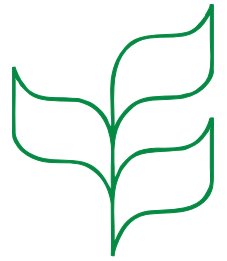




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# **Biodiversity and Climate Change : considerations for development planning**

**United Nations Convention on  
Biological Diversity**



## **Section 1: Impacts of Climate change on biodiversity**

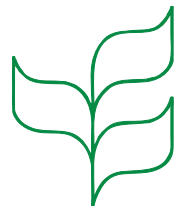
## **Section 2: Impacts of biodiversity on climate change**

## **Section 3: Climate change, biodiversity and development planning**

## **Section 4: Response of the Convention on Biological Diversity**



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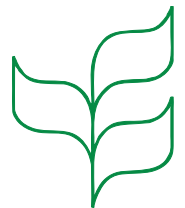


## Section 1: Impacts of Climate Change on Biodiversity

- **Millennium Ecosystem Assessment** – climate change is the second greatest threat to biodiversity
  - Climate change is **changing species** through:
    - shifting habitat
    - changing life cycles
    - the development of new physical traits
  - Climate change is reducing the ability of **indigenous and local communities** to sustain traditional, biodiversity-based livelihoods

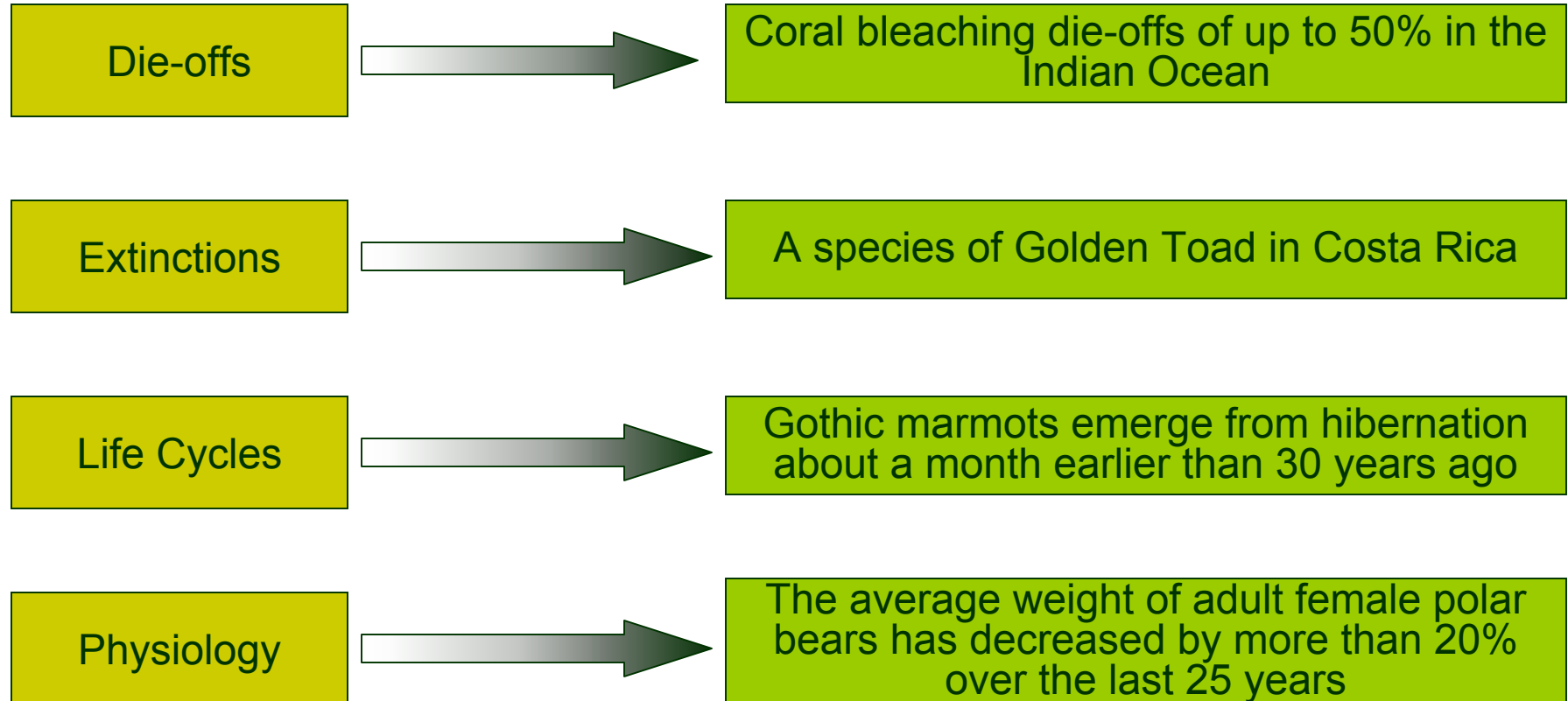


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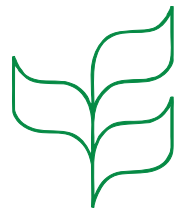


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## Section 1: Impacts of Climate Change on Biodiversity



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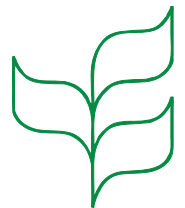
## Section 2: Impacts of Biodiversity on Climate Change

Biodiversity can contribute to climate change adaptation and mitigation through:

- **Reducing emissions** from deforestation and other forms of habitat destruction
- Providing a '**safety net**' of genetic resources for adaptation
- Providing **protection** (bioshields) against the negative impacts of climate change such as flooding, coastal erosion, etc.



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## Section 2: Impacts of Biodiversity on Climate Change

Reducing Emissions



Forests account for more than half of the global stock of carbon stored in terrestrial vegetation and soil

Biodiversity Safety Net



Land races of many crops are providing genetic material for the development of drought-resistant crop varieties

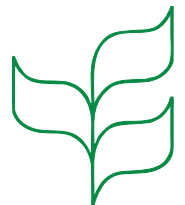
Bioshields



The value of mangroves as coastal protection has been estimated at \$25 – \$50 per hectare



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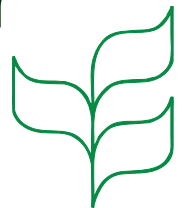
## Section 3: Climate Change, Biodiversity Loss and Development Planning

Biodiversity loss linked to climate change can counteract poverty alleviation measures by:

- Negatively impacting **natural resource based livelihoods** such as tourism, herding, the exploitation of non-timber forest products, hunting, gathering and fishing
- Increasing **vulnerability** to external shocks such as drought, floods, and pests
  - Increasing **migration** in response to lost ecosystem services including food, fuel, water



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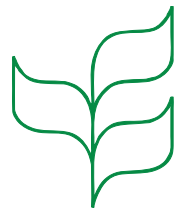


## Section 3: Climate Change, Biodiversity Loss and Development Planning

- Escalating **food insecurity**. Most studies agree that a 2.5 °C temperature increase will lead to an increase in world food prices
- **Traditional knowledge and culture** which cannot be sustained within changing climate conditions
- **Indigenous and local communities** subjected to 'environmental genocide'



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## Section 3: Climate Change, Biodiversity Loss and Development Planning For example...

Women in the Cook Islands have noticed a scarcity of pupu shells which are used in local handicrafts. The decline is linked to warming sea temperatures

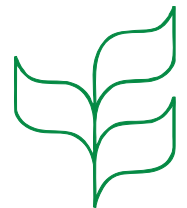
The Sami people have observed changes in species composition in traditional reindeer grazing lands. These changes are impacting reindeer health

Rising sea levels, desertification and shrinking freshwater supplies will create up to 50 million environmental refugees by 2010

In Vanuatu an entire village was forced to relocate inland as a result of rising sea levels



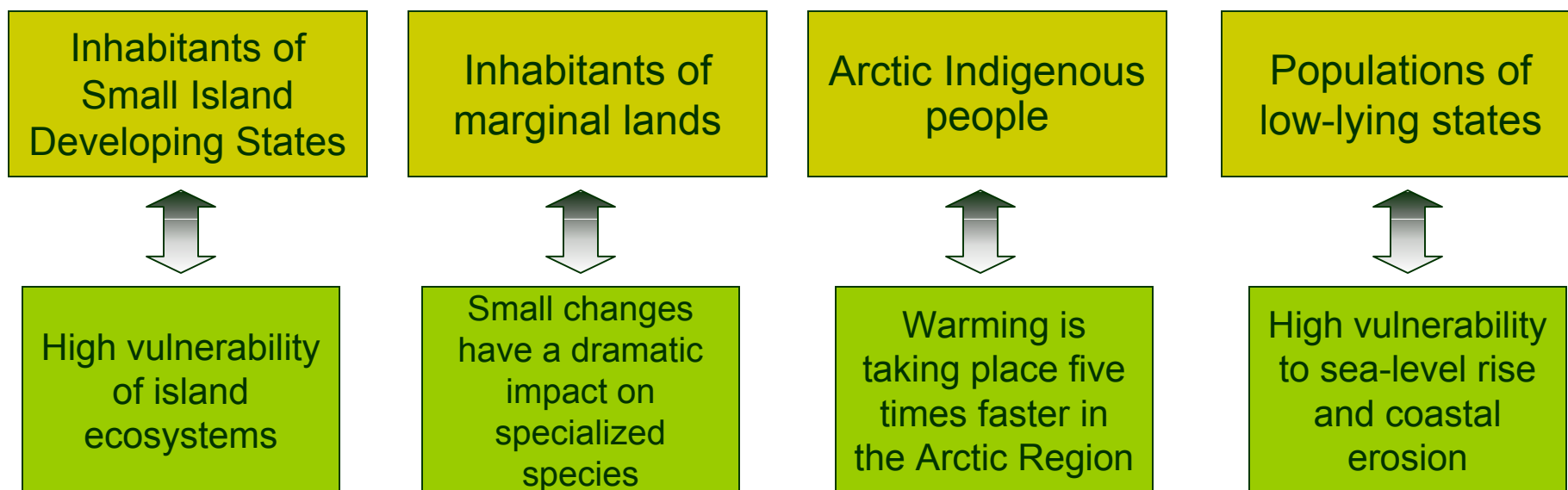
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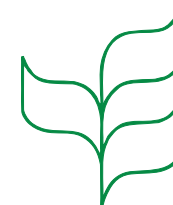
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## Section 3: Climate Change, Biodiversity Loss and Development Planning

Examples of indigenous and local communities that are particularly vulnerable to the negative impacts of climate change include:



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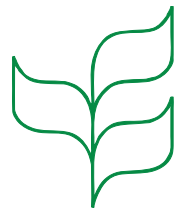
## Section 4: Response of the Convention on Biological Diversity

Climate change and biodiversity are addressed by the CBD through:

- The **cross-cutting issues** on biodiversity and climate change and the ecosystem approach
- The **Ad Hoc Technical Expert Group** on climate change and biodiversity
- Climate change components within all **programmes of work** of the Convention
- **Joint work** undertaken with the UNFCCC on technology transfer, vulnerability and adaptation, and reducing emissions from deforestation



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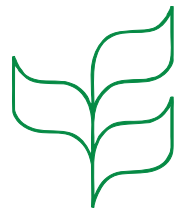


## Section 4: Response of the Convention on Biological Diversity

- **Article 8j** on local and indigenous communities and traditional knowledge
- **The Akwé:Kon Voluntary Guidelines** for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to take place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities



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