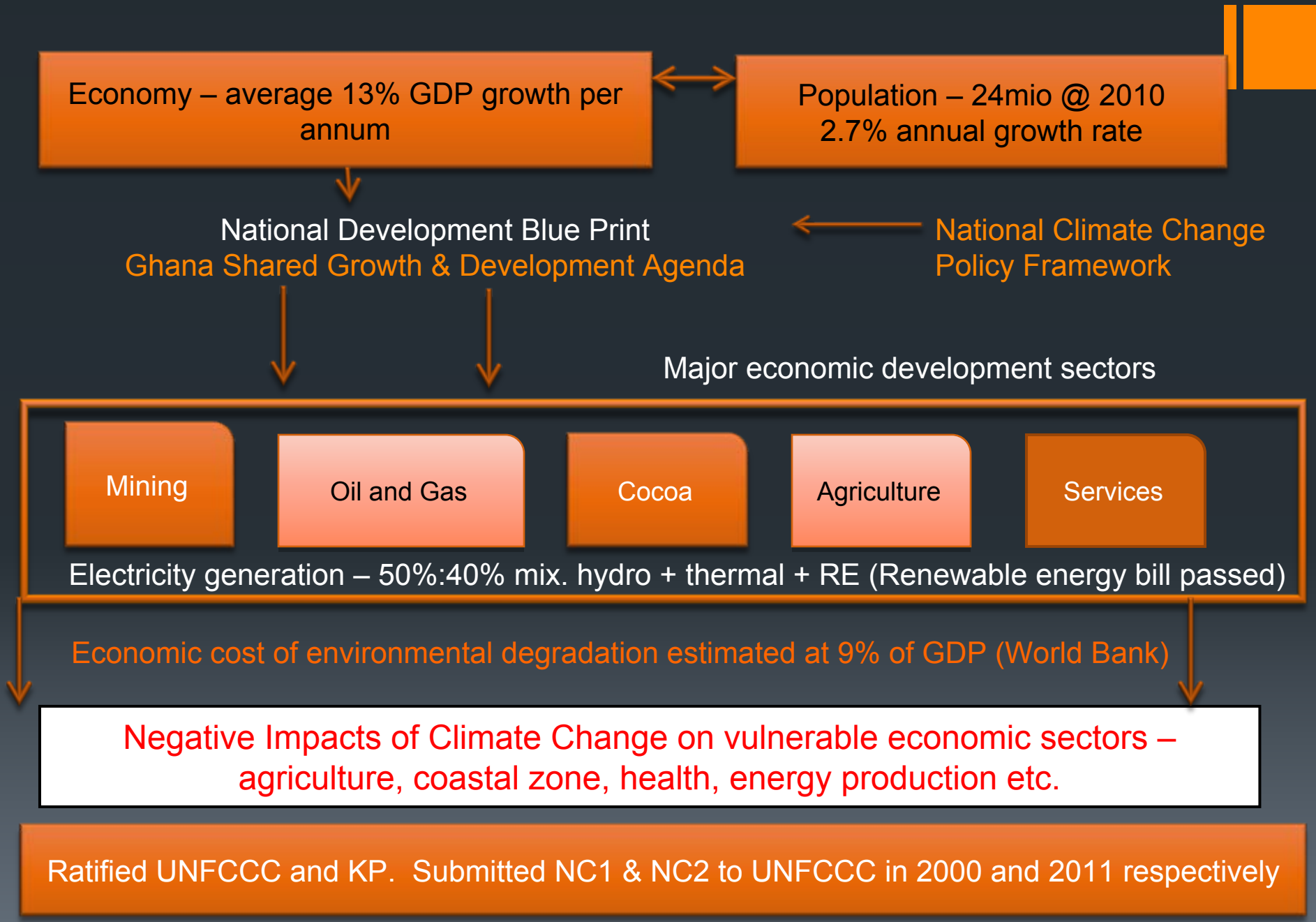
Ghana's Second National Communication

Side Event on Presentation of Second National Communications
Blyde River (Durban Exhibition Centre)
Monday, 5th December, 2011

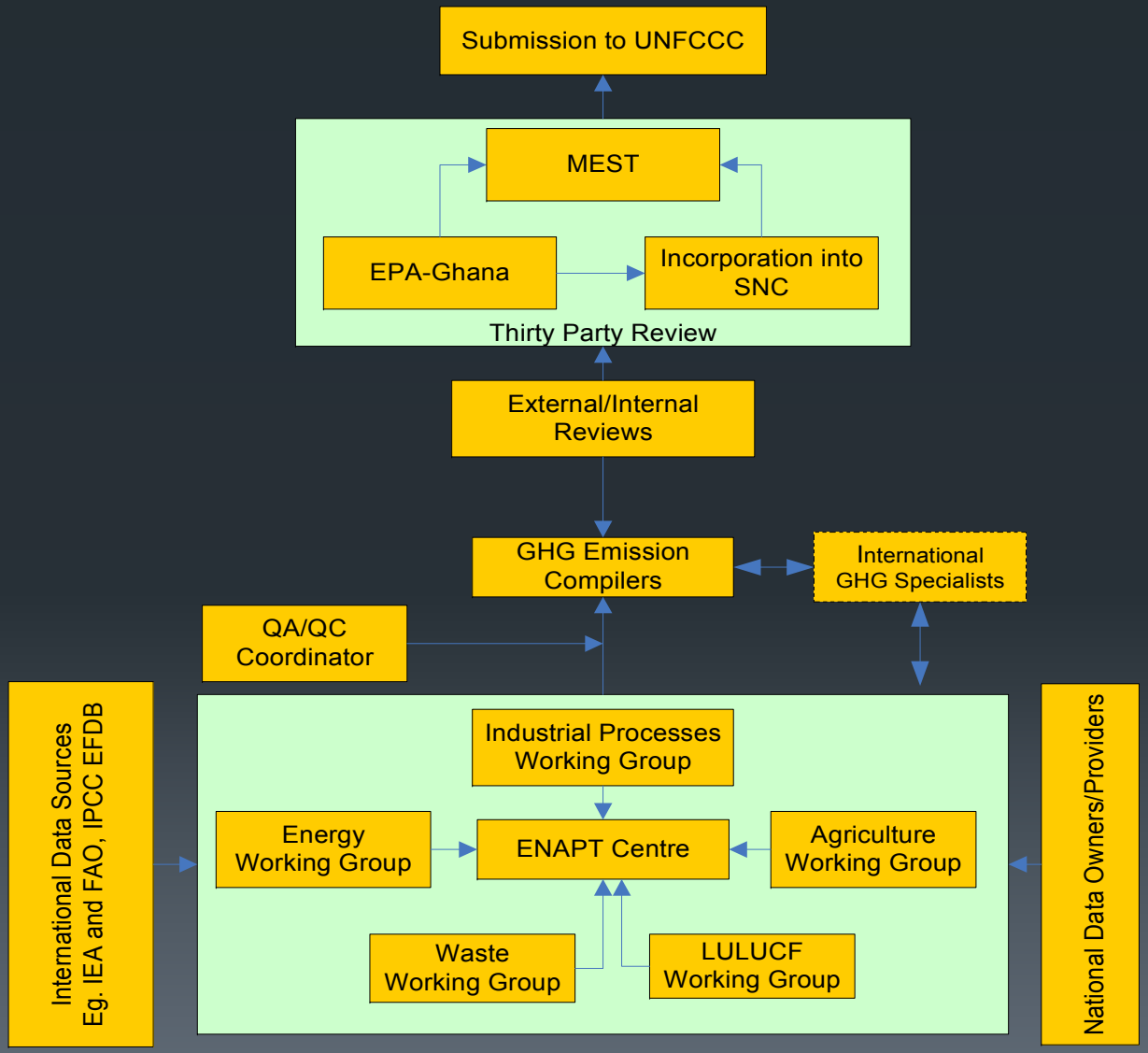
Ghanaian Delegation

outline of presentation


Economy – average 13% GDP growth per annum
Population – 24mio @ 2010
2.7% annual growth rate
National Development Blue Print
Ghana Shared Growth & Development Agenda
National Climate Change Policy Framework
Major economic development sectors
Mining
Oil and Gas
Cocoa
Agriculture
Services
Electricity generation – 50%:40% mix. hydro + thermal + RE (Renewable energy bill passed)
Economic cost of environmental degradation estimated at 9% of GDP (World Bank)
Negative Impacts of Climate Change on vulnerable economic sectors – agriculture, coastal zone, health, energy production etc.
Ratified UNFCCC and KP. Submitted NC1 & NC2 to UNFCCC in 2000 and 2011 respectively

Key Outcomes of NC2

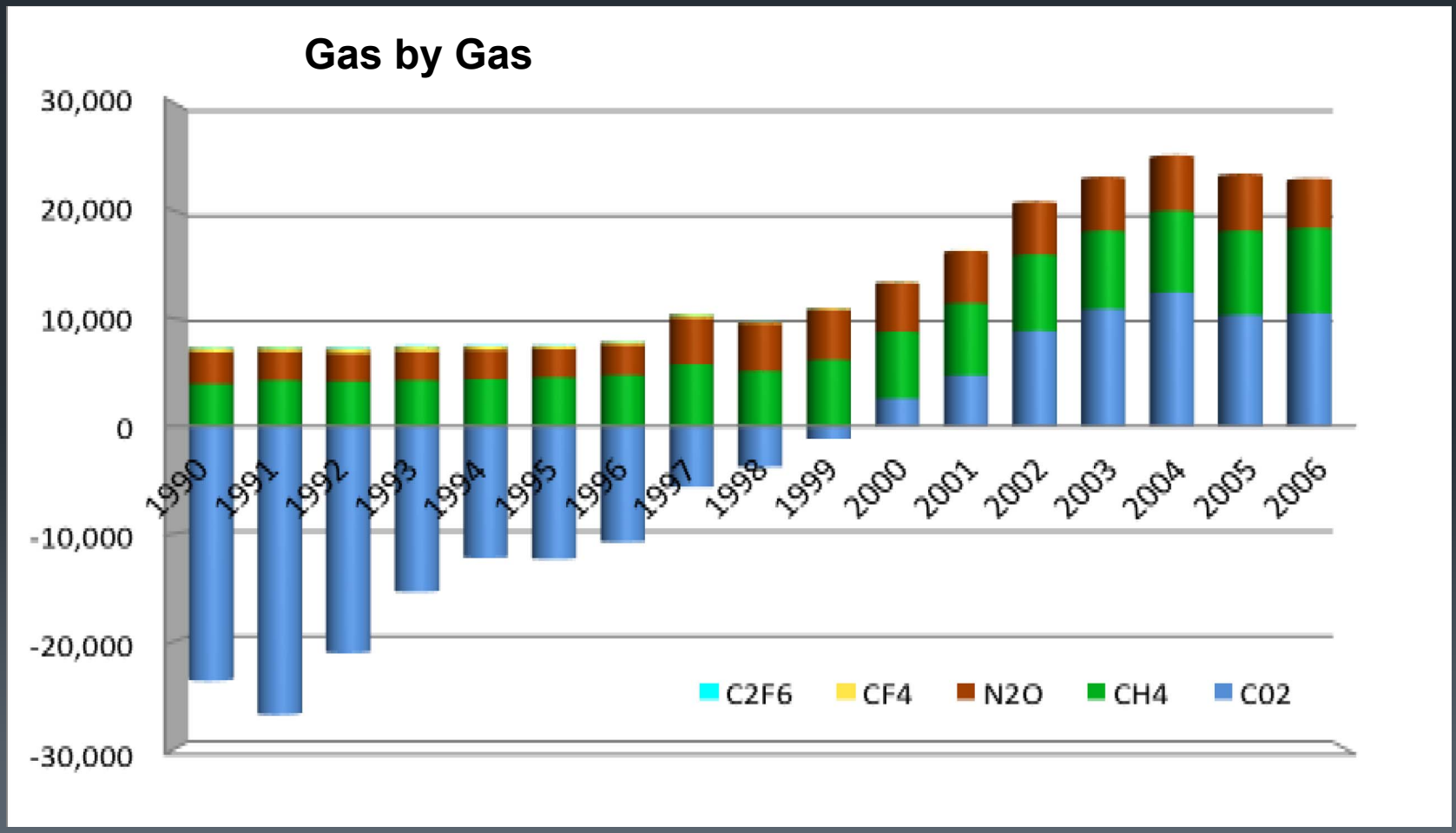
Institutional Arrangement



methodologies used for GHG Inventory -

Greenhouse Gas Source and Sink Categories		CO_2		CH_4		N_2O		PFC-CF_4		PFC-C_2F_6	
		Methods applied	Emission Factor	Methods applied	Emission Factor	Methods applied	Emission Factor	Methods applied	Emissio n Factor	Methods applied	Emission Factor
1.	Energy	D, T1	D, CS	D, T1	D, CS	D, T1	D, CS				
A	Fuel Combustion	D, TI	D, CS	D, TI	D, CS	D, TI	D, CS				
B	Fugitive Emissions from Fuels	NE	NE	NE	NE	NE	NE				
2.	Industrial Process	D, PS	D, PS	NE, NO	NE, NO	NE, NO	NE, NO	D	D	D	D
4	Agriculture			D, IE	D, IE	D, IE	D, IE				
5	Land-use & Forestry	D, CS	D, CS,	D	D, CS	D	D, CS				
6.	Waste	D	D	D	D	D	D				

National GHG Inventories (mega tonnes)



Key source category analysis - including LUCF, 2006 (levels)

IPCC Category	Sector	Key Category	Gas	Cumulative level (%)
5B	LUCF	Forest and Grassland Conversion	CO_2	43.4
5A	LUCF	Changes in Forest and Other Woody Biomass Stocks	CO_2	84.8
5C	LUCF	Abandonment of Managed Lands	CO_2	87.3
5D	LUCF	Emissions and Removals from Soil	CO_2	89.4
1A.3	Energy	Mobile Combustion: Road Vehicles	CO_2	91.3
4D	Agriculture	Direct and Indirect Emissions from Agricultural Soils	N_2O	92.9
4A	Agriculture	Emissions from Enteric Fermentation in Domestic Livestock	CH_4	94.0
6A	Waste	Emissions from Solid Waste Disposal Sites	CH_4	95.0

Key source category analysis - excluding LUCF, 2006 (levels)

IPCC Category	Sector	Key Category	Gas	Cumulative level (%)
4D	Agriculture	Direct and Indirect Emissions from Agricultural Soils	N_2O	20.30
1A.3	Energy	Mobile Combustion: Road Vehicles	CO_2	39.10
4A	Agriculture	Emissions from Enteric Fermentation in Domestic Livestock	CH_4	50.20
2A	Industrial Processes	Emissions from Mineral Production	CO_2	58.60
1A.2	Energy	Emissions from Manufacturing Industries and Construction	CO_2	66.50
6A	Waste	Emissions from Solid Waste Disposal Sites	CH_4	73.80
4C	Agriculture	Emissions from Rice Production	CH_4	81.10
1A.4	Energy	Other Sectors: Residential	CH_4	87.50

Adaptation strategy – “cross bottom-up process-based approach”

Climate scenario development – agro-ecological zones, dry savannah areas??

Vulnerable sector impact assessments: **10 sectors**

77 adaptation options ; multi-sector impact analysis – **Akropong prioritization Approach**

Ten Point National Adaptation Programme

National draft adaptation strategy

National Climate Change Policy Framework

Ghana Shared Growth and Development Approach

Downstream actions

upstream actions

Increasing resilience to climate change impacts: identifying and enhancing early warning systems.

Alternative livelihoods: minimizing impacts of climate change for the poor and vulnerable

Enhance national capacity to adapt to climate change through improved land use management

Adapting to climate change through enhanced research and awareness creation

Development and implementation of environmental sanitation strategies to adapt to climate change.

Managing water resources as climate change adaptation to enhance productivity and livelihoods

Minimizing climate change impacts on socio-economic development through agricultural diversification.

Adaptation to climate change: sustaining livelihoods through enhanced fisheries resource management.

Demand- and supply-side measures for adapting the national energy system to impacts of climate change.

Mitigation – assessment– NEEDS Project

Mitigation Options (Energy)	CO2 reduction potential (Gg)	$/Gg
Replacing some biomass with LPG: replacement of fuelwood and charcoal with LPG at the rate of 10% per annum from 1995 to 2020 – Scenario I	494,506	33.22
Use of biogas and LPG to replace some biomass from 2010 to 2015 when only LPG and biogas will be used with the largest proportion of energy for cooking coming from biogas - Scenario II.	700,044	27,701.56
Gradual penetration of solar PVs to the existing mix Scenario III	712,515	6,932.22
Gradual penetration of biogas instead of a huge penetration as in the second and third scenarios. Scenario IV	543,778	9,448.86

Mitigation – assessment (energy & forestry)

Mitigation Options (forestry)	CO2 reduction potential (Gg)	$/Gg
Sustainable forest management in productive forest	Increment of 59tC/ha	
reforestation abatement scenario (additional 112,000 ha of land is reforested)	6,060ktC	15.45/KtC sequestered

Incremental Cumulative Investment by sectors - (Constant Million USD)

Sector	B-A-U	Mitigation Scenario	Amount Needed
Energy (Whole Sector)**			
2006	2,467.04	2,344.34	123.69
2020	6,170.43	5,861.97	308.46
2050	6,263.11	5,950.30	313.81
Transport			
2003	58.80	55.39	2.41
2020	134.96	128.68	6.28
2050	133.74	127.84	6.90
Electricity			
2004	189.81	179.76	9.05
2020	437.80	415.83	21.97
2050	440.16	418.08	21.08
Forestry-Reforestation			
2006	14.84	13.67	0.8
2020	77.33	73.79	3.54
2050	154 42	73.35	81.07

Key Challenges

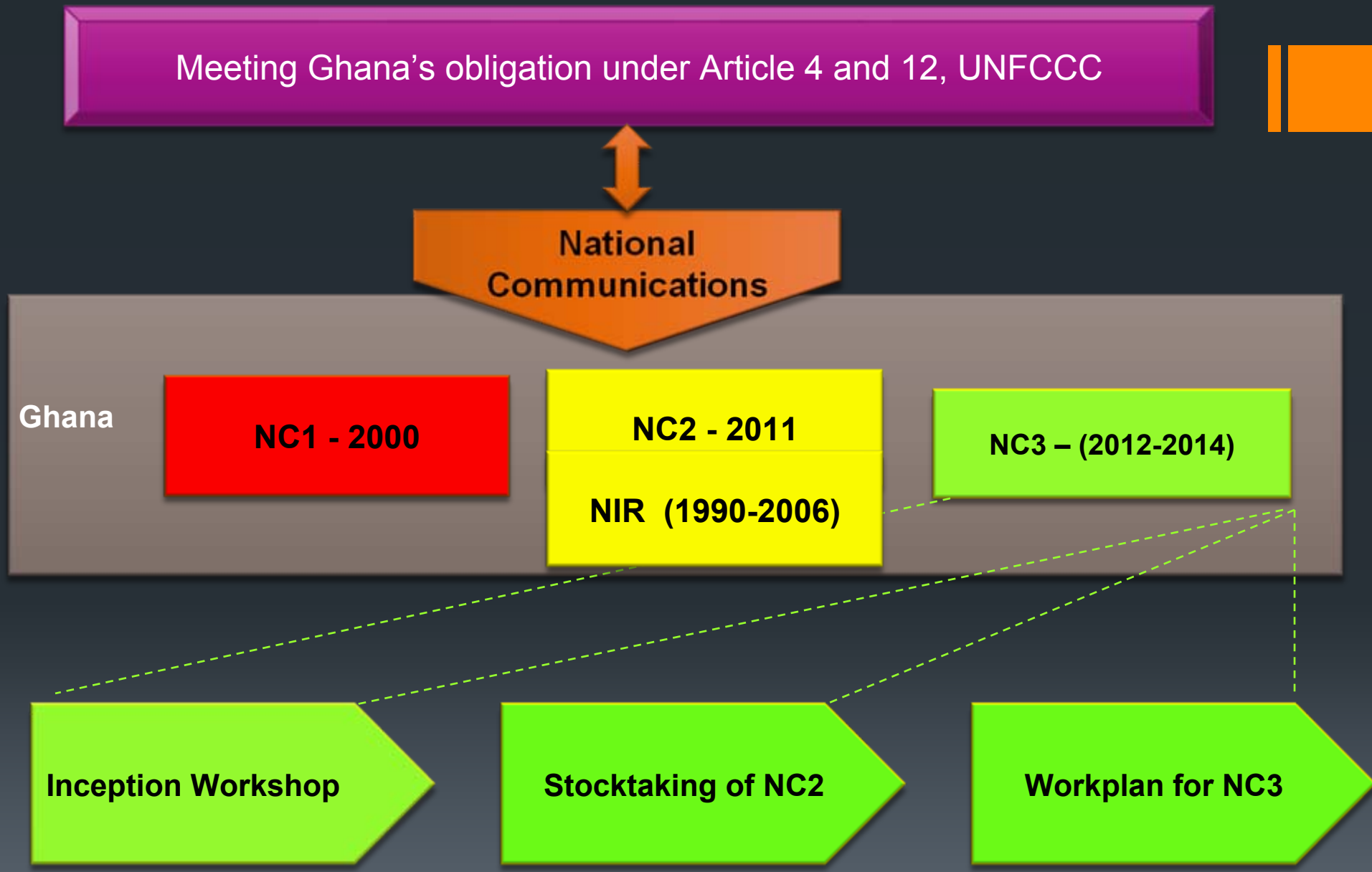
- **Administrative (process)**
  - lack of clear and formalized institutional roles and responsibilities.
  - unsustainability of adhoc working group approach
  - Inadequate financial resources
  - weak “high-level” support for national communication process.
  - Public participation process largely constrained.

- **Technical (guidelines and methodologies)**
  - gaps and inconsistencies in national data
  - Under capacity – use of tools, models and methods
  - Guidelines – generally fuzzy– less emphasis on lateral synergies among chapters.
  - “Other Information chapter” – quite repetitive.

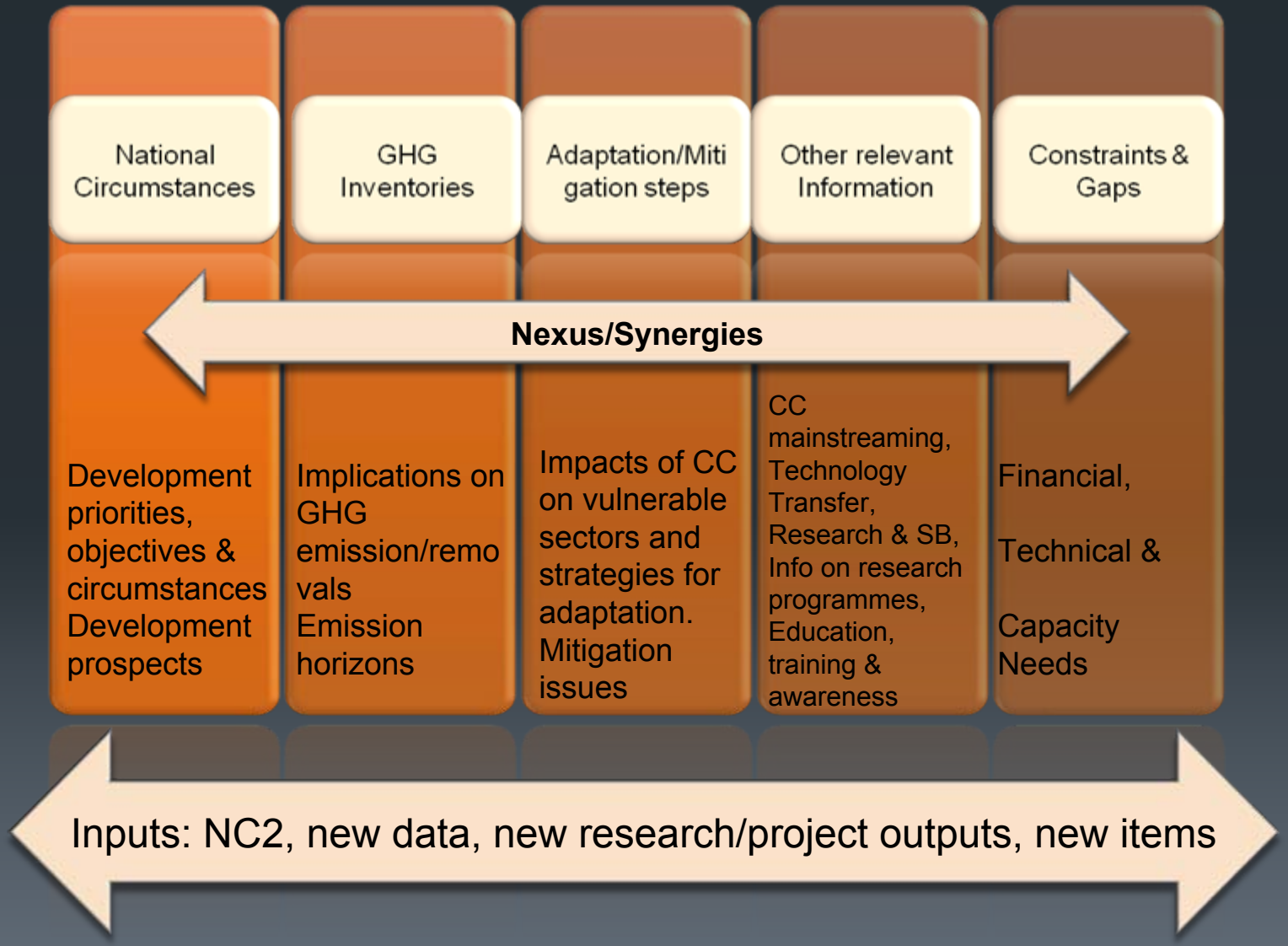
key lesson/innovations.

- strong leadership, team work and motivated individuals.
- Improved access to national data. (Increasing willingness on the part of data providers to share)
- continuing skills training (national and CGE capacity development programmes and others).
- Mainstreamed into “country working institutions” with clearly defined “collaborative mechanism”. Surest means to ensure sustainability of national teams.
- decentralize and devolve responsibilities to key national institutions. e.g. documentation and QA/QC, and uncertainity management
- enhanced incentives for national experts and data providers.

Next Critical Steps


Meeting Ghana's obligation under Article 4 and 12, UNFCCC
National Communications
Ghana
NC1 - 2000
NC2 - 2011
NIR (1990-2006)
NC3 – (2012-2014)
Inception Workshop
Stocktaking of NC2
Workplan for NC3

Highlights of NC3 – Approaches and activities (building blocks)



Critical areas (highlights)

- GHG – potential national report for NAMAs and REDD+
  - Update time series to 2010,
  - New institutional design
  - Emission modeling for national reference emission setting
  - Migrate to higher tier methodologies and improved national data
- Mitigation
  - Update mitigation assessment for key economic sectors including cost analysis
  - National Action Plan on NAMAs (NAP-NAMAs)
  - Electronic Platform for tracking NAMAs (ELEP-NAMAs) seeking or received support and its impacts.
  - Analysis of impacts or cumulative impacts of policy (ies) on emission reduction, sustainable development

Potential partnership areas……MORE

- Capacity enhancement programmes
  - Economy-wide mitigation assessment including marginal cost analysis (tools, model, training, access to models, etc)
  - National emission reference setting (emission modeling, etc)
- Setting up National Climate change technology programme
- National Article 6 Programmes of Action
- National Action plan on NAMAs (NAP-NAMAs
- Establishment of Domestic Electronic Registry System (DERS)

Thank you for your attention

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