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**ECOSYSTEM-BASED ADAPTATION:  
WHAT IS IT?  
HOW CAN IT ENHANCE THE RESILIENCE OF  
ISLAND COMMUNITIES?**

**Presented as  
Part of Islands  
Trust Climate  
Action Series**

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# PRESENTATION **OUTLINE**

- How can we **respond** to climate change?
  - Mitigation vs. Adaptation
- **What** is Ecosystem-based Adaptation (EbA)?
- How can EbA **enhance the resilience** of island communities?
  - “Unpacking” the 4 components of what constitute EbA



# HOW CAN WE **RESPOND** TO CLIMATE CHANGE?

## Mitigation

An intervention **to reduce the emissions sources** or **enhance the sinks** of greenhouse gasses.

= Addresses **the causes** of climate change (i.e. accumulation of greenhouse gases in the atmosphere)

## Adaptation

Adaptation means **responding to** and **preparing for** change.

= Deals with the **impacts** (consequences) of climate change

- **Both** approaches are needed ! – simultaneously.

# WHY DO WE NEED A **STRONGER** EMPHASIS ON **ADAPTATION?**



Closing the barn door **after** the horse is gone....!!!

# WHAT IS ECOSYSTEM-BASED ADAPTATION?

Ecosystem-based Adaptation (EbA) is

1. ...the **use of biodiversity and ecosystem services**
2. ...as part of an **overall adaptation strategy**
3. ...to **help people**
4. **adapt to the adverse effects of climate change”**

(official definition by the  
Global Convention of Biodiversity (CBD) 2009).



# EBA AND THE USE OF BIODIVERSITY AND ECOSYSTEM SERVICES

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# ECOSYSTEMS AND CLIMATE CHANGE

The connection between ecosystems and climate change adaptation is a **two-fold link**:

Climate change - and other anthropogenic pressures - are **putting at risk** ecosystems and their ecosystem services.

BUT **when healthy**, ecosystem services can contribute **to reducing people's vulnerability** to climate change.

# THE CONCEPT AND IMPORTANCE OF ECOSYSTEM SERVICES

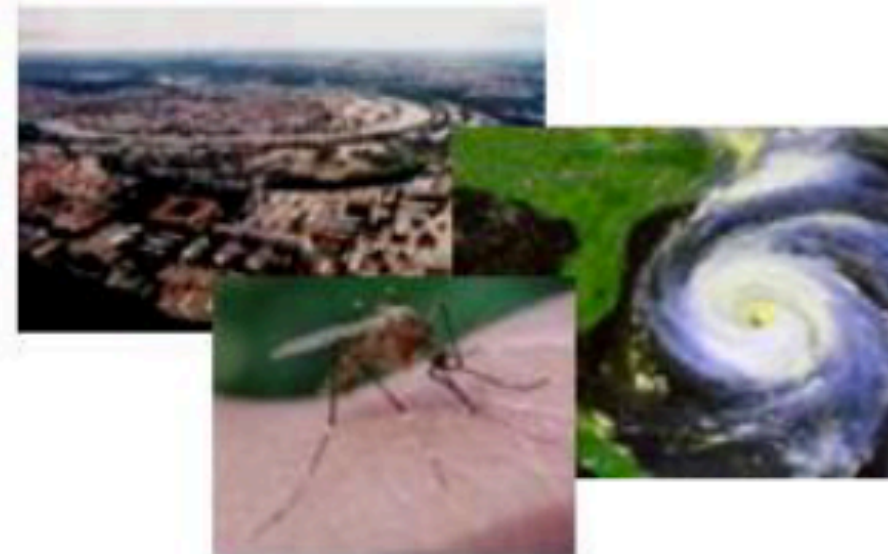
## Provisioning

- food, wood and fiber, fuels,...



## Regulating

- climate regulation, water cycle regulation,...



## Cultural

- aesthetic, spiritual, recreational,...



## Supporting

- e.g. photosynthesis, soil formation, nutrient cycle,...

# EBA **HELPS PEOPLE** BECOME MORE RESILIENT

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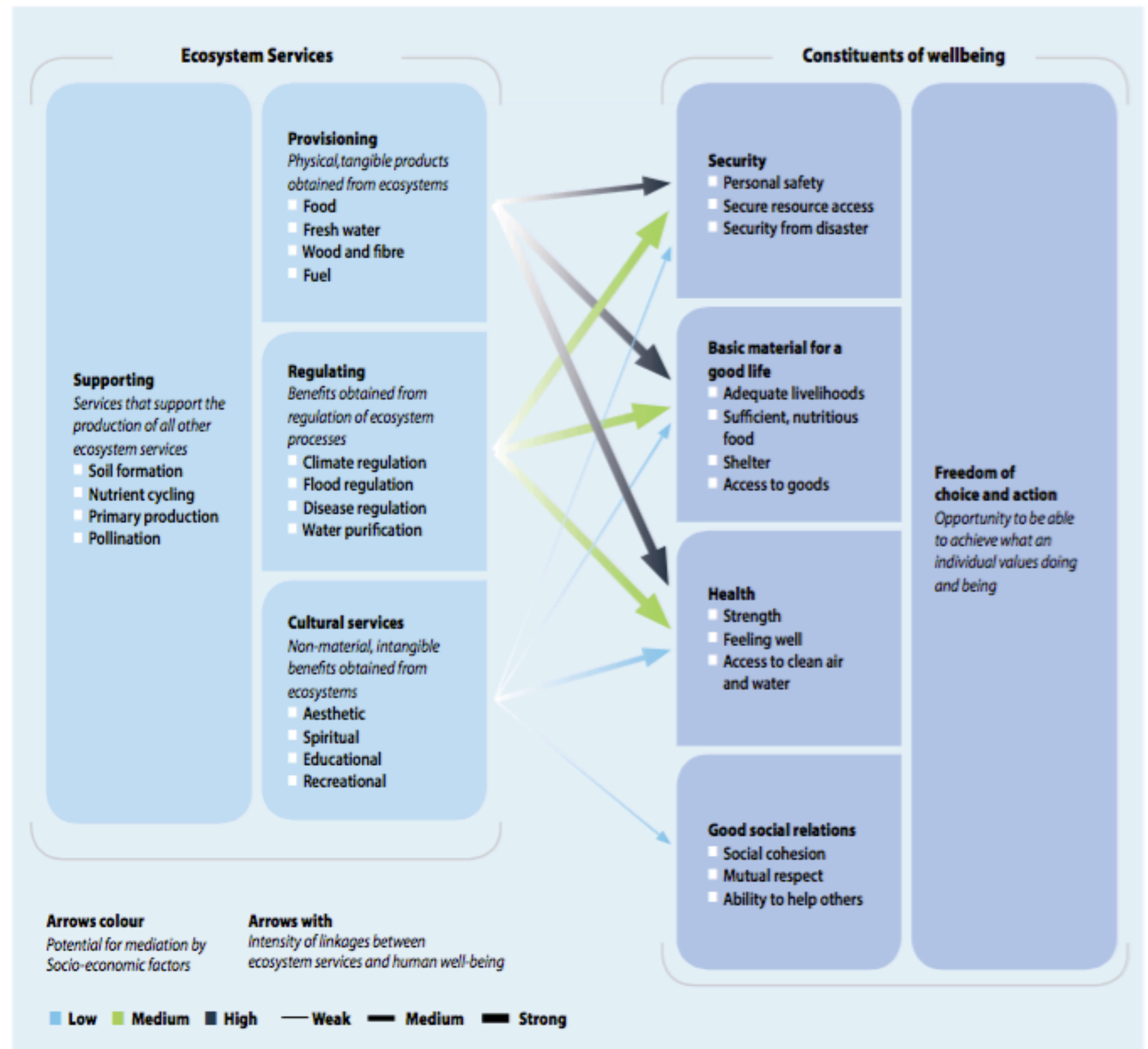
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# ECOSYSTEM SERVICES AND THEIR LINKS TO HUMAN WELL-BEING

By examining the environment through the **framework of ecosystem services**, it becomes much easier:

- To identify how **changes in ecosystems** influence and can potentially enhance **human well-being**.



Source: Reid and others (2005)

# EBA HELPS PEOPLE ADAPT TO THE ADVERSE EFFECTS OF CLIMATE CHANGE

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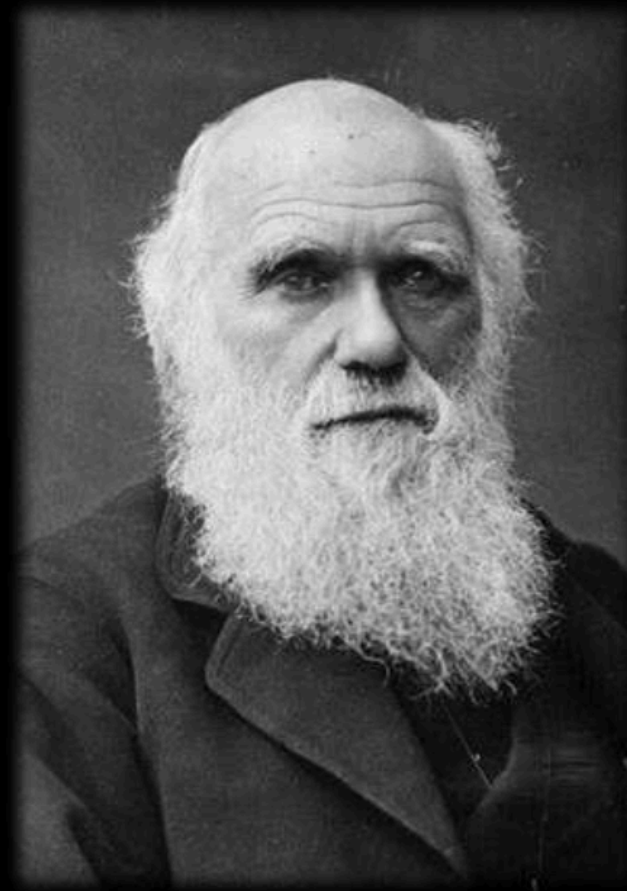
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# DYNAMIC ECOSYSTEMS IN A CHANGING CLIMATE

- Ecosystems are **dynamic** and affected by climate change
- Yet, **traditional** conservation, restoration and sustainable use are **less reliable** in a changing climate.
- **So what do we do?**



It is not the strongest of the species that survive, nor the most intelligent, but the one that is most **responsive to change.**

*Charles Darwin*  
naturalist

# EBA IS ABOUT MANAGING ECOSYSTEMS AND CHANGE DIFFERENTLY!

## OPTION 1 - RESIST

- Many ecosystems changes can be **RESISTED** by managers...
- to maintain ecosystem processes, function, and composition toward a **historical** baseline.

## OPTION 2 - ACCEPT

- Many changes can be **ACCEPTED** by managers, perhaps because...
- **Not feasible** to be managed
- Insufficiently impactful to warrant response
- **Acceptable** to (even desirable by) stakeholders
- Lack of will or impetus despite sufficient knowledge or resources

## OPTION 3 - DIRECT

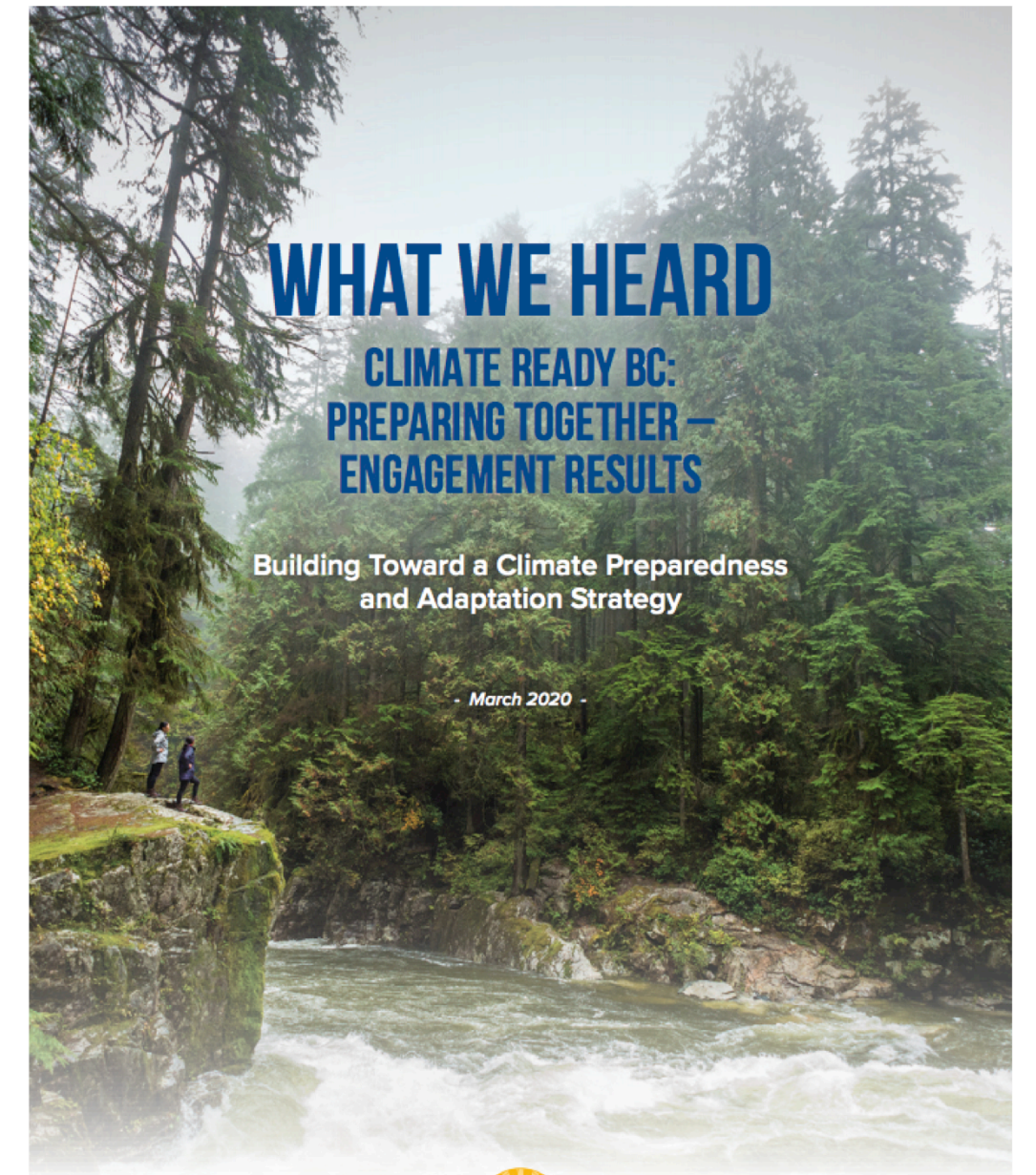
- Some changes can be **DIRECTED** by managers **toward a specific future state** because...
- So dramatic that **resisting is untenable** and
- there is a feasible opportunity to **steward change** towards a more desirable outcome than what would be achieved with acceptance

# EBA AS PART OF A **BROADER** ADAPTATION STRATEGY

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# EBA – AS PART OF A **BROADER** ADAPTATION STRATEGY

- EbA not a **panacea** for all climate change challenges.
- It is only effective if and when **combined with other measures** that help people adapt to climate change.



# EBA – AS PART OF **BROADER SUITE** OF **NATURE-BASED** APPROACHES

- Major **societal challenges** that can be addressed by **nature-based** approaches:
  - ✓ Climate change
  - ✓ Natural disasters
  - ✓ Water scarcity
  - ✓ Water insecurity
  - ✓ Human health
  - ✓ Socio-economic development





**FOR MORE  
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