation of national communications



GENDER RESPONSIVE CLIMATE CHANGE REPORTS



WHY GENDER SHOULD BE INCLUDED IN CLIMATE CHANGE REPORTS?

1. INCREASED TRANSPARENCY

WHAT TECHNICAL ASSISTANCE/ CAPACITY DEVELOPMENT WILL SUPPORT BETTER USE OF WOMEN'S AND MEN'S KNOWLEDGE AND SKILLS?

MORE CLARITY ON WOMEN'S AND MEN'S KNOWLEDGE



HOW WILL DIFFERENT GROUPS OF WOMEN AND MEN BE AFFECTED BY CLIMATE CHANGE?

BETTER PLANNING TO REDUCE VULNERABILITY



BEHAVIOUR/TINKING ABOUT GENDER ROLES IS TRANSFORMED, FOSTERING INNOVATIONS IN IMPLEMENTATION



HOW CAN MEN AND WOMEN BE MORE FULLY ENGAGED IN ADAPTATION AND MITIGATION?

BETTER UNDERSTANDING OF NATIONAL CIRCUMSTANCES



HOW ARE MEN AND WOMEN INVOLVED IN DIFFERENT SECTORS, AND HOW DO THEY USE RESOURCES?

2. IMPROVED PLANNING



ENSURES HIGHER LEVELS OF SUSTAINABILITY



IMPROVES INFORMATION FROM STAKEHOLDERS



ENSURES THAT INITIATIVES REACH THE RIGHT AUDIENCES AND LEVELS



ENSURES ACCURACY AND INCLUSIVITY OF CAPACITY ASSESSMENTS



DEVELOPS GENDER-RESPONSIVE INDICATORS AND IMPROVES TARGETING OF BUDGETS



INCREASES OWNERSHIP AND COMMITMENT BY MEN AND WOMEN



GENDER RESPONSIVE CLIMATE CHANGE REPORTS

3. ENHANCED EFFECTIVENESS IN IMPLEMENTATION



CLARIFYING EVIDENCE OF SEX-DISAGGREGATED DATA



INCORPORATING MEN'S AND WOMEN'S KNOWLEDGE INTO REPORTS



SHARING INFORMATION DEEPENS UNDERSTANDING OF CLIMATE CHANGE DYNAMICS

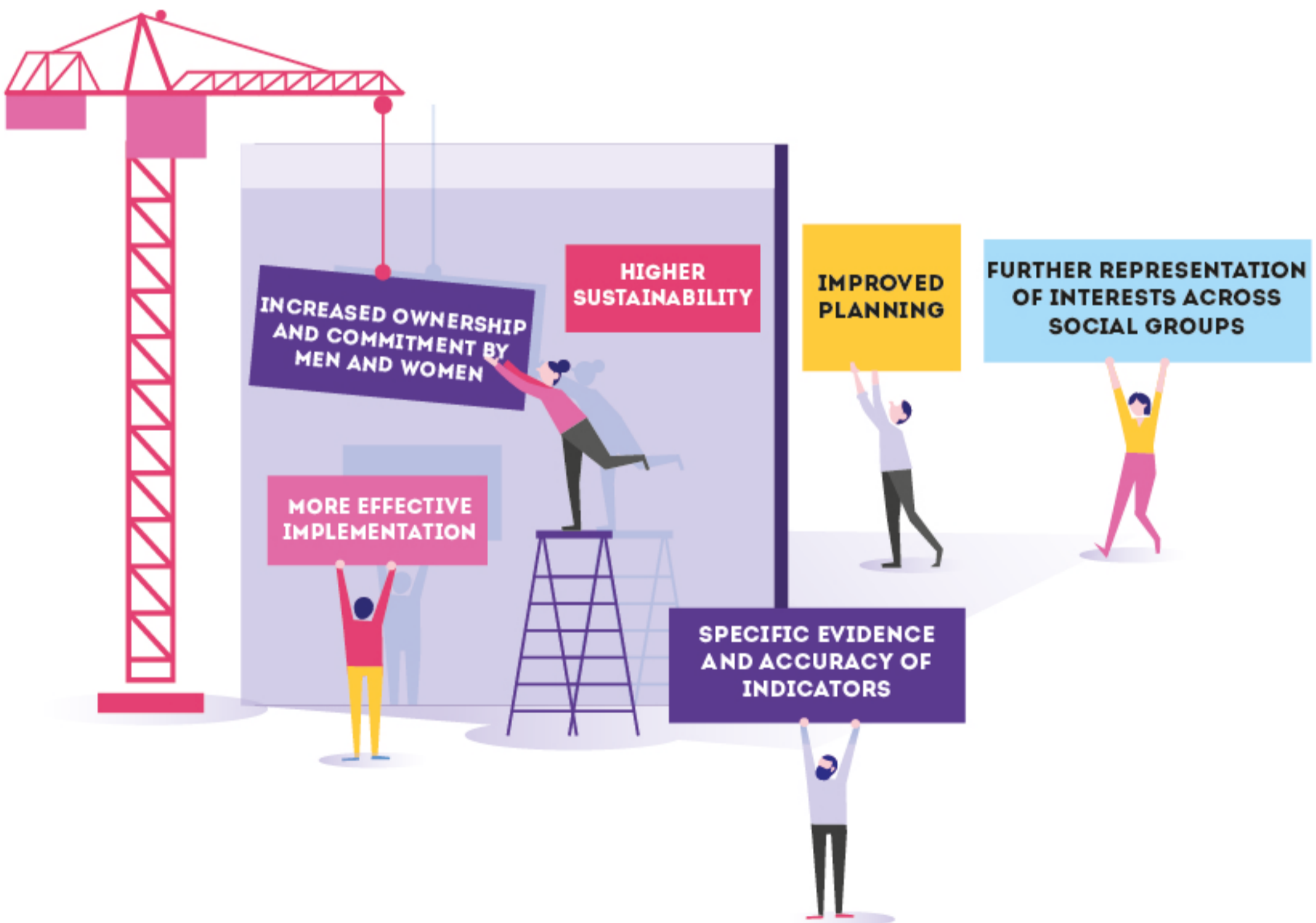


ACCURATELY TARGETING ACTIONS BASED ON EVIDENCE



MEN AND WOMEN COLLABORATING ON DIFFERENT ASPECTS OF CLIMATE CHANGE RESPONSE

4. BETTER RESULTS ACROSS SECTORS





GENDER RESPONSIVE CLIMATE CHANGE REPORTS



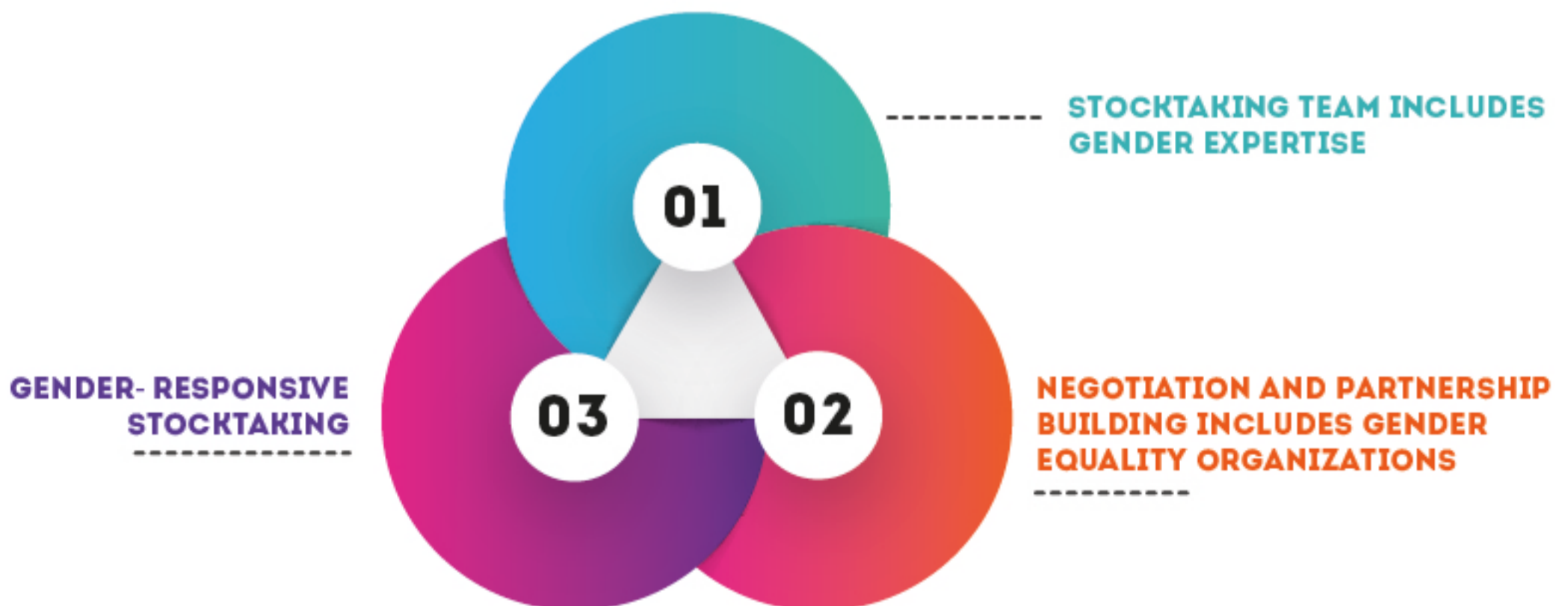
HOW GENDER CAN BE INTEGRATED IN NATIONAL COMMUNICATIONS AND BIENNIAL UPDATE REPORTS?

1. STAKEHOLDER ENGAGEMENT

-  **MANAGEMENT OF STAKEHOLDER ENGAGEMENT ADDRESSES GENDER**
-  **STAKEHOLDER MAPPING AND ANALYSIS CONSIDERS BOTH WOMEN'S AND MEN'S INTERESTS**
-  **INFORMATION-SHARING AND AWARENESS-RAISING ON GENDER AND CLIMATE ISSUES**
-  **STAKEHOLDER INVOLVEMENT IN DEVELOPMENT OF NC/BUR REPORTS REFLECTS COMMITMENTS TO GENDER BALANCE**

-  **CONSULTATION AND ENGAGEMENT PROCESSES ACCOUNT FOR GENDERED ROLES**
-  **NEGOTIATION AND PARTNERSHIP BUILDING INCLUDES GENDER EQUALITY ORGANIZATIONS**
-  **REPORTING RESULTS TO ALL STAKEHOLDERS**

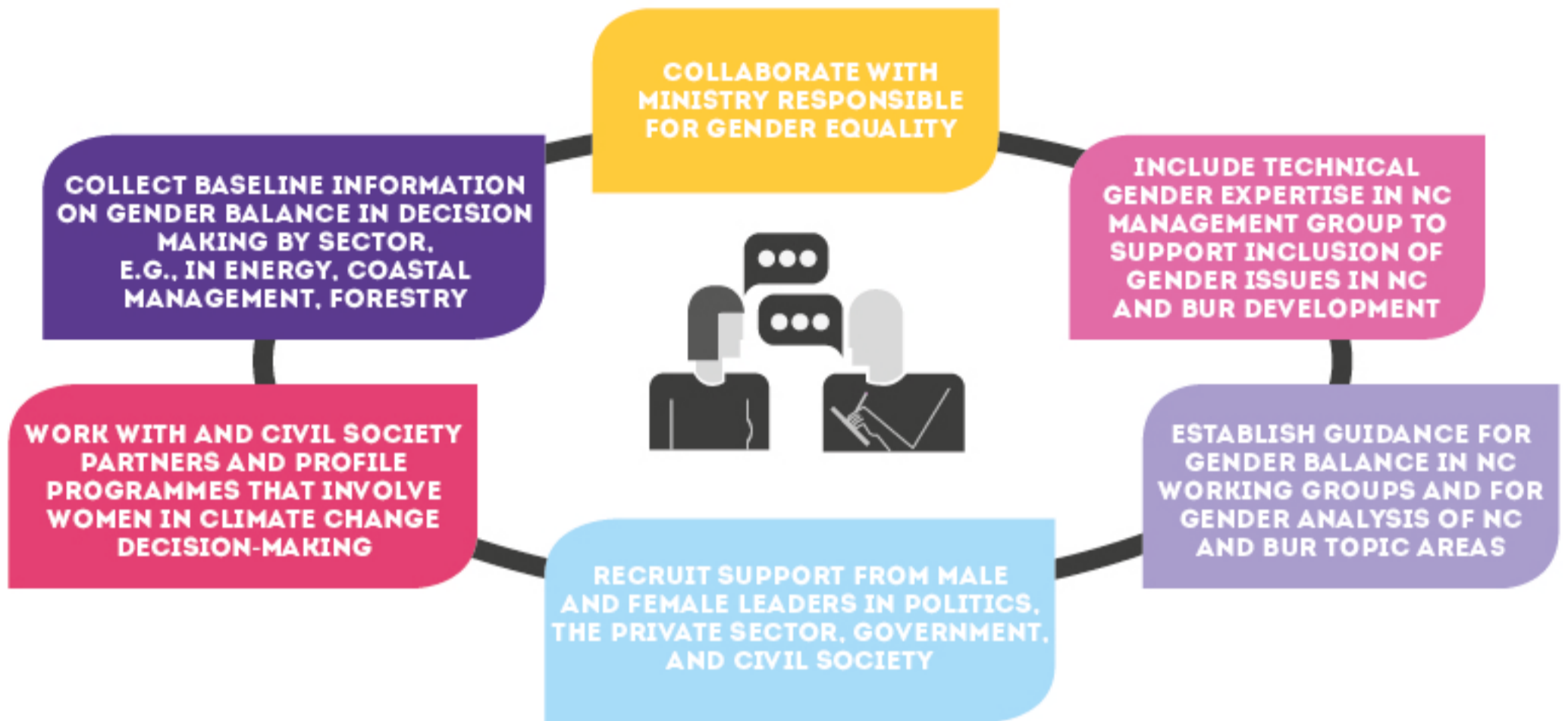
2. TAKING STOCK OF MEN'S AND WOMEN'S DIFFERENT KNOWLEDGE, SKILLS AND NEEDS





GENDER RESPONSIVE CLIMATE CHANGE REPORTS

3. GENDER-EQUITABLE DECISION-MAKING APPROACHES



4. COORDINATING GENDER AND CLIMATE CHANGE MAINSTREAMING EFFORTS





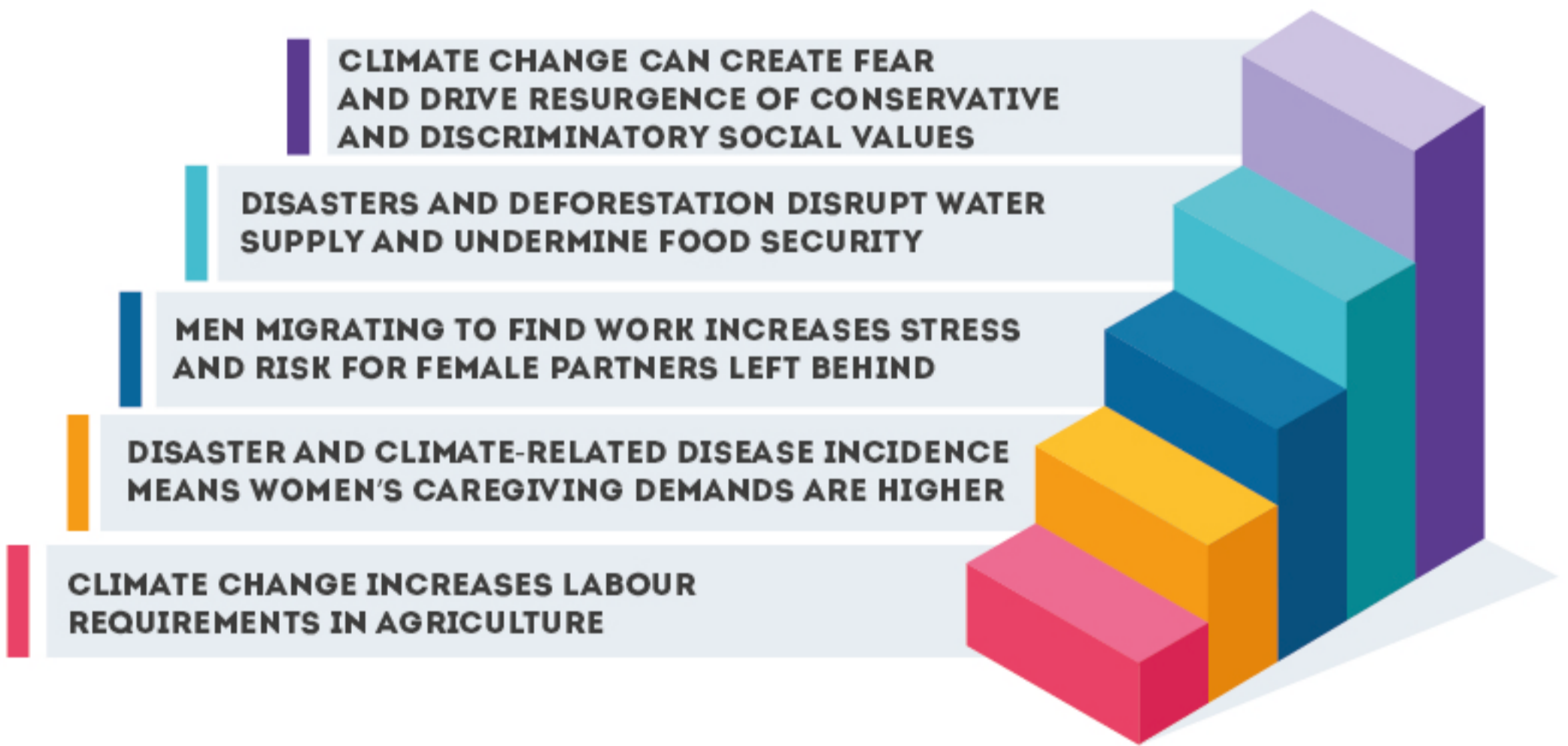
GENDER RESPONSIVE CLIMATE CHANGE REPORTS



UNDERSTANDING GENDER ISSUES BY CLIMATE CHANGE TOPIC

Climate change impacts differently on men and women and both can act as active agents of change with different capacities in responding to climate change. Gender issues cut across climate change topics that are often discussed separately, but are in fact interconnected elements of climate change impacts and responses.

1. VULNERABILITY AND ADAPTATION



BENEFITS OF GENDER-RESPONSIVE ADAPTATION

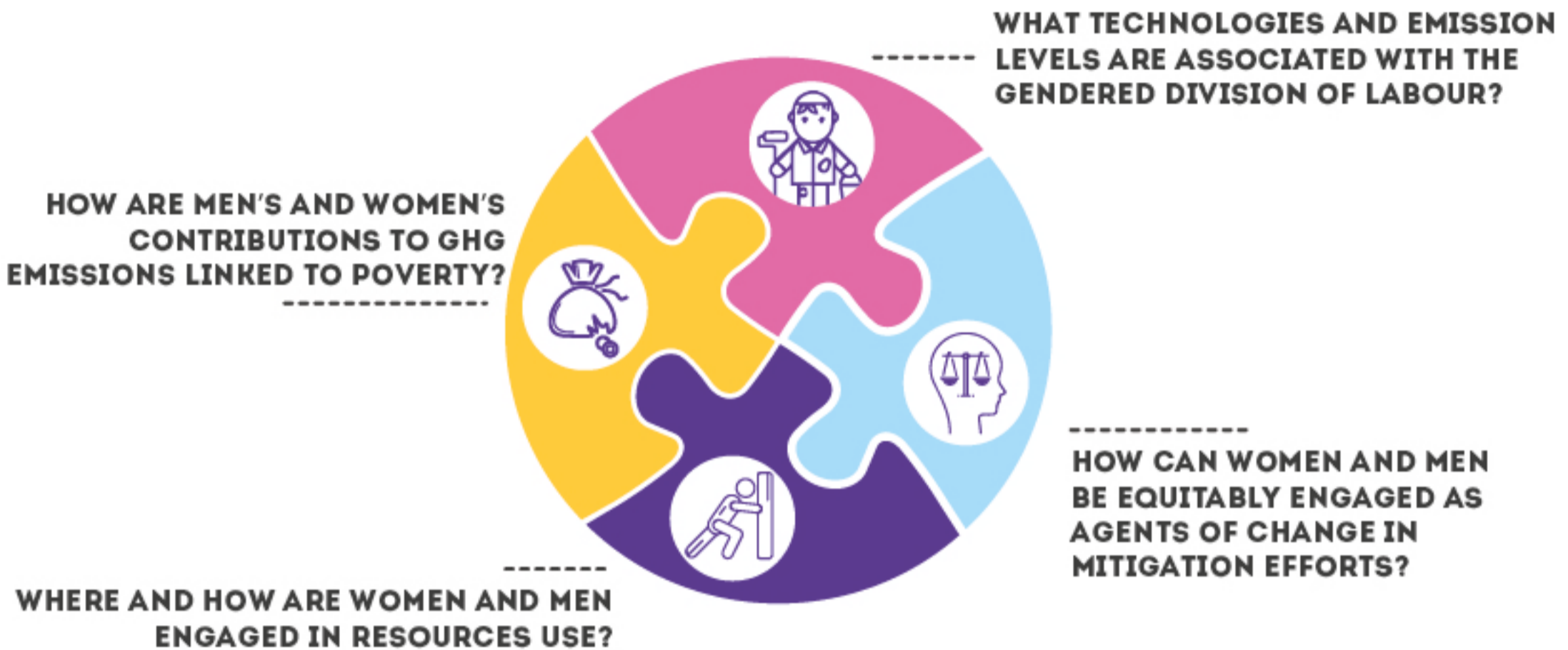
- INCLUDE AND VALUE WOMEN'S KNOWLEDGE IN ADAPTATION PLANNING
- ENSURE THAT COMMUNITY ADAPTATION INITIATIVES RESPONDING TO WOMEN'S AND MEN'S NEEDS ARE MORE SUSTAINABLE
- INCLUDE EMPOWERMENT STRATEGIES IN VULNERABILITY AND RISK ASSESSMENTS
- ENSURE THAT INDICATOR SETS ARE MORE ACCURATE AND REALISTIC AND SUPPORT MORE ACCURATE MONITORING
- TARGET LIVELIHOOD INITIATIVES TO WOMEN'S STRATEGIC AND LONG-TERM ECONOMIC INTERESTS
- IDENTIFY GENDER INEQUALITIES AND RISK REDUCTION STRATEGIES



GENDER RESPONSIVE CLIMATE CHANGE REPORTS

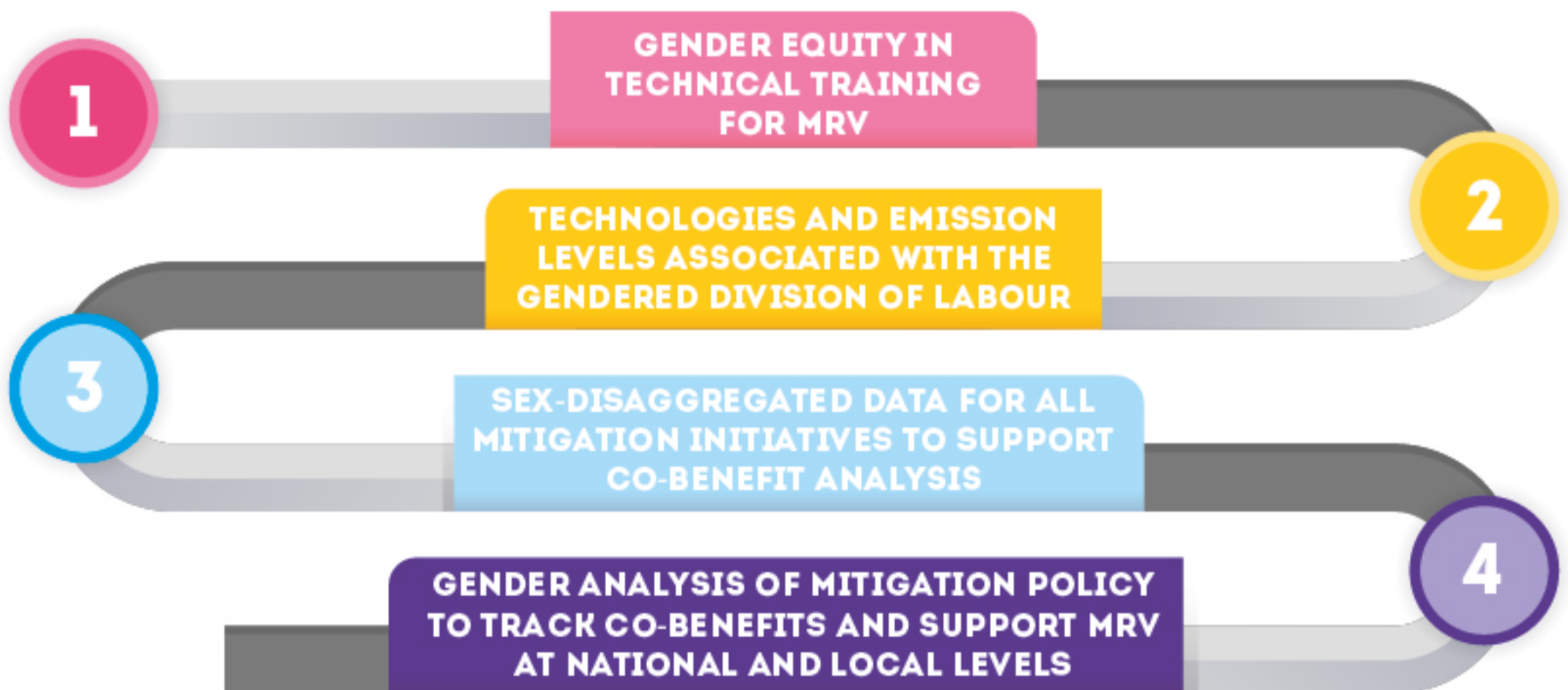
2. MITIGATION

SOCIAL DATA TO INFORM GENDER-RESPONSIVE MITIGATION EFFORTS



3. MONITORING, REPORTING AND VERIFICATION

STEPS TO INCREASE GENDER-RESPONSIVE MRV





GENDER RESPONSIVE CLIMATE CHANGE REPORTS

4. GREENHOUSE GAS INVENTORIES

GENDER FACTORS IN GHG MEASUREMENT AND CAPTURE

SOCIO-ECONOMIC FACTORS IN EMISSION REDUCTION

- WHO HAS A SAY? (W/M)
- WHO IS USING OLD AND HIGH- EMISSION TECHNOLOGIES? (W/M)
- HOW ARE BENEFITS SHARED? (W/M)
- HOW DO INTERVENTIONS SUPPORT GENDER EQUALITY AT A STRATEGIC LEVEL?

SOCIO-ECONOMIC DRIVERS OF EMISSIONS

- WHICH GROUPS PRODUCE MORE/LESS EMISSIONS?
- WHO CONTROLS INDUSTRIES?
- WHO USES/WHO BENEFITS/ WHO PAYS?
- WEALTH CONCENTRATION/ POVERTY CONNECTIONS?
- HOW DO MEN AND WOMEN FARE IN EACH OF THE ABOVE AREAS?

5. TECHNOLOGY NEEDS ASSESSMENTS

GENDER RESPONSIVE TECHNOLOGY NEEDS ASSESSMENT

ANALYSING WHERE AND HOW GENDER ROLES CAN BE CHALLENGED TO SUPPORT GENDER EQUALITY

FACTORING GENDER ROLES, TIME BURDENS AND LEVELS OF EDUCATION INTO ASSESSMENTS

ENSURING MEN & WOMEN CONTRIBUTE TO ASSESSMENTS IN AN EQUITABLE MANNER THROUGH WELL-DESIGNED CONSULTATIONS

FINANCING AVAILABLE TO DELIVER TECHNOLOGY TRAINING DIRECTLY TO WOMEN AND MEN





GENDER RESPONSIVE CLIMATE CHANGE REPORTS



MAKING NATIONAL COMMUNICATIONS AND BIENNIAL UPDATE REPORTS GENDER RESPONSIVE

COMMITMENT

- FROM SENIOR GOVERNMENT
- IN CIVIL SOCIETY AND FAITH-BASED ORGANIZATIONS
- COMMUNITY AND FAMILY LEVELS

TECHNICAL CAPACITY

- CLIMATE CHANGE TRAINING FOR GENDER SPECIALISTS
- GENDER ANALYSIS
- GENDER BUDGETING
- GENDER IN PLANNING



GENDER INDICATORS

- SEX-DISAGGREGATED DATA
- SUPPORT TO STATISTICS OFFICES
- SUPPORT TO LINE MINISTRIES
- COORDINATION WITH PARTNERS

FUNDING

- INSTITUTIONAL ARRANGEMENTS
- DATA COLLECTION AND ANALYSIS
- VERIFICATION CONSULTATIONS
- REPORT PREPARATION



BUILDING COMMITMENT FOR GENDER-RESPONSIVE REPORTING AT EACH LEVEL OF THE PROCESS



BUDGETING FOR GENDER-RESPONSIVE NATIONAL COMMUNICATIONS AND BIENNIAL UPDATE REPORTS



BUILDING AND USING TECHNICAL CAPACITY FOR GENDER ANALYSIS OF CLIMATE CHANGE



IDENTIFYING BASIC GENDER INDICATORS TO SUPPORT MONITORING AND REPORTING

