

# The National Adaptation Plan

UNFCCC NAP Technical Guidelines building blocks

Essential components to be included in the NAPs

Submissions to NAP Central

NAP GSP Workshop

Addis Ababa, 19 to 22 August 2019



ACCORDING TO THE SCIENCE OF MEMORY, YOU ARE LIKELY TO FORGET NINETY PERCENT OF WHAT I PRESENT TODAY.



DILBERT.COM @SCOTTADAMSSAYS

SO I GOT RID OF NINETY PERCENT OF MY SLIDES TO FOCUS ON THE ONE SLIDE THAT MATTERS.



8-16-19 2019 Scott Adams, Inc./Dist. by Andrews McMeel

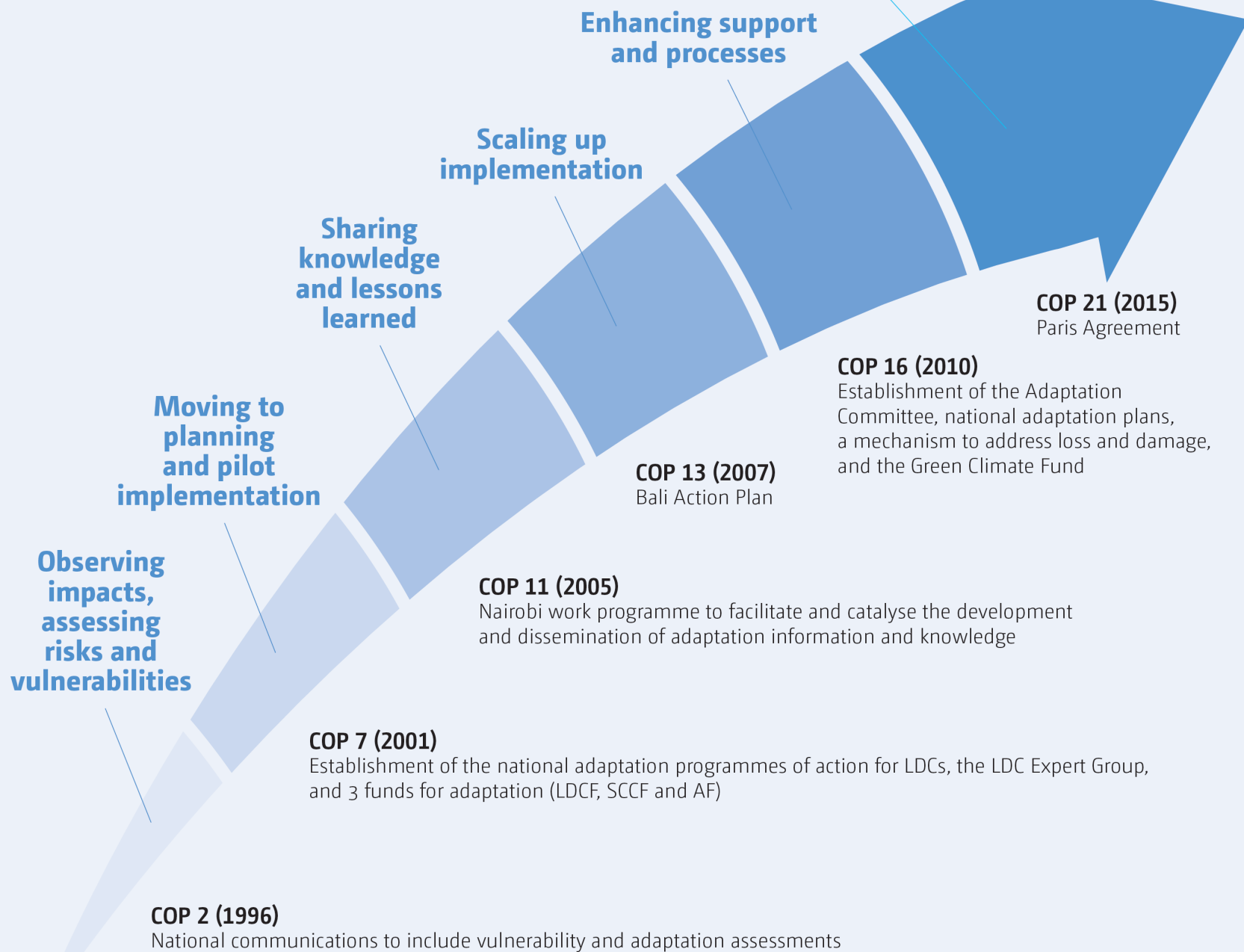
OR WERE YOU TOO LAZY TO MAKE MORE THAN ONE SLIDE?

I ALREADY FORGOT NINETY PERCENT OF WHAT YOU JUST SAID.



# Adaptation milestones under the Convention

## Adapting in the future



## Objectives of NAPs and the PA global goal of adaptation

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### ❑ Objectives of the NAP process (decision 5/CP.17) are:

- a) To **reduce vulnerability** to the impacts of climate change, by **building adaptive capacity** and **resilience**;
- b) To **facilitate the integration of climate change adaptation**, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.

### ❑ Global goal of adaptation (Article 7 of the Paris Agreement)

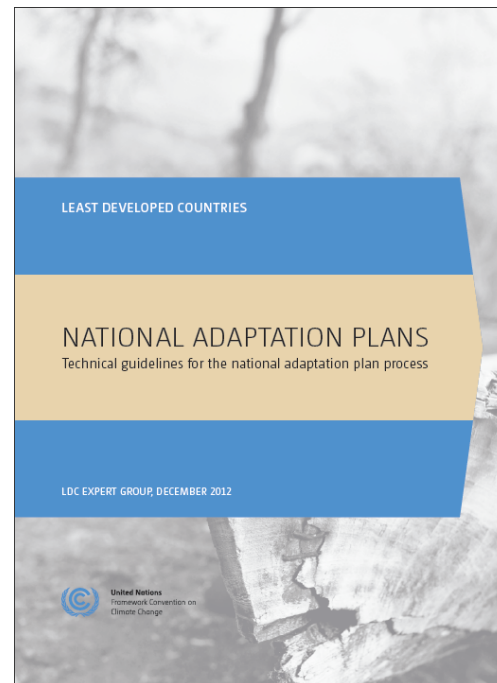
**Enhancing adaptive capacity, strengthening resilience and reducing vulnerability** to climate change, with a view to contributing to **sustainable development** and ensuring an adequate adaptation response in the context of the **global temperature limit of less than 2°C**.



## Guidelines

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- Initial guidelines are contained in [decision 5/CP.17, annex](#)
- Technical guidelines for the NAP process, developed by the LEG in response to [decision 5/CP.17 paragraph 15](#) are available in [multiple languages](#) at <http://unfccc.int/7279>
- Supplements to the guidelines are available on NAP Central <http://www4.unfccc.int/nap/Guidelines/Pages/Supplements.aspx>



**The guidelines provide the basis for the formulation and implementation of NAPs**

## Guiding principles for NAPs (decision 5/CP.17)

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- Continuous planning process at the national level with iterative updates and outputs
- Country-owned, country-driven
- Not prescriptive, but flexible and based on country needs
- Building on and not duplicating existing adaptation efforts
- Participatory and transparent
- Enhancing coherence of adaptation and development planning
- Supported by comprehensive monitoring and review
- Considering vulnerable groups, communities and ecosystems
- Guided by best available science
- Taking into consideration traditional and indigenous knowledge
- Gender-sensitive



## Elements of the process to formulate and implement NAP (decision 5/CP.17)

### Element A: Laying the groundwork and addressing gaps

- Initiating and launching of the NAP process
- Stocktaking: identifying available information on climate change impacts, vulnerability and adaptation and assessing gaps and needs of the enabling environment for the NAP process
- Addressing capacity gaps and weaknesses in undertaking the NAP process
- Comprehensively and iteratively assessing development needs and climate vulnerabilities

### Element B: Preparatory Elements

- Analysing current climate and future climate change scenarios
- Assessing climate vulnerabilities and identifying adaptation options at the sector, subnational, national and other appropriate levels
- Reviewing and appraising adaptation options
- Compiling and communicating national adaptation plans
- Integrating climate change adaptation into national and subnational development and sectoral planning

### Element C: Implementation Strategy

- Prioritizing climate change adaptation in national planning
- Developing a (long-term) national adaptation implementation strategy
- Enhancing capacity for planning and implementing adaptation
- Promoting coordination and synergy at the regional level and with other multilateral environmental agreements

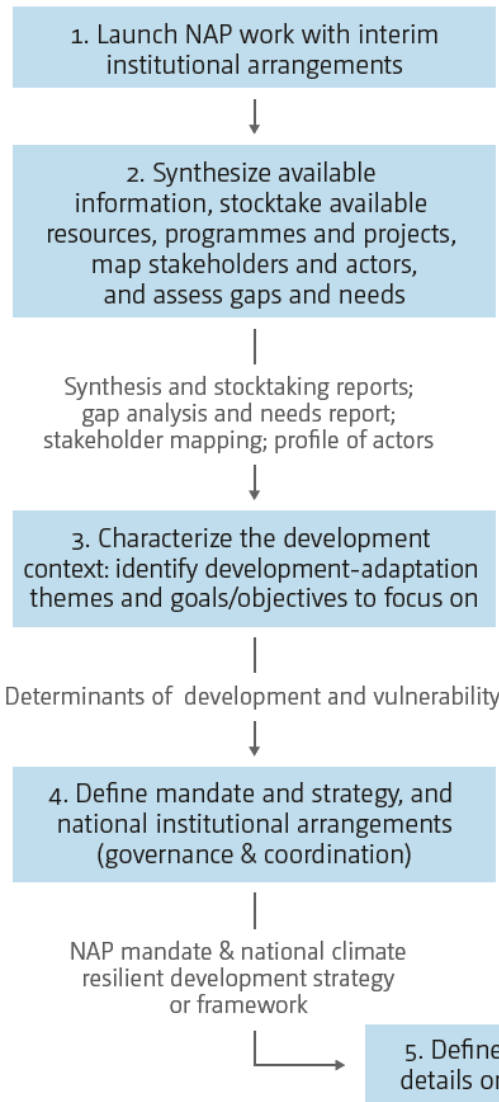
### Element D: Reporting, Monitoring and Review

- Monitoring the NAP process
- Reviewing the NAP process to assess progress, effectiveness and gaps
- Iteratively updating the national adaptation plans
- Outreach on the NAP process and reporting on progress and effectiveness



# Sample process to formulate and implement a National Adaptation Plan

## Element A: Lay the groundwork and address gaps



## Element B: Preparatory elements



## Element C: Implementation strategies



## Element D: Reporting, monitoring and review





## NAP – SDG iFrame

Promoting coherence between adaptation and the SDGs, Sendai Framework and other relevant frameworks



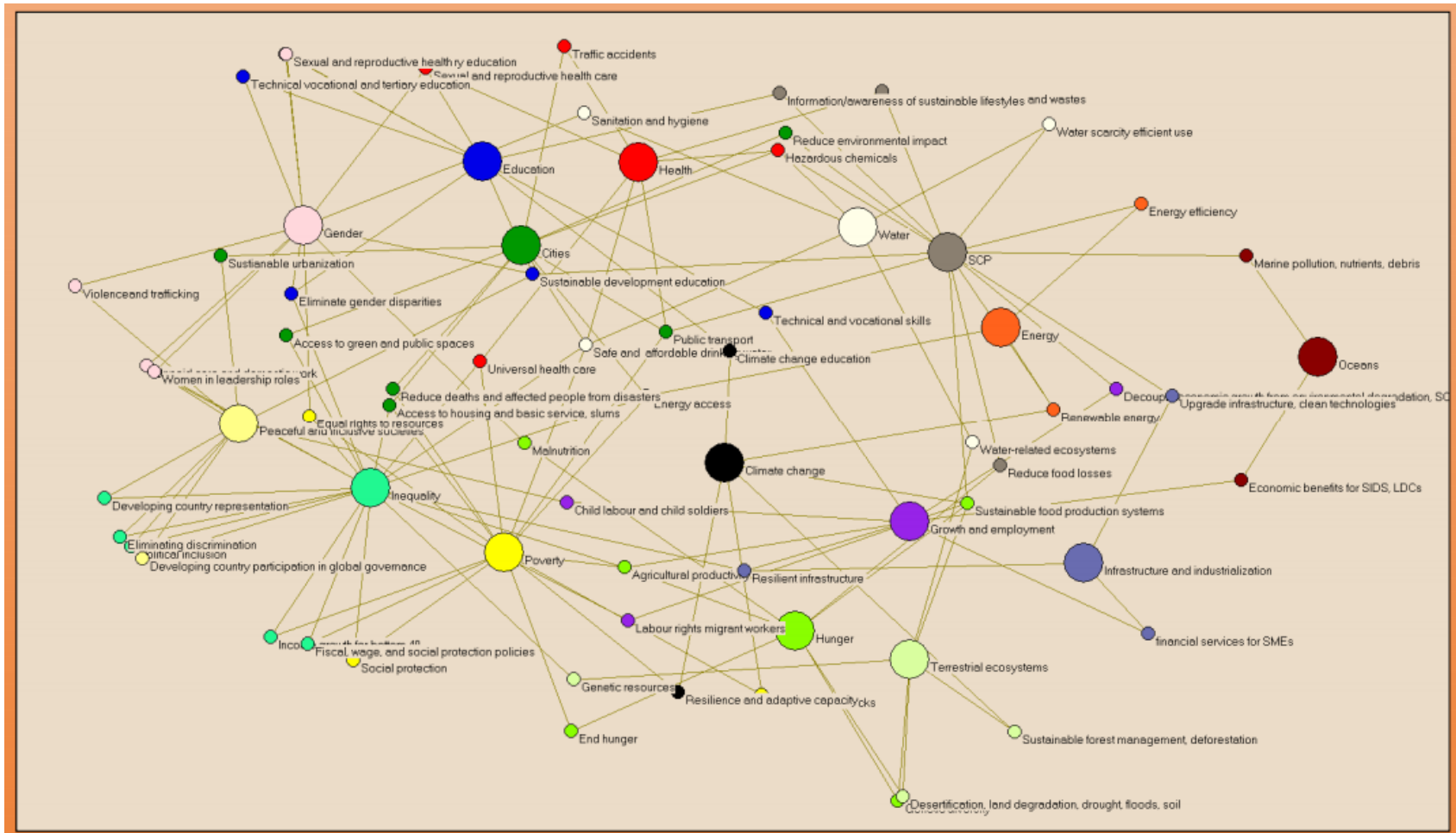


# SUSTAINABLE DEVELOPMENT GOALS

<b>1</b> NO POVERTY 	<b>2</b> ZERO HUNGER 	<b>3</b> GOOD HEALTH AND WELL-BEING 	<b>4</b> QUALITY EDUCATION 	<b>5</b> GENDER EQUALITY 	<b>6</b> CLEAN WATER AND SANITATION 
<b>7</b> AFFORDABLE AND CLEAN ENERGY 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE 	<b>10</b> REDUCED INEQUALITIES 	<b>11</b> SUSTAINABLE CITIES AND COMMUNITIES 	<b>12</b> RESPONSIBLE CONSUMPTION AND PRODUCTION 
<b>13</b> CLIMATE ACTION 	<b>14</b> LIFE BELOW WATER 	<b>15</b> LIFE ON LAND 	<b>16</b> PEACE, JUSTICE AND STRONG INSTITUTIONS 	<b>17</b> PARTNERSHIPS FOR THE GOALS 	 <b>SUSTAINABLE DEVELOPMENT GOALS</b>



# SDGs as a linked system of goals and targets



Source: David Le Blanc, "Towards integration at last? The SDGs as a Network of Targets", Rio+20 Working Paper 4



## Some observations and motivations ...

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- ❑ Adaptation is specific to a system, the system can be local, national, regional or global
- ❑ Climate-resilient development helps us connect the national development process to adaptation and all its forms in terms of impacts, exposure, climate drivers and hazards, vulnerability, risk etc
- ❑ Adaptation covers both the transformational actions needed to address fundamental shifts in climate and also the climatic extremes that lead to disasters – providing the overlap with DRR



## Adaptation planning ....

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- ❑ There are multiple entry points:
  - ❑ Climate hazards
  - ❑ Sectors
  - ❑ Geographic scope: community, city, basin, state, country, region, even global
  - ❑ Development themes – Food, Energy, Water securities, etc
- ❑ Can add SDG, Sendai elements, urban agenda, etc to the mix



# Identifying systems for assessment: a demo using Food Security



## Case example: Systems for Canada's food production (1/3)



### A summary of potential climate change effects on food production in Canada

- 1) **Crop productivity** depends strongly and directly on seasonal weather for heat, light and water. Locations for particular crops will also change.
- 2) **Pollinators** would face shorter, less harsh winters but may be affected by increased pest and disease activity, different food sources and changes in the timing of flowering.
- 3) **Animal production** will be affected by changes in crop production, water availability and heating and cooling requirements.
- 4) Changes in water supply and precipitation patterns will affect **farm operations** (e.g. need for drainage or irrigation). Water quality will also be affected (e.g. increased flushing of contaminants into waterways due to heavy rainfall).



## Case example: Canada's food production (2/3)



### A summary of potential climate change effects on food production in Canada

- 5. Food processing** may be challenged by reduced or variable water availability. Food and feed storage will need to deal with increased heat, and in some places, increased storage capacity may be required to allow for increased frequency and duration of transportation interruptions.
- 6. Fish stocks** will respond to changes in water temperatures, water chemistry, food supply, algal blooms, runoff and ocean currents. Reorganizations of lake/ocean ecosystems are likely, with resultant impacts on all types of fisheries.
- 7. Pests, diseases and invasive species** could become more virulent and diverse.







## Characterizing each development theme

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- Define each 'theme' in terms of its essential function(s), structure, knowledge base, boundary, relationships with other systems, applicable risk/vuln framework, and later, collection of main adaptation solutions/options
- Lets consider examples for food security and water for a city/district



## Food Security Example

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Consider the Food Security model developed by CCAFs within a systems dynamics modeling software package called *Simile*

Component models are easy to build and can be nested and interlinked to represent multiple scales or interactions across systems/sectors. The software takes care of all coding for the simulation model



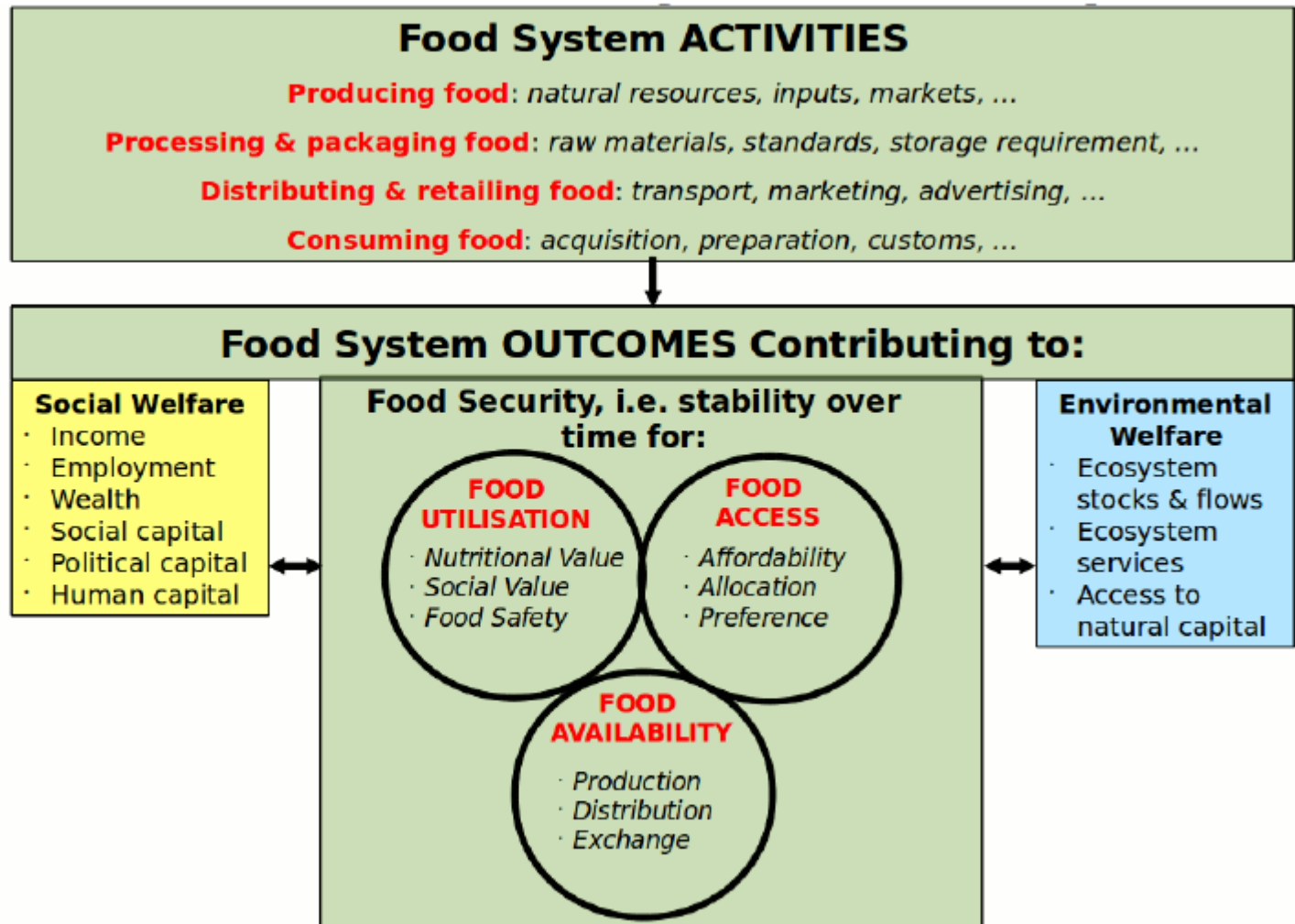
CGIAR Research Program on  
Climate Change, Agriculture and Food Security (CCAFS)  
Extended System Dynamics modelling of the  
impacts of food system drivers on food security,  
livelihoods and the environment

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21 December 2010

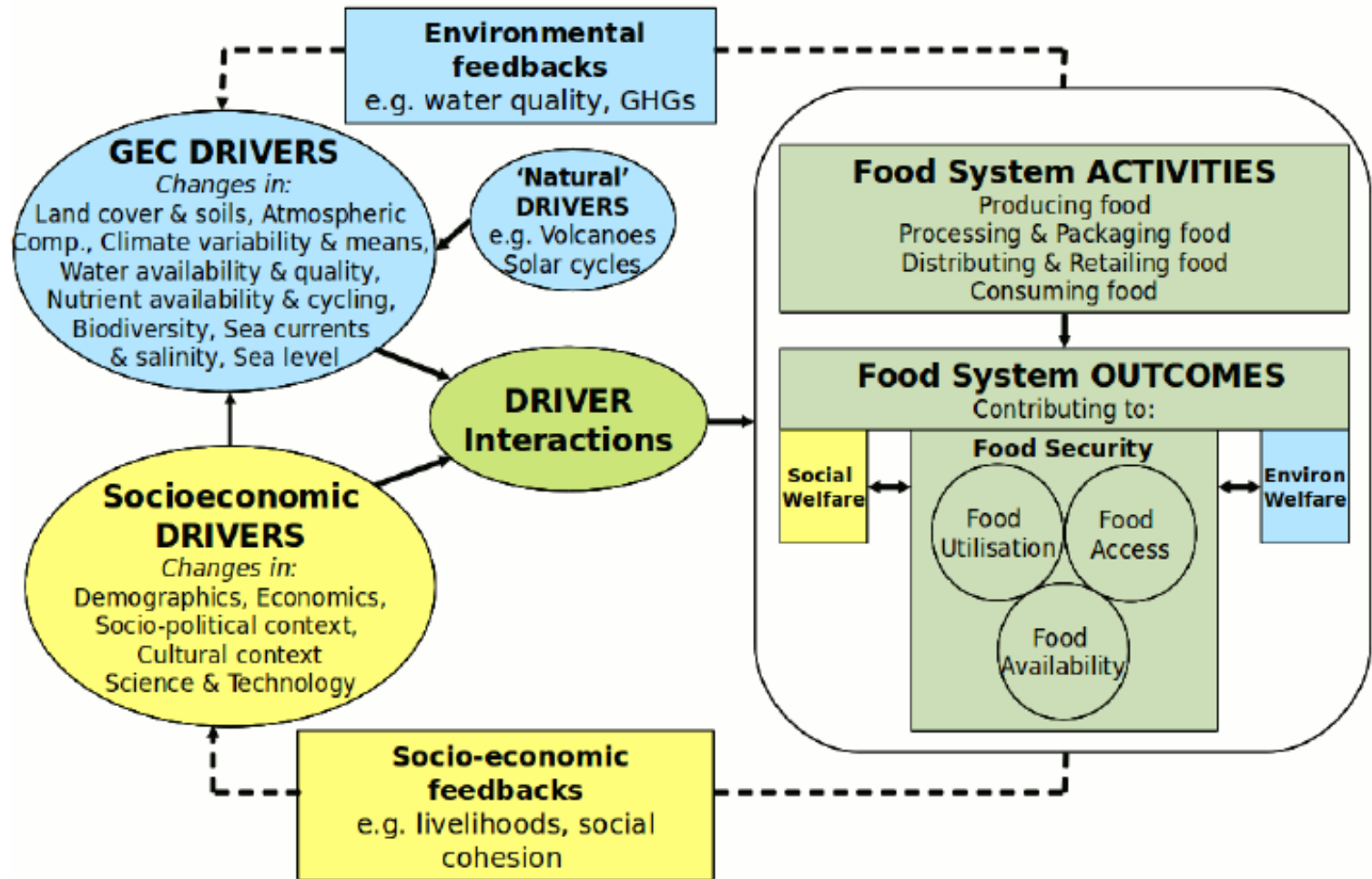
Robert Muetzelfeldt





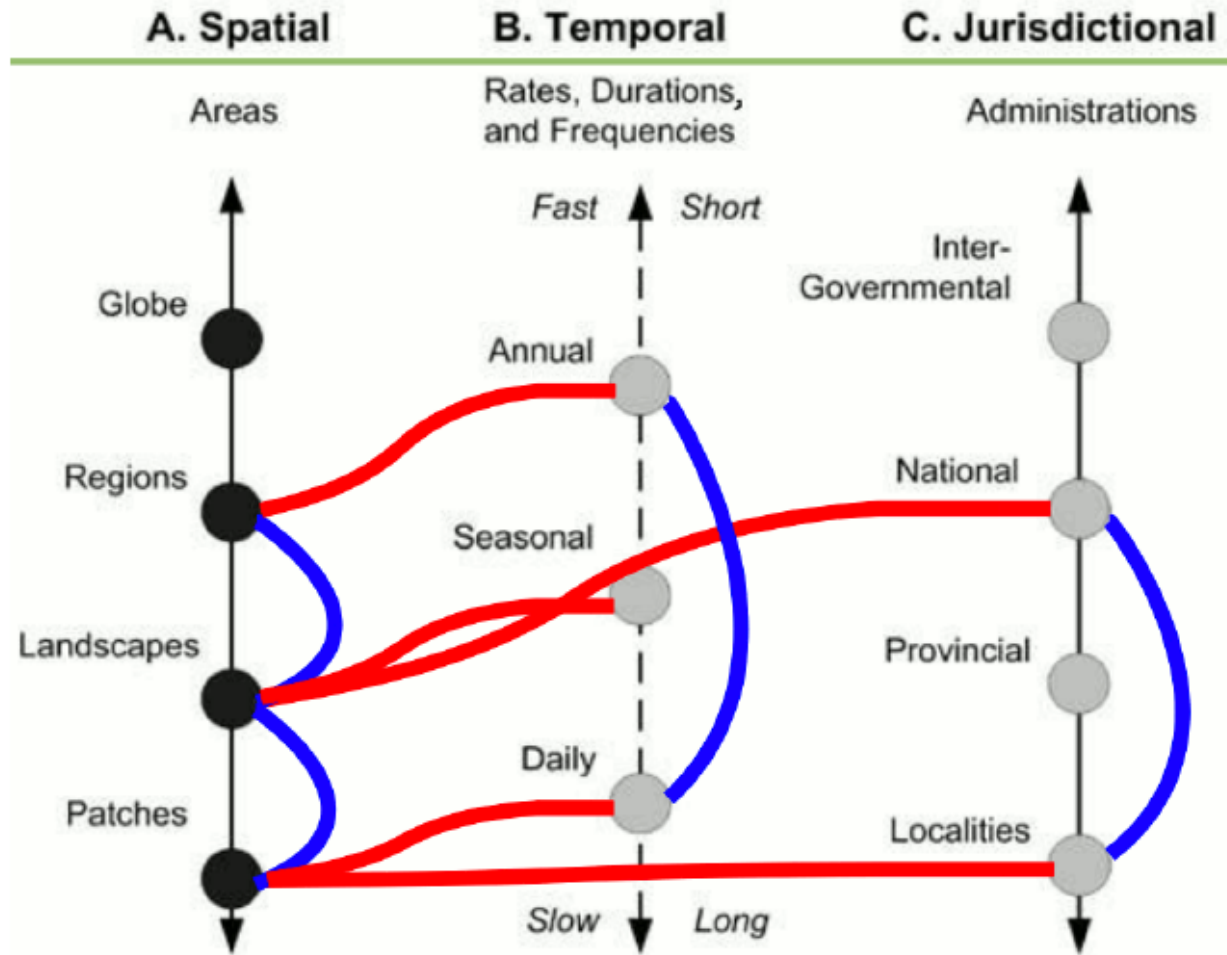
**Fig. 4.** The main Food System Concept diagram (from Ericksen, 2009).





**Fig. 5.** The Food System concept diagram, with the addition of drivers and feedbacks (from Ericksen, 2009).





**Fig. 22.** Multiple scales, multiple levels within each scale. Within-scale interactions are shown in blue, and between-scale interactions in red. Derived from Ingram (2009).

## Adaptation Strategy/Solution and options for specific actions

Theme	System	Description (essential function or service)	Description of the Baseline	Needs to achieve SDGs over baseline	Climate Risk	Key vulnerability/risk assessment	Adaptation strategies/Solution	Adaptation Actions by scale				
								Local	National	Regional/Transboundary	Global/supporting science	
Agriculture and Food Security	Crop production (subsistence, small scale)	Provide primary source of food for rural inhabitants, as well as source of income and livelihood through sale of part of the produce	Rain-fed production, yield < 2T/ha; heavy post-harvest losses; traditional seed/hybrid seed based on cost	Inputs (fertilizer, improved seed), water management/harvesting, etc to double production by 2030	Increasing dry spells/drought; shifting growing seasons and patterns of rainfall; floods and waterlogging; increased pest and disease	Risk of huge yield losses and crop failure/destruction	1. Manage choice of species to grow	Choose crop to grow for given location and physical assets (type, seed, etc)	1. Develop well-tested options for suitable species and provide extension services to farmers	Considerations of supply and demand and effect on commodity prices at the regional level (market analysis)	1. Global research on choice of species for different zones (species matching research), provenance matching, etc	
									2. Support research on potential shifts of species to grow for subsistence and commercial purposes and with work with stakeholders/farmers to support decision making/tradeoff analysis and the shift (cultural, social, economic shifts, markets)			2. Develop incentives to promote good practice
									3. Develop incentives to promote good practice			
							2. Manage the production process	Manage constraints to production (inputs - fertilizer, water management)	1. Support research on key species to develop suitable provenances/seed types	Shifts in sources for important commodities (supply and demand), market analysis to offer alternatives to local production	Global trade dynamics in important commodities: shifts in sources	
									2. Manage land use zoning and quotas/permits to ensure production of key crops		Develop incentives to promote good practice	
									3. Import and export as a tool to manage supply of main commodities			
									4. Develop incentives to promote good practice			



## Another simple example for a water supply system

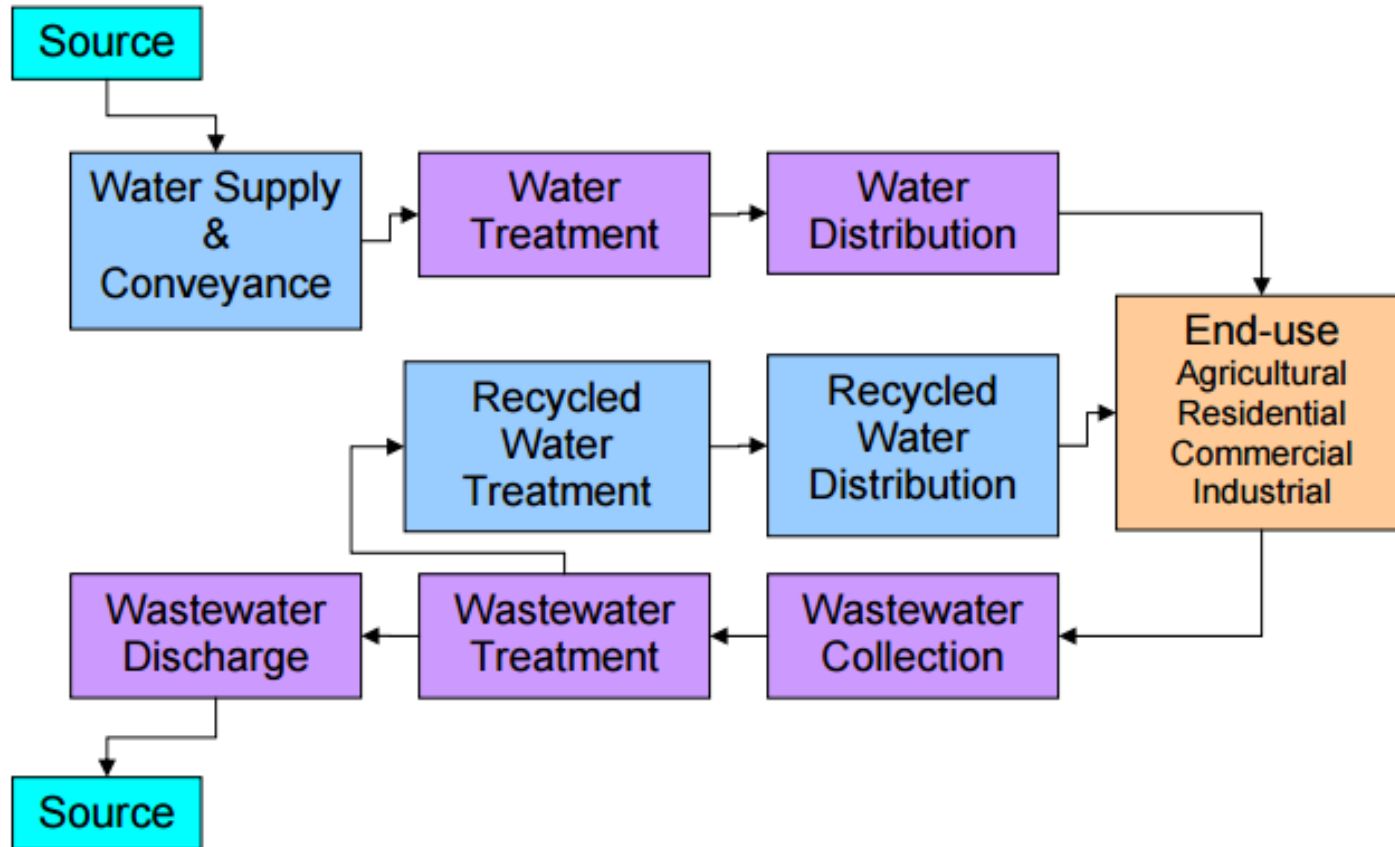
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- A water supply system can be simple – representing one source and supplying users in a small city, or in many cases, can be network of sources, often over great distances, with pipelines transporting water from a river, dam or lake into one or several treatment plants, then to various holding tanks for distribution to different parts of a city.
- In some states (e.g. California), the whole system is a connected network





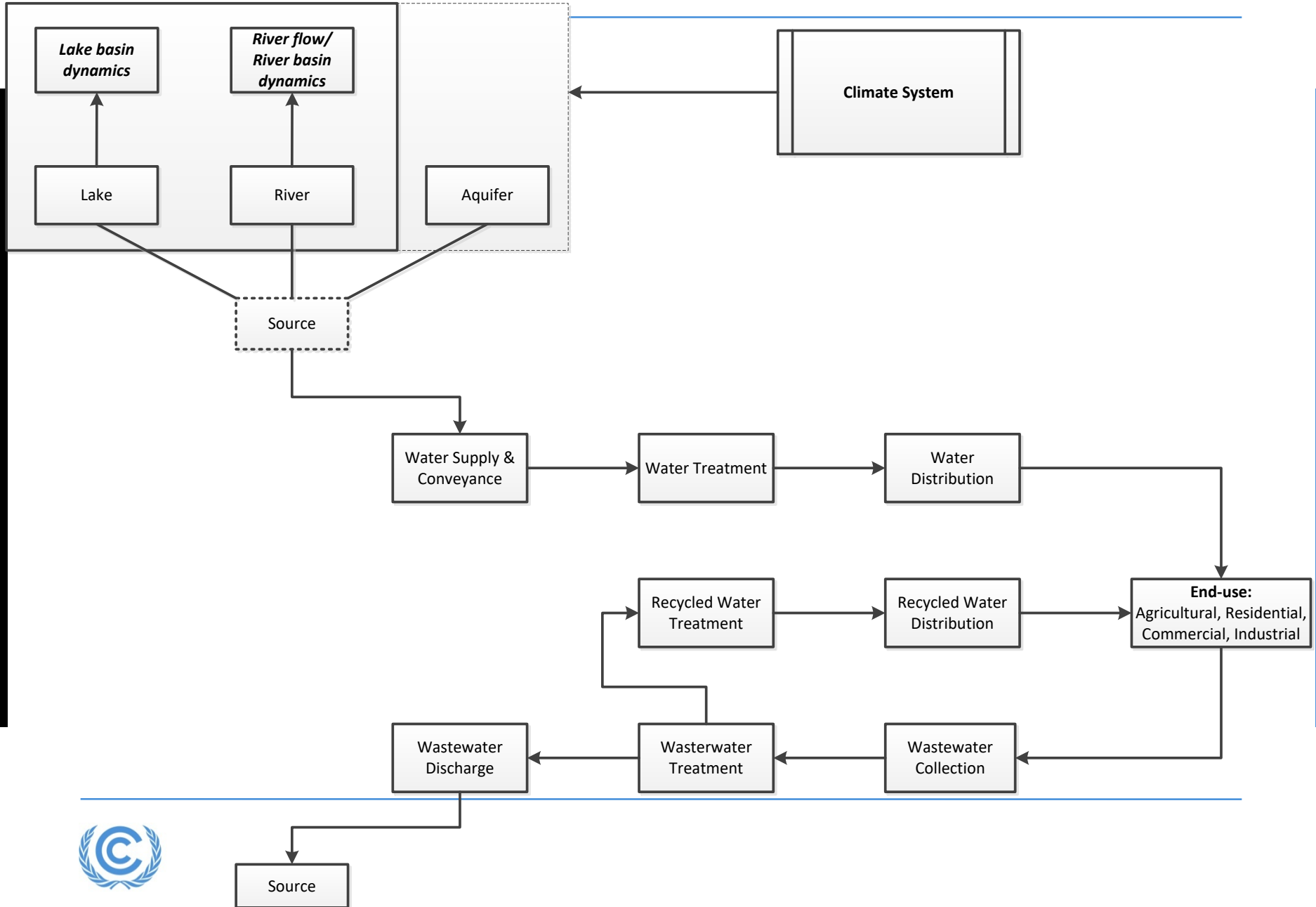
## Case example: California's Water Use system



Source: California's Water-Energy Relationship, Final Staff Report, November 2005



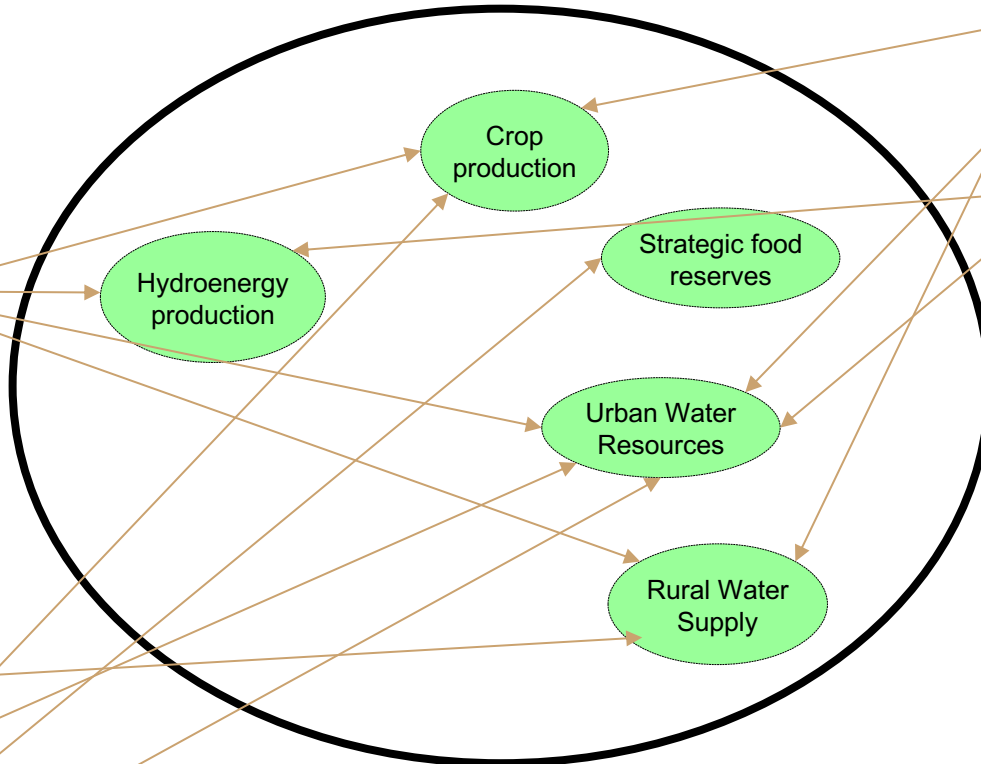
# Linking the water system to broader sources and the climate system



# NAP integrating framework (iFrame)

## Climate hazards

- Drought/aridity



## Spatial units

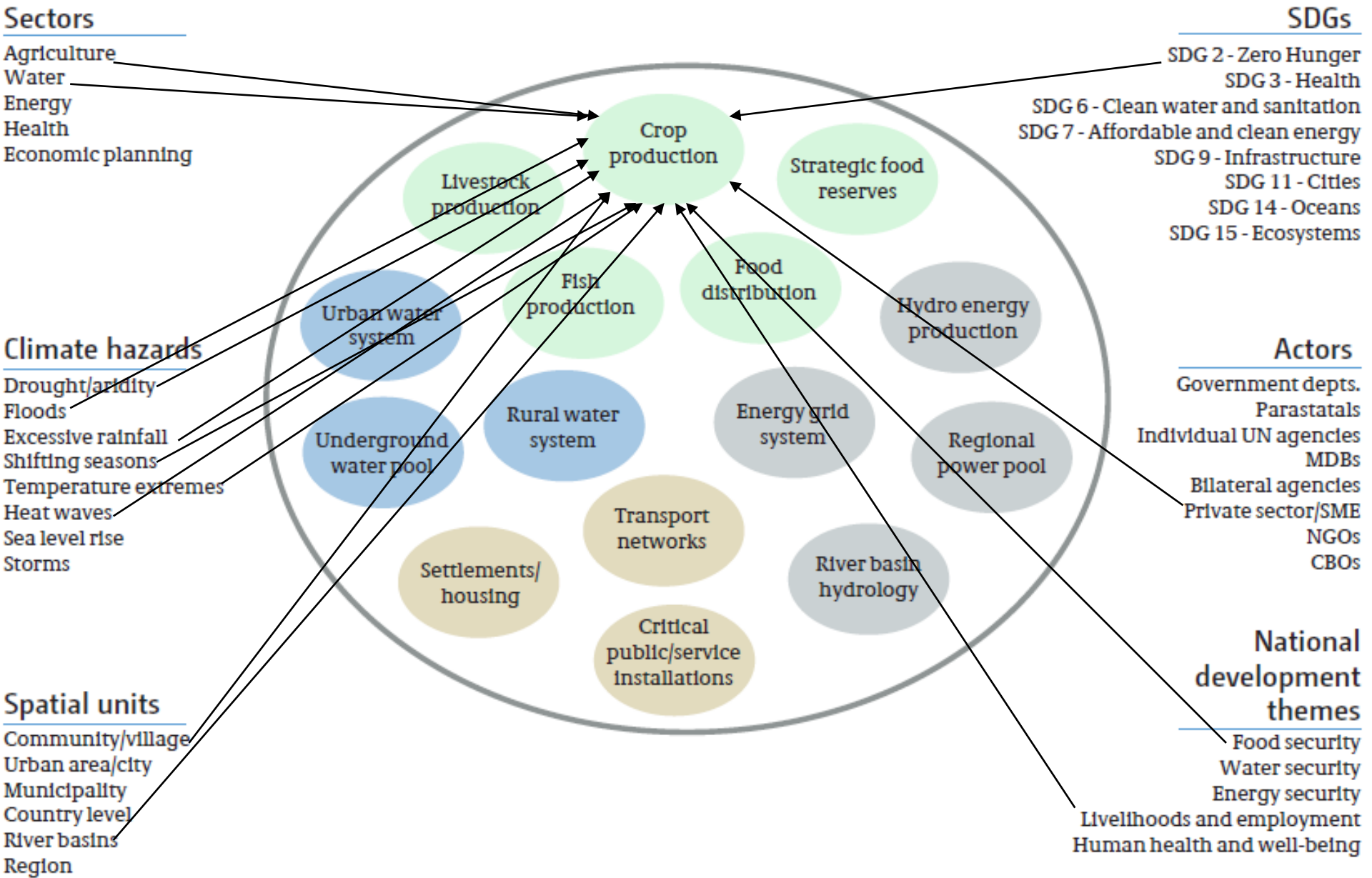
- Community/village
- Urban area/city
- Municipality
- Country level
- River basins
- Region

## SDGs

- SDG 2 – Zero hunger and sanitation
- SDG 6 – Clean water and energy
- SDG 7 – Affordable and clean energy
- SDG 11 – Cities



# Integrative Framework for NAPs and SDGs (NAP-SDG iFrame)



### Sectors

- Agriculture
- Water
- Energy
- Health
- Economic planning

### Actors

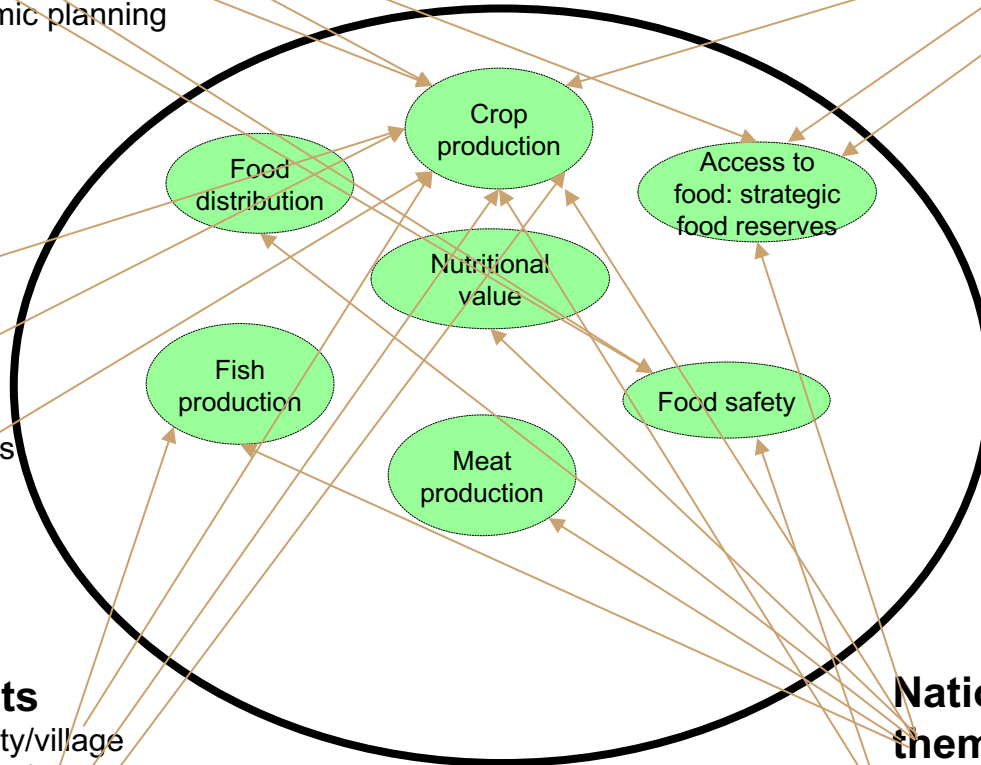
- Government depts.
- Parastatals
- Individual UN agencies
- MDBs
- Bilateral agencies
- Private sector/SME
- NGOs
- CBOs

### Climate hazards

- Drought/aridity
- Floods
- Excessive rainfall
- Shifting seasons
- Temperature extremes
- Heat waves
- SLR
- Storms

### Spatial units

- Community/village
- Urban area/city
- Municipality
- Country level
- River basins
- Region



### National development themes

- Food security
- Water security
- Energy security
- Livelihoods and employment
- Human health and well-being, etc.



# NAP-SDG iFrame

## Sectors

- Agriculture
- Water
- Energy
- Health
- Economic planning
- etc

## SDGs

- SDG 2 – Zero hunger
  - SDG 3 – Health
- SDG 6 – Clean water and sanitation
- SDG 7 – Affordable and clean energy
- SDG 9 – Infrastructure
  - SDG 11 – Cities
  - SDG 14 – Oceans
  - SDG 15 - Ecosystems

## Climate hazards

- Drought/aridity
- Floods
- Excessive rainfall
- Shifting seasons
- Temperature extremes
- Heat waves
- SLR
- Storms
- etc

## Actors

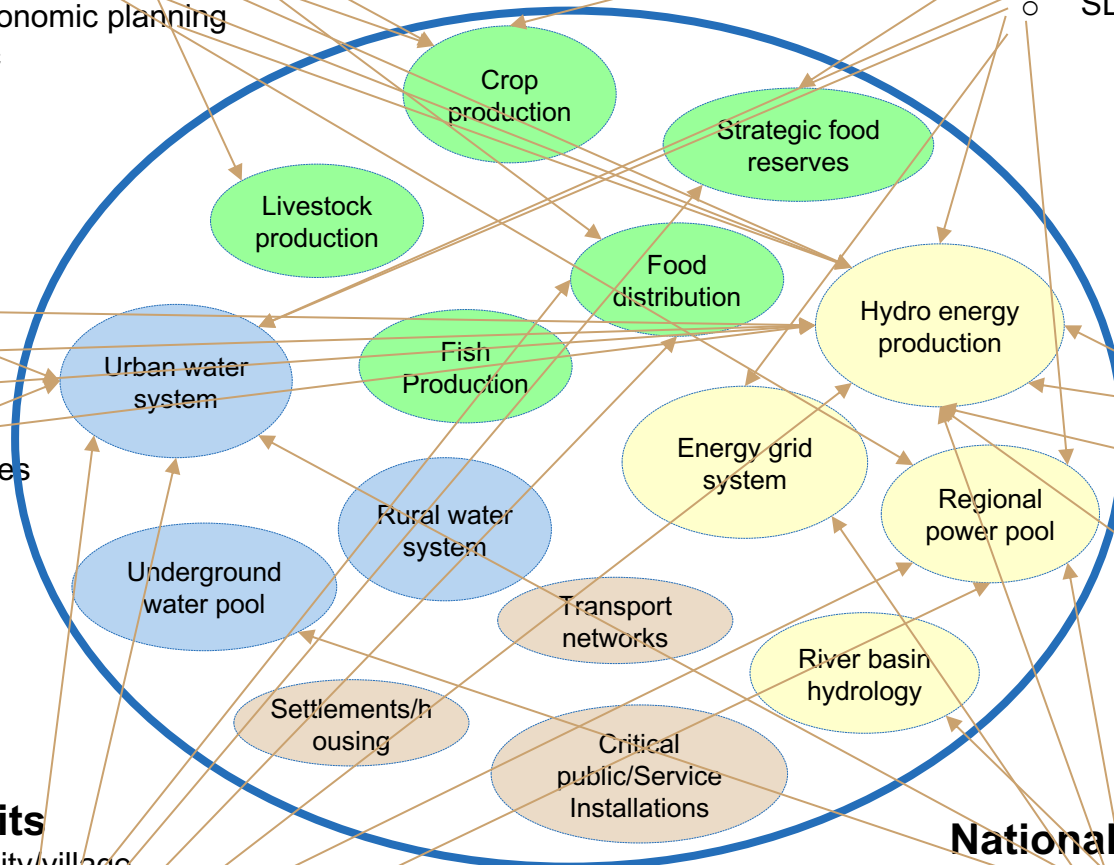
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## National development themes

- Food security
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- Energy security
- Livelihoods and employment
- Human health and well-being, etc.

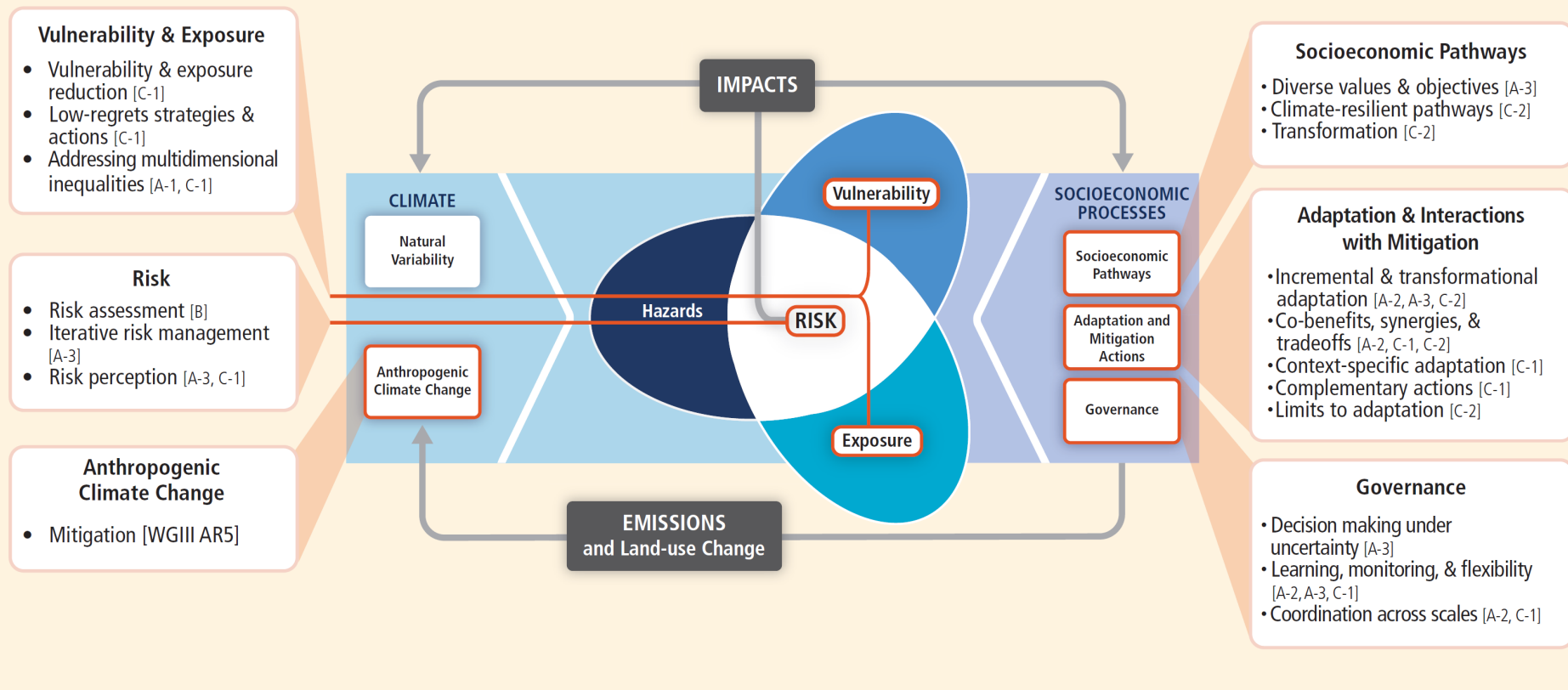


## Applying the systems during assessment, planning and implementation

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- ❑ By focusing on the systems, we avoid usual trappings of specific actors, sectoral ministries, or specific admin levels
- ❑ For a given country, can identify a small number of systems that determine development (and its vulnerability to climate change), covering economic, social and environment spheres
- ❑ Each system has a community of science and practice
- ❑ Systems can be simple or composite, and informs nexus and trade-off analyses
- ❑ Indicators are easily defined for these specific systems and can be aggregated to the national level as necessary

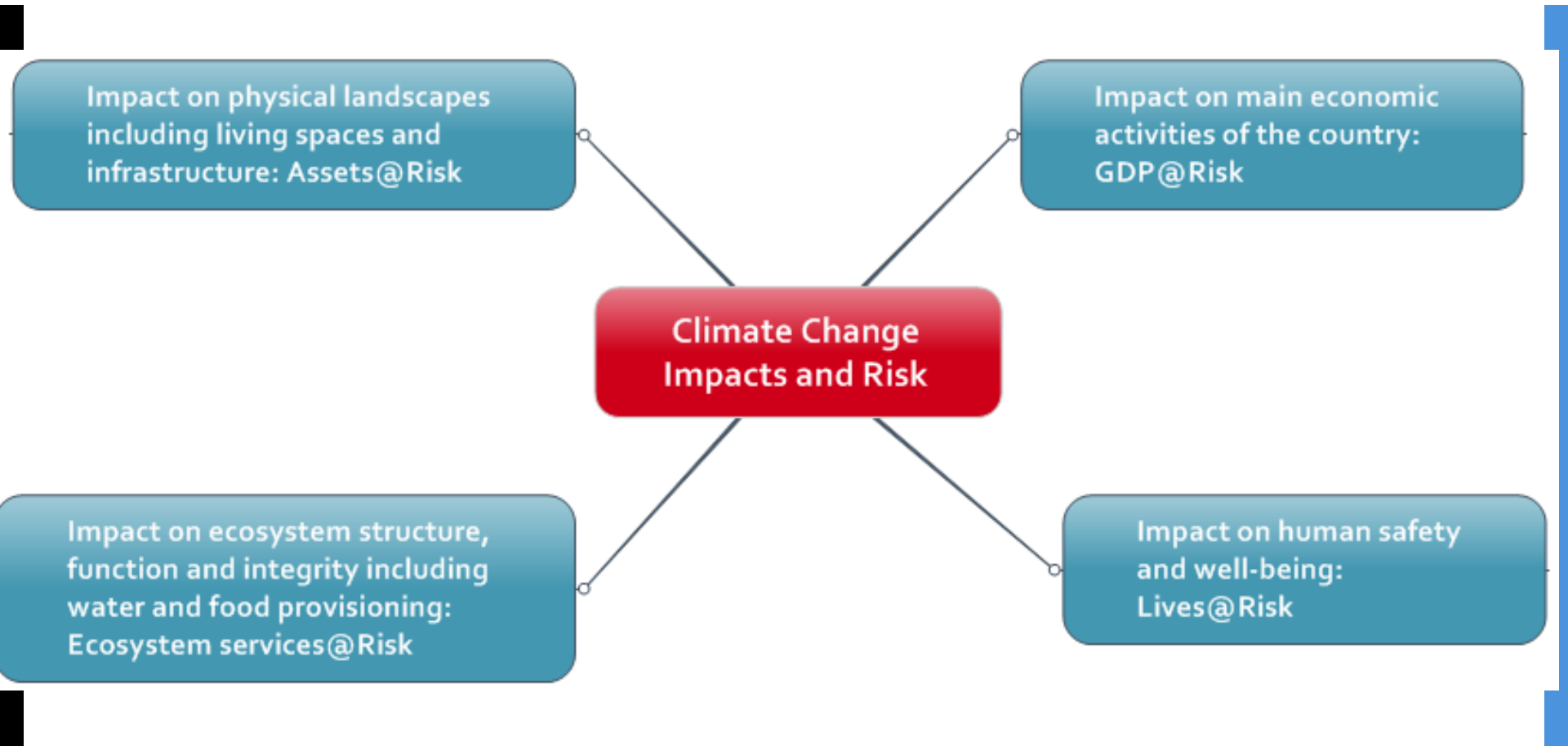




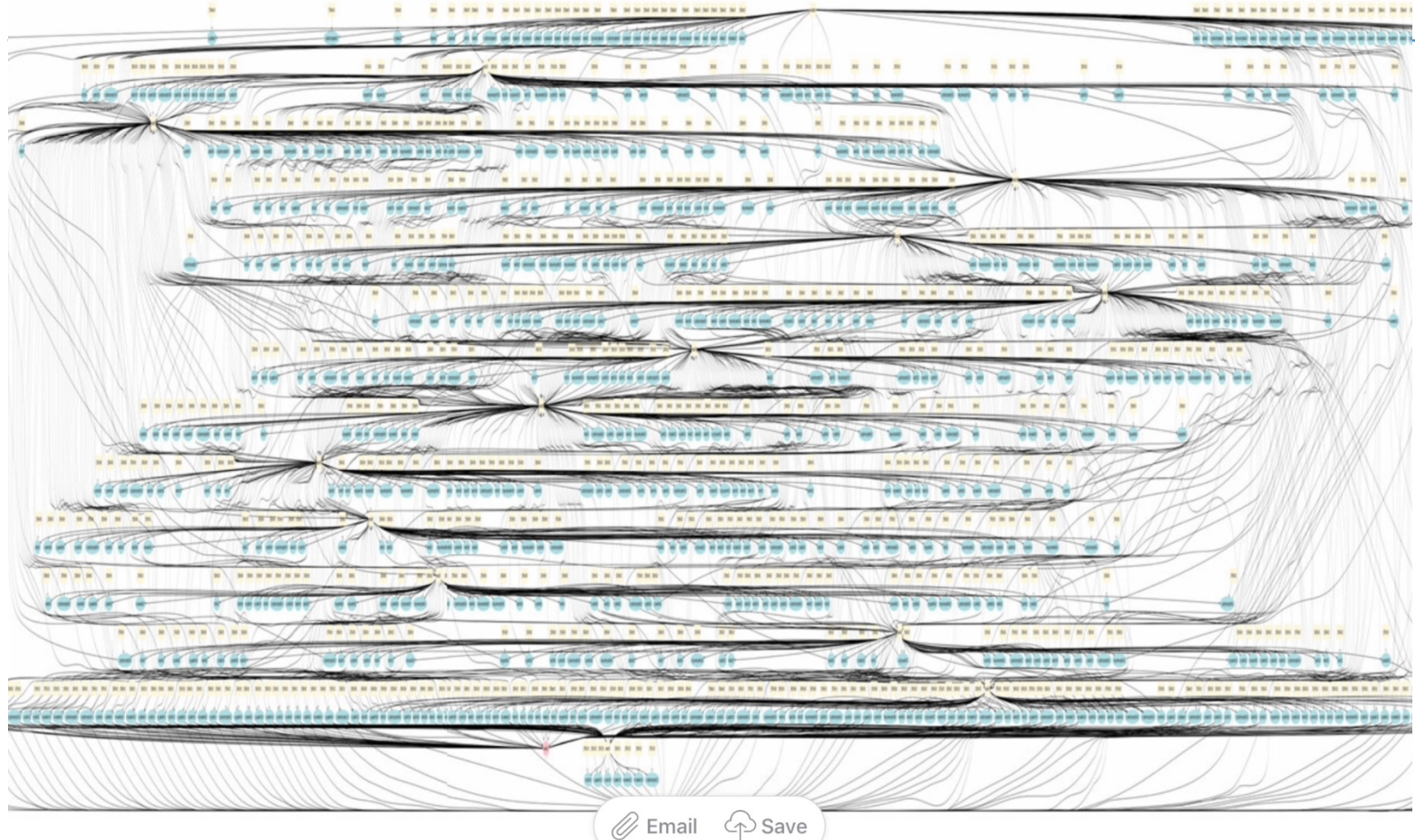
**Figure TS.12 |** The solution space. Core concepts of the WGII AR5, illustrating overlapping entry points and approaches, as well as key considerations, in managing risks related to climate change, as assessed in the report and presented throughout this summary. Bracketed references indicate sections of the summary with corresponding assessment findings.







Source: Steven Noel (Jan 2004, George Mason Univ)



Explanatory note: A given country is composed of numerous processes and systems, such as supply chains, activities of different actors, all at different levels and scales ... indicators capture aggregated information from selected processes, at appropriate nodes, to represent the overall state of what is being measured. Next page shows an example from the world risk index, and the information from different nodes/processes. This is essentially how different indices are developed



# WorldRisk Index ...

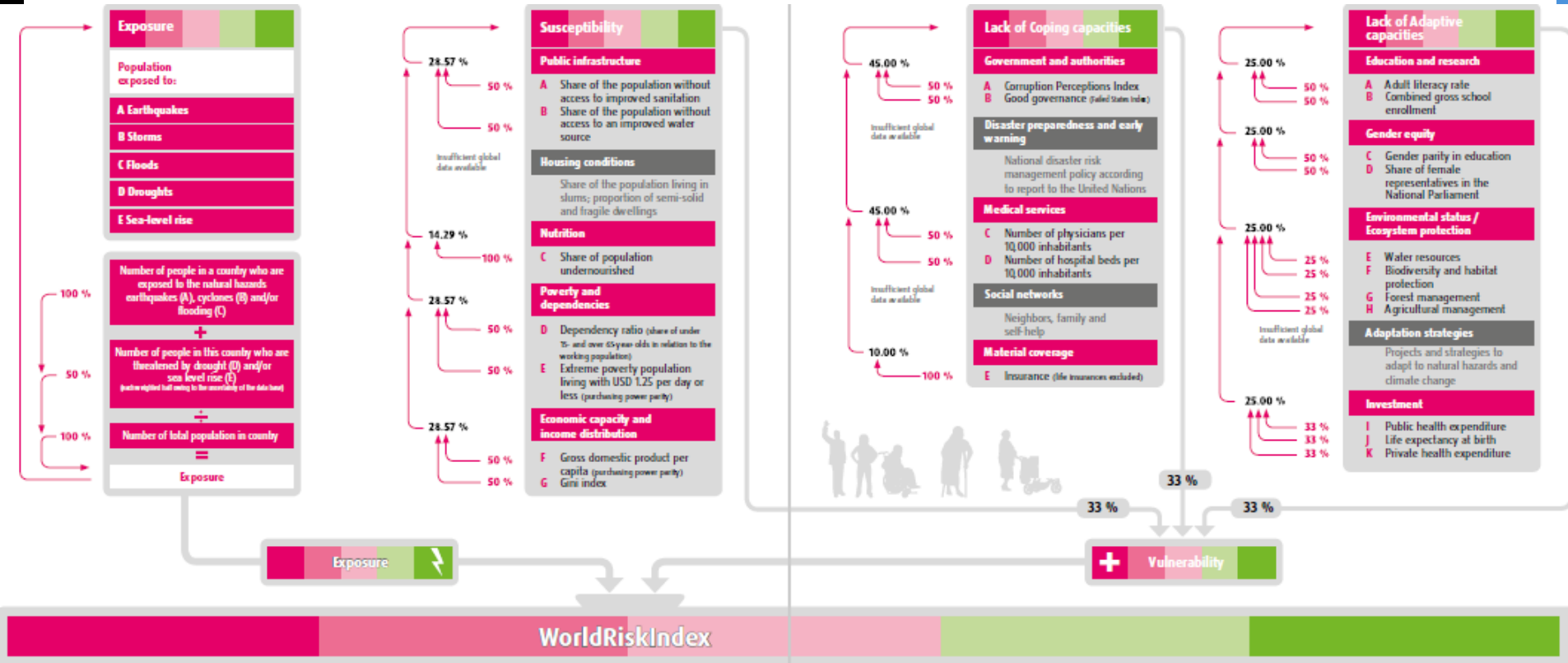
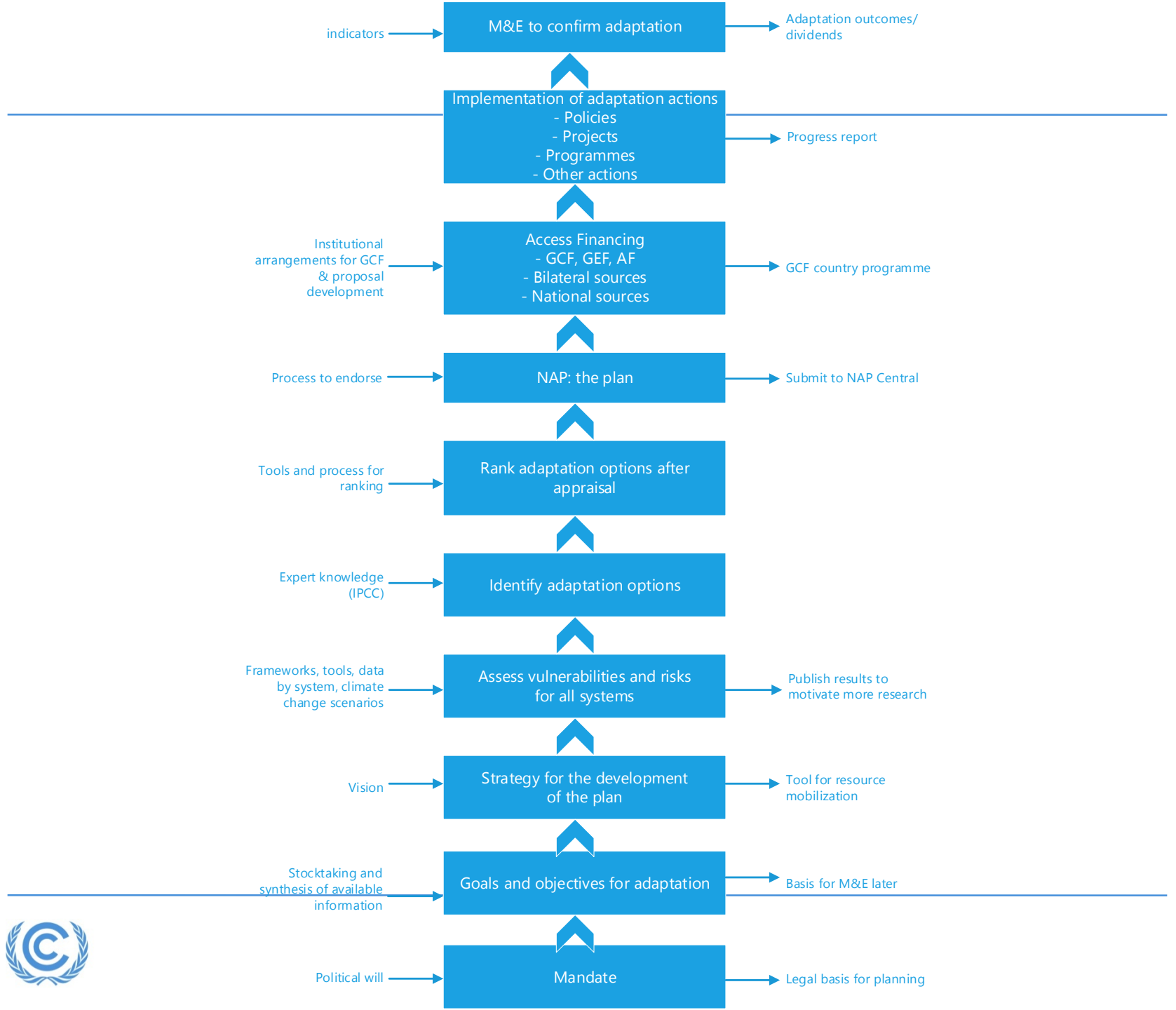


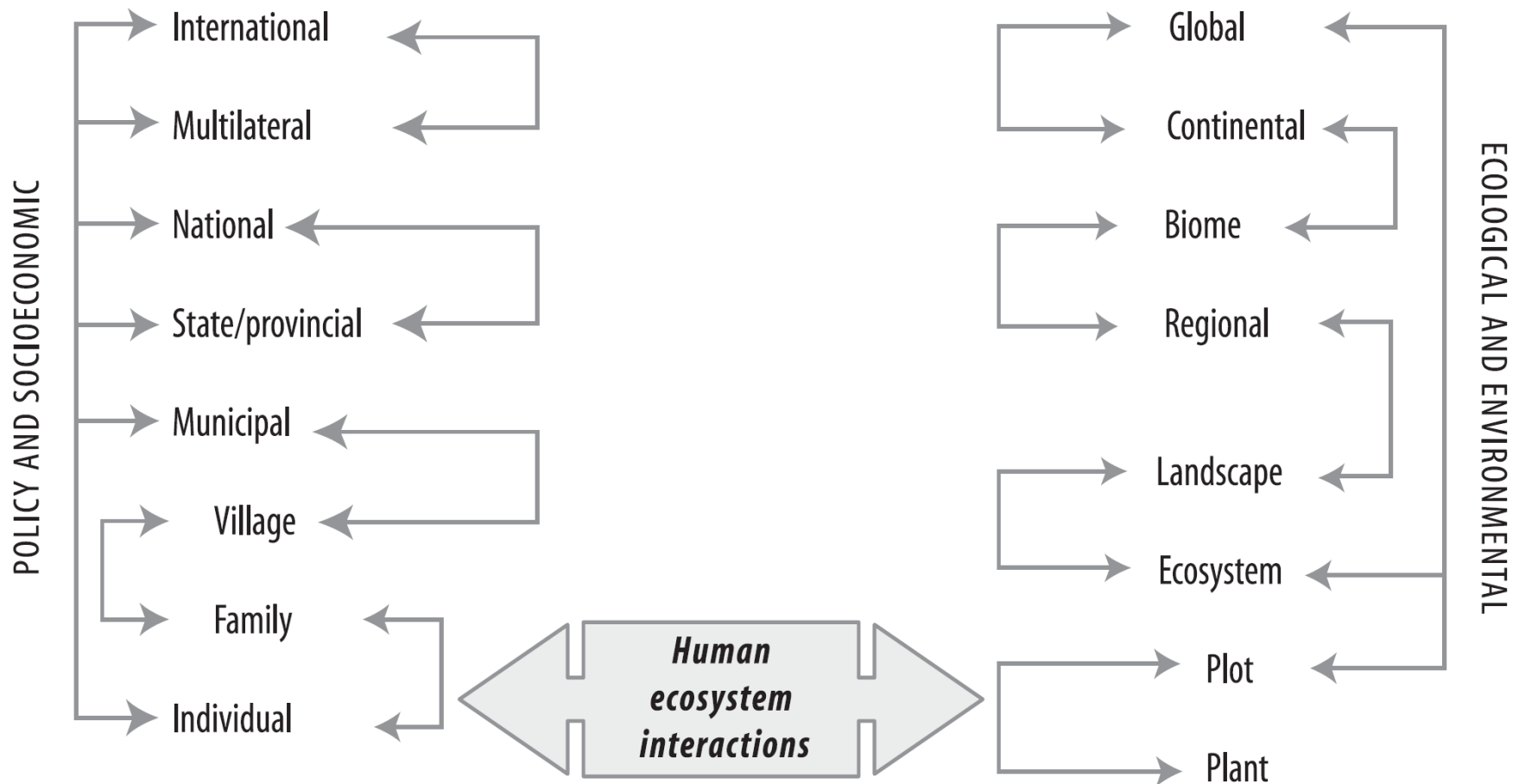
Figure 4: Calculation of the WorldRiskIndex (from WorldRiskReport 2016)





## FIGURE 5.3 Overview of Some Commonly Used Institutional Levels and Ecological Scales

Levels are arranged on a shared vertical axis representing spatial extent. The arrows represent key influences. Direct interactions mostly take place at the local scale, but governance occurs at many scales.



## The NAP

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- ❑ Why compile the NAP?
    - ❑ Serve to communicate adaptation priorities and ambitions for the country, covering all relevant levels and scales
    - ❑ Serve as a strategic investment plan for the country for adaptation showing policies, projects and programmes to be implemented, directed at the GCF as well as other sources of financing
    - ❑ Serve to document the process of formulating the NAP – how both objectives addressed and how the guiding principles incorporated
    - ❑ Serve as the basis for assessing progress in adaptation by providing the plan against which to measure progress
    - ❑ Serve to inform reporting and other submissions to the UNFCCC and the PA including the NDC
- 



### **1. Vision, mission and objective of the NAP**

### **2. National circumstances**

- a. The national development context: Economy, environment and social
- b. Key economic sectors and systems
- c. Key environmental issues and systems
- c. The social system
- d. Description of decision-making processes and how and why adaptation options are prioritized

### **3. Regulatory frameworks and institutional arrangements for adaptation**

- a. Governance structures
- b. Plans for integrating adaptation and NAPs in development planning and plans



- 4. Processes supporting the development of the National Adaptation Plan**
  - a. National roadmap and framework
  - b. Guiding principles (science, ITK, gender, transparency and participation, etc.)
  - c. Identification of desirable and available information
  - d. Resource mobilization for the process
  - e. Multi stakeholder consultations
  
- 5. Assessment of impacts, vulnerabilities and risks (short-, medium- and long term)**
  - a. Assessment framework for national adaptation
  - b. Synergy with SDGs, Sendai Framework for DRR, and other relevant regional and national frameworks
  - c. Baseline climate based on 1961-1990
  - d. Observed impacts
  - e. Future impacts, vulnerabilities and risks





### **6. National adaptation priorities and costs**

- a. Policies
- b. Projects and programmes
- c. Efforts to integrate the NAP and climate change into development planning

### **7. Climate adaptation investment strategy**

- a. Implementation and support needs
- b. Alignment with the GCF adaptation strategy
- c. National climate change adaptation programme
- d. Alignment with national strategies, GCF country programme
- e. Mobilization of other sources of finance

### **8. Reporting, monitoring and evaluation framework**

- a. Reporting on NAPs under the UNFCCC
- b. Link to the Adaptation Communication and/or the NDC
- c. Reporting and outreach at the national level



# United Nations Framework Convention on Climate Change

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# Reporting adaptation efforts to the UNFCCC

Reporting on progress on NAPs

Communicating adaptation priorities and ambition through NDCs

Communicating progress on adaptation through the adaptation communication

**NAP GSP Workshop**  
**Addis Ababa, 19 to 22 August 2019**



## Adaptation under the Paris Agreement (Article 7)

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### Global goal on adaptation

- Enhancing adaptive capacity
- Strengthening resilience
- Reducing vulnerability to climate change
  
- Sustainable development
- Global average temperature to well below 2°C

### Recognition of adaptation efforts of developing country Parties

- To also be considered under the global stocktake

### Adaptation communications

To include

- Priorities
- Implementation and support needs
- Plans and actions

### Link to disaster risk reduction

- Parties recognize that pursuing efforts towards 1.5°C would significantly reduce the risks and impacts of climate change

### Global stocktake

- To recognize adaptation efforts
- Enhance implementation of adaptation
- Review adequacy and effectiveness of adaptation and support
- Review progress in achieving the global goal on adaptation



- ❑ **Reports:** official communications to the UNFCCC/PA to report on required elements
    - ❑ Under Convention:
      - ❑ National Communications: GHG Inventories, vuln and adaptation
      - ❑ Biennial Update Reports
      - ❑ INDCs (pre-Paris)
    - ❑ Under the Paris Agreement
      - ❑ NDCs > national ambitions to mitigate + information on planned adaptation actions
      - ❑ Biennial Transparency Reports (from 2024)
- 
- ❑ Adaptation Communications (report on progress)



## ❑ Plans/Programmes of Action

- ❑ National Adaptation Programmes of Action > Use to access LDC Fund resources for urgent and immediate adaptation needs of LDCs
- ❑ National Adaptation Plans > design and Implement comprehensive medium-long-term adaptation actions. Adaptation basis for NDCs



# The NAP and the NDC

National Level Efforts: the NAP

