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Case Study Market

Session B09 on adaptation case studies



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The Maldives

Climate change as existential threat

EDWARD CAMERON | Director, International Climate Initiative

Case study method



Participants will be presented with a real-life scenario up to the decision-point.

Participants will then be placed in the role of decision-maker, analyze the information and suggest courses of action

The group will finally look at the actual policies that were pursued and will have an opportunity to discuss these policies.

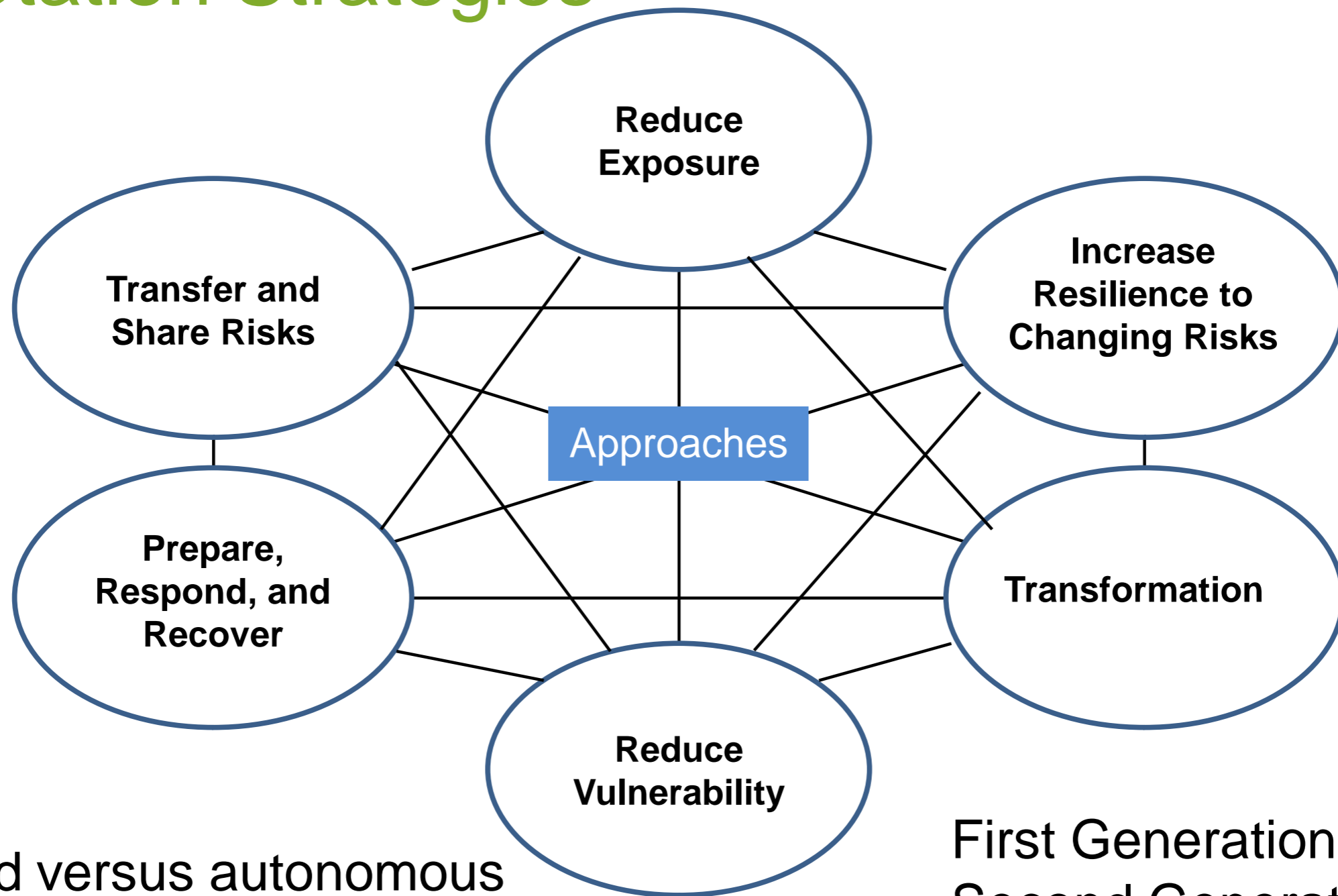
Vulnerability

Vulnerability is a function of the character, magnitude, and rate of climate change and variation in which a system is **exposed**, its **sensitivity**, and its **adaptive capacity**

Sources: IPCC 4th Assessment Report 2007 p21



Adaptation Strategies



Planned versus autonomous adaptation

First Generation
Second Generation
Third Generation (?)

"The Pearls of the Indian Ocean"

There are 1190 small tropical islands out of which 358 islands are being currently utilized.

The majority of the Maldives' twelve hundred islands lie less than one meter above sea level.



Economy

According to the national census, Maldives GDP per capital GDP of USD \$3000, making the Maldives the richest per capita country in South Asia.

This does not account for the substantial levels of inequality and poverty in the country. The same census stated that forty two percent of the Maldivian population lives below the poverty line.

The two major economic activities are tourism and fisheries are reef based and provide more than 80% of the total revenues to the country



Economy

Tourism is the main economic activity of the Maldives. In 2006, the tourism sector accounted for thirty percent of GDP and employed 17,000 direct jobs.

Tourism provides indirect employment and other livelihood opportunities in transport, communication, agriculture, distribution and construction.

Diving alone is estimated to earn revenues of \$55m per year



Economy

More than twenty percent of the population depends on fisheries as the major income earning activity.

In 2005, tuna and tuna-related species accounted for approximately eighty nine percent of the total fish catch and tuna products provided US\$97 million in export revenue.

Fish is also the primary source of dietary protein for Maldivians. Tuna movement and abundance in the Indian Ocean is closely linked to the climate.



Exposure to climate risks

CLIMATE
CHANGE

In the short-term, the Maldives is already facing increasing exposure to extreme weather events such as the sea-swells that struck the country in May and June of 2007. In addition coastal erosion damages homes and infrastructure.

Exposure to climate risks

CLIMATE
CHANGE

In the medium term, exposure to increasing CO₂ deposits and warming of ocean temperatures threaten the prized coral reef system, exacerbating existing human impacts from fishing, construction, pollution and tourism.

Exposure to climate risks

CLIMATE
CHANGE

The most significant long-term threat stems from rising sea-levels. In their worst case scenario projection, the IPCC estimates as much as a ninety centimeters rise in sea level by the end of this century. This would render the Maldives uninhabitable.

Beyond Climate - political uncertainty

In 2008 the Maldives completed an unprecedented political transition. The country signed up to all core international human rights treaties and witnessed its first multi-party election resulting in a peaceful change of government.



In 2012 political uncertainty returned to the Maldives with the end of the Nasheed Presidency under controversial circumstances, prompting months of violence, protest, international concern, and ongoing political uncertainty.

You are the decision maker. What will you do?

- What are the underlying causes of the Maldives' vulnerability?
- What courses of action are available to make the country more resilient?
- What strategy do you intend to pursue?





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The Maldives

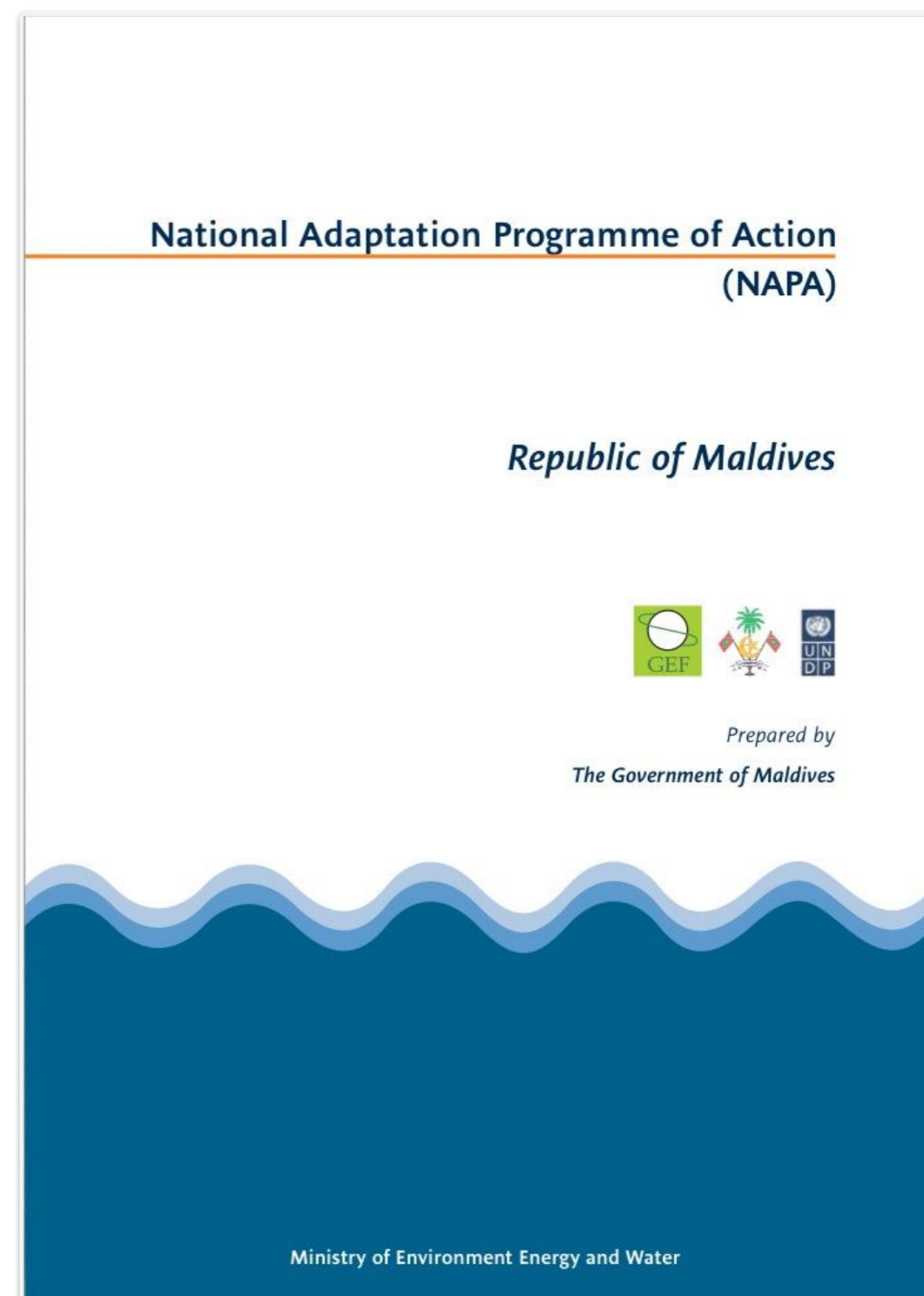
Climate change as existential threat

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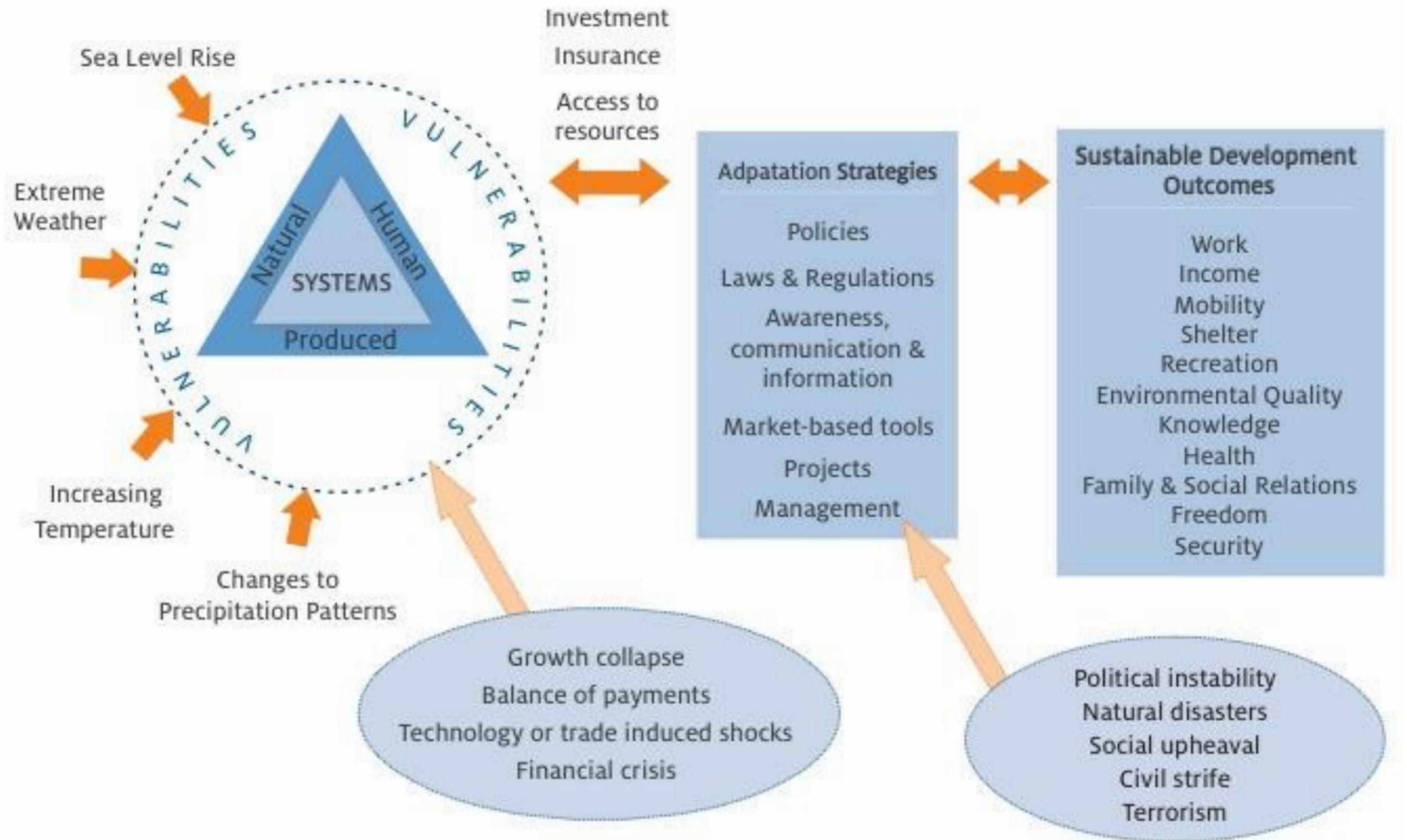
Managing the Unavoidable - NAPA

NAPA was developed with wide stakeholder participation and through extensive consultations at the atoll and national levels. Targeted awareness raising and activity-based learning was conducted for school children from a number of secondary schools.

The resulting NAPA is a multi-dimensional goal that aims to increase resilience in the face of climate change to achieve sustainable development.



The NAPA - Conceptual Framework



The NAPA - Top Ten Adaptation Measures

Adaptation Measures	Score	Rank
Build capacity for coastal protection, coastal zone management and flood control.	76.14	1
Consolidate population and development.	44.47	2
Introduce new technologies to increase local food production	35.62	3
Acquire support for the speedy and efficient implementation of Safer Island Strategy.	32.94	4
Develop coastal protection for airports and development focus islands.	32.94	5
Integrate climate change adaptation into national disaster management framework.	32.03	6
Strengthen tourism institutions to coordinate climate response in the tourism sector.	29.78	7
Improve building designs to increase resilience and strengthen enforcement of building code.	29.09	8
Acquire appropriate sewage treatment and disposal technologies to protect water resources.	28.32	9
Incorporate climate change adaptation measures to upcoming resorts	27.83	10

Adaptation Strategies

Consolidation and Safe Islands

**Reduce
Exposure**



Adaptation Strategies

Protection of coasts and infrastructure

**Prepare,
Respond, and
Recover**



Adaptation Strategies

Food production and tourism

**Reduce
Vulnerability**



A broader strategy for resilience

- Climate Diplomacy
- Carbon Neutrality
- Human Rights and Climate Change Initiative



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Thank you

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