



Workshop: Progresses and challenges with the establishment of MRV System in African Countries.

SENEGAL: Building National MRV System, Experience and Perspective.

Cotonou, BENIN: Africa Carbon Forum / Day 2 - June 29, 2017.

Palais Des Congrès of Cotonou, Room Polyvalente Rez de Chaussé.



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- B. The context SENEGAL (from INDC to NDC);
- C. Our MRV system;
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- E. MRV GHG Emission (Electricity Production);
- F. MRV IT Platform;
- G. NDC & National Development Plan (PSE);
- H. Summary Table.

A. The Country: SENEGAL, Long considered one of Africa's model democracies, it has a tradition of stable governments and civilian rule.



Country Name: Republic of Senegal, **Government type:** Presidential republic.

Area: 196 222 km²

Capital: Dakar (14 44 N, 17 38 W);

Economy - GDP Growth Rate: 6.6% (2016), 6.5% (2015), 4.3% (2014).

Independence: April 4th 1960 (from France).

Currency CFA (Communaute Financiere Africaine) franc.

Languages: French (official), Natives: Wolof, Diola, Puular, Serere, Soninke, ...

Population: 14.3 millions (2016 est.), urban population: 43.7% of total population (2015),
Urbanization rate : 3.59% (2010-15 est.).

Administrative Division: 14 regions (Dakar, Diourbel, Fatick, Kaffrine, Kaolack, Kedougou, Kolda, Louga, Matam, Saint-Louis, Sedhiou, Tambacounda, Thies, Ziguinchor).

Electricity:

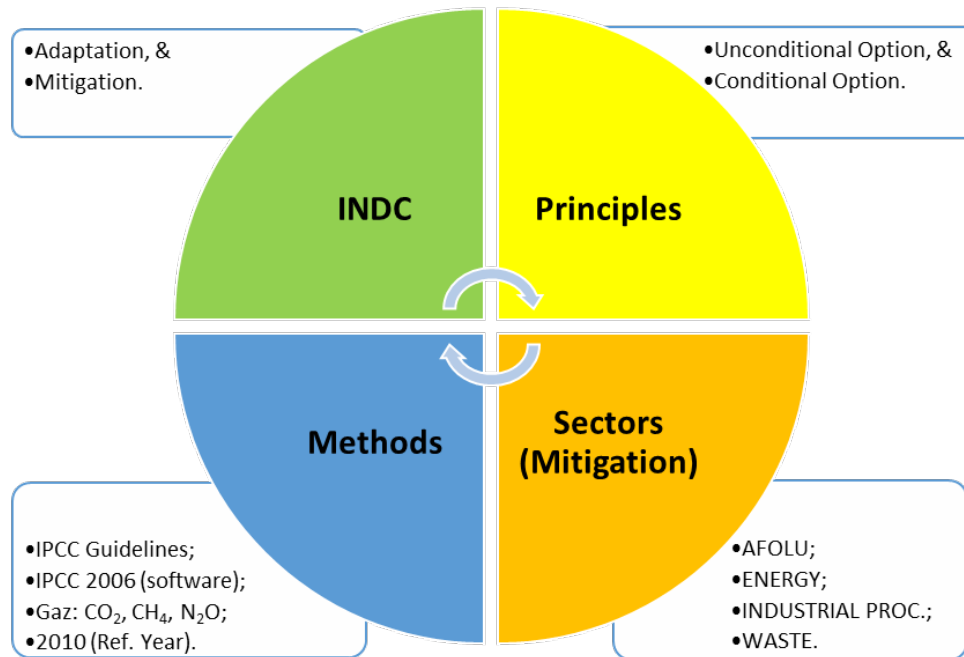
a. Population without electricity: 6.4 millions;

b. Electrification - Population: 55%, urban areas: 90%, rural areas: 28%.

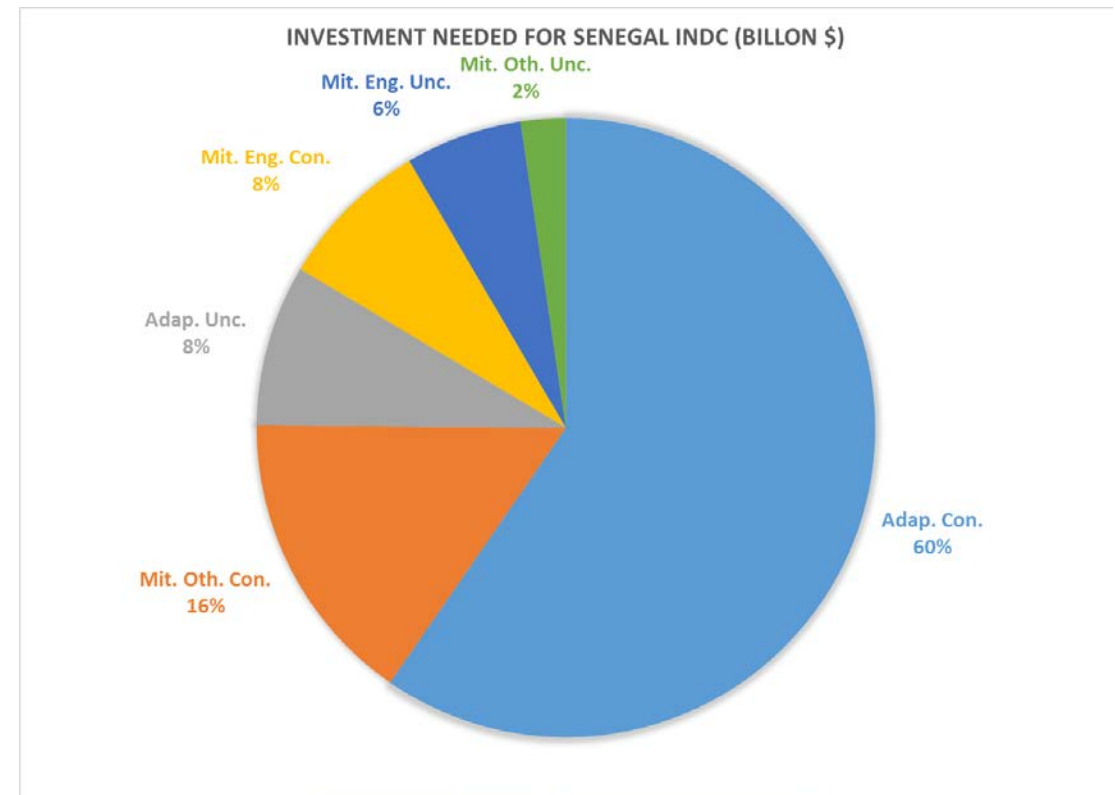


B. The Context:

- ▶ INDC has been submitted prior to the COP21;
- ▶ SENEGAL has signed and ratified the PA;
- ▶ NDC under development (INDC update).



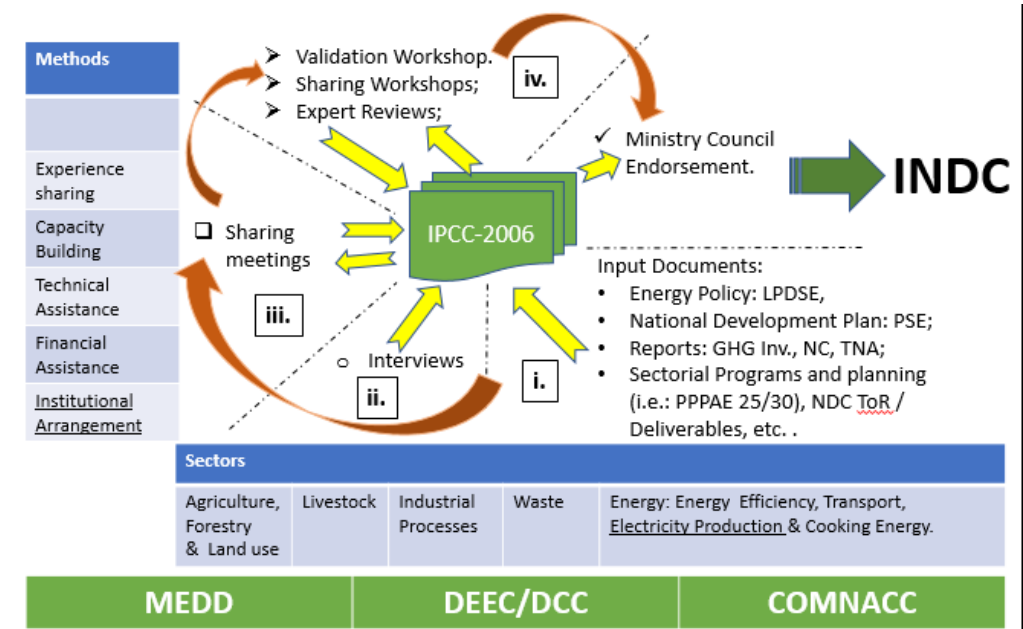
1. About our NDC.



2. INDC required Investment. (6.8 Billion US \$)

B. The Context: Current situation

- ▶ Identification of capacity building and technology transfer needs is under development for several sectors;
- ▶ Strategy for the implementation of actions has to be developed.
- ▶ Key INDC success factors:
 - Political endorsement (Ministry Council's approval);
 - Strong leadership, coordination and support from the Ministry in charge of Environment (MEDD, DEEC/DCC) and the National Comity of Climate Change (COMNACC);
 - Broad based support/Inclusive and participative: 4 consultation levels.



3. The INDC journey.

C. Our MRV System:

MRV System: is the mean by which countries ensure effective articulation of the necessary components to build their mitigation obligations and to track its progress overtime.

Our MRV is to:

- Have a good understanding our country's emission profile;
- Enhance good organization management practices;
- Fulfill our international obligations;
- Track progress of our NDC.

Required MRV Arrangements:

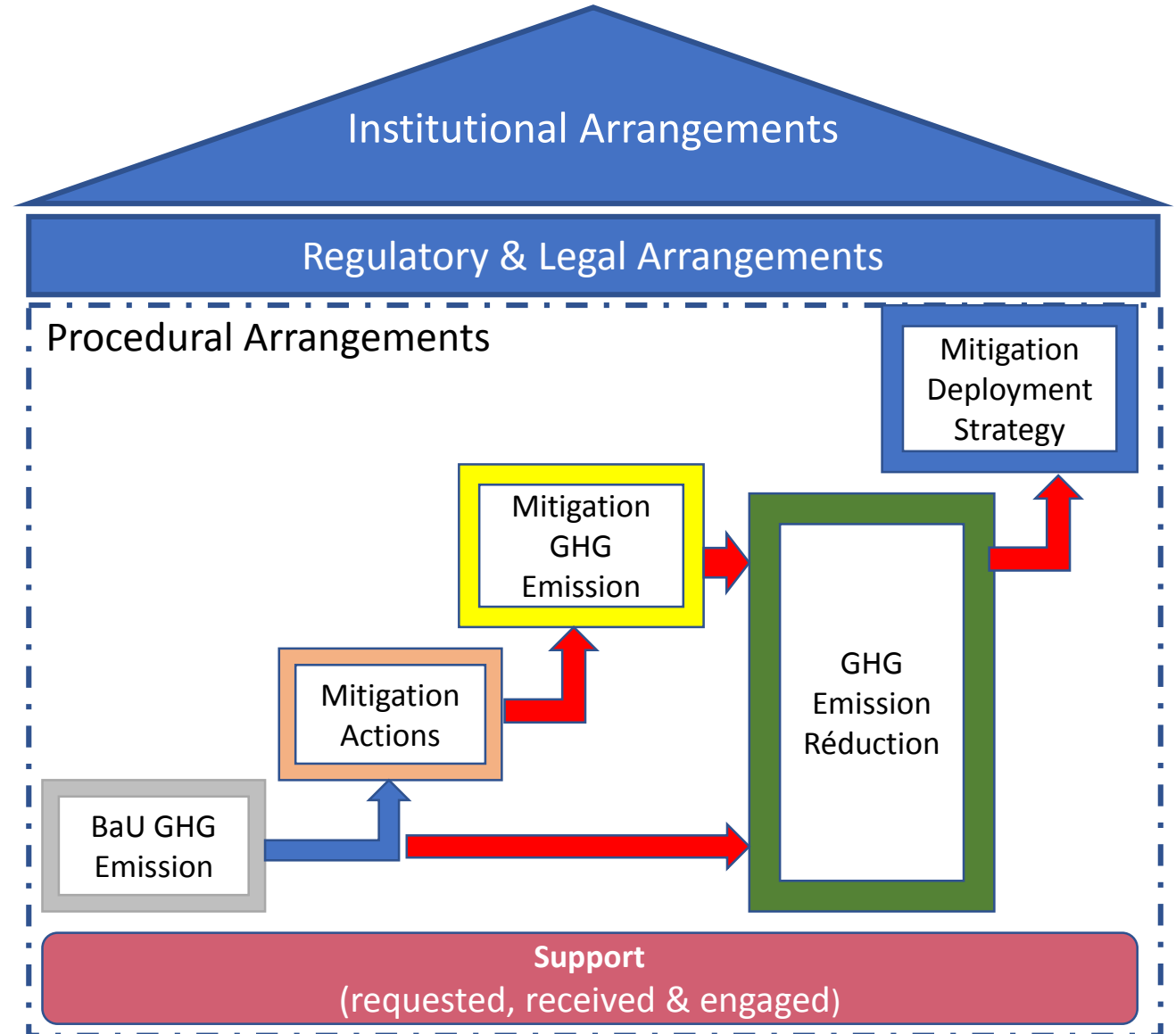
- Institutional;
- Regulatory / Legal;
- Procedural.



C. Our MRV System:

MRV Arrangements:

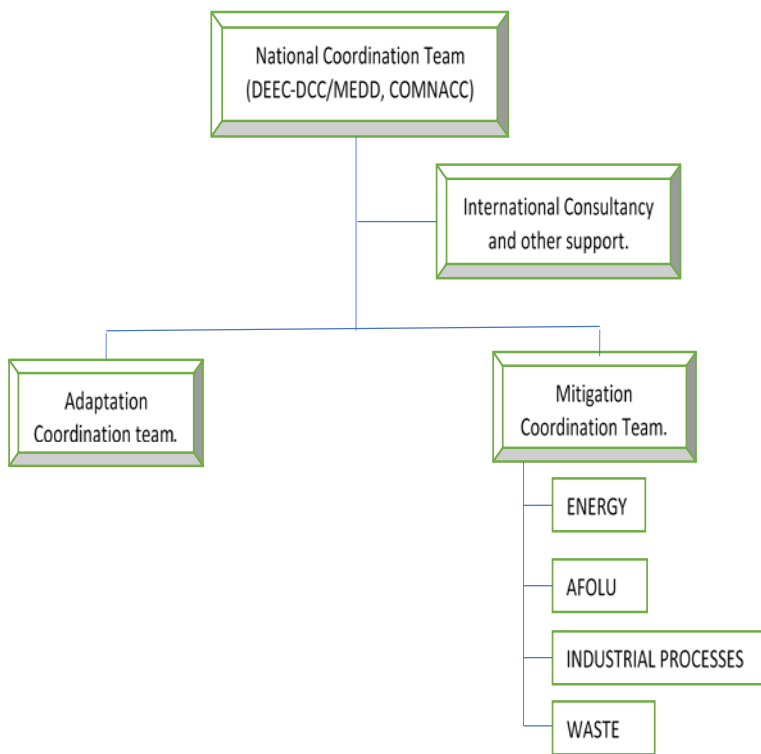
- ✓ Institutional: Entities, Responsibilities, interactions, information flow (frequency, Quality, Form).
- ✓ Regulatory & Legal: Legal instruments for data sharing.
- ✓ Procedural: Processes, predefined templates e.g. for data collection, emission estimation, performance indicators.



4. Suggested Mitigation MRV System.

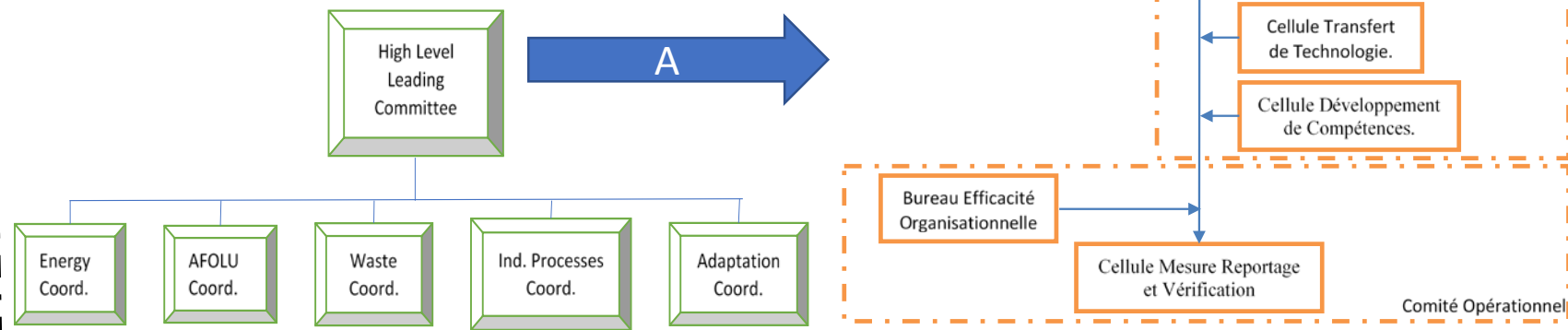
D. MRV Institutional Arrangements:

5. MRV organization structure (As is: INDC).

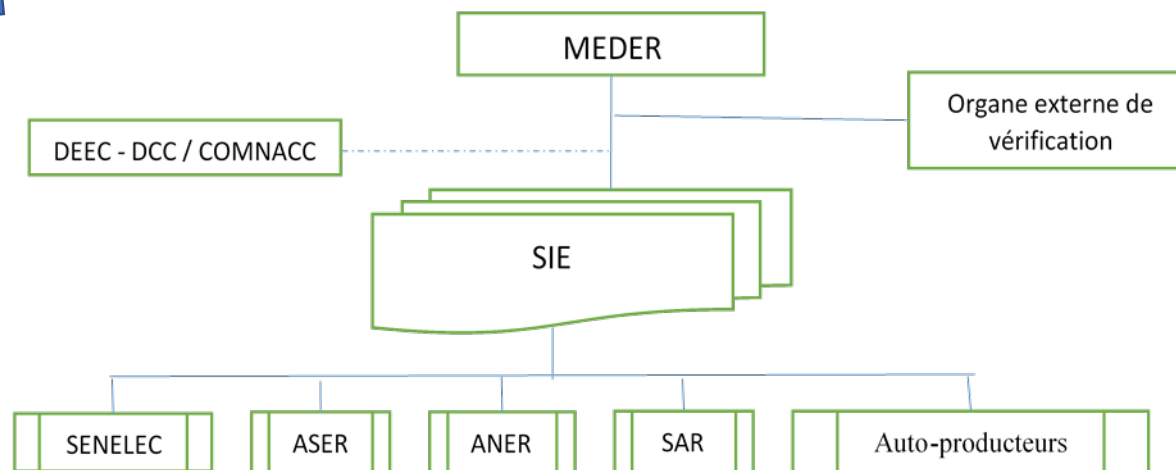


Challenge 1.

6. MRV organization structure (SUGGESTION: NDC).

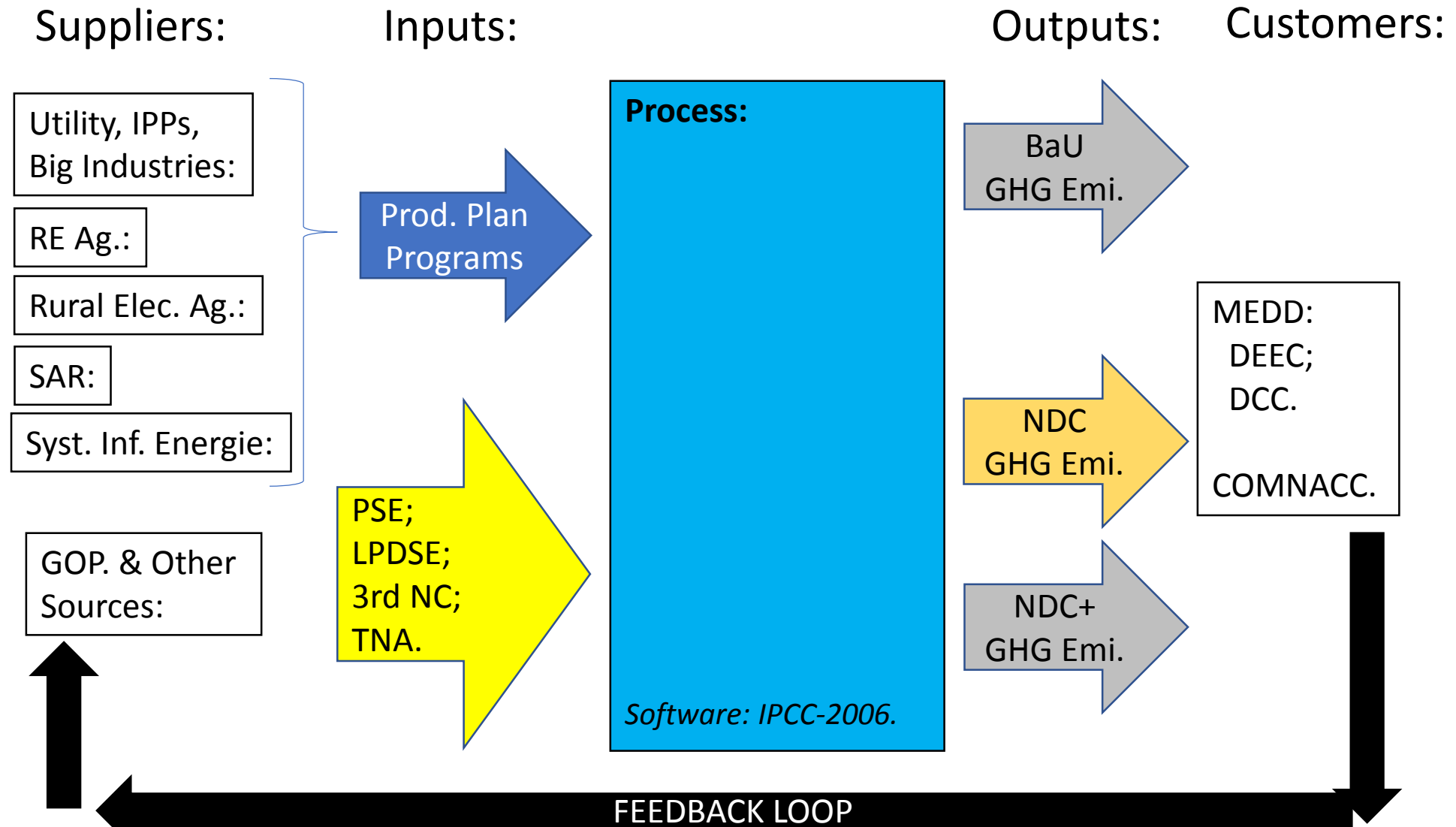


Solution 1.



- Performance organisationnelle** (fréquence : minimum une fois l'an.) :
- Audit, effectué par une tierce partie (exemple organisme accrédité pour effectuer des audits ISO) ;
 - Revue de direction par le comité ministériel ;
 - Tableau de bord.

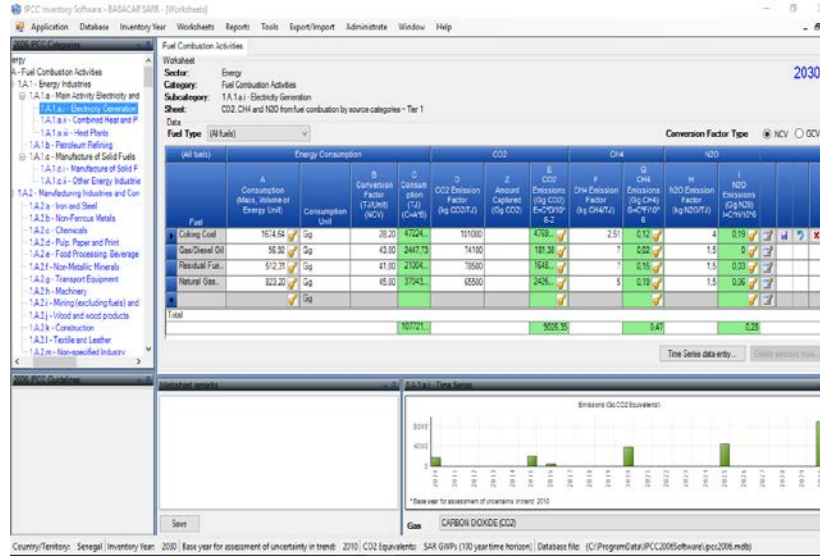
E. GHG Emission MRV for Electricity Production:



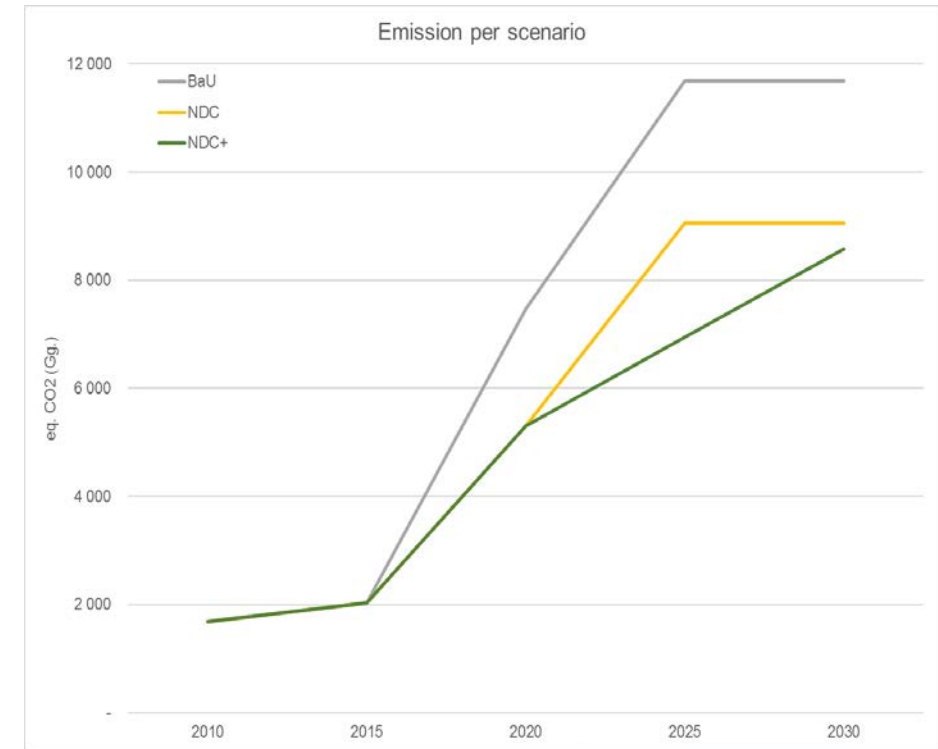
7. GHG Emission MRV SIPOC for the Electricity Production sub-sector.

E. GHG Emission MRV for Electricity Production:

Challenge 2.



9. GHG inventory with the IPCC-2006 software.



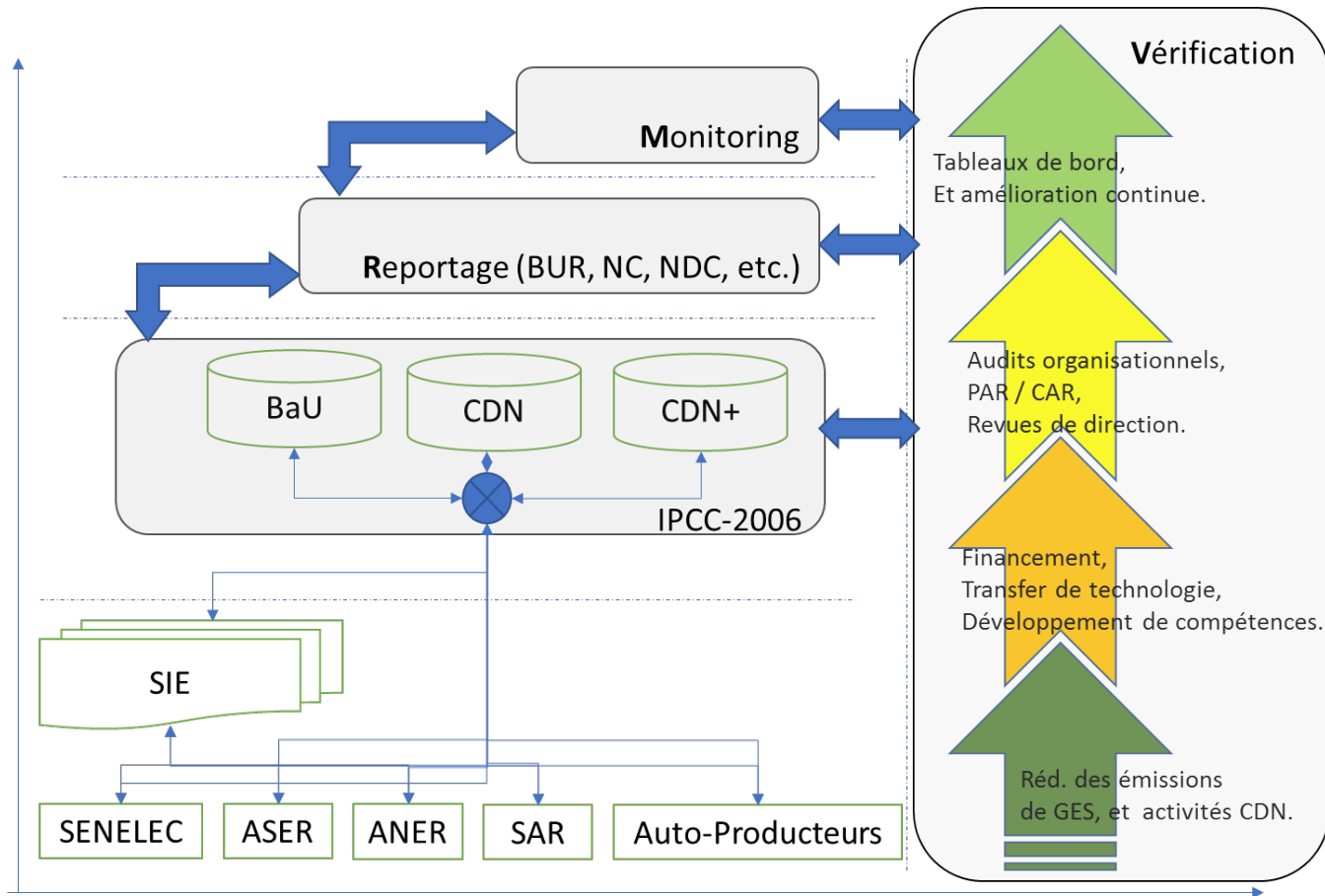
10. Graphical representation of the GHG emission.

Scen	Busi	UNITE	Type	Comb	Puis (MW)	Prod (GWh)	Date d'achèvement	Annee
BaU	IPP	Tobéne Power P1 au HFO	Fuel	HFO	70	534	mars 2016	2016
BaU	Location	Locau Gasoil	Fuel	Gasoil	45	345	mars à juin 2017	2017
BaU	IPP	África Energy P1 / charbon	Fuel	Charbon	90	670	mi 2019/jan 2020/jan 2021	2019
CDN	IPP	Santhiou Mékhé (SENERGY PV SA)	EnR	PV	20	53	Avril 2017	2017
CDN	IPP	Dagana (SENERGY 2)	EnR	PV	20	53	Oct 2016	2016
CDN	IPP	Kahone (ENERGY RESOURCES)	EnR	PV	20	53	Avril 2017	2017
CDN	Importation	Gouina - OMVS Hydro	EnR	Hydro	35	140	janv-20	2020
CDN	Importation	Sambangalou - OMVS Hydro	EnR	Hydro	61	193	janv-21	2021
CDN	Importation	Souapiti Hydro	EnR	Hydro	100	350	janv-21	2021
CDN	Importation	Koukoutamba Hydro	EnR	Hydro	70	175	janv-25	2025
CDN+		CCGN P3	Fuel	GN	200	1.524		2030
CDN+		200 GWh Hydro	EnR	Hydro		200		2030
CDN+		Centrale eolienne P1	EnR	Wind	100	259		2022
CDN+		Centrale eolienne P2	EnR	Wind	100	259		2028
CDN+		Centrale PV P1	EnR	PV	100	263		2022

8. Database of the electricity production sub-sector.

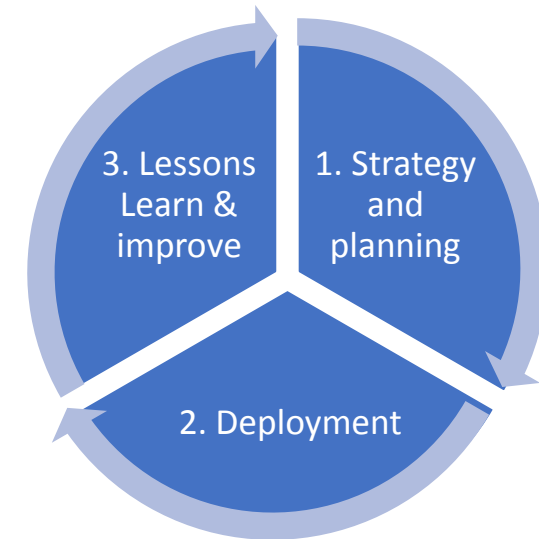


F. MRV IT Platform

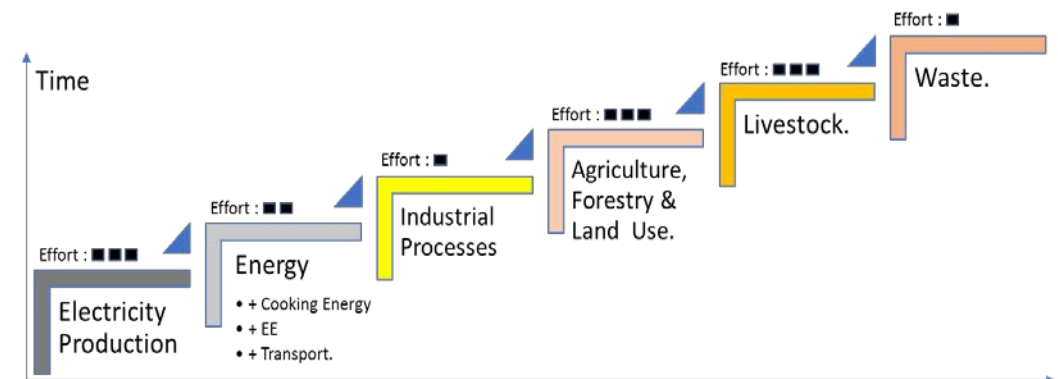


11. MRV IT Platform

Solution 2.



12. MRV Deployment Strategy

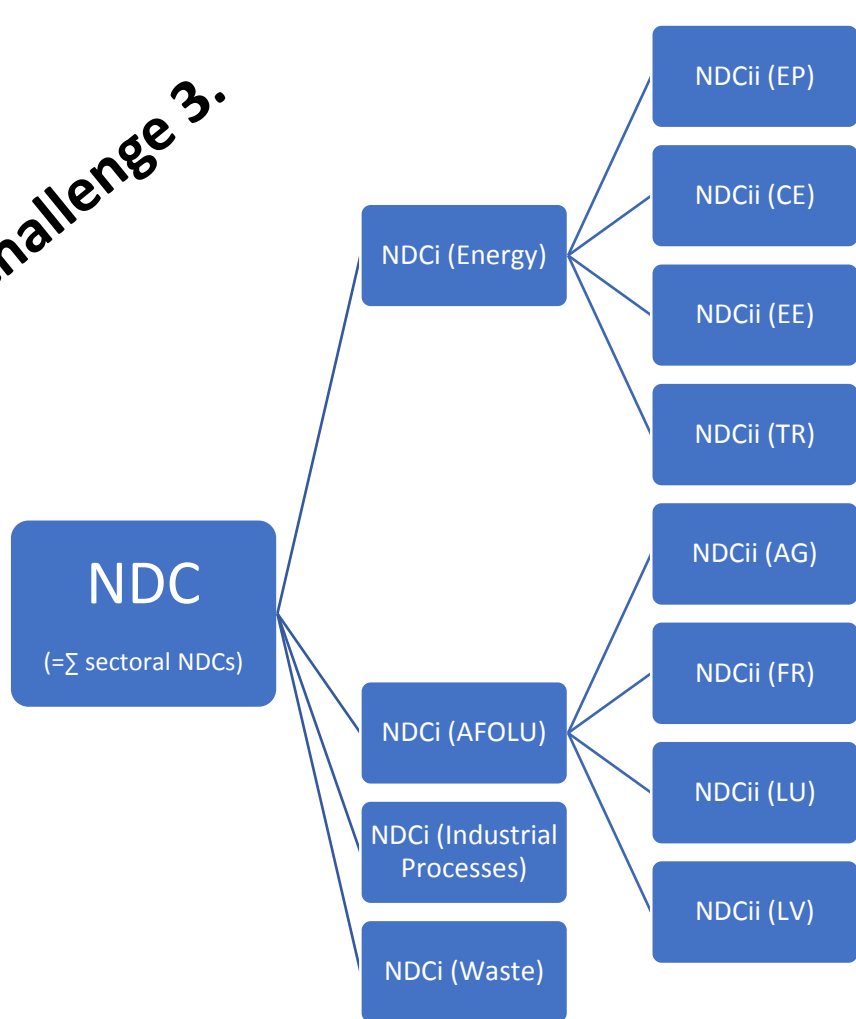


13. MRV Progressive Deployment.

Scope

G. NDC alignment with National Development Plan (PSE).

Challenge 3.



Ministry of Energy (MEDD),

- i. Ownership to be broken down and delegated to appropriate directorates, departments and/or agencies;
- ii. Mitigation actions to be in the Ministry Priority Project List; and
- iii. Reflected in the Ministry Development Policy Letter (LPDSE).

Note: A. Idem for all other ministries involve in the NDC Mitigation Component: Ministry in charge of Transport (TR), Agriculture (AG), Forestry (FR), Land Use (LU), Livestock (LV).

B. The Ministries Priority Project Lists put to getter is the National Development Plan (NDP), therefore ensure that NDC = NDP.

C. Remaining component will be a legal/regulatory document to develop for the coordination entities (roles & responsibilities, deliverables and time schedule) of all parties involve in the MRV arrangements.

14. NDC broken down.

H. Summary table:

Barriers:

- Room for organization improvement;
- Power struggle.



Challenges:

- Leadership (seasonal);
- Integrate / Align NDC and National Development Plan (NDP);
- New category (Oil & Gaz).

Solutions:

- Organization improvement (Org. Chart, results oriented management, Change management);
- IT MRV Platform (Tool: GHG Emission, Mitigation actions, Support);
- Alignment of NDC and NDP;
- Awareness.



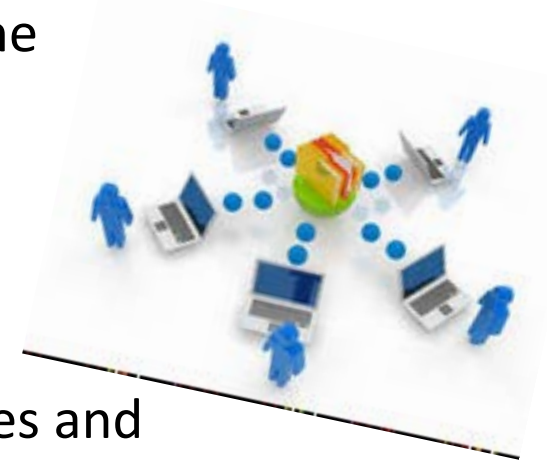
Annex 1. Improvements / Food for thoughts:

Data:

- a. Software for inventory analysis and compilation, allowing to have the scenarios (BaU, NDC, NDC +) data at the same time (Solution 2);
- b. Switch from Tier 1 to Tier 2 and ultimately to Tier 3.

System:

- a. Decentralization and ownership (Solution 1):
 - i. Move from sectoral consultants system to experts from ministries and other ministerial bodies;
 - ii. Operating procedures.
- b. Sectoral databases and national IT for sectoral integration reports (Solution 2).
- c. Formalization:
 - i. Institutional configuration and arrangement (Solution 1);
 - ii. Regulatory and legal framework.
- d. Evaluation and monitoring (Scoreboard / performance indicators):
 - i. Evaluation of the whole system operation;
 - ii. Tracking of planned actions;
 - iii. Corrective and / or preventive actions in case of deviation.



Thank You for your attention.

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