

# Protected Areas and Climate Change



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# Protected Areas and Climate Change Adaptation

- 1. Reminder: PAs are valuable!**
- 2. How does Climate Change impact PAs?**
- 3. What mandate does the CBD provide us?**
- 4. Can we manage the unavoidable?**
- 5. What should we do next?**

# 1. Protected Areas are valuable

## Outcomes of the World Parks Congress Durban 2003

### BENEFITS BEYOND BOUNDARIES

- Durban Plan of Action
- Message to the CBD COP7



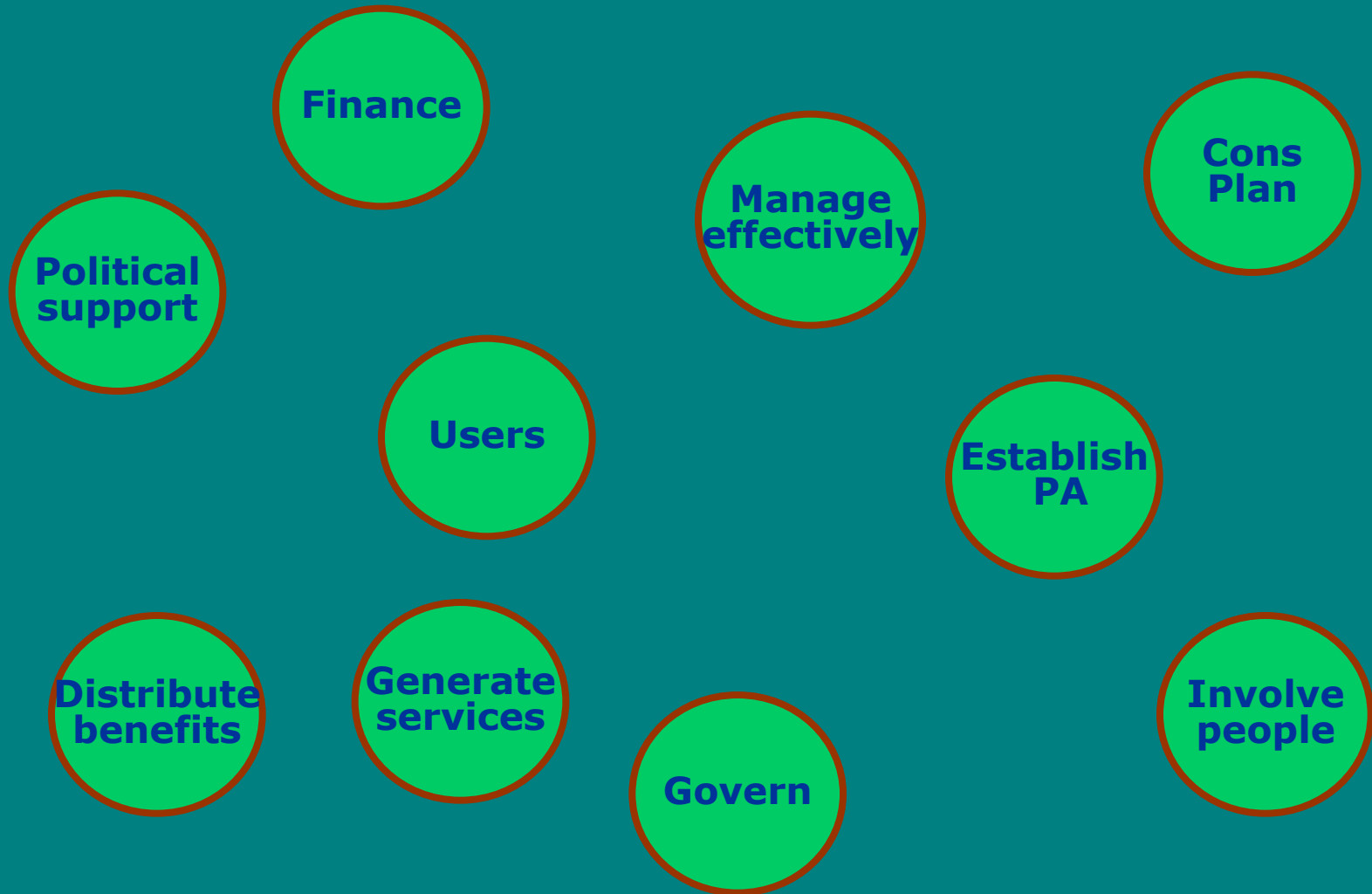
# THE PROGRAMME OF WORK ON PROTECTED AREAS:

A collection of  
4 elements,  
and 16 goals  
involving 92  
actions

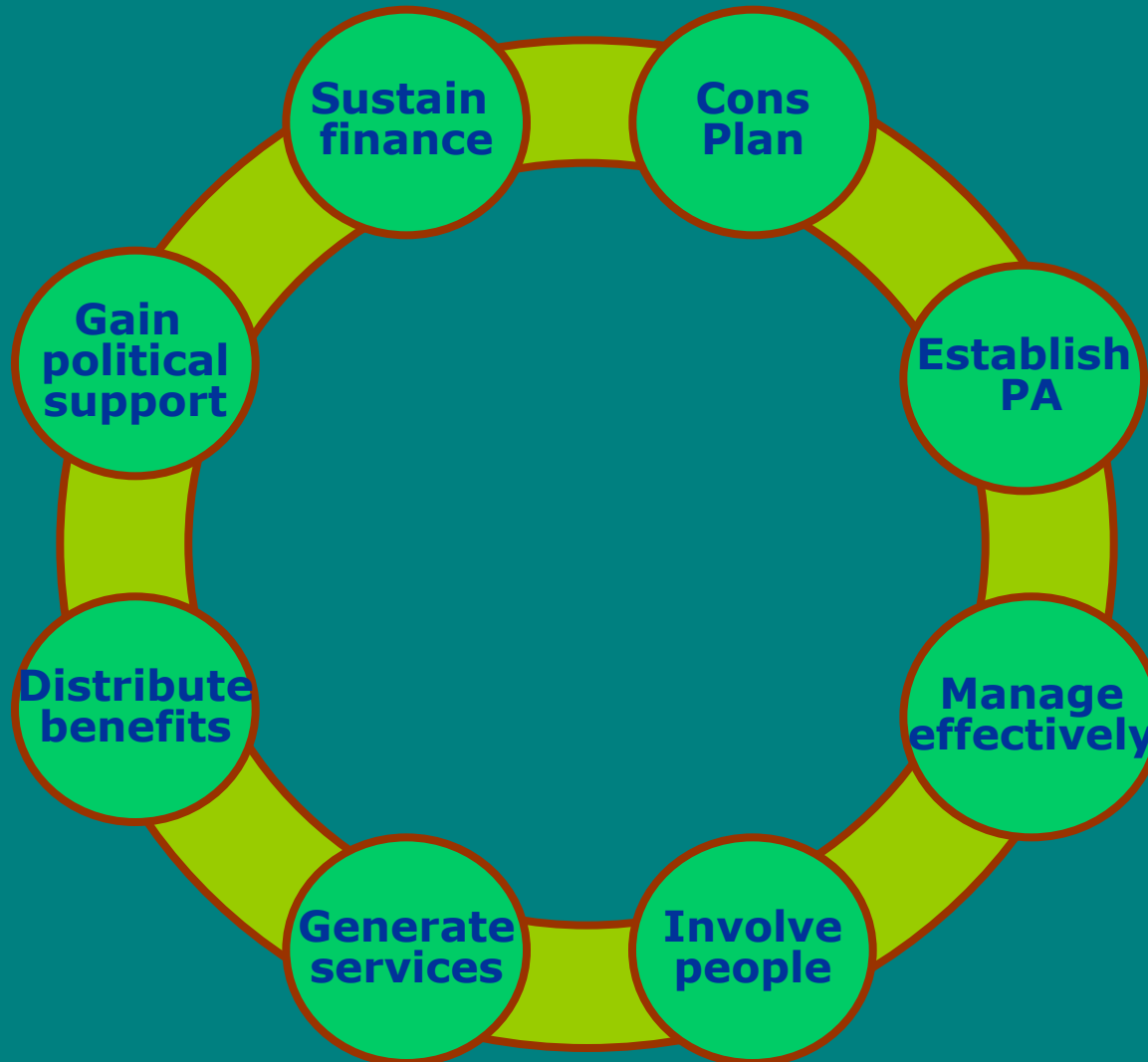


OVERALL THEME	PoWPA Actions
Assessing and improving the protected area network	
▪Ecological gaps	(1.1.1), (1.1.2), (1.1.3), (1.1.5),
▪Landscape and seascape integration	(1.2.1), (1.2.3), (1.2.4),(1.3.1)
▪Transboundary protected areas	(1.3.2), (1.3.3), (1.3.4), (3.1.11)
▪Restoration	(1.2.5), (1.5.3), (1.5.4), (1.5.5), (1.5.6)
Assessing and improving protected area management	
▪Management of threats	(1.4.3), (1.4.5), (1.5.1), (1.5.2)
▪Management planning	(1.4.2), (1.4.4)
▪Monitoring and adaptive management	(4.1.3), (4.3.1), (4.3.2), (4.3.3), (4.3.5)
▪Management effectiveness	(1.4.6), (4.2.1), (4.1.1), (4.2.2), (4.2.3), (4.2.4)
▪Capacity development	(3.2.1), (3.2.2), (3.2.3),
▪Participatory planning	(1.4.1), (2.1.5), (2.2.1), (2.2.2), (2.2.3), (2.2.5)
▪Communication and education	(3.5.1), (3.5.2), (3.5.3), (3.5.4), (3.5.5), (3.5.6)
Assessing & improving the protected area enabling environment	
▪Protected area system master planning	
▪Policy environment	(1.2.2), (2.2.4), (3.1.1), (3.1.3), (3.1.5), (3.1.6), (3.1.7), (3.1.8), (3.2.4)
▪Sustainable finance	(3.1.9), (3.1.10), (3.2.5), (3.4.1), (3.4.2), (3.4.3), (3.4.4), (3.4.6)
▪Protected area governance	(1.1.4), (1.1.7), (2.1.2), (2.1.3), (3.1.4)
▪Protected area benefits	(2.1.1), (2.1.4), (2.1.6), (3.1.2)

# Re-arranging the pieces



# A value chain for protected areas



# CBD PA Decision COP7

***Calls* on Parties and development agencies to integrate within their development strategies (such as country assistance strategies, poverty reduction strategies and national development strategies) protected area objectives and reflect the contributions of protected areas to sustainable development, as a means to achieve the Millennium Development Goals, in particular Goal 7 on environmental sustainability;**

## 2. Impacts of climate change

- dangerous floods and storms
- water stress
- decline in agricultural productivity and food security
- population displacement
- potential conflicts
- sea level rise threatens the existence of nations



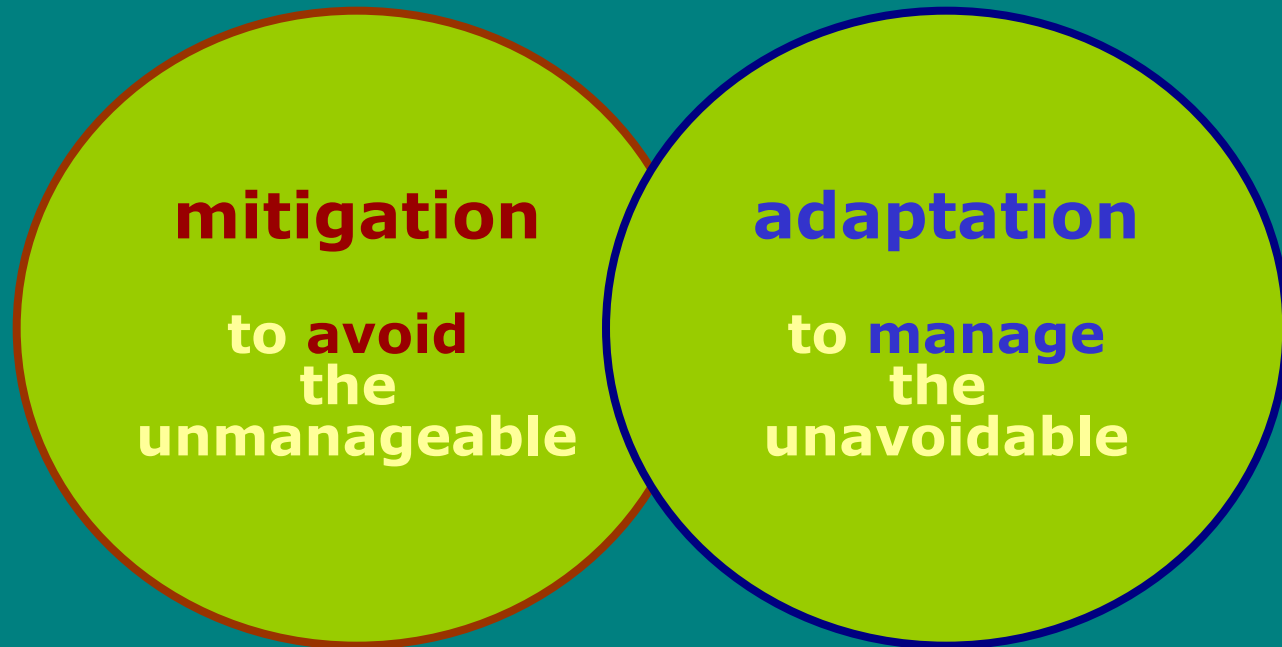
## 2. Impacts of climate change on PAs

- Changes in temperature and moisture/ seasons
- Affecting primary productivity of ecosystems
- Changes in species distributions, populations and assemblages
- Changes in intensity and frequency of fire
- Changes in distribution of alien invasive species
- Impacts on ecosystem services
- Impacts on peoples' livelihoods



# Responses to climate change

An effective response to climate change must combine both:



(World Bank: Draft Strategic Framework on Climate Change and Development)

### 3. What guidance is there from the CBD?



*There is **ONE** reference in the Programme of Work on PAs:*

#### *Suggested activities of the Parties*

- **1.4.5** Integrate climate change adaptation measures in protected area planning, management strategies, and in the design of protected area systems.

### 3. What guidance is there from the CBD?



**COP9 Decision IX/18: invites parties to:**

- 3. (h) Explore funding opportunities for protected area design, establishment and effective management in the context of efforts to address climate change**
- .....

### 3. What guidance is there from the CBD?

#### COP9 Decision IX/18:

6. *Urges* multilateral donors, non-governmental organizations and other funding organizations to support developing countries, least developed countries, small island developing States as well as countries with economies in transition by:

(e) Supporting projects that demonstrate the role that protected areas play in addressing climate change



### 3. What guidance is there from the CBD?

**COP9 Decision IX/18:**

**9. *Invites* the Global Environment Facility to:**

**(b) To consider support for proposals that demonstrate the role-protected areas play in addressing climate change;**



### 3. What guidance is there from the CBD?

#### COP9 Decision IX/18:

- **23. *Encourages* Parties and invites relevant organizations to enhance research and awareness of the role that protected areas and the connectivity of networks of protected areas play in addressing climate change;**



## 4. Can we manage the unavoidable?

### Adaptation in PROTECTED AREAS

- Revision of PA boundaries/refugia
- Prevention/control of alien invasions
- Revision of fire management plans
- Revision of sustainable harvesting plans
- Building capacity of managers



## 4. Can we manage the unavoidable?

### Adaptation in PA CORRIDORS:

- Development of PA corridors to include CC-related ecological gradients
- Use of all PA governance types, including state, private, indigenous and community conserved areas
- Review of social assessments to understand how neighbouring communities are affected by CC



## 4. Can we manage the unavoidable?

### Adaptation in PA SYSTEMS:

- Modelling of projected climate change
- Assessment of impacts on conservation targets
- Assessment of impacts on ecosystem services
- Review of conservation assessments
- Revision of projected area system design
- Consolidation of protected areas

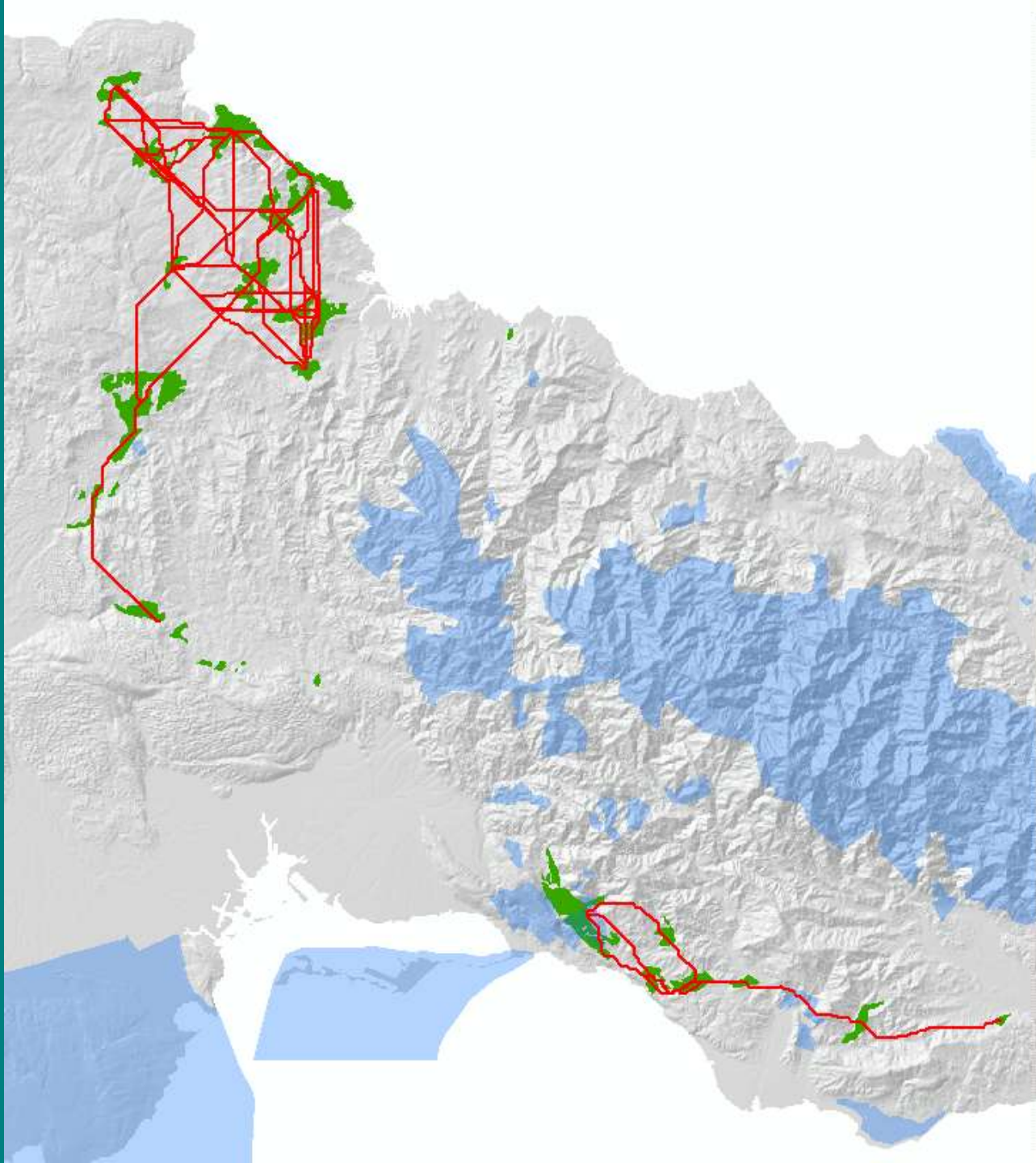


## 4. Can we manage the unavoidable?

### Adaptation in NATIONAL PLANS:

- Inclusion of PAs in Climate Change Action Plans
- Revision of land use plans
- Revision of coastal zone management plans
- biodiversity considerations in all sectoral plans
- Recognition of nature-based infrastructure as cost-effective adaptation measure





## Mexico's Parks & Protected Areas ~BENEFITS BEYOND BOUNDARIES~



Gulf of Mexico



### GULF OF CALIFORNIA

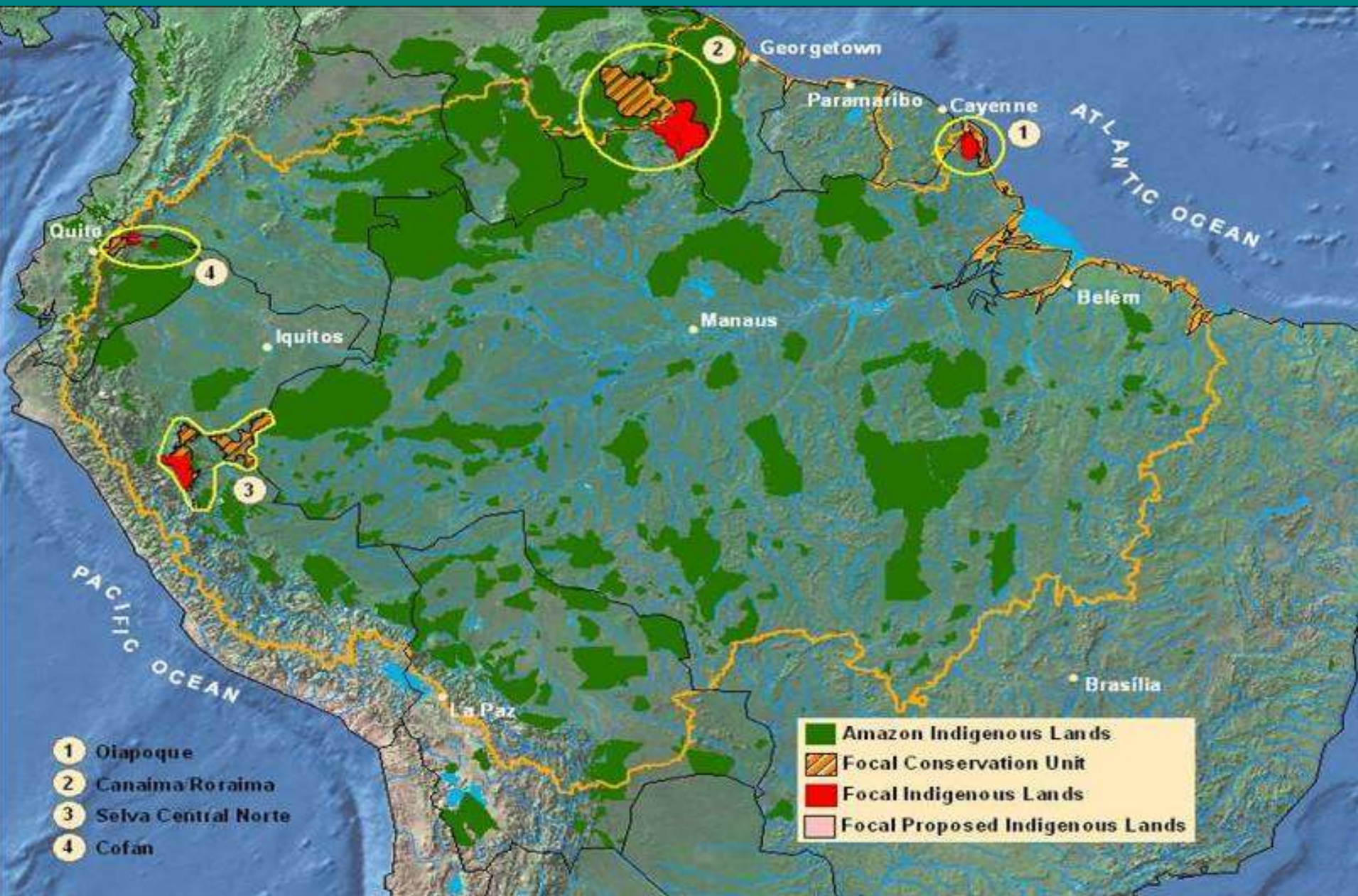
The waters of Mexico's Gulf of California teem with marine life that provide sustenance to communities far and wide. Fisheries in the Gulf account for more than 50% of the total volume and value of fish caught in the country. In addition, these waters draw more than 12 million visitors a year to the region and tourist dollars total almost 25% of each surrounding state's gross domestic product.

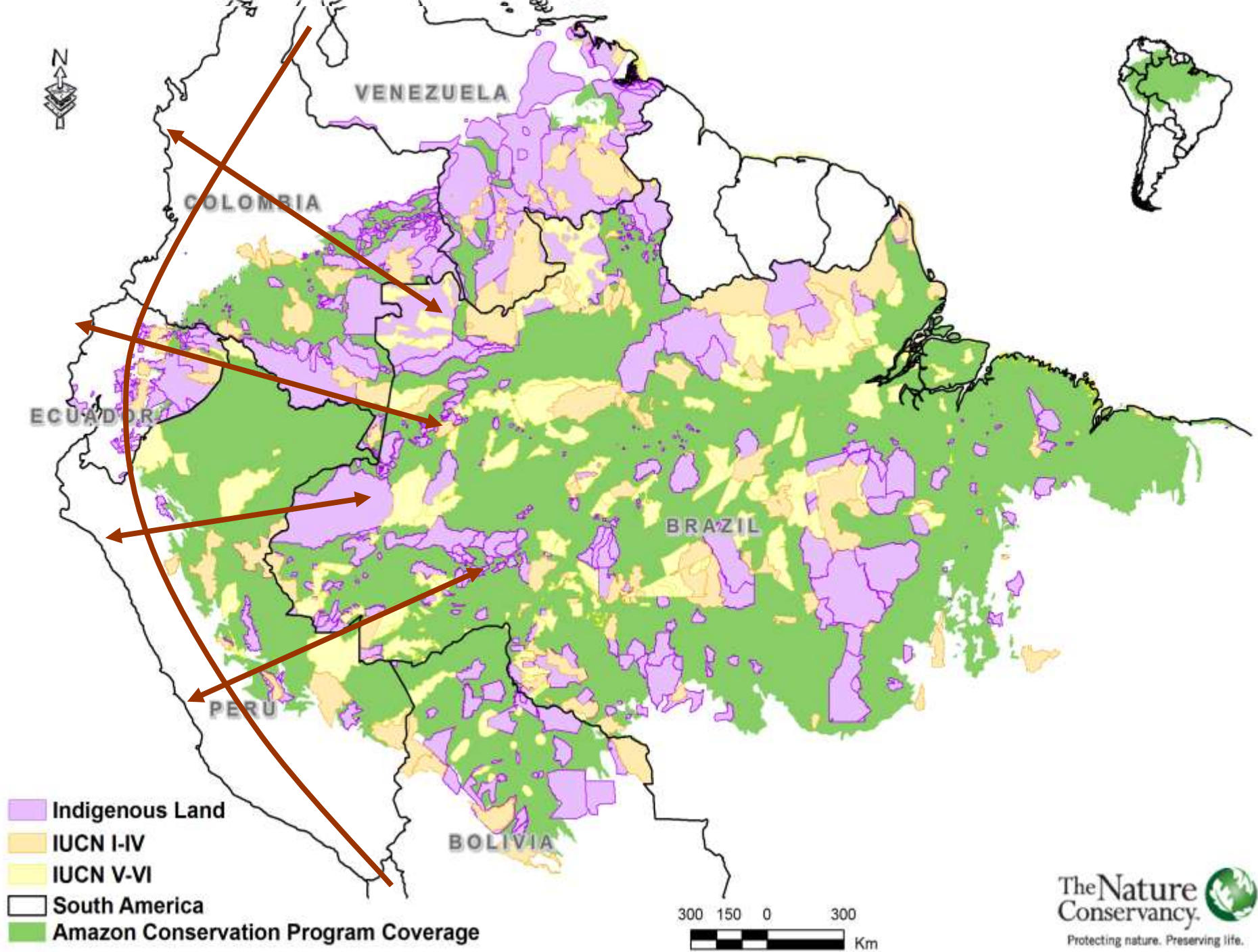
PACIFIC OCEAN

### SOUTHERN PACIFIC WATERSHEDS, CHIAPAS

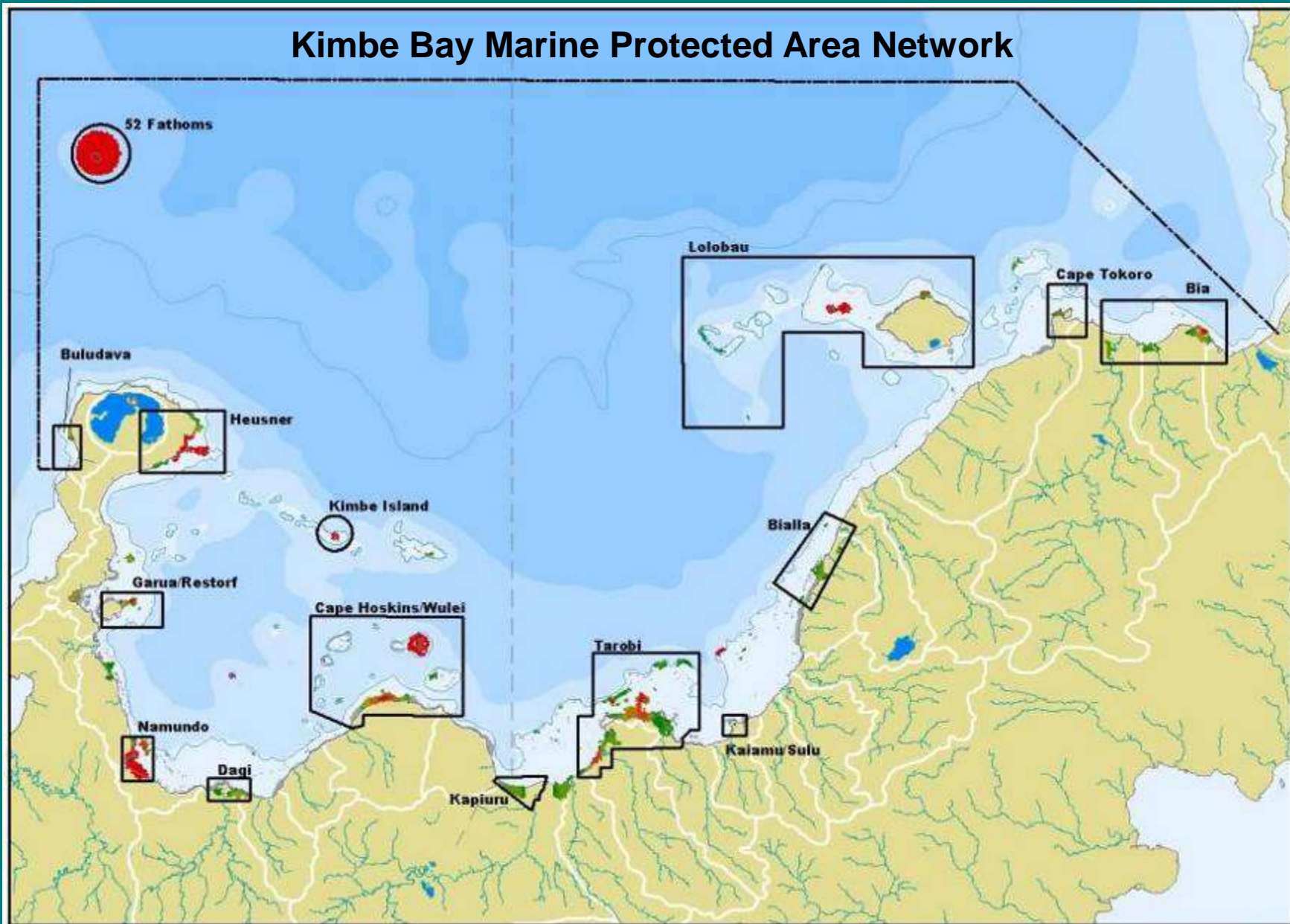
The cloud forests and fourteen rivers of Chiapas, Mexico's most biologically rich region, capture 10 percent of the country's rainfall and provide a wide range of services to people and nature alike. Three protected areas in the region help maintain the flow of these ecological services. These include: clean, reliable water for drinking, agricultural irrigation for 260,000 local residents; the source of 30 percent of Mexico's hydro-powered electricity—benefiting the country's population of more than 100 million; and protection of coastal wetlands and marine fisheries.

-  Protected areas as of 2005
-  Important Areas of Biological Diversity





## Kimbe Bay Marine Protected Area Network

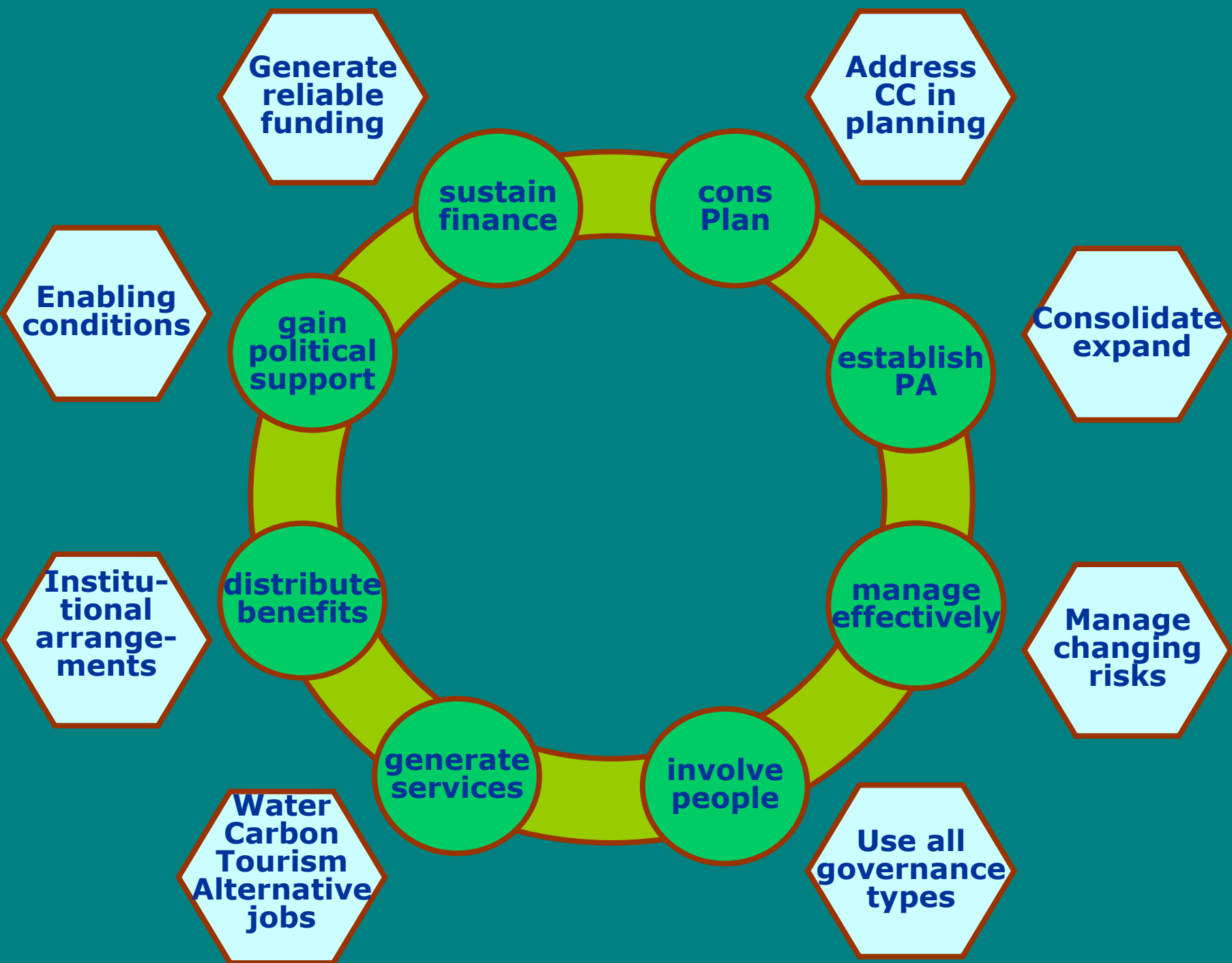


## **5. What should we do next?**

**Climate change represents the greatest risk to biodiversity we know**

**Protected areas represent the world's most significant investment for adapting to (and mitigating) climate change**





## 5. What should we do next?

ADAPTATION RESPONSE	PRACTICE	POLICY
<b>SCIENCE</b> Understanding impacts and developing tools		
<b>PLANNING and STRATEGY</b> Reviewing strategies and plans		
<b>SITE-BASED IMPLEMENTATION</b> Piloting and testing responses in situ		
<b>LEARNING and CAPACITY</b> Building understanding and capacity to respond		

**We should not....**



**MAN-MADE CLIMATE CHANGE**

It really isn't happening

**Muchas Gracias!**