



## From TNAs to Low Carbon Development Strategies (LCDS) and Nationally Appropriate Mitigation Actions (NAMAs)

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*Publication date:*  
2012

*Document Version*  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

*Citation (APA):*  
Dhar, S. (Author). (2012). From TNAs to Low Carbon Development Strategies (LCDS) and Nationally Appropriate Mitigation Actions (NAMAs). Sound/Visual production (digital)

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# Technology Needs Assessments

(A GEF Funded UNEP Project)

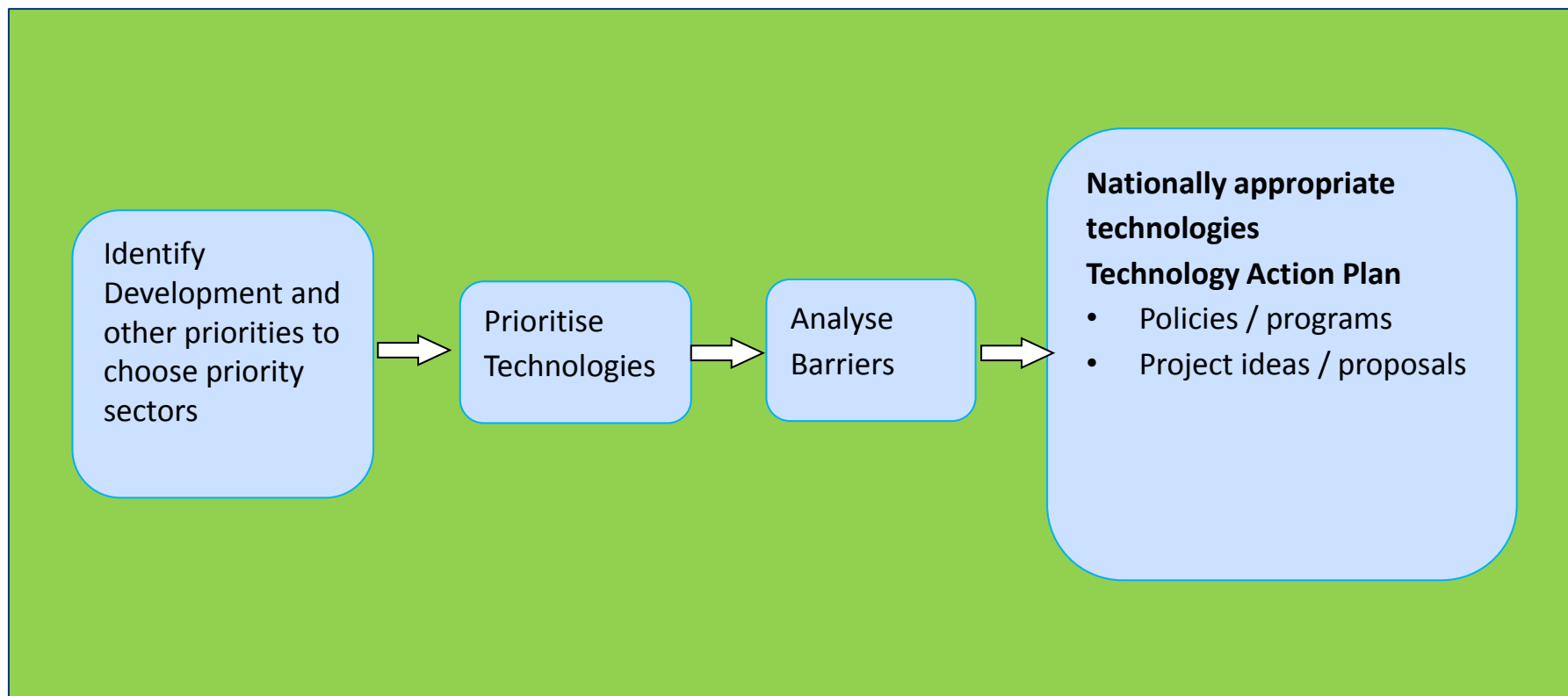
**From TNAs to Low Carbon Development Strategies (LCDS) and  
Nationally Appropriate Mitigation Actions (NAMAs)**

**Subash Dhar**  
UNEP Risoe Centre

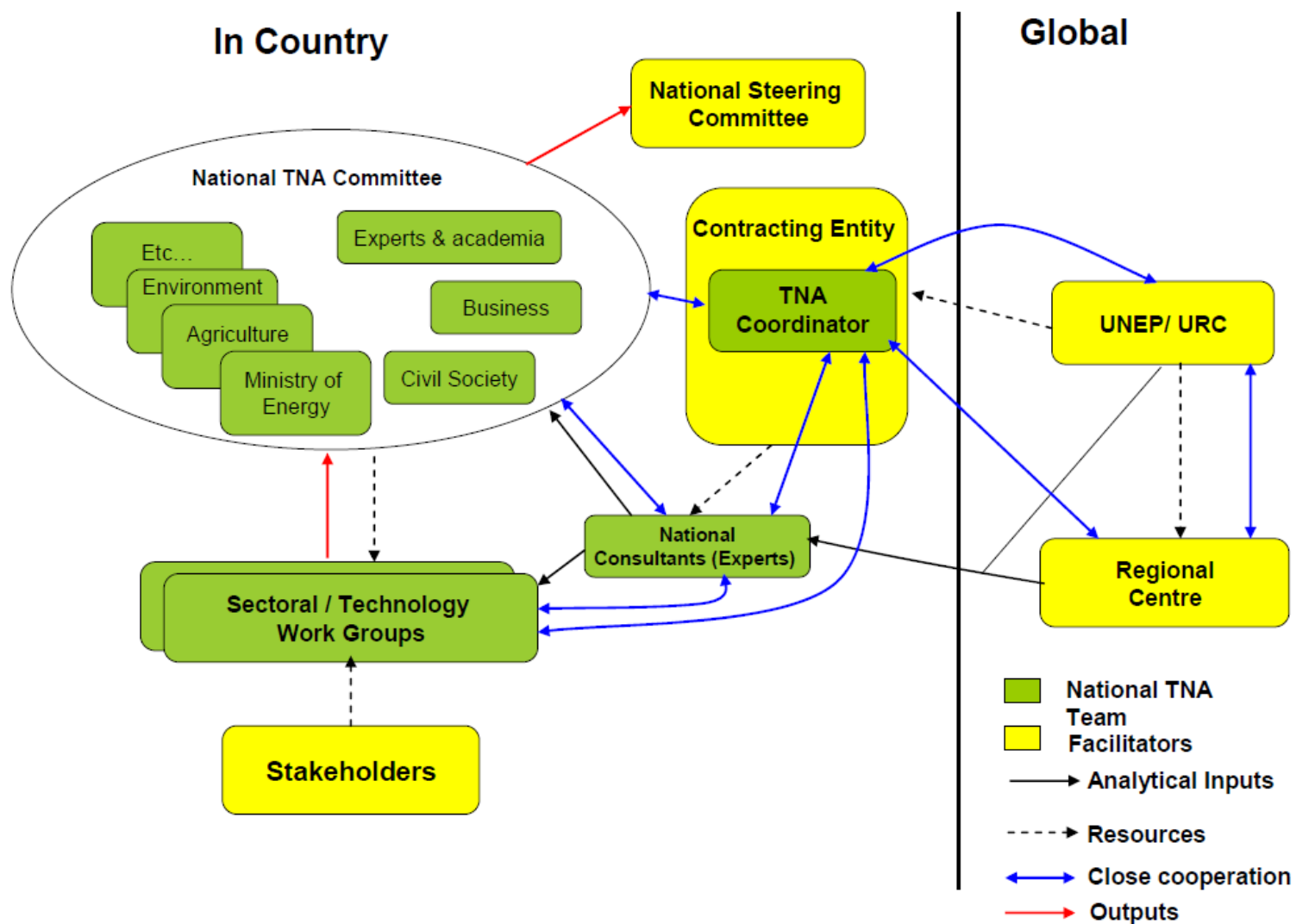
**Experience Sharing Workshop**  
**Bangkok**  
**10-12 September 2012**  
**Bangkok, Thailand**

# Contents

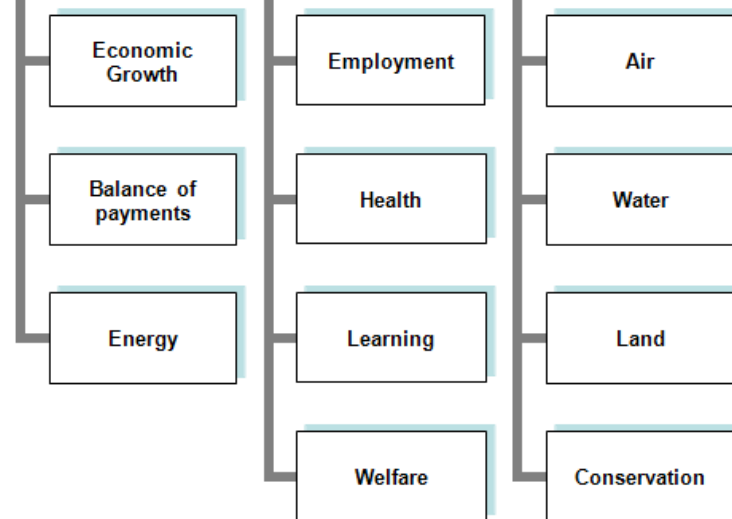
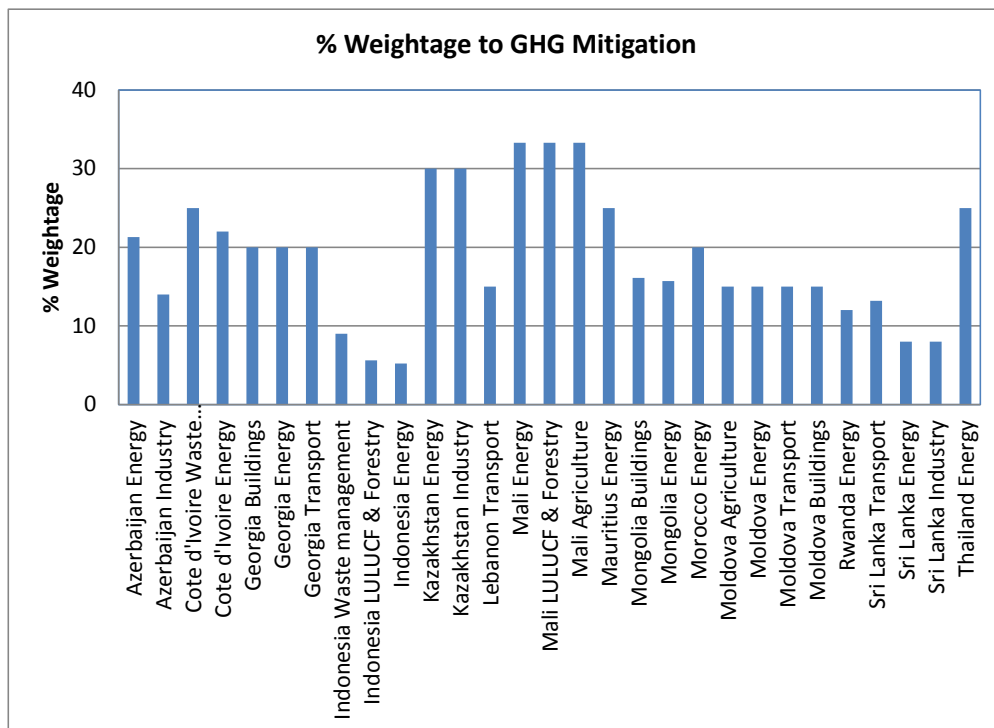
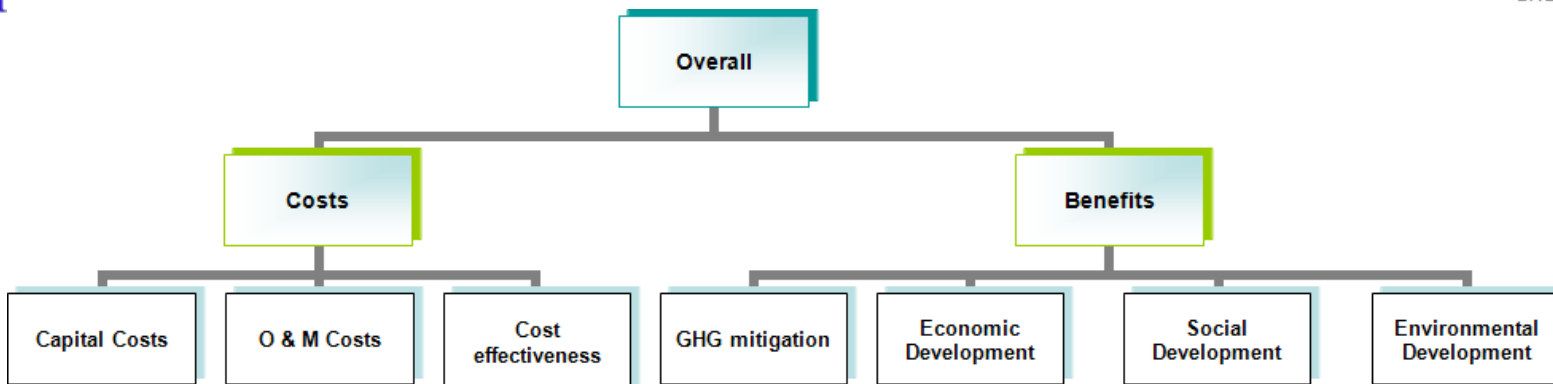
- TNA Process
- Outputs of Current GEF-TNA
- Framework for relating TNA with LCDS and NAMA
- Conclusion



# Institutional Structure for TNA



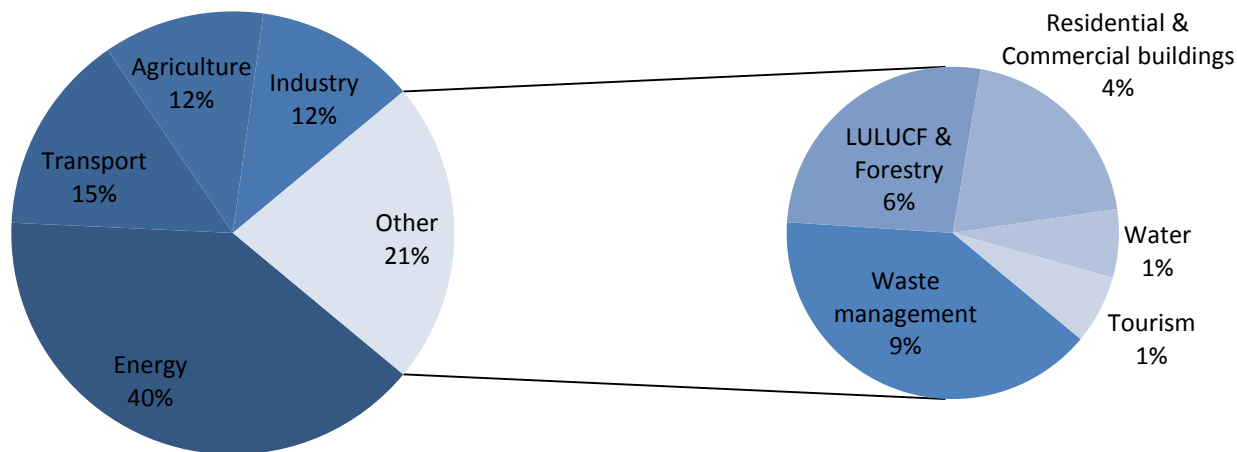
# Multi Criteria & Mitigation



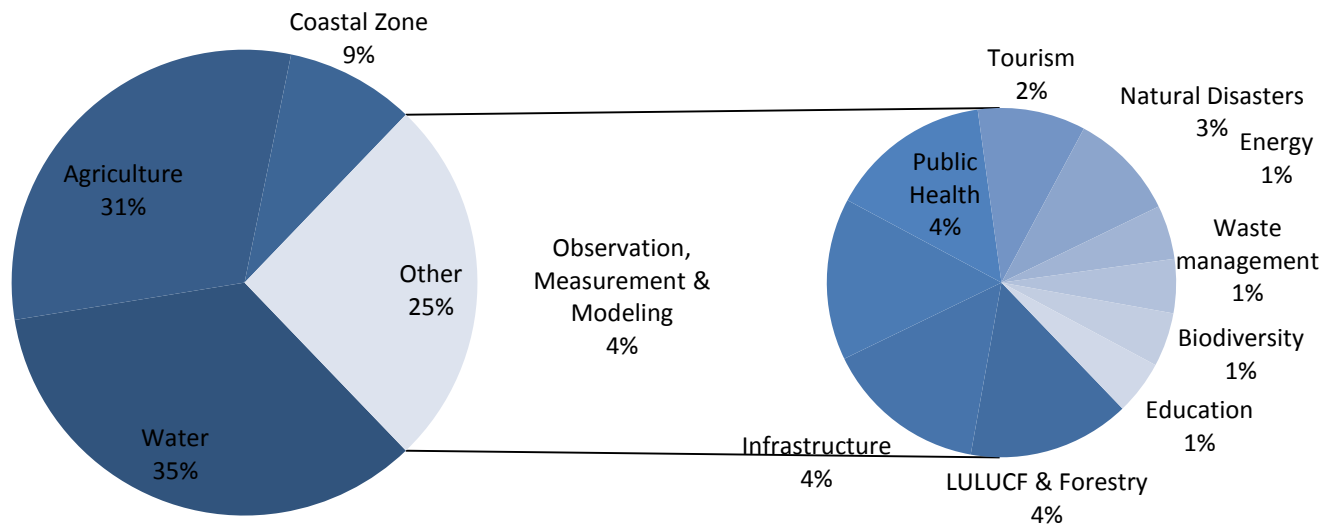
Preliminary assessment of TNA reports (Current round)

# Sector prioritised by countries

## Prioritized Mitigation Sectors



## Prioritized Adaptation Sectors



# Technologies prioritised by countries (Preliminary assessment)

## Most prevalent prioritized mitigation technologies:

- Solar PV
- Hydro power
- Wind energy
- Combined heat and power
- EE lighting
- EE buildings
- Mode shifts (Transport)
- Urban Mass Transit
- Biogas
- Tillage practices

## Most prevalent prioritized adaptation technologies:

- Sprinkler and Drip Irrigation
- Rainwater Harvesting
- Rainwater Collection from Ground Surfaces - Small Reservoirs and Micro-catchments
- Wetland restoration
- Increased reservoir technology
- Sustainable Livestock management
- Agro-forestry
- Biotechnology for Climate Change Adaptation of Crops
- Crop diversification and New Varieties
- Seasonal to Inter-annual Prediction



# TNA Outcomes

- Nationally appropriate technologies
  - Though information on scale of implementation not clear
  - Pure carbon measures like CCS also generally ignored
- National appropriate Policies / programs that enable these technologies
- Project ideas related to technologies / programs

## NAMA definition

"developing country parties will take nationally appropriate mitigation actions (NAMAs) in the context of sustainable development, supported and enabled by technology, financing and capacity building, aimed at achieving a deviation in emissions relative to business as usual emissions in 2020"

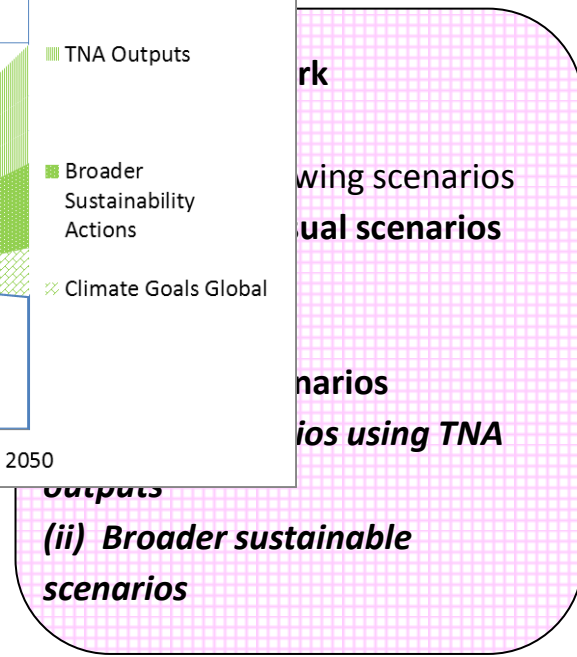
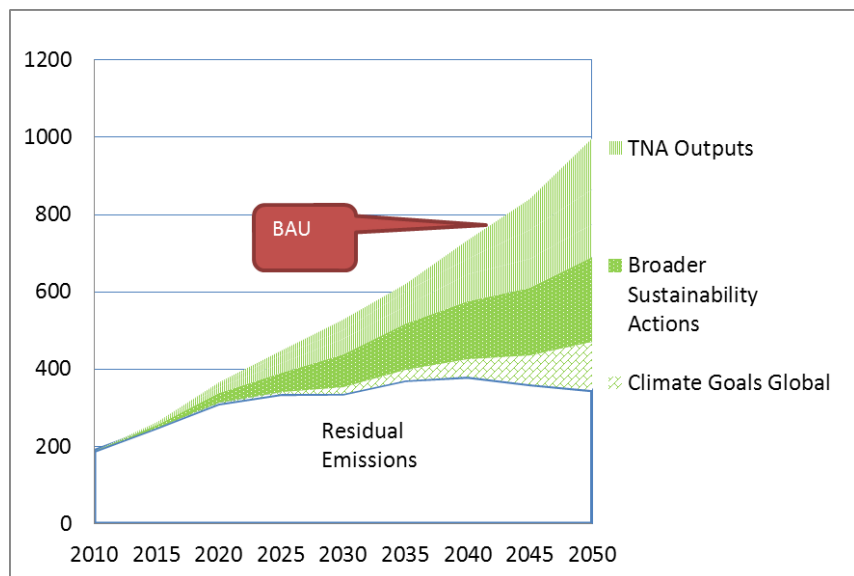
Cancun Agreements

## MRV International Tier

1. National Communications (NC) every 4 years and Biennial reports (BER) every 2 years
  - Biennial reports Measurement (M) and Reporting (R) part of NAMA
2. International Consultations and Analysis (ICA) by technical experts
  - Analysis of information in BER

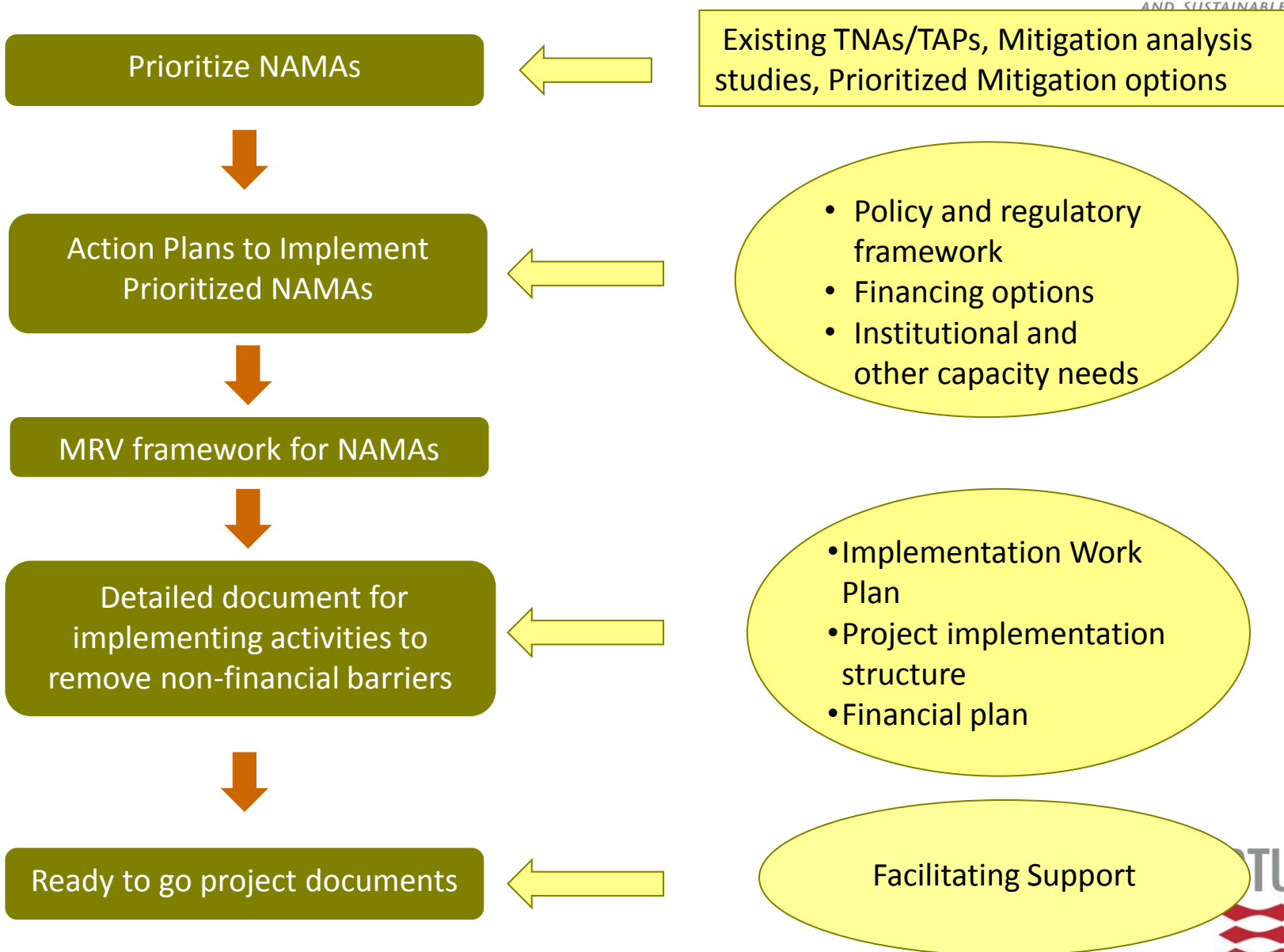
(Sharma, S, 2012)

# LCDS Framework using TNA Outputs



TNA outputs are in blue whereas additional elements / methodologies which are required for NAMAs and LCDS are shown in pink

# PRIORITISING NAMAS AND DEVELOPING IMPLEMENTATION PLANS



Source : FIRM project, URC

# Conclusions

- Actions identified within TNA /TAP are first set of actions that can be taken for implementation as NAMAs
- Additional set of actions can be obtained from LCDS frameworks
- These mitigation actions need to be upgraded to NAMA by enumerating mitigation impacts explicitly
- Frameworks for MRV are required as these actions are to be reported under the convention



# Thank You

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