

Thai Institutional Arrangement

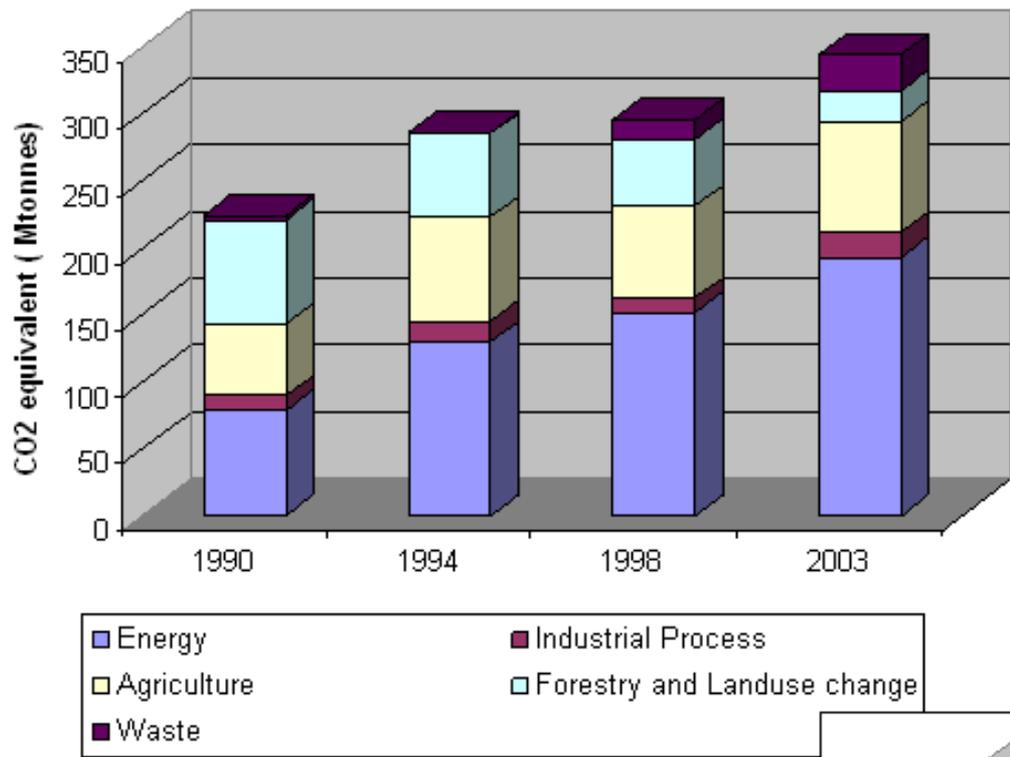
Sirintornthep Towprayoon
*Joint Graduate School of Energy and
Environment, King Mongkut's University of
Technology Thonburi*

Historical of Thai National Inventory

Inventory year	Purposed	Compiler	End used
1990	ALGAS and Country study	Thailand Research Fund	OEPP, Min of NRE
1994	First NC	Economic	OEPP, Min of NRE
1998	National Study System	ERM Thailand	Min of Energy
2003	CDM support	ERM Thailand	Min of Energy
2000-2005	Second NC	Joint Graduate School of Energy and Environment	ONEP, Min of NRE

Lesson learn

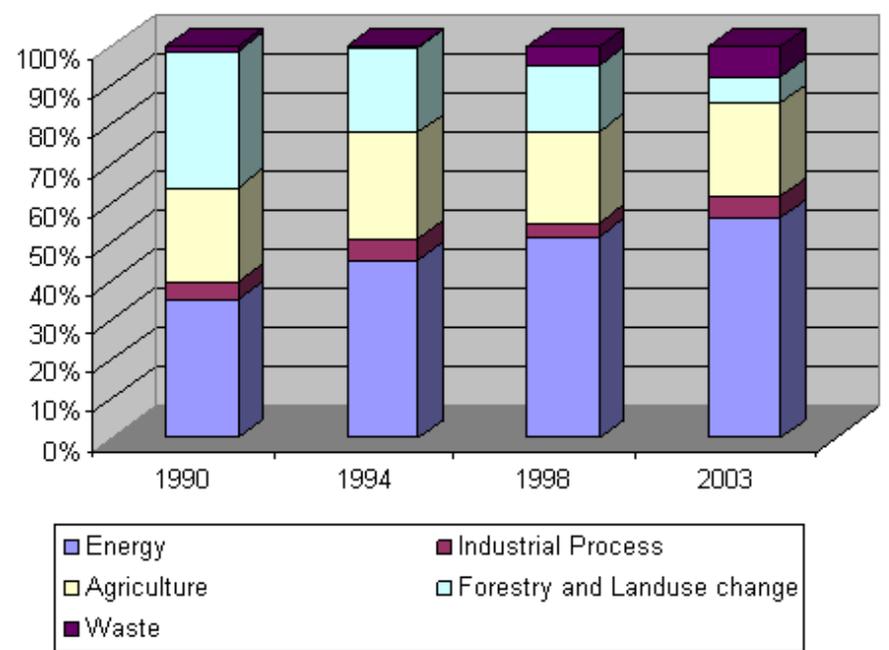
Different team, different data set , different purposed
No database set up, No communication,
Start from scratch



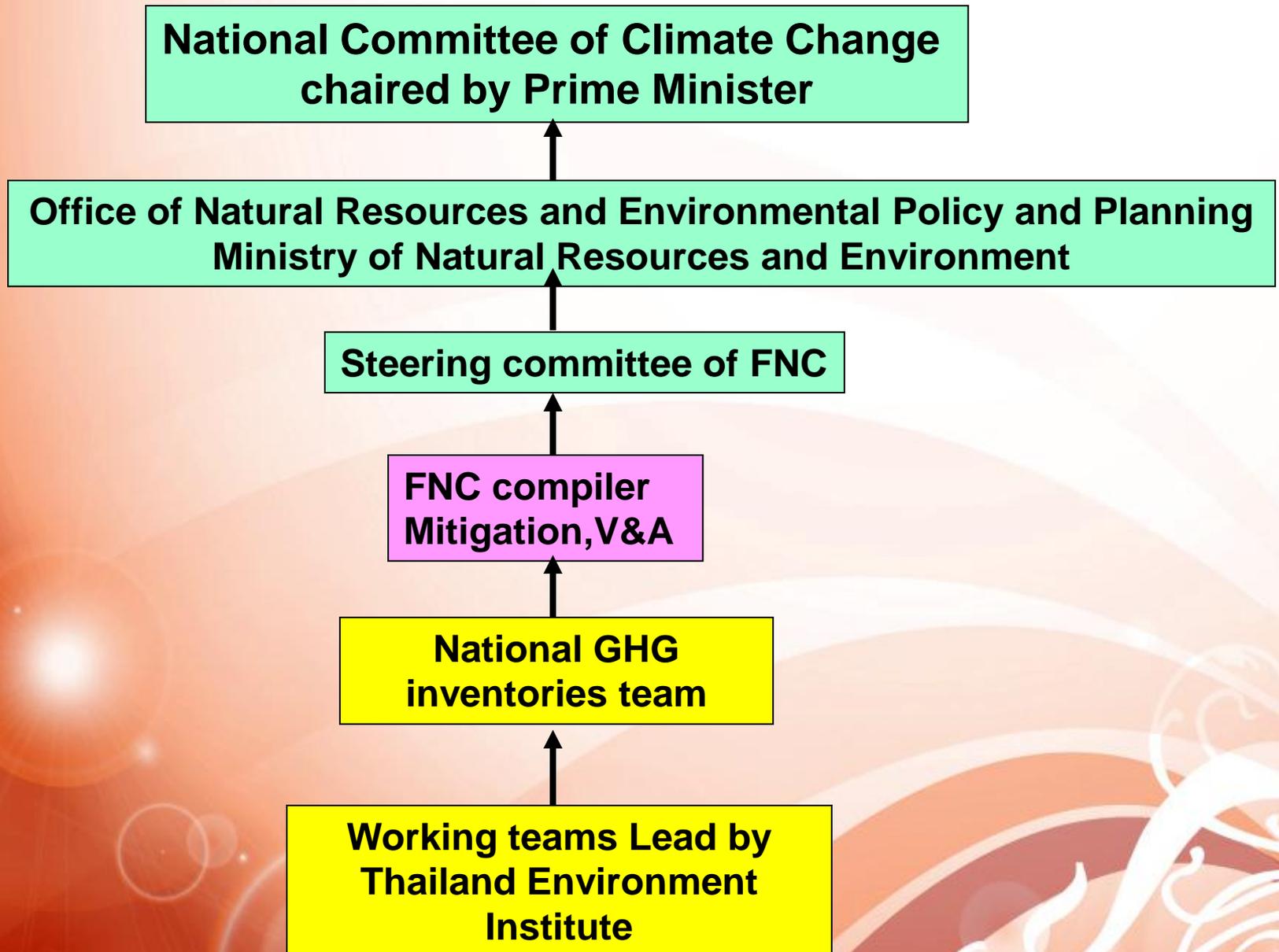
National GHG emission by source

Share of National GHG emission by source

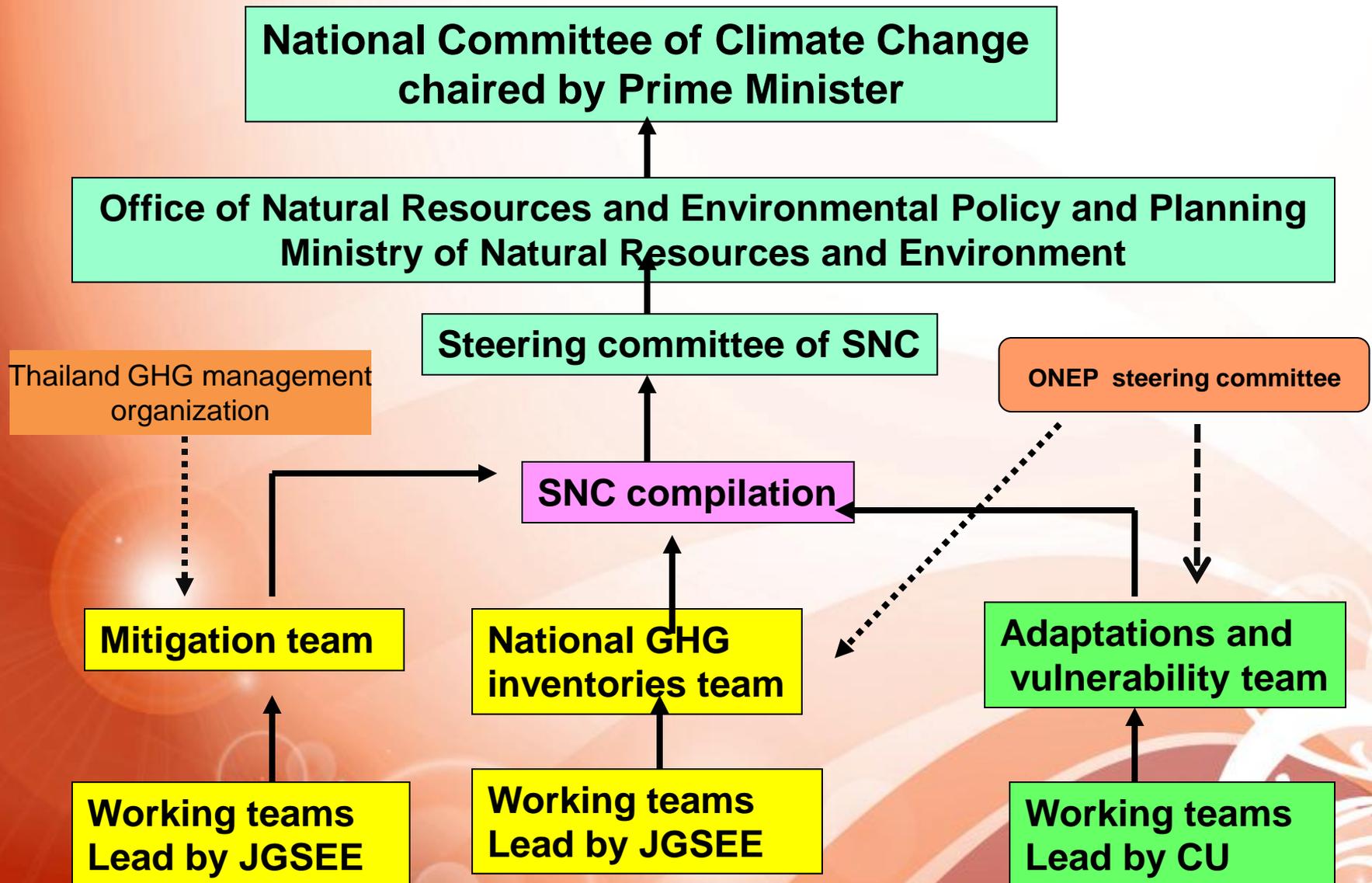
1990 ---Algas
 1994----FNC
 1998----NSS
 2003----CDM



Structure of FNC in Thailand

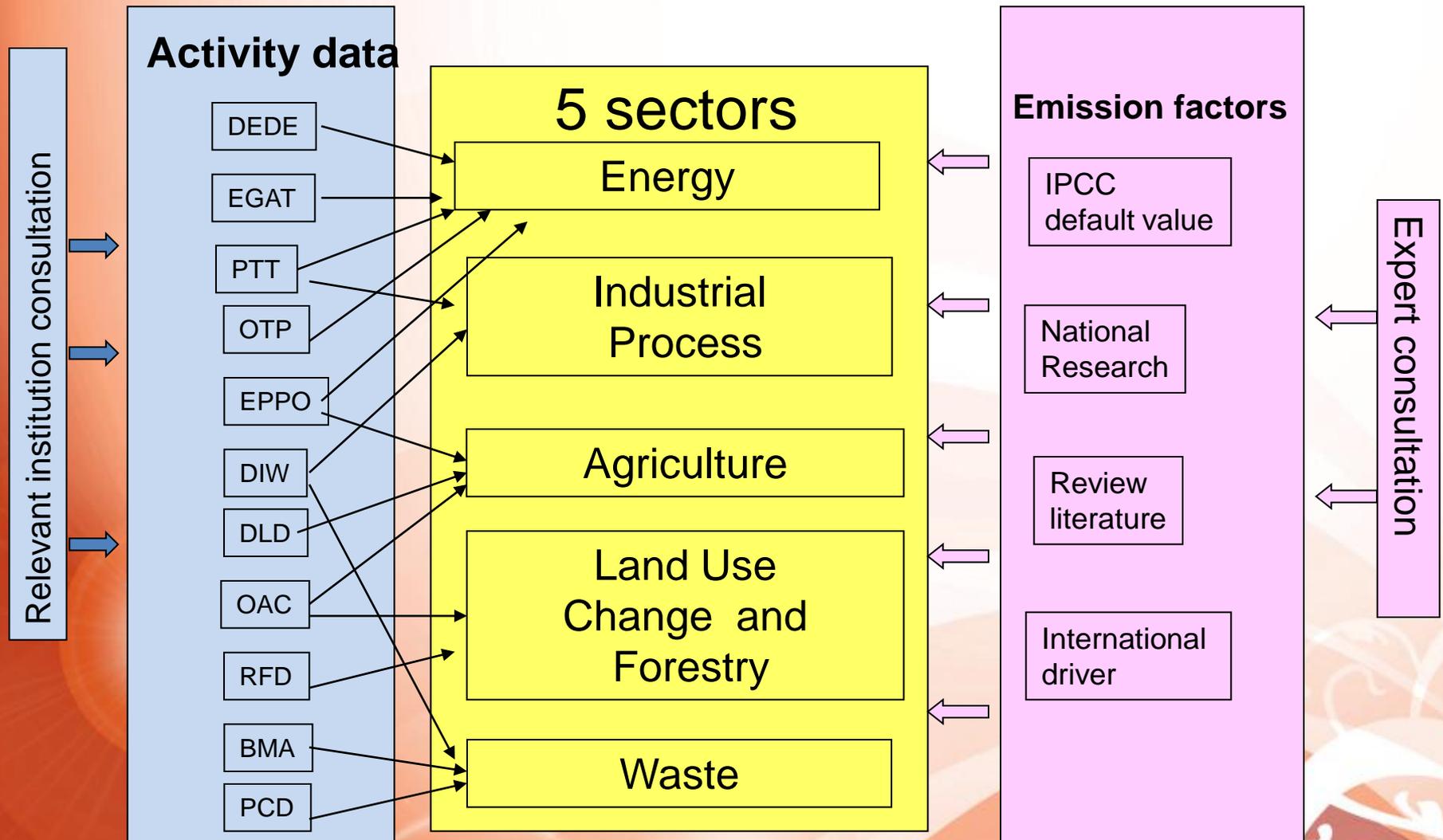


Structure of SNC in Thailand



National GHG Inventory Calculation

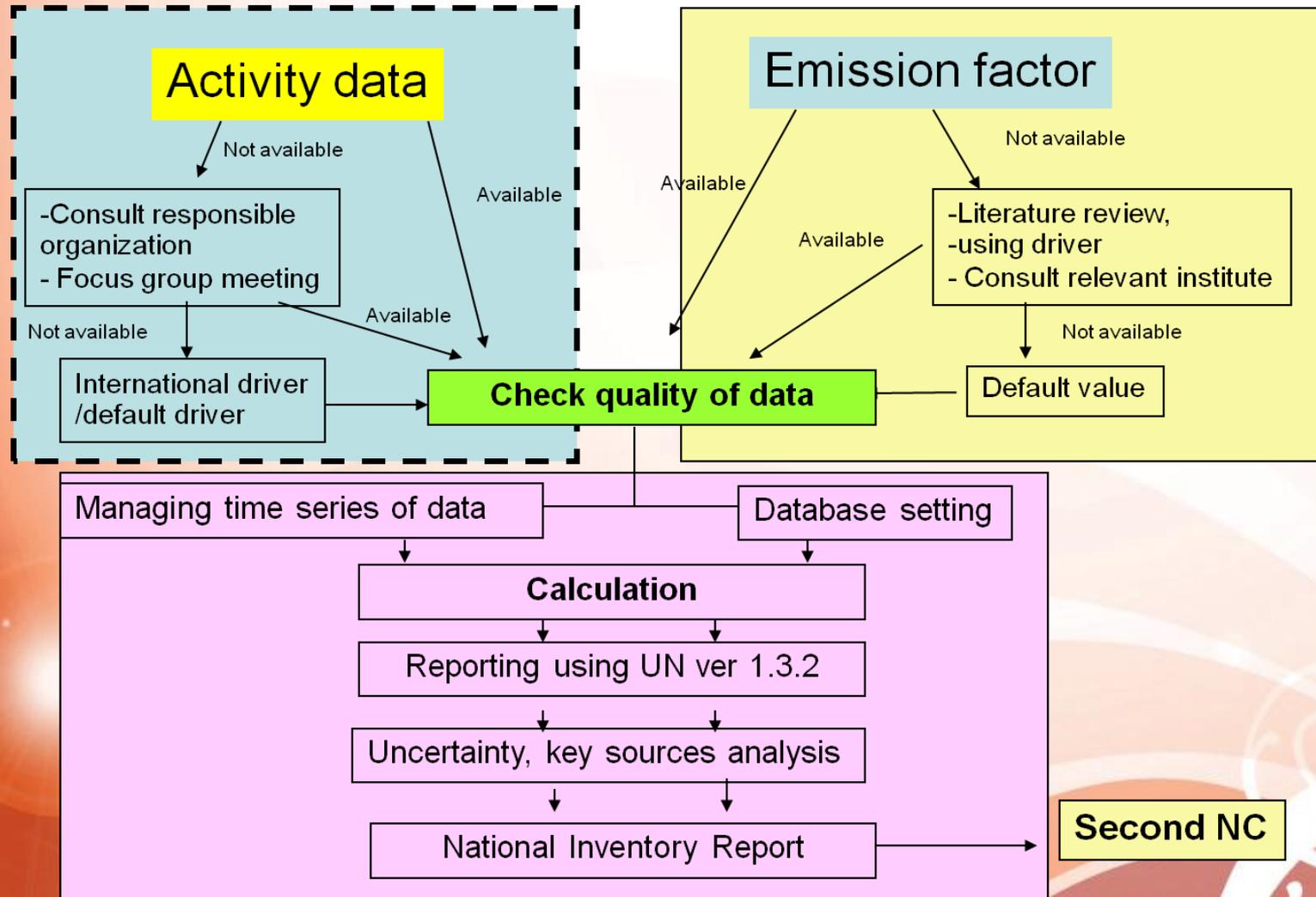
$$\text{Emission} = \text{Activity Data} \times \text{Emission Factor}$$



Abbreviation

- DEDE = Department of Alternative Energy Development and Efficiency
- EGAT = Electricity Generating Authority of Thailand
- PTT = Petroleum Authority of Thailand
- OTP= Office of Transport and Traffic Policy and Planning
- EPPO = Energy Policy and Planning Office
- DIW = Department of Industrial Work
- DLD = Department of Land Development
- OAC = Office of Agriculture Economics
- RFD = Royal Forest Department
- BMA= Bangkok Metropolitan Administrative
- PCD = Pollution Control Department
- MONRE=Ministry of Natural Resource and Environment
- TGO= Thailand Greenhouse Gas Management Organization
- ONEP =office of Environmental Planning and Policy,

Conceptual framework of GHG estimation



Quality Control

- Monthly in house meeting
- Each group report progress work and discuss on calculation result , data acquisition
- Check and review by main compiler team to ensure consistency and correctness
- Debate on reporting form and some cross cutting issue
- Invite external expert to help review and in house capacity building
- Reporting oversea seminar/meeting/conference where applicable to inventory team such as ALU software training, Extended Snapshot
- Set up electronic share room where teams can ask question and exchange information

Quality Assurance

- Project Steering Committee ; comprise of expert from relevant governmental office
- Small group seminar in each sector to confirm data and emission factor used such
- Interview data set compiler to check and confirm the reliability of the calculation number
- Organizing public hearing twice

Reporting

Source by source database (by sectors)

Value, unit, origin, ref, comparability, suitability



Primary database (by sectors)

Calculated number, year



UNFCCC software version 1.3.2 (by year)

Combined and integrated data and total result

Database initiative

- SBS and primary data are transferred to data base archived at Government agency
- Time series data set have been used in SNC and can systematically forward to third national communication

Capacity building

- During SNC preparation
- In country
 - Monthly meeting
 - Invited lecture on uncertainty,
 - Advisory team on Economics issues
- Oversea
 - WGIA workshop
 - SWGA workshop
 - Reviewer training
 - ALU workshop
- After Compilation
 - Train DEDE, Min of Energy
 - Train DLD, Min of Agriculture
 - Invited speaker to Thai Federation of Industry
 - Lecture in the training in local data collection -TGO

Linkage to future MRV System

- Expand understanding of emission estimation to various communities
- Establishment of activity data and methodology database

Weak point

- No data /data is not complete in some sector
- National statistical data cover only in some sector.
- Lack of major responsible unit for data archiving in some sector
- Data is scatter in many institutes
- Double database
- Internal conflict (methodology change)
- Data not in the form to be used for inventory
- Inventory issue is not well understood by data governed unit

Strengthen point

- Evaluation system
- Some national statistical data has long historical reported
- Establishment of database for third NC and MRV system

Government acting to cope with long term NGHGI

- Climate Change Officer (coordinator) at governmental agency
- GHG annual report, CSR,
- Private sector involved in steering committee
- Legal reporting format directly to the data collecting agency not fully exist but some under negotiation

Three levels of NGHGI preparation

Level 3
GHGI
achieving

NGHGI Archiving organization (focal point)



Level 2
Calculation
and
compilation

GHGI Preparation (competent agency)

Energy

IPPU

Agriculture

LUC

Waste

Level 1
Data
collection
step

DEDE, EGAT,PTT

IWD

DLD,OAC

RFD

PCD,BMA

AD achieving (Gov. Agency)

Proposed of Improvement of Institutional Arrangement

- First approach, building capacity of activity data archiving agencies enable to estimate sectoral inventory and national focal point performs the compilation of NGHGI.
- Second approach is to have the estimation and compilation done at the focal point with annual systematical flow of data from activity data archiving agencies.

Approach 1 of Institutional arrangement

Level 3
Compilation and achieving

NGHGI Archiving organization (focal point)



Level 2
Calculation

Energy

IPPU

Agriculture

LUC

Waste



DEDE, EGAT, PTT

IWD

DLD, OAC

RFD

PCD, BMA

Level 1
Data collection step

AD achieving (Gov. Agency)

Approach 2 of Institutional arrangement

Level 3
GHGI
achieving

NGHGI Archiving organization (focal point)

Energy

IPPU

Agriculture

LUCF

Waste

Level 2
Calculation
and
compilation

Level 1
Data
collection
step

DEDE, EGAT,PTT

IWD

DLD,OAC

RFD

PCD,BMA

AD achieving (Gov. Agency)



Concerns on Intuitional Arrangement

- Continuity of inventory preparation
- Data availability and database achieving system
- Competent members
- Collaboration

Inventory Team

- Team Leader
 - Dr. Sirintornthep Towprayoon
- Energy
 - Dr. Suthum Patumsawas
 - Dr. Chumnong Sorapipat
- Industrial Processes
 - Dr. Siriluk Chiarakorn
- Agriculture
 - Dr. Annop Noparattana
 - Dr. Amnat Chid thaisong
 - Dr. Savitri Garivait
 - Dr. Sirintornthep Towprayoon
- Land use change and Forestry
 - Dr. Amnat Chidthaisong
 - Dr. Savitri Garivait
- Waste
 - Dr. Chart Chiemchaisri
 - Dr. Sirintornthep Towprayoon
- Software
 - Dr. Awassada Pongpipat
- Mitigation
 - Dr. Nattapong Chayawatho

Supporting staffEnergy

- Mr. Tharathorn Kongkaew
- Mr. Chakapong .Pongthanaisawan
- Industrial Processes
 - Mr. Thanita Areerob
- Agriculture
 - Ms. Onarmol Laopitinan
 - Mr. Pomgthep Harnpattanakit
 - Ms. Tassanee Jiapasuanan
 - Mr. Akapol Chanpen
- Land use change and Forestry
 - Mr. Pomgthep Harnpattanakit
 - Mr. Akapol Chanpen
- Waste
 - Ms.Sukama Chitapornpan
 - Mr Somrat Nairum

Acknowledgement

- Office of Natural Resource , Environmental Policy and Planing
- Thailand Greenhouse Gas Management Organization
- Earth System Science Research Center at KMUTT
- Governmental and private institute that support data and information



Thank You

