



Netherlands Commission for
Environmental Assessment

Integrating climate change in development planning using SEA & EIA

Bangkok 25 October 2011

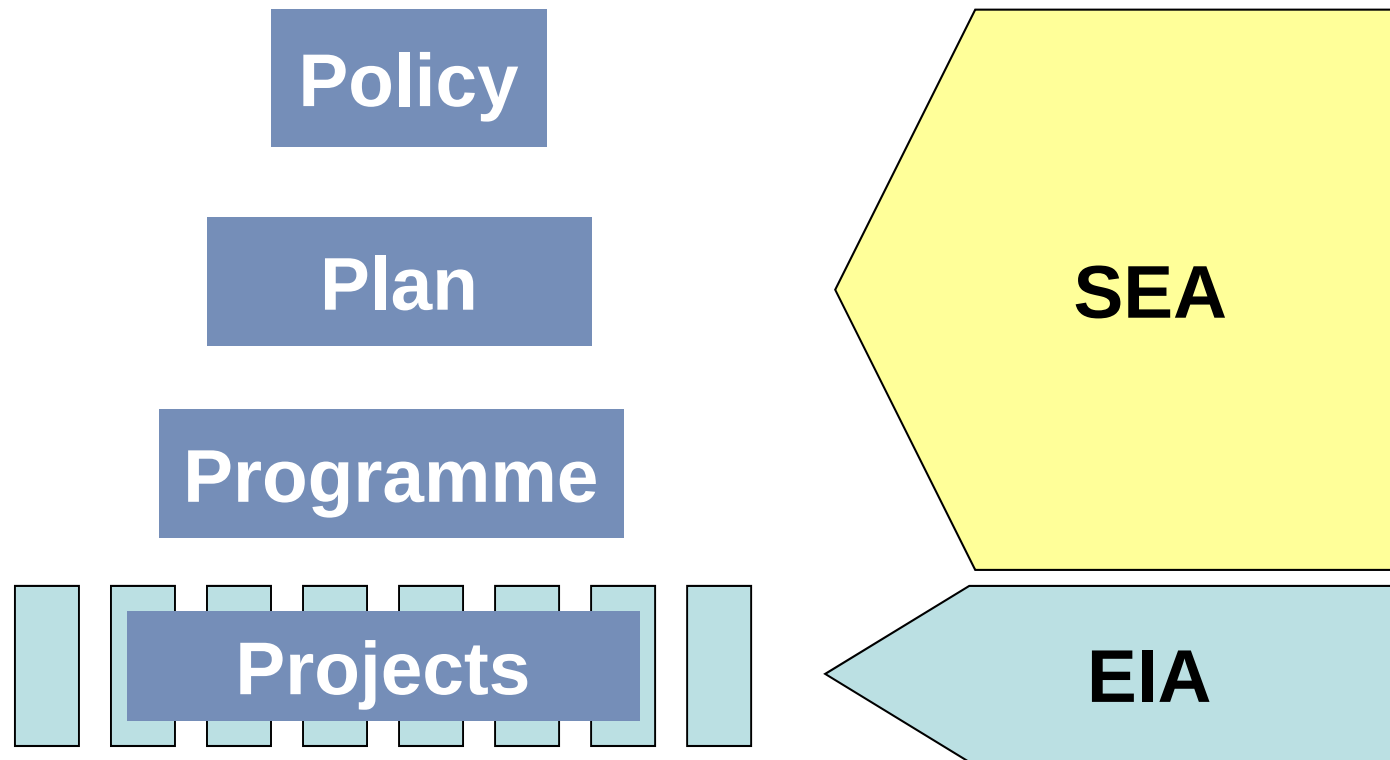
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Netherlands Commission for Environmental Assessment

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- What is SEA?
- CC framework – SEA
- How to integrate CC in SEA?
- Example climate change inclusive SEA for provincial plan in Vietnam



How does SEA relate to EIA?

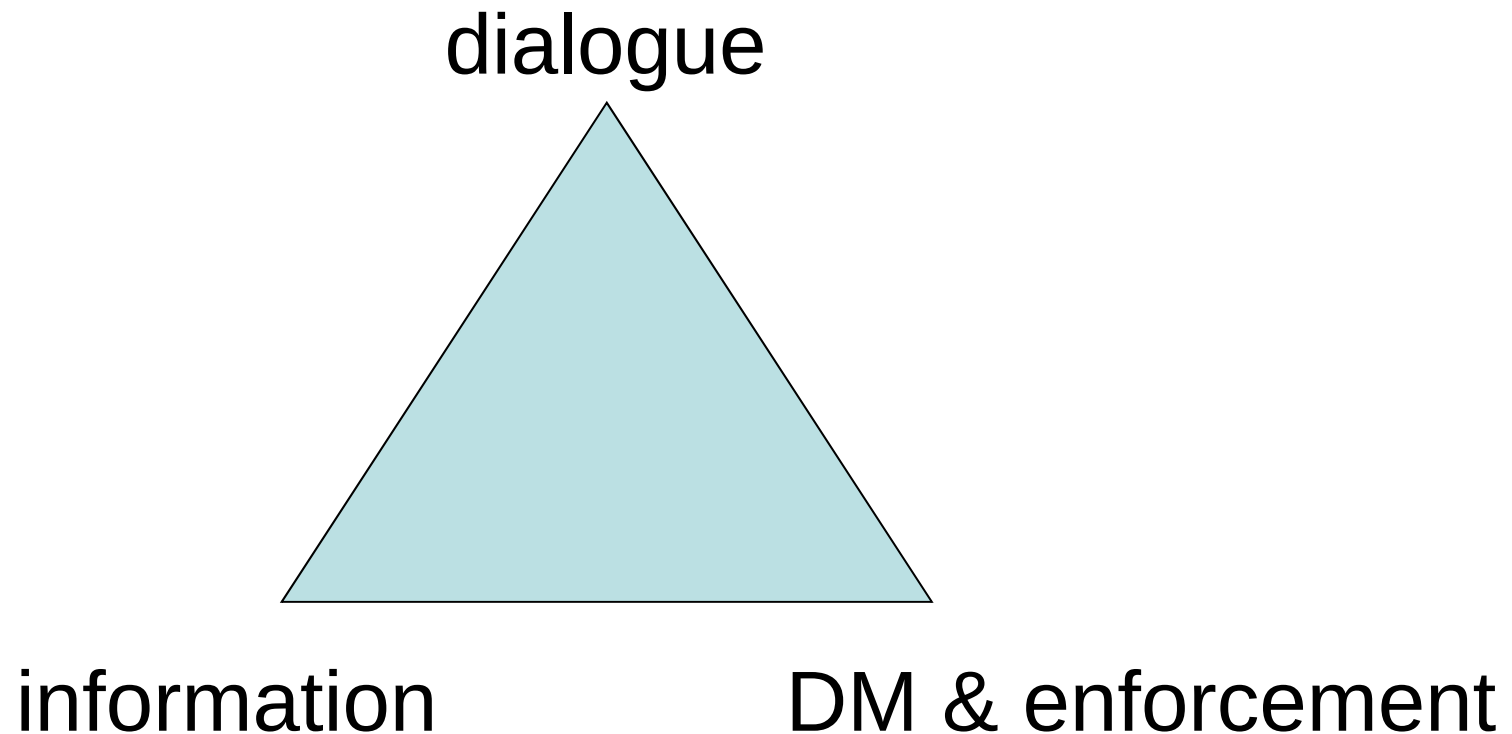


What is SEA?

Definition of SEA:

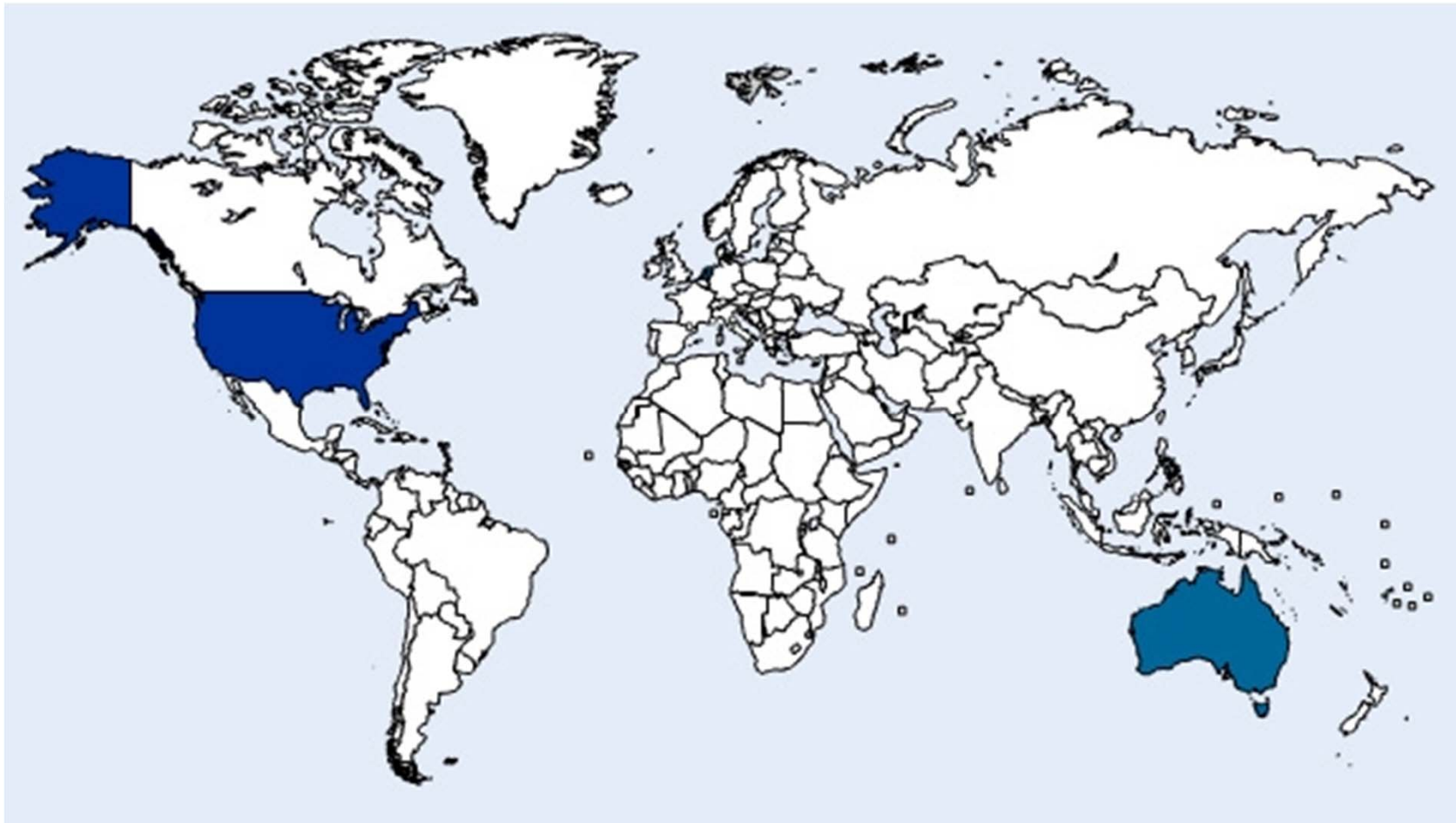
- Family of **analytical** and **participatory** approaches,
- Aiming to **integrate** environmental considerations into policies, plans and programmes, and
- Evaluate their inter-linkages with **economic** and **social** considerations

What are key elements of SEA?

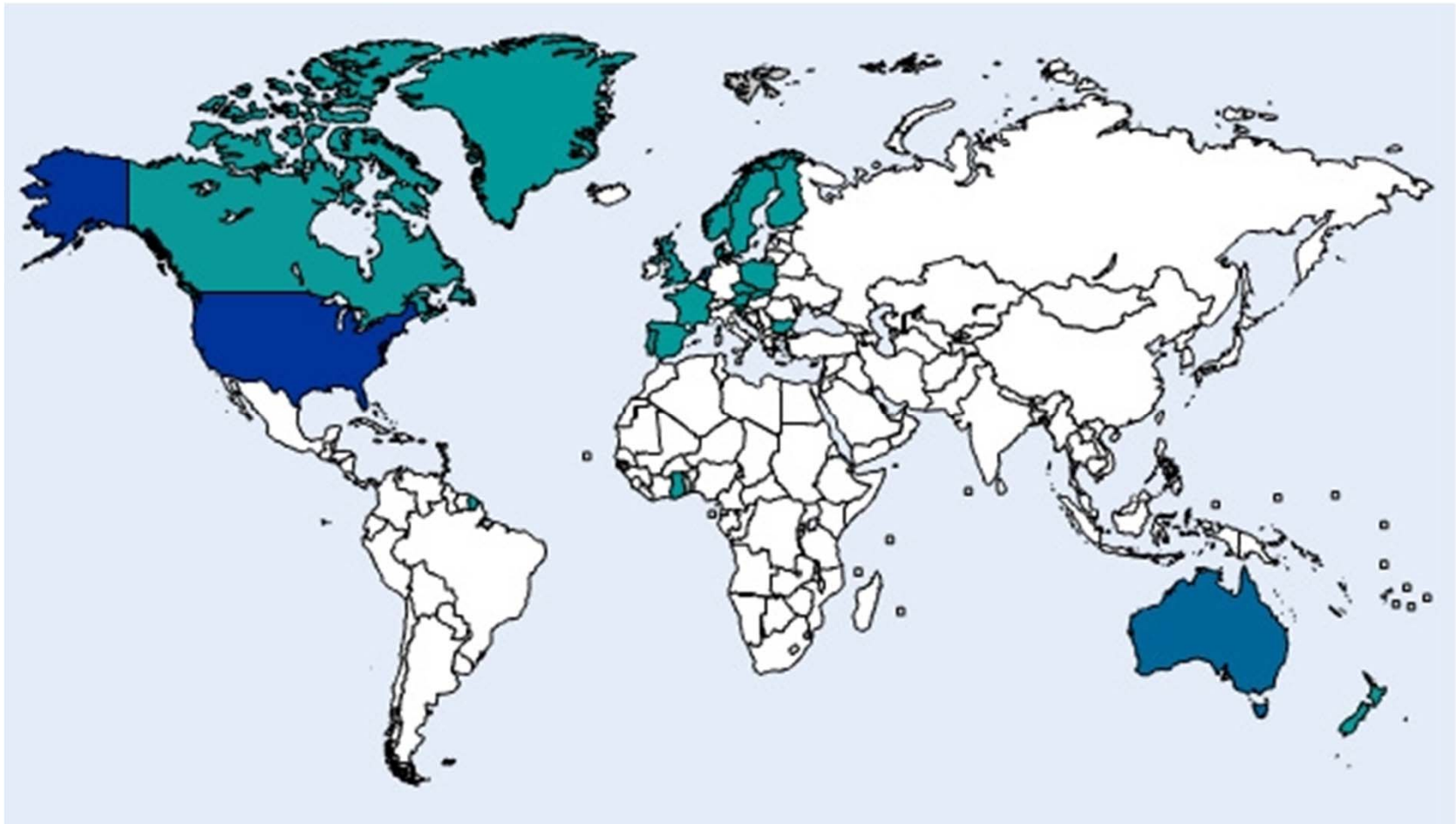


SEA legislation established before 1989

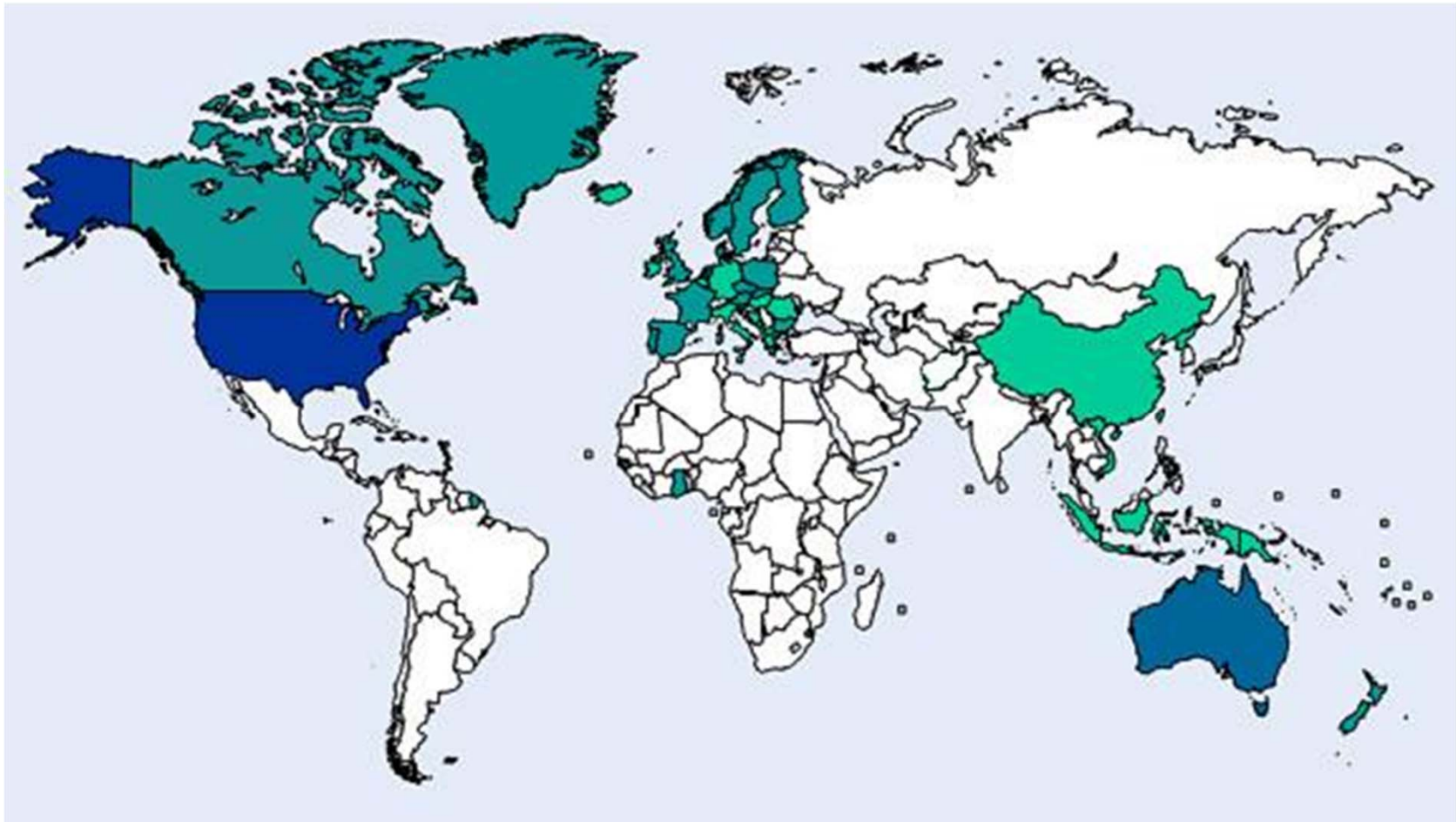
(1)



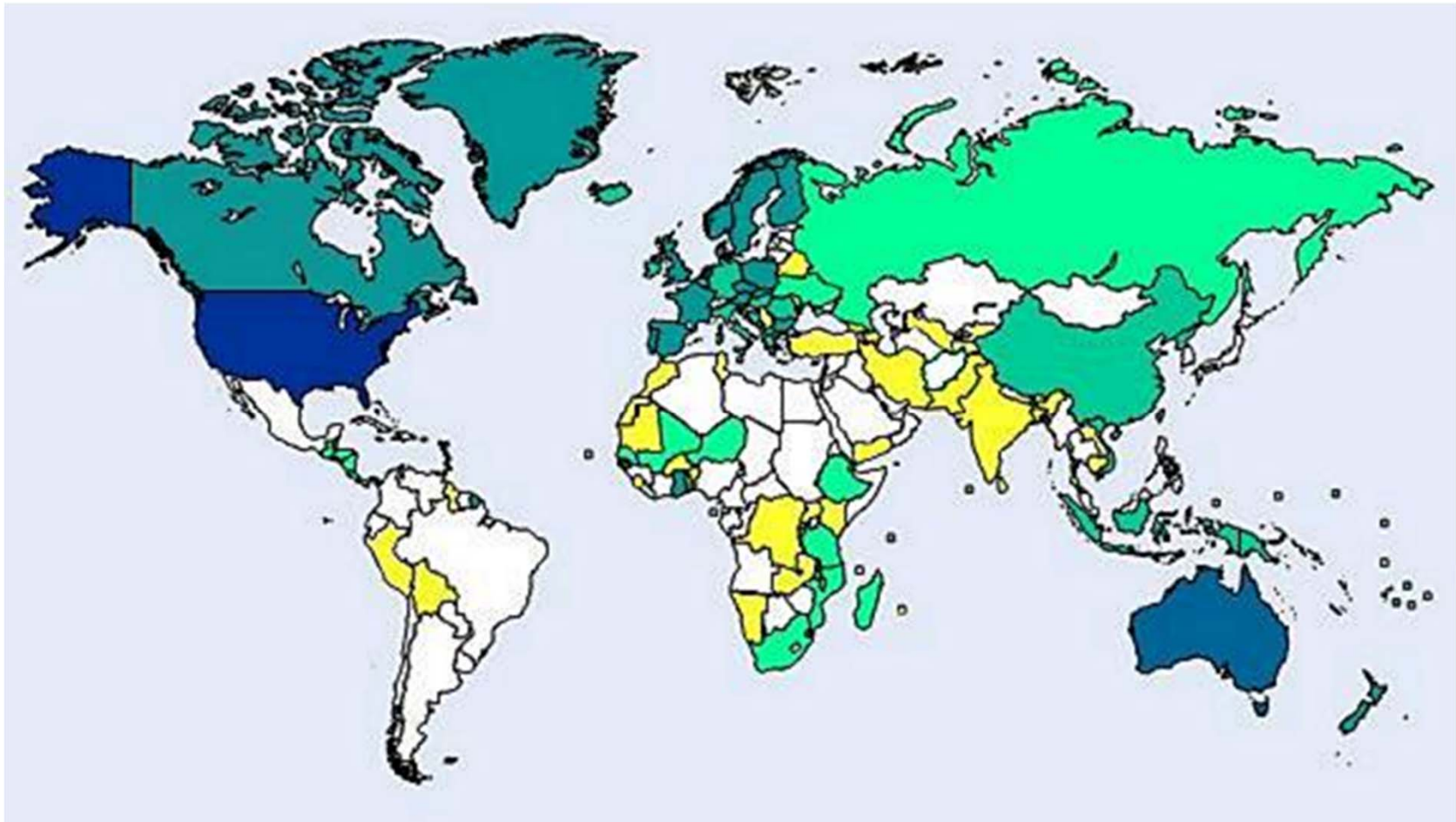
SEA legislation established between 1990-1999 (2)



SEA legislation established between 2000-2009 (3)

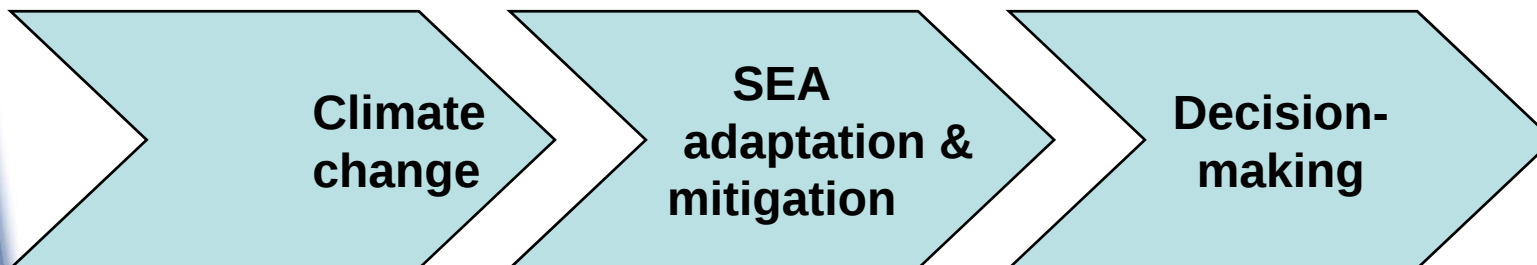


No SEA legislation, but SEA practice (4)

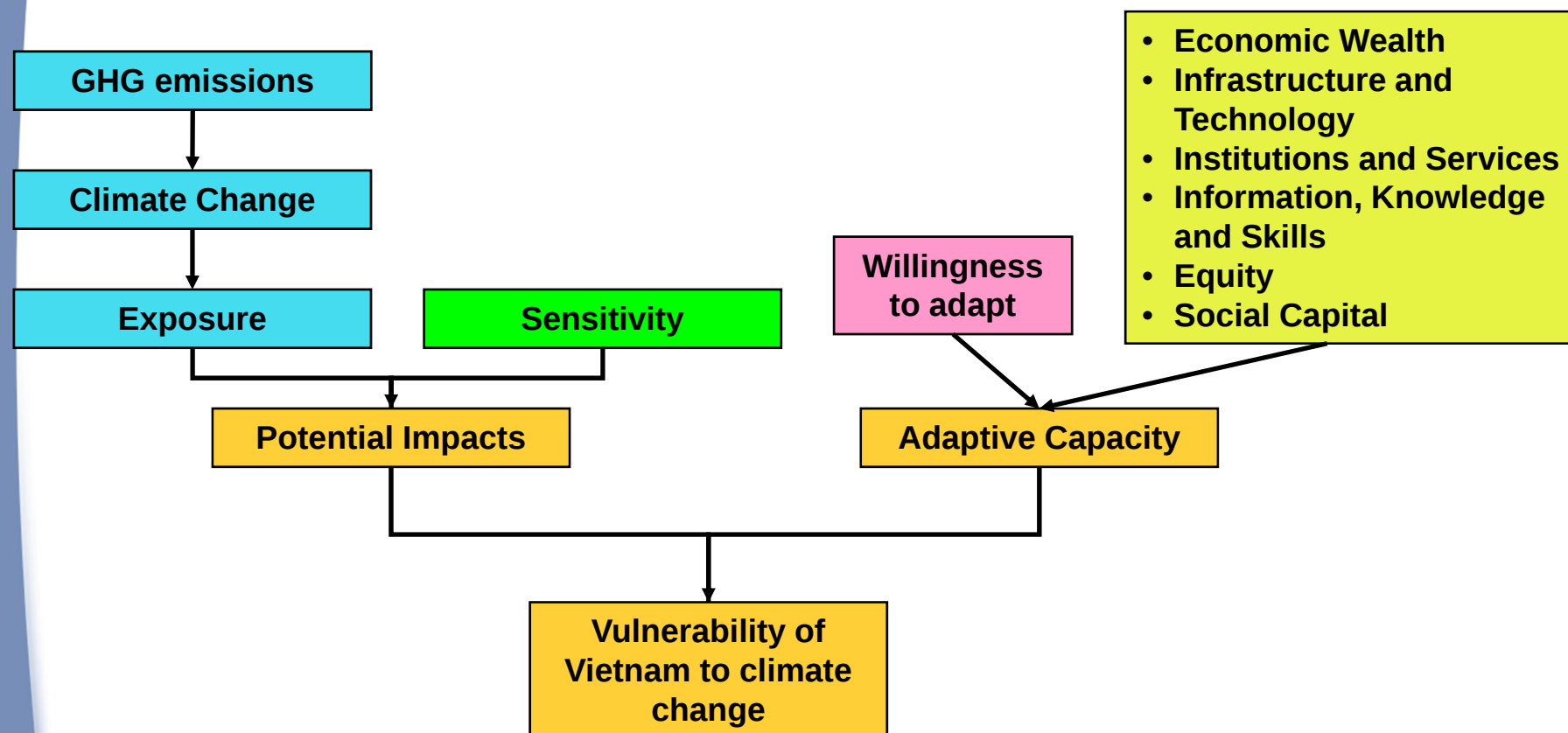


Climate change & SEA

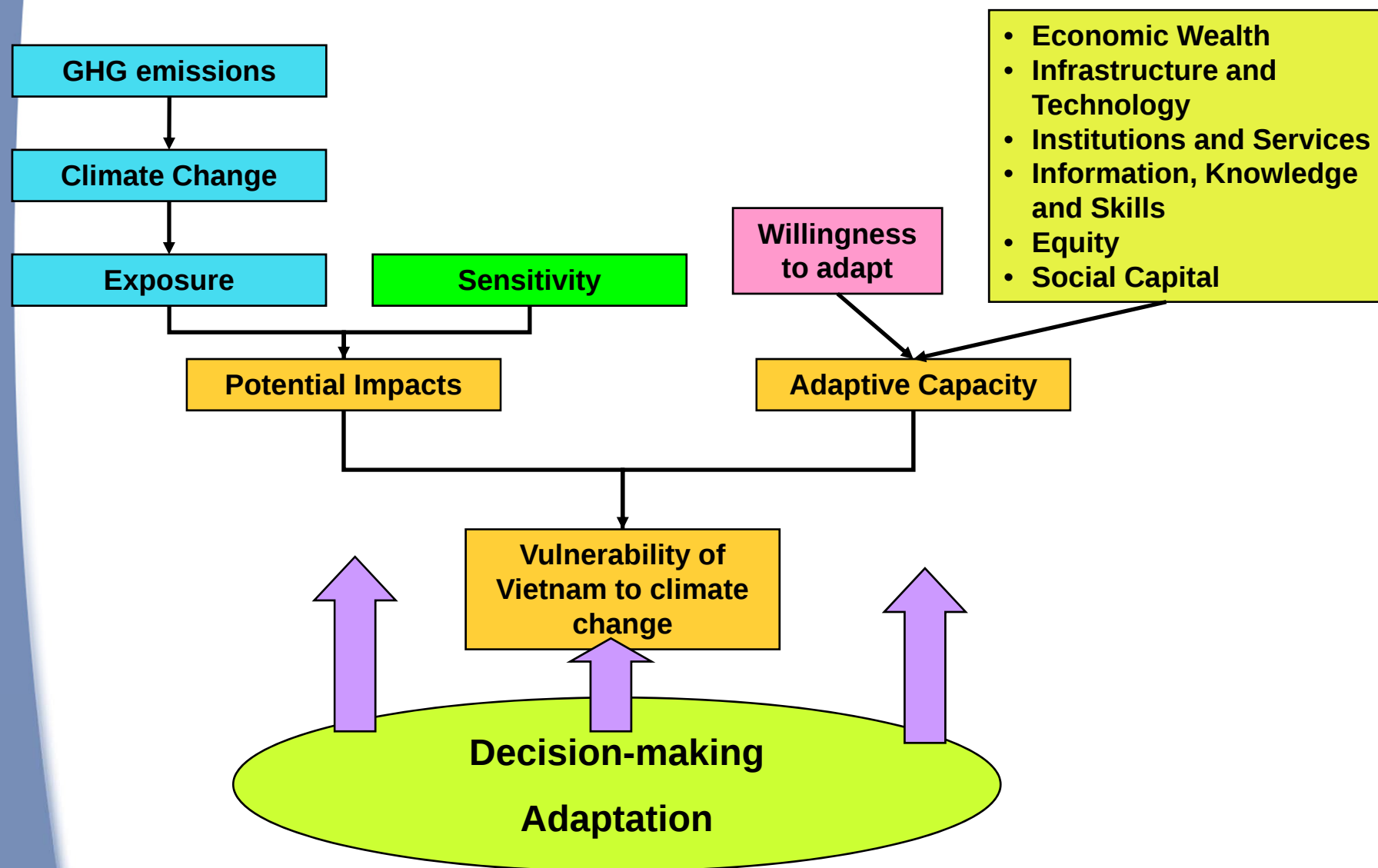
- Mitigation – SEA can have a role!
- Adaptation – SEA has the potential to integrate climate change adaptation options in government plans
- Climate change adaptation & mitigation can easily be integrated in SEA



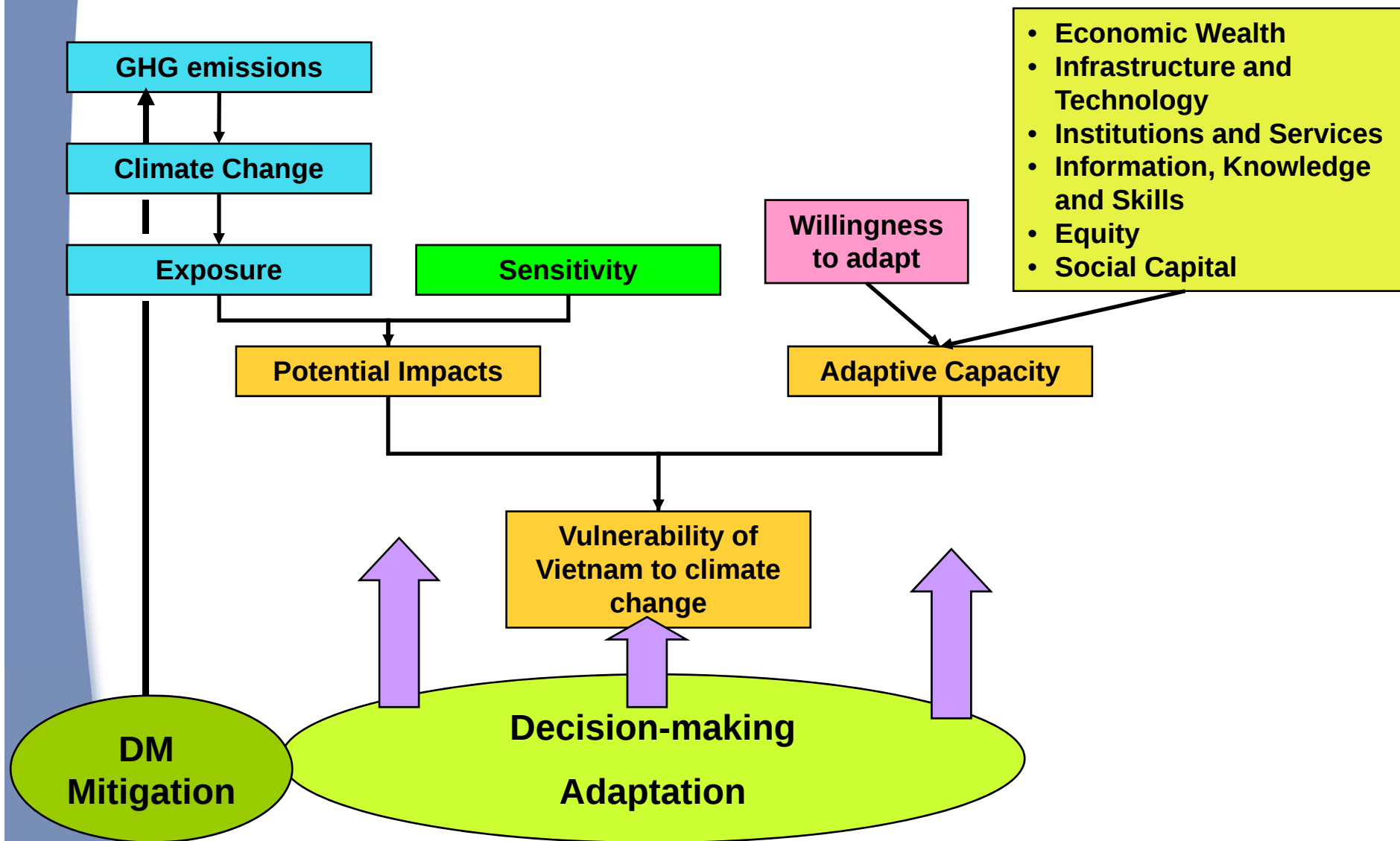
adaptation framework



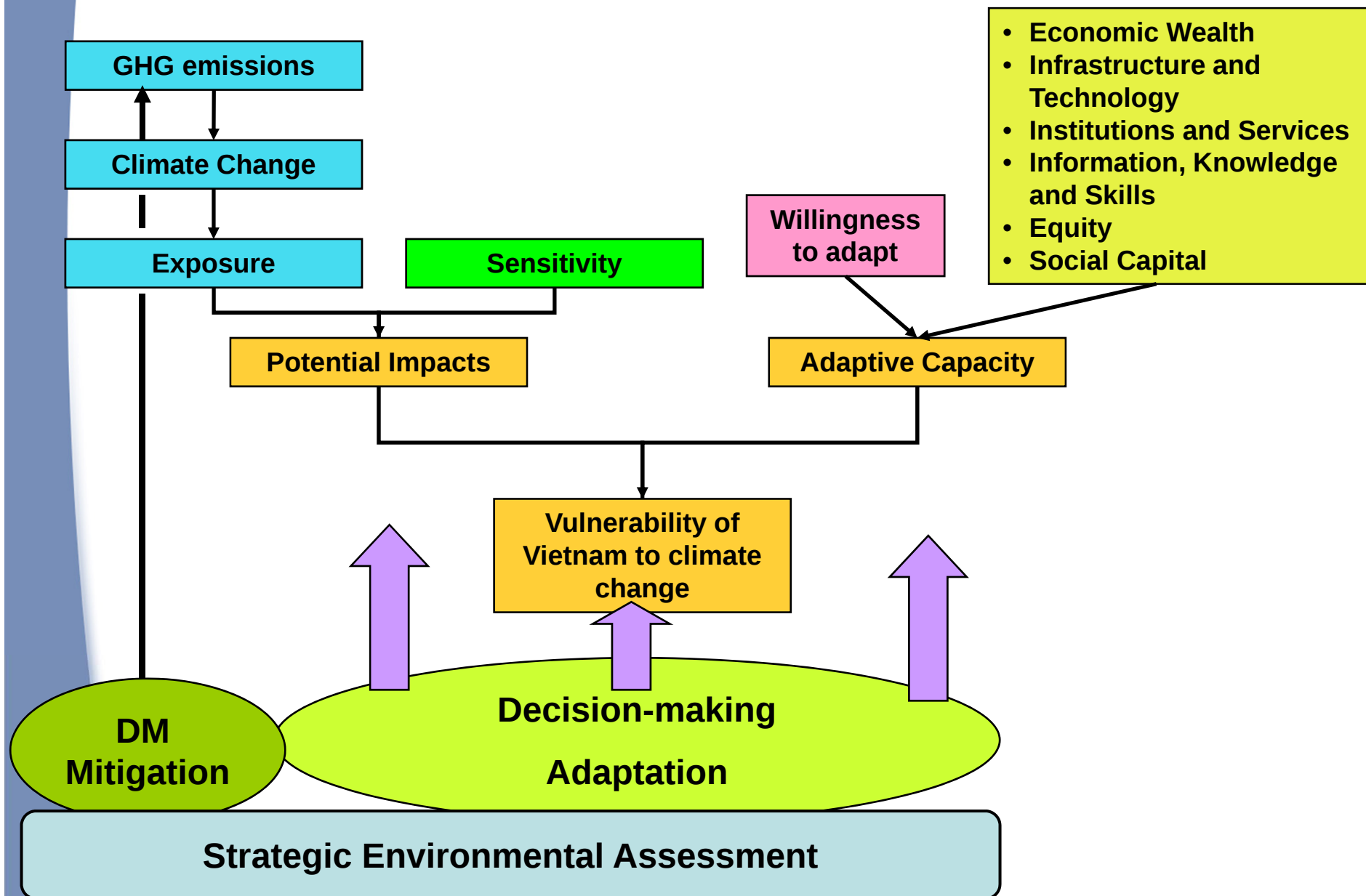
adaptation framework



mer adaptation – mitigation framework



mer adaptation – mitigation framework



How to integrate CC-mitigation in SEA?

- Mitigation is relatively simple to deal with
- Identify the:
 - policy objectives for GHG reduction
 - identify opportunities to reduce GHG?
- Most important sectors:
 - agriculture / rice fields
 - industry
 - transport
 - opportunities for renewable energy sources

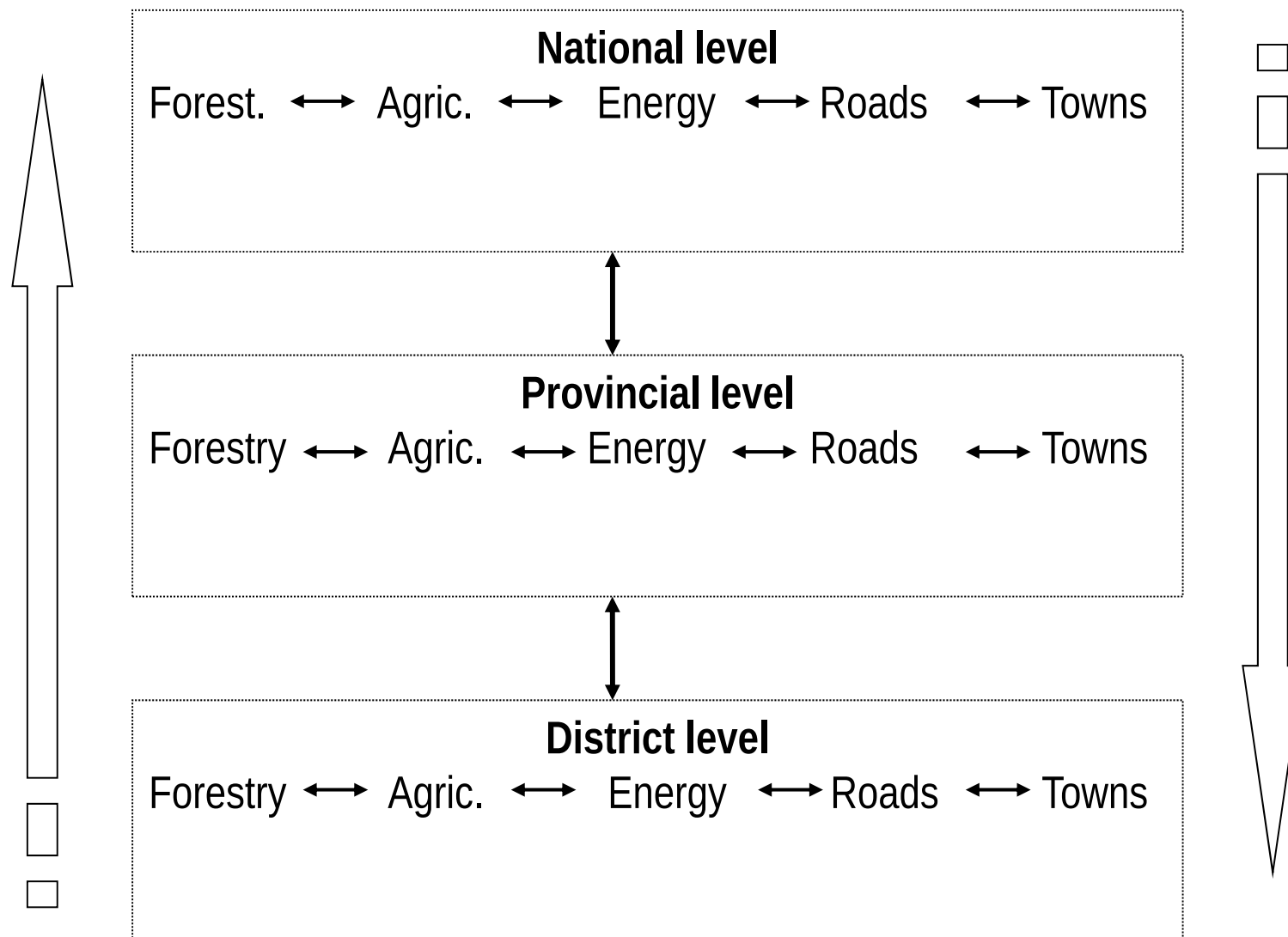
How to integrate CC-adaptation in SEA? (1)

1. Setting the objective

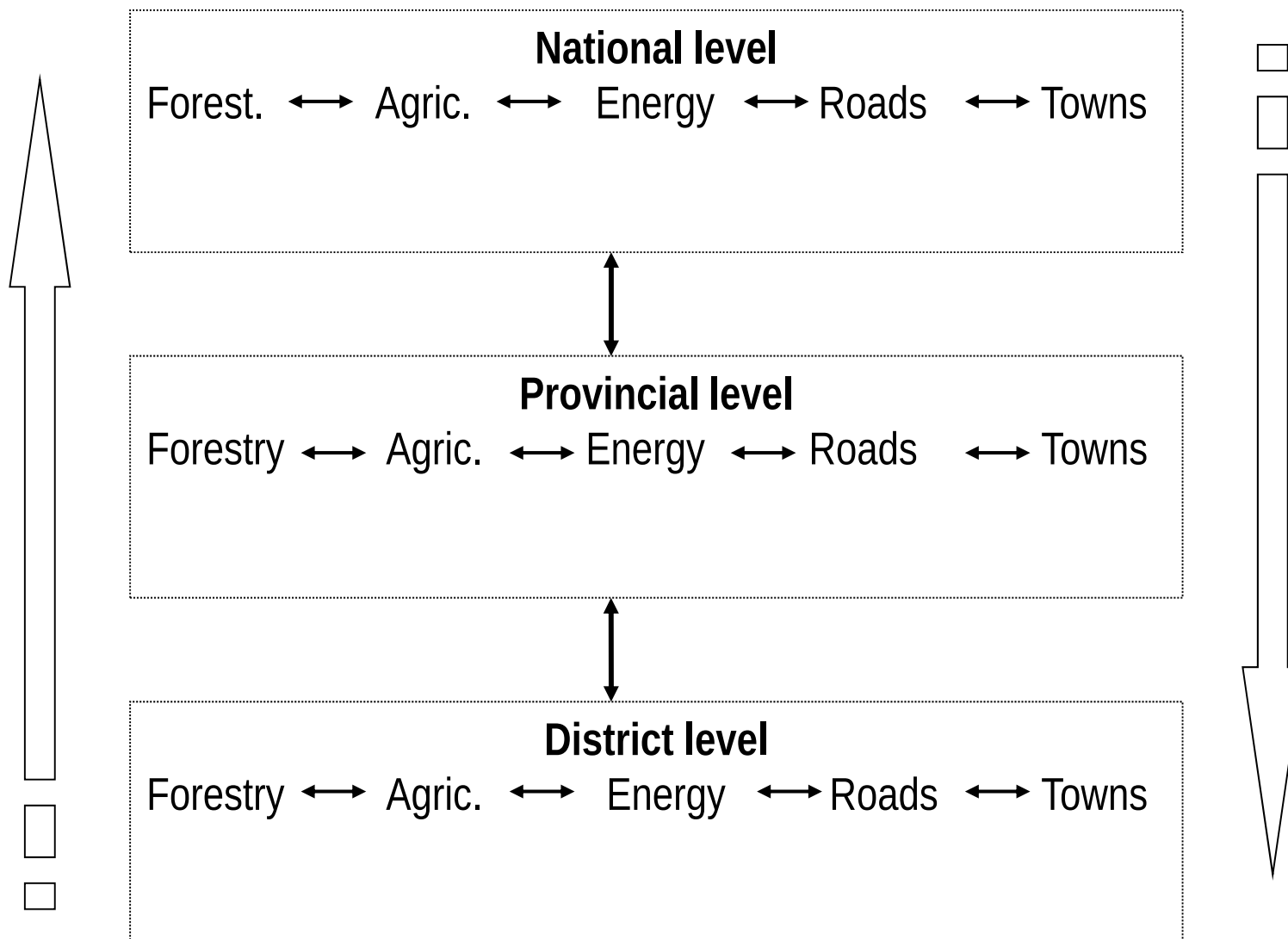
- What national, regional and sector policies and plans are in place?
 - What objectives are set regarding:
 - mitigation of GHG and adaptation - safety?
 - Translate those objectives for a specific plan
 - measurable
- Objective provincial action plan: to establish climate proof province for sustainable development:
 - vulnerability (low – high) ?
 - adaptation capacity (low – high) ?
- Agree on standards or a range of acceptability
- Long term time horizon



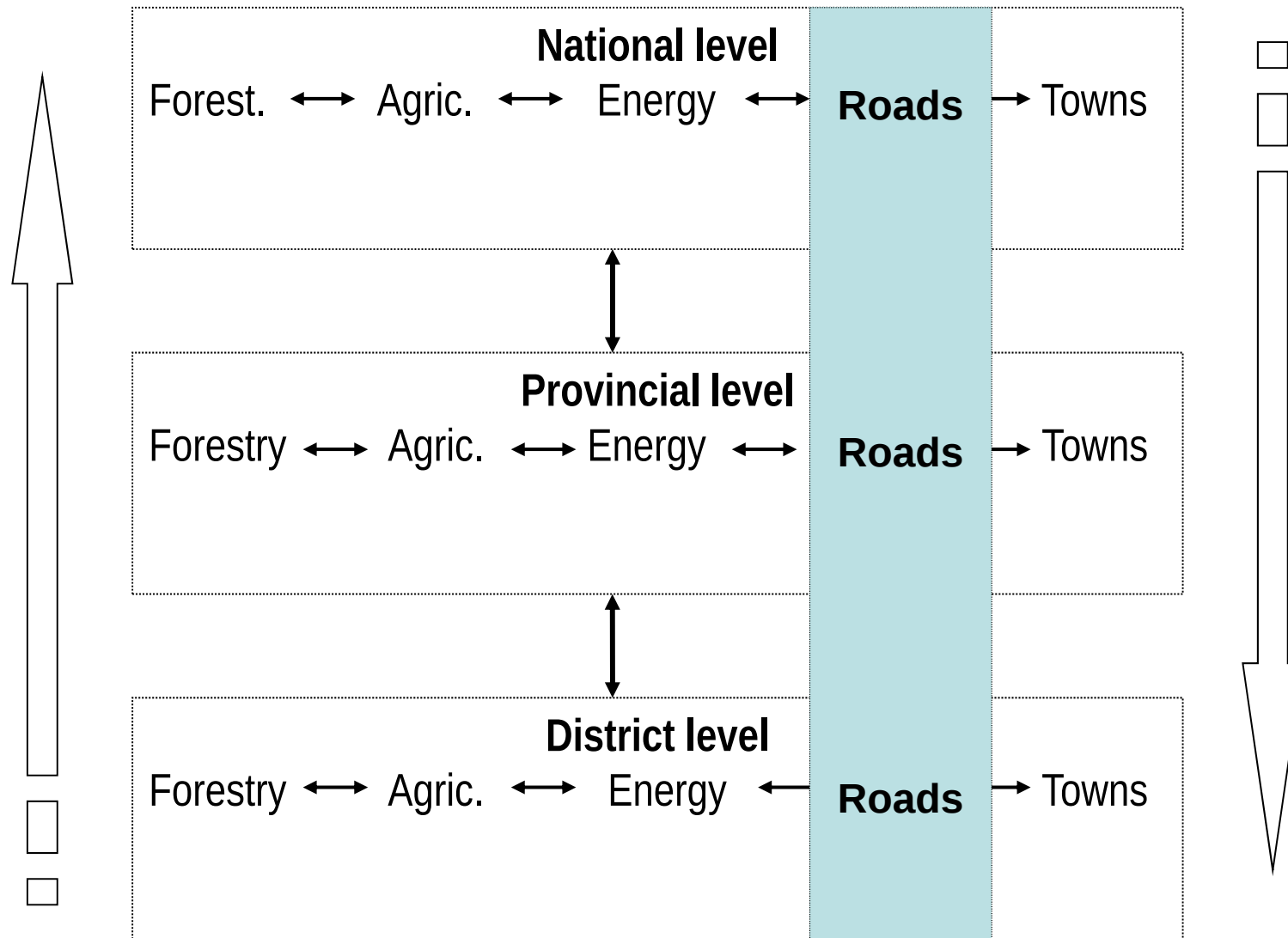
Country specific decision-making framework



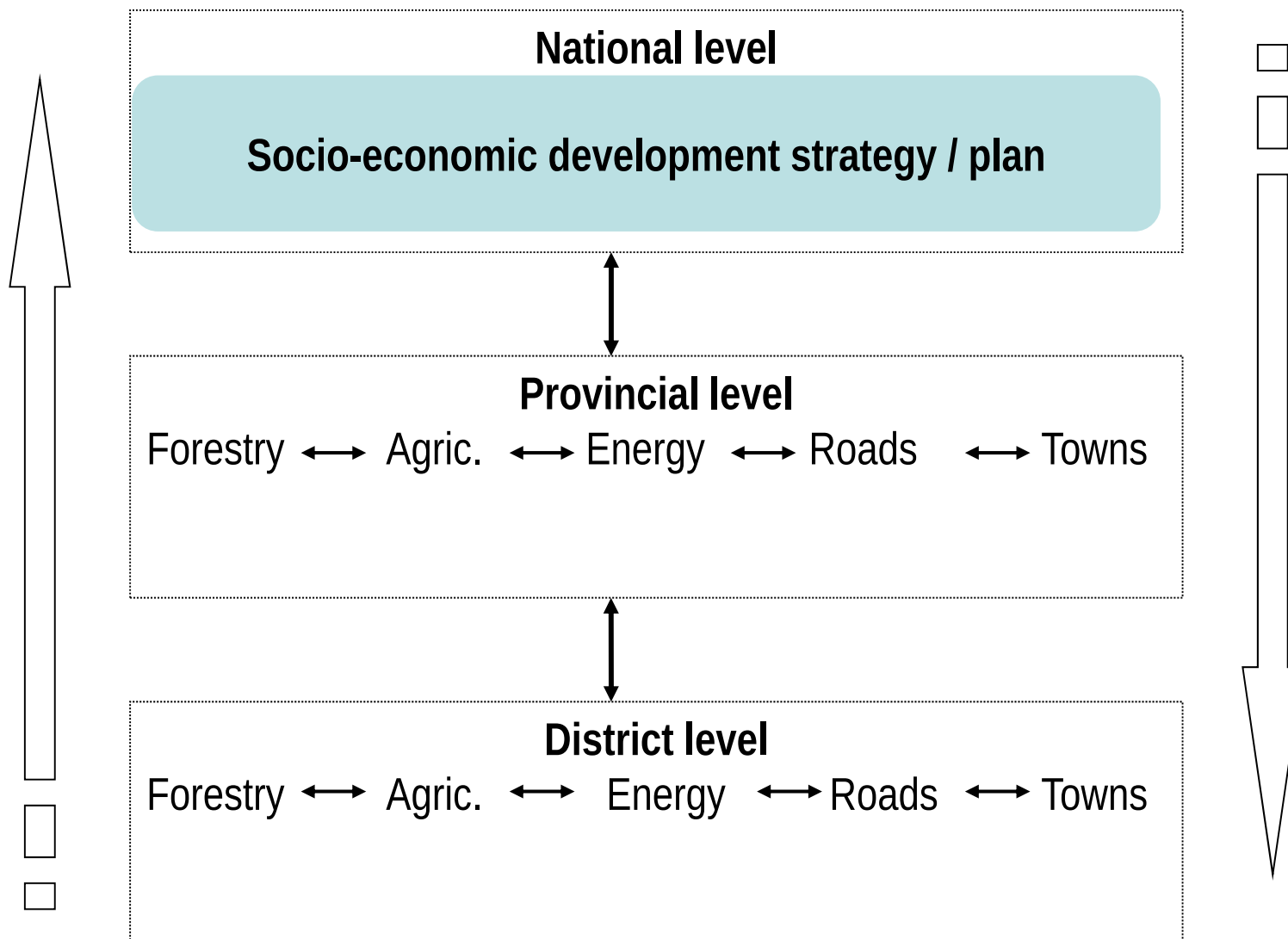
National CC policy needs to be implemented



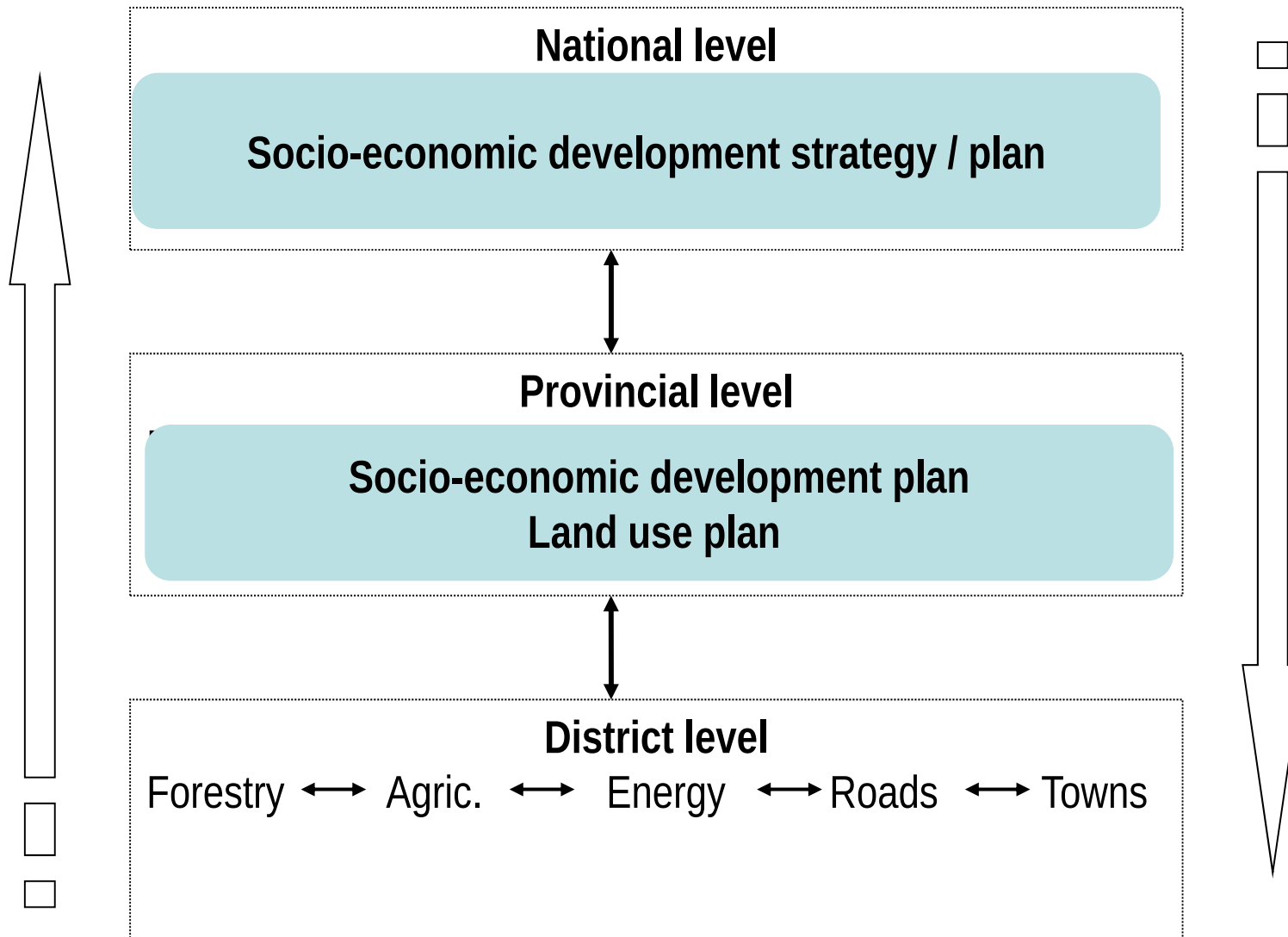
Climate change policy implementation



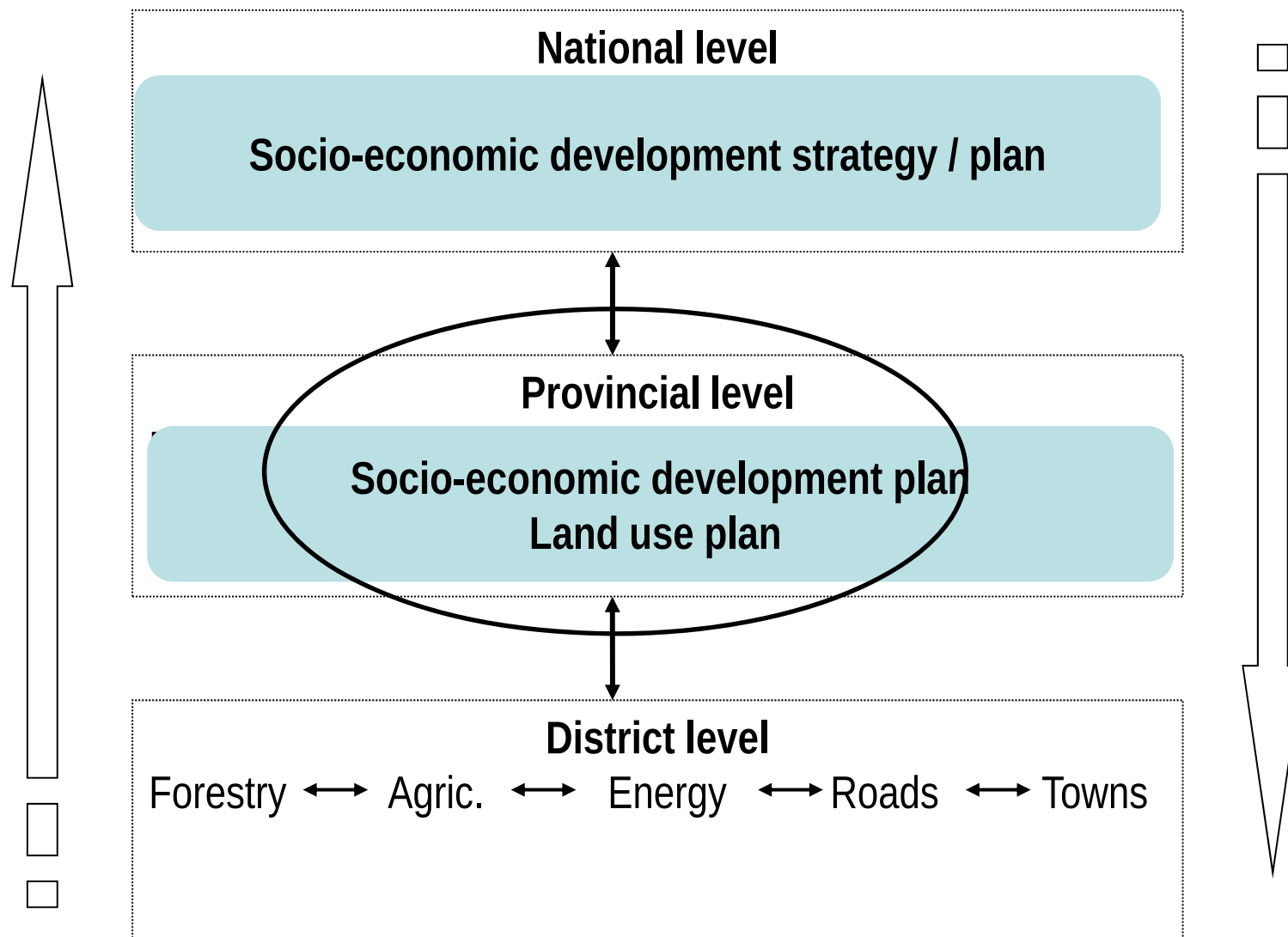
Climate change policy implementation



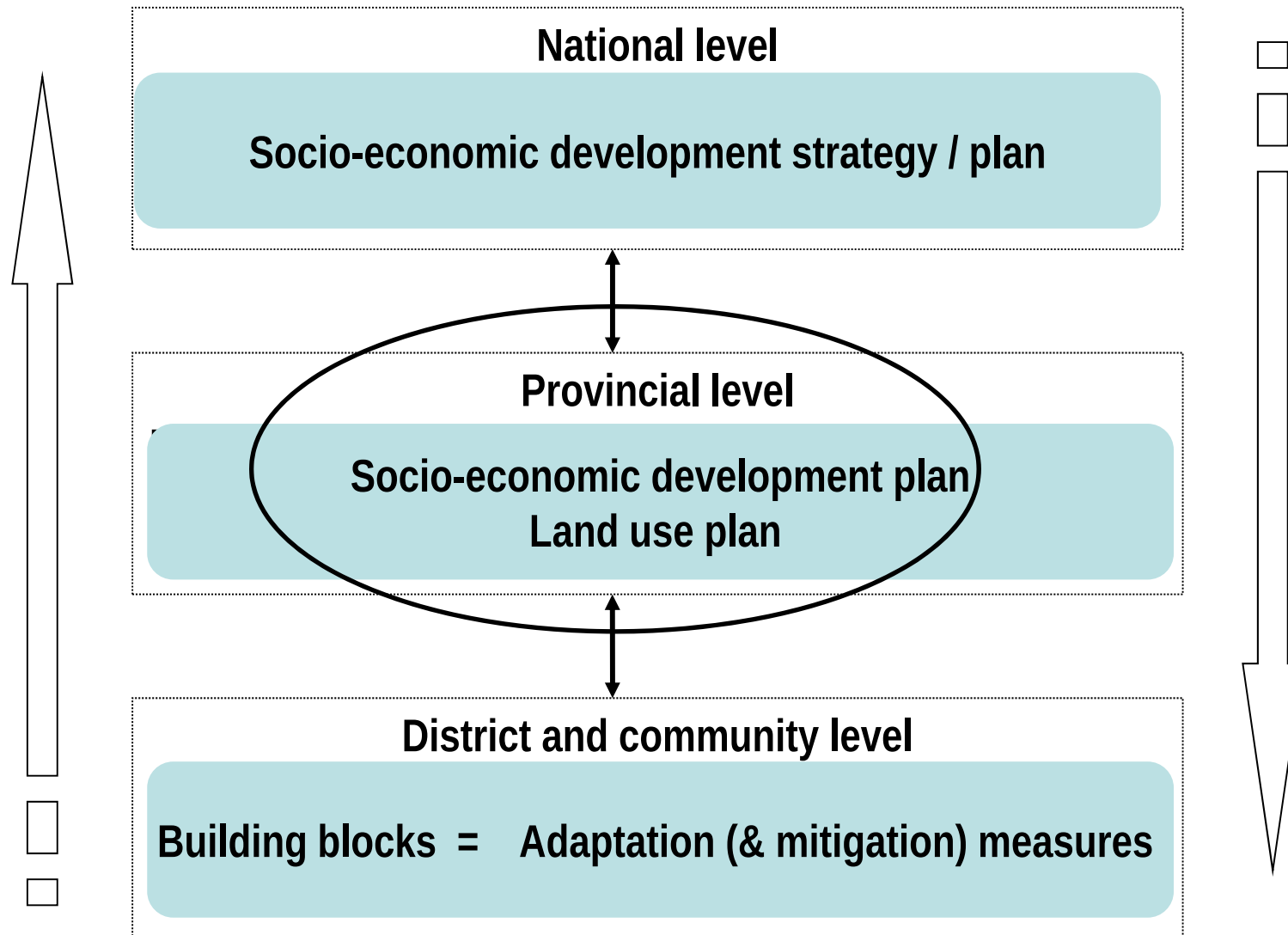
Climate change policy implementation



Climate change adaptation



Climate change adaptation

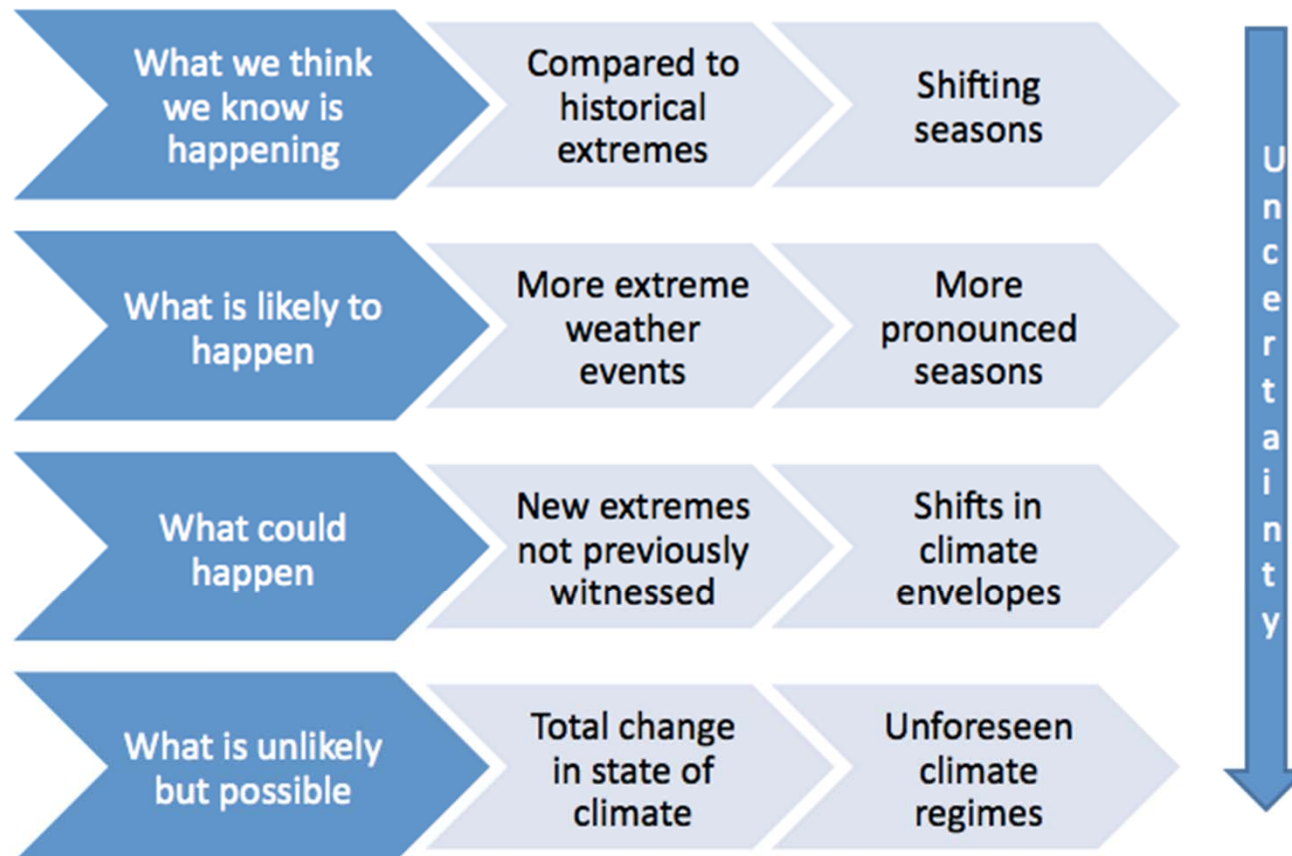


How to integrate CC adaptation in SEA? (2)

2. Determine climate change impacts

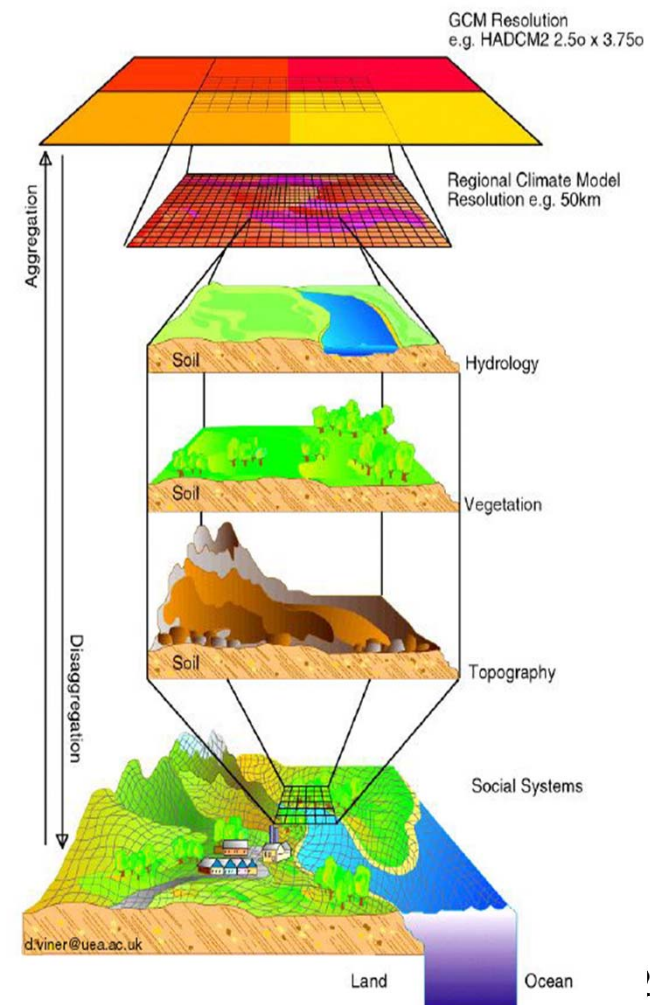
- Select a climate change scenario(s)
 - Scenarios are available – most likely work with mid - Scenario B
 - Uncertainty is still large – be frank about it (#)
 - Estimate primary climate change impacts per sector
 - Estimate primary climate change impacts per land use
 - prepare flooding / drought (risk) maps
 - prepare maps with risk of salt intrusion
 - Estimate for each community the primary and secondary risks of climate change (small, medium, high, x-high)
- Prepare vulnerability map (by making use of GIS)

Accomodate uncertainty in decision making



Scale - data

- Translating CC projections to national and local level
- Linking these projections to site specific information



How to integrate CC adaptation in SEA? (3a)

3a. Assess all proposed actions / measures

- Assess to what extent proposed actions and measures influences climate change risks
- Score: increase / neutral / decrease / unknown

How to integrate CC adaptation in SEA? (3b)

3b. Determine adaptation options / alternatives

- Adaptation options should provide building blocks for alternatives (e.g. focus on green versus grey)
- Identify existing or new adaptation measures per:
 - sector
 - land use
 - communities / districts
 - neighbouring provinces
 - inventory of (international) CC adaptation projects
- Adaptation measures need to be combined in a coherent set of measures

How to integrate CC adaptation in SEA ? (4)

3c. Determine adaptation options / alternatives

Remark:

- Adaptation options reduce the risk of CC impacts
- One can distinguish the following adaptation measures:
 - no regret measures
 - local / community level
 - district level
 - provincial level intra-provincial
 - international

How to integrate CC adaptation in SEA? (5)

4. Evaluation of all (including adaptation) alternatives

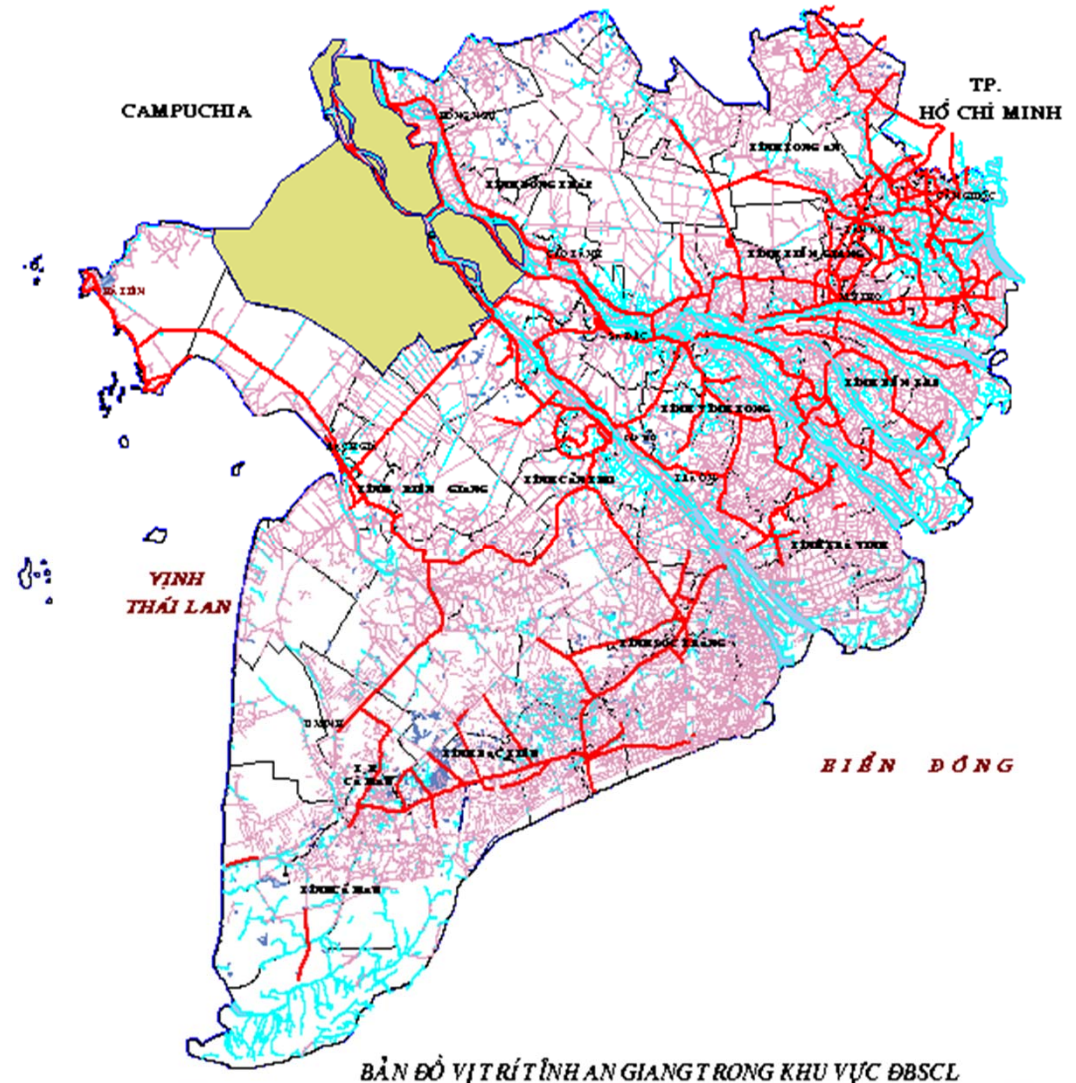
Remark: Evaluation of adaptation measures preferably integrated into alternatives should include trade offs with other aspects, score on followig aspects:

- climate change risks
- livelihoods
- environment quality
- (social) cost benefits

Practice: Vietnam - An Giang province

Characteristics

- 2.2 M. inhabitants
- Gateway to the Mekong delta
- 2nd largest rice producer
- 1st fish producer





SEA Socio economic development Master plan 2020 An Giang province

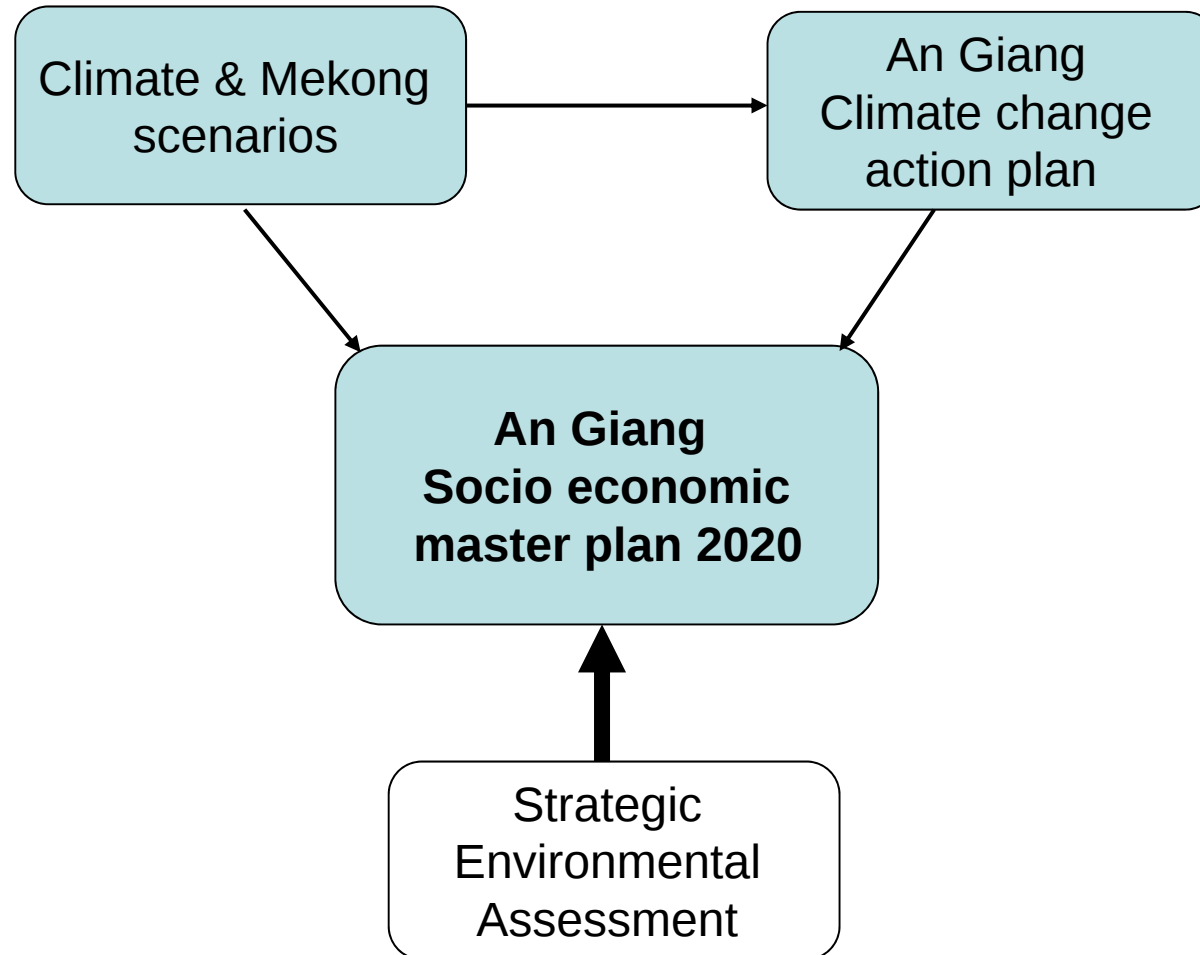
Objective: SEA - An Giang province Master plan 2020

Inform the An Giang government on:

Phase 1. Risks of climate change for investments
planned in 2020 Master plan

Phase 2. Development of an alternative climate proof
Master plan 2020 (horizon to 2050)

SEA phase 1:



How is climate change addressed in the existing master plan?

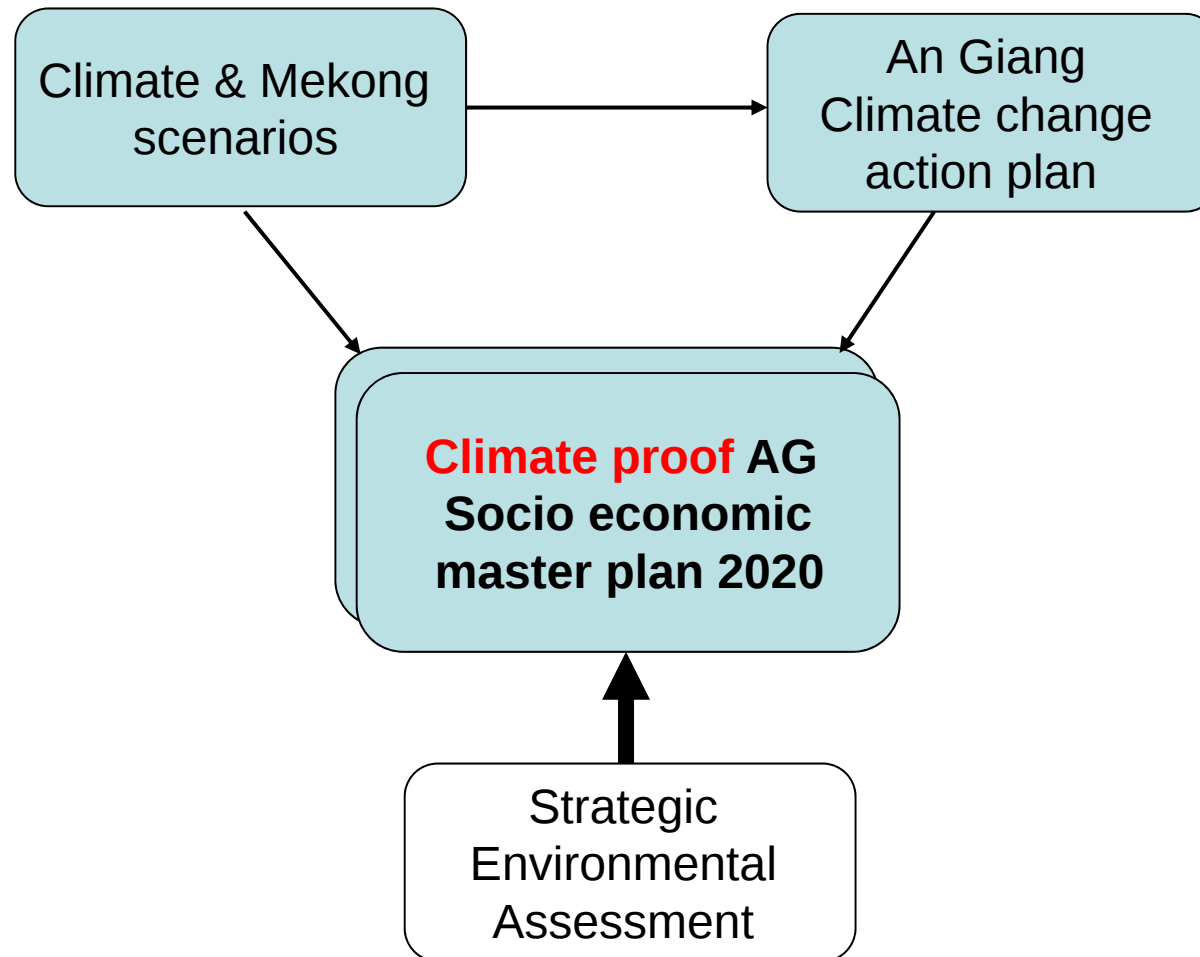


SEA phase 1: Participatory approach together with all departments

SEA - phase 1: Assessing risks of climate change+ for the investments planned in the Master plan 2020



SEA phase 2:

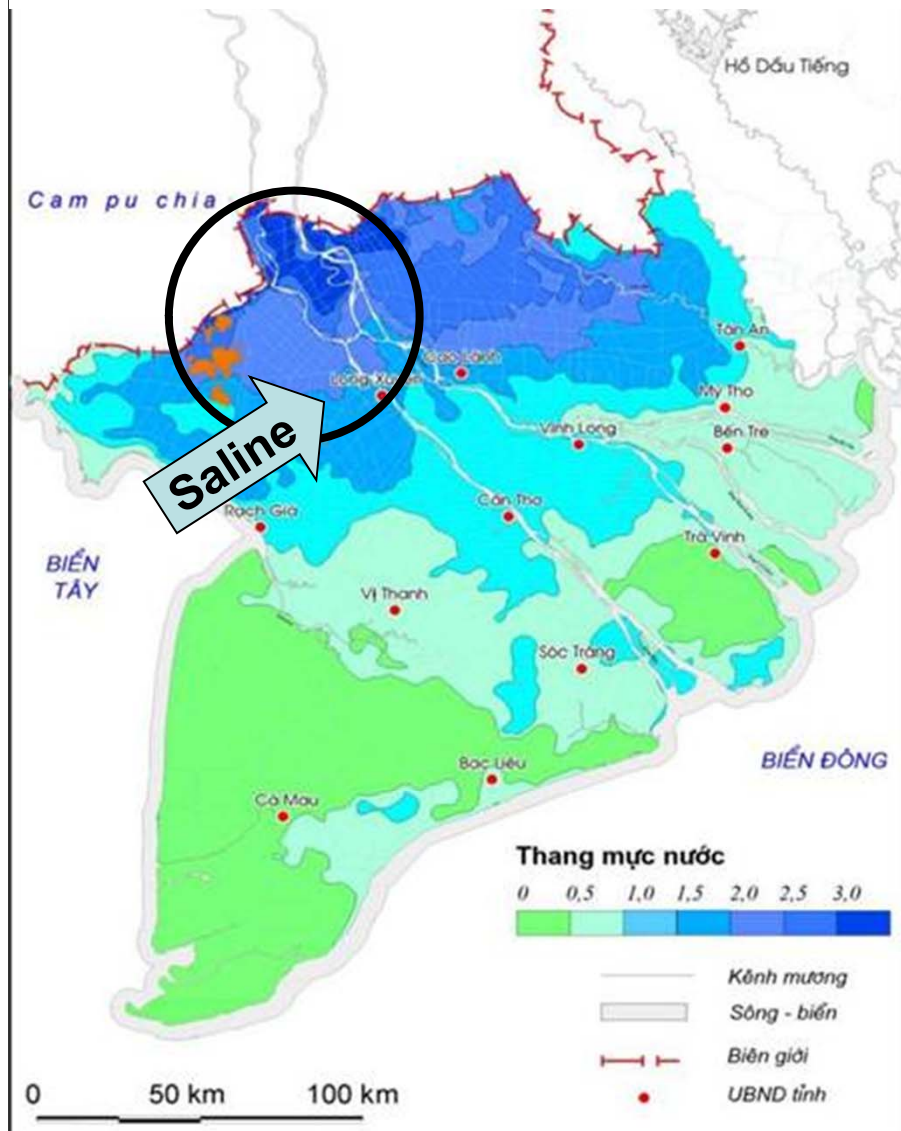


How is climate change addressed in the existing master plan?

An Giang a province vulnerable to climate change and changes in the Mekong basin

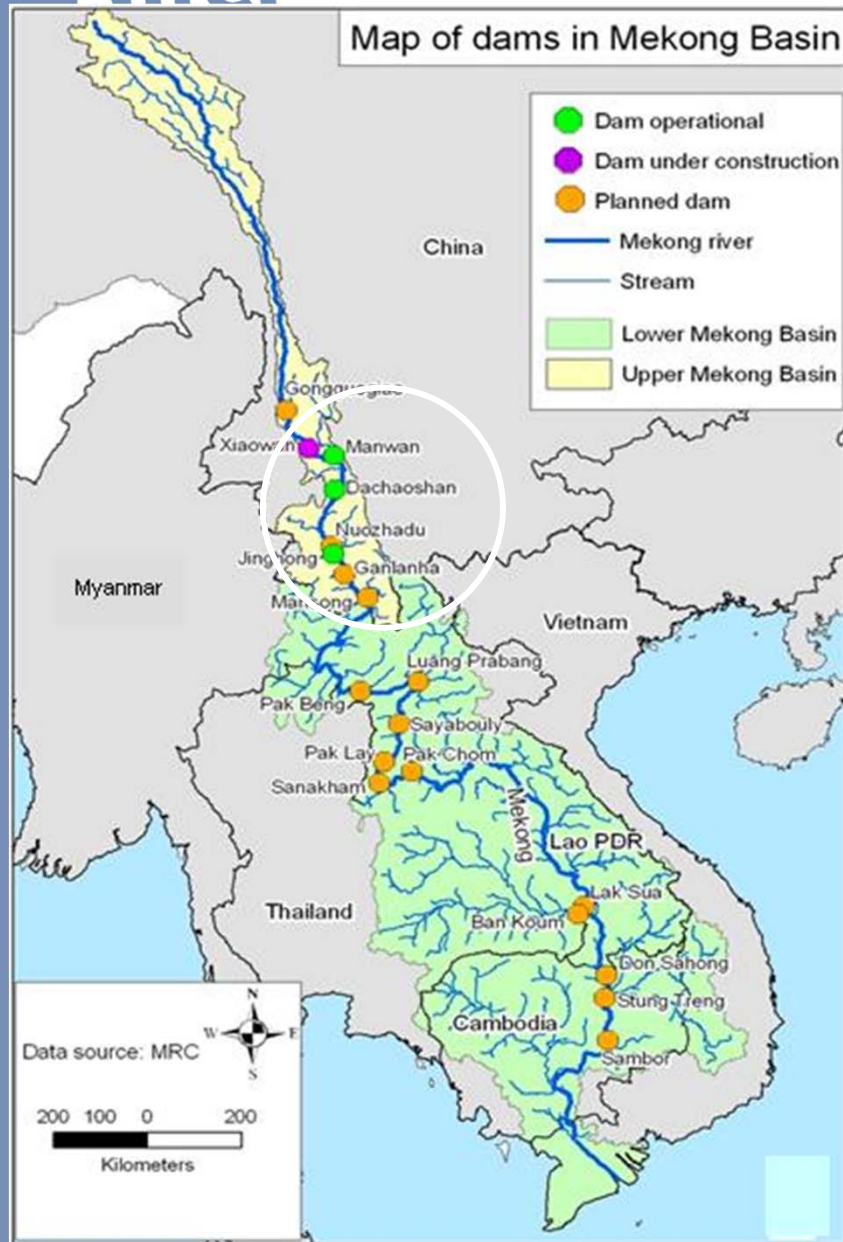


Climate change impacts



Main impacts:

- Drought
- Flooding
- Temperature rise
- Salt intrusion



Impact of dams on Mekong delta

Main impacts:

- Peak flow in wet season decreases
- Flow in dry season more stable
- Sediment discharge decreases, negative impact e.g. fish production

→ Combined impacts will be considered in SEA for An Giang province

An Giang Climate change action plan 2011

Objective: Develop effective response to CC to reduce damage and ensure sustainable development

- Assess influence of climate change on
 - areas;
 - sectors;
 - communities;
 - Develop programs and plans to respond to CC
 - Identify mitigation and adaptation measures
 - Ensure benefit sharing
 - Start pilot projects
- Still very general, measurable objectives in SEA



An Giang - Socio-economic development master plan 2020

Objectives and targets:

- Sustainable development of an open economy
- Agricultural industrialization and rural modernization
- Transform manual production economy into a modern production economy
- Economic growth 12.5 % (2011-2020)
- Reduction of poor hh 1.5 – 2.0 % yr



Investments planned Master plan 2020

Agriculture

- > irrig. area 2→3 crops
- clean agriculture

Aquaculture

- applic. of int. standards

Urban areas

- extension

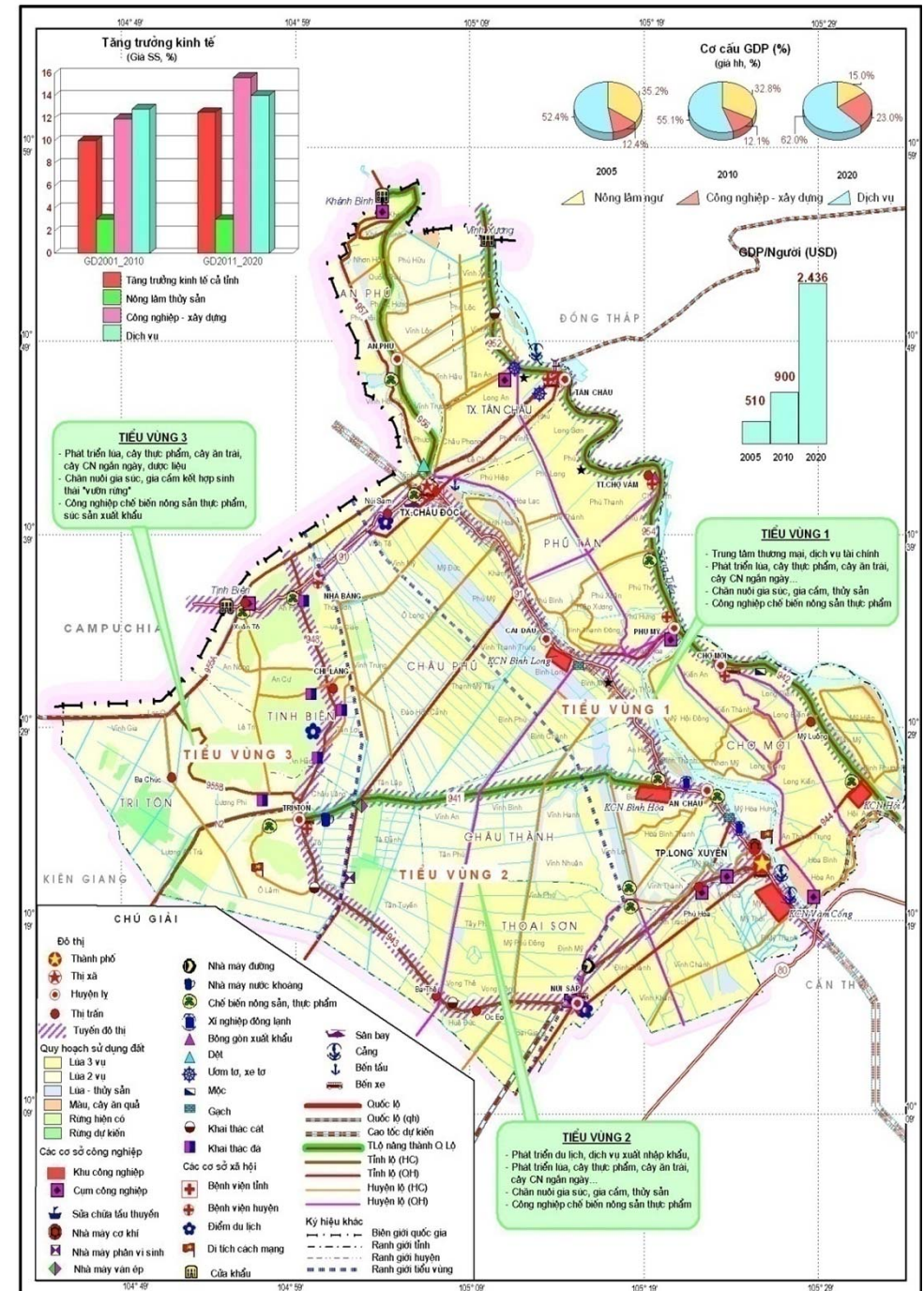
Industry

- 4 new zones ~1000 ha

Infrastructure

- 1 int. seaport, 1 airport
- new prov. nat. roads
- int. railway

ĐIỀU CHỈNH QUY HOẠCH TỔNG THỂ PHÁT TRIỂN KINH TẾ - XÃ HỘI TỈNH AN GIANG ĐẾN NĂM 2020



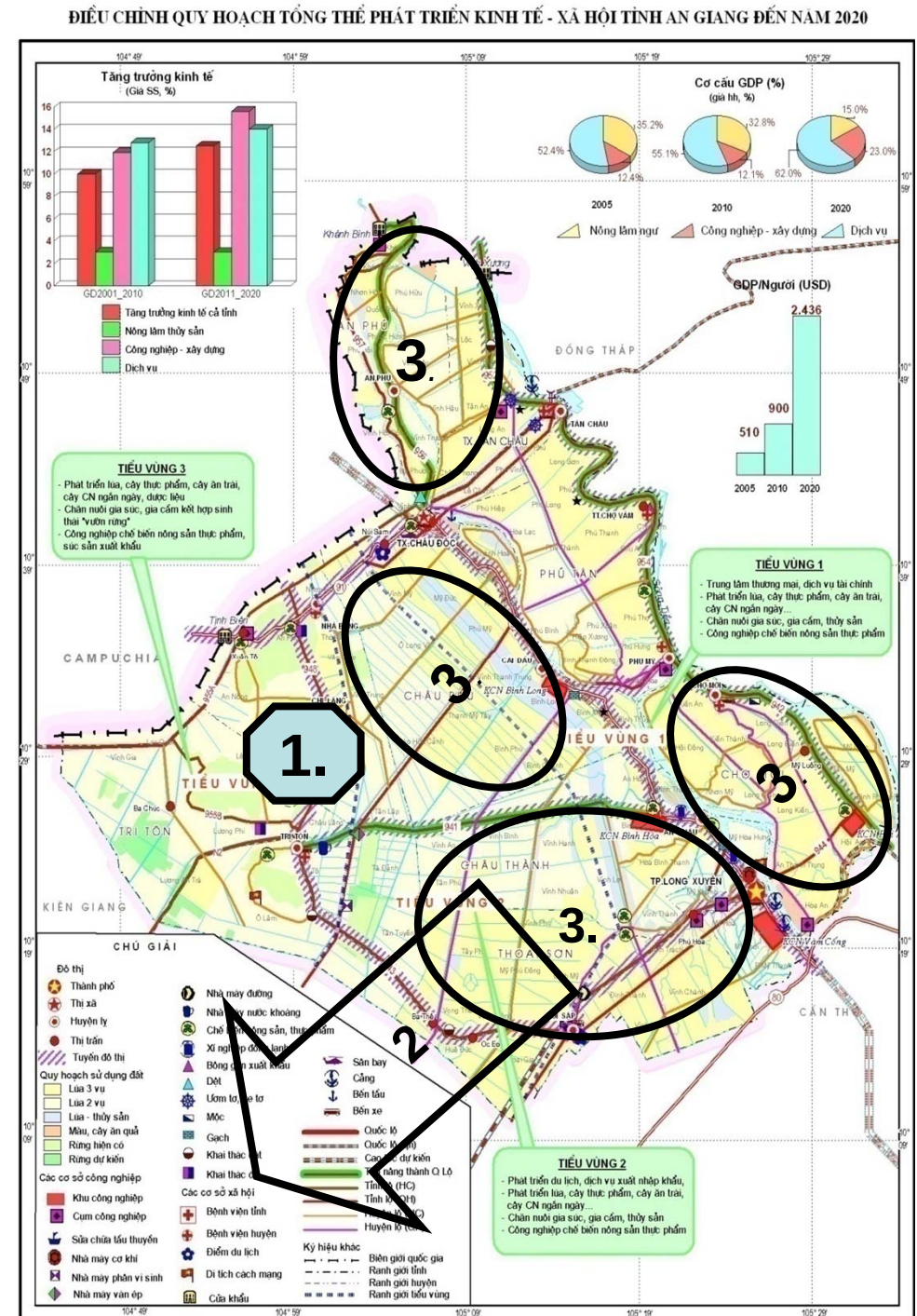


Investments planned Master plan 2020

Climate change
adaptation measures:

1. drinking water basins
2. construction of sluices and canals
3. develop dike system

→ Focus on grey
adaptation



SEA phase 1: Lessons learned

- Province strong mandate for CC, steering districts & commun.
- Provincial climate change action plan
 - too general, no info on risks and no measurable objectives
 - scenarios for climate yes, for Mekong no
- 10 yr Master plan is guiding investments & adaptation measures
 - investments are not climate proofed
 - adaptation are technical, down stream impacts not considered
 - inter-provincial coordination nearly absent
- Strong need for an integrated (transboundary) Mekong Delta Plan
- SEA helpful to assess, how climate change is incorporated in policy-making

SEA Phase 2: Final result

A climate proof Master plan 2020

- Long term vision 2050, flexible strategy
- Different risk standards
- Adaptation measures: no regret, grey, green and social
- Ecosystem services
- Comparative analysis of the costs and benefits of the existing and the new Master plan

Province decides on adapting the Master plan!



Thank you for your attention!