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Climate change adaptation in the private sector

UNFCCC Private Sector Initiative

30 March 2012



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Introduction



Introduction

Private sector adaptation initiatives

- The UNFCCC website hosts a database of adaptation case studies as part of the Private Sector Initiative of the Nairobi work programme.
- The case studies reflect climate change adaptation activities undertaken by private companies (sometimes in partnership with NGOs or the public sector) from a range of sectors and regions.
- Templates are available from the UNFCCC website which are populated with information related to each case study. An example of the template structure is represented alongside.

Scope of work

- KPMG has undertaken an assessment of the adaptation case studies on the UNFCCC database, assessing the initiatives per region. In particular, the following aspects were considered:
 - The target and drivers for each adaptation case study
 - The type of organisation undertaking the initiative i.e. consulting/ services organisation or internally developed initiatives
 - Regional findings.



United Nations
Framework Convention on
Climate Change

Private Sector Initiative actions on adaptation

Title of case study	Rainwater harvesting and storage technology (bob)
Name of organization(s)	EnterpriseWorks/VITA (EWV) a Division of Relief International
Business sector	Consulting and Environmental Services
Region(s) relevant to case study	<input type="checkbox"/> All regions <input checked="" type="checkbox"/> Africa and the Arab States <input checked="" type="checkbox"/> Asia and the Pacific <input checked="" type="checkbox"/> Caribbean and Central America <input type="checkbox"/> Europe <input checked="" type="checkbox"/> Least Developed Countries <input type="checkbox"/> North America <input type="checkbox"/> Polar regions <input checked="" type="checkbox"/> Small Island Developing States <input checked="" type="checkbox"/> South America
Country(s) relevant to case study	Uganda
Adaptation sector(s) relevant to case study	<input checked="" type="checkbox"/> Business <input type="checkbox"/> Education and training <input type="checkbox"/> Food security, agriculture, forestry and fisheries <input checked="" type="checkbox"/> Human health <input type="checkbox"/> Oceans and coastal areas <input type="checkbox"/> Science, assessment, monitoring and early warning <input type="checkbox"/> Terrestrial ecosystems <input type="checkbox"/> Tourism <input checked="" type="checkbox"/> Transport, infrastructure and human settlements <input checked="" type="checkbox"/> Water resources <input type="checkbox"/> Other (please specify):
Adaptation activity	In just one day, more than 200 million hours of women's time is consumed collecting water for domestic use, often from dirty and polluted sources. In many drought-prone regions, limited fresh water supply is likely to be further exacerbated by climate change. An adaptation technology designed to address this – bob – is a low-cost, innovative domestic rainwater harvesting device that provides clean

What is climate change adaptation?



What is climate change adaptation?

Vulnerability to climate change

- Vulnerability to climate change refers to the degree to which a system is susceptible to, or unable to cope with, the adverse effects of climate change, including climate variability and extremes.¹
- The vulnerability of a system depends on a number of factors, including the rate and magnitude of climate variability or changes, the sensitivity of the system and its ability to adapt (adaptive capacity). Vulnerability can be exacerbated as a system gets exposed to multiple stressors.

Climate change adaptation

- Climate change adaptation is an adjustment in natural or human systems in response to actual or expected climate impacts.¹ Adaptation measures can target both climate variability (at an inter-annual scale) as well as longer-term mean climatic changes.
- Adaptation is an essential response strategy to climate change for a number of reasons:²
 - A time-lag exists between the emission of greenhouse gases into the atmosphere, and the associated climatic response. Climatic changes will continue to occur into the future, with mitigation only limiting the severity of these changes.
 - Social pressures such as rapid population growth and urbanisation can result in an increased vulnerability to climate-related stresses and impacts.
 - The impacts of climate change are expected to fall disproportionately on developing countries, which may be limited in their ability to respond effectively to such climatic stresses.
- Adapting to climate change involves reducing the sensitivity of the system to climate change, altering the exposure of the system to the effects of climate change, and lastly, increasing the resilience of the system to cope with climatic changes.³ Adaptation often involves moderating potential negative impacts, coping with consequences and taking advantage of opportunities.

1: Intergovernmental Panel on Climate Change (2001) Working Group II: Impacts, Adaptation and Vulnerability.

2: Pielke, Jr, R.A. (1998): Rethinking the role of adaptation in climate policy. *Global Environmental Change*, 8(7): 159-170.

3: Adger, W.N., Arnell, N.W. & Tompkins, E.L. (2005): Successful adaptation to climate change across scales. *Global Environmental Change*, 15, 77-86

What are the business drivers for adaptation?



What are the business drivers for adaptation?

Business drivers for adaptation can include:

- Business opportunity
- Wider social advantages
- Social licence to operate
- Reputation
- Reduced operational costs
- Reduced disruption to production/services
- Improved ability to do business
- Changing demands for goods/services.

**What types of organisations
are undertaking adaptation?**



What types of organisations are undertaking adaptation?

Consulting/services organisation	
Targets	Business drivers
Climate-sensitive sectors and regions	Business opportunity
Vulnerable communities	Wider social advantages
	Driving or changing demands for goods/services.

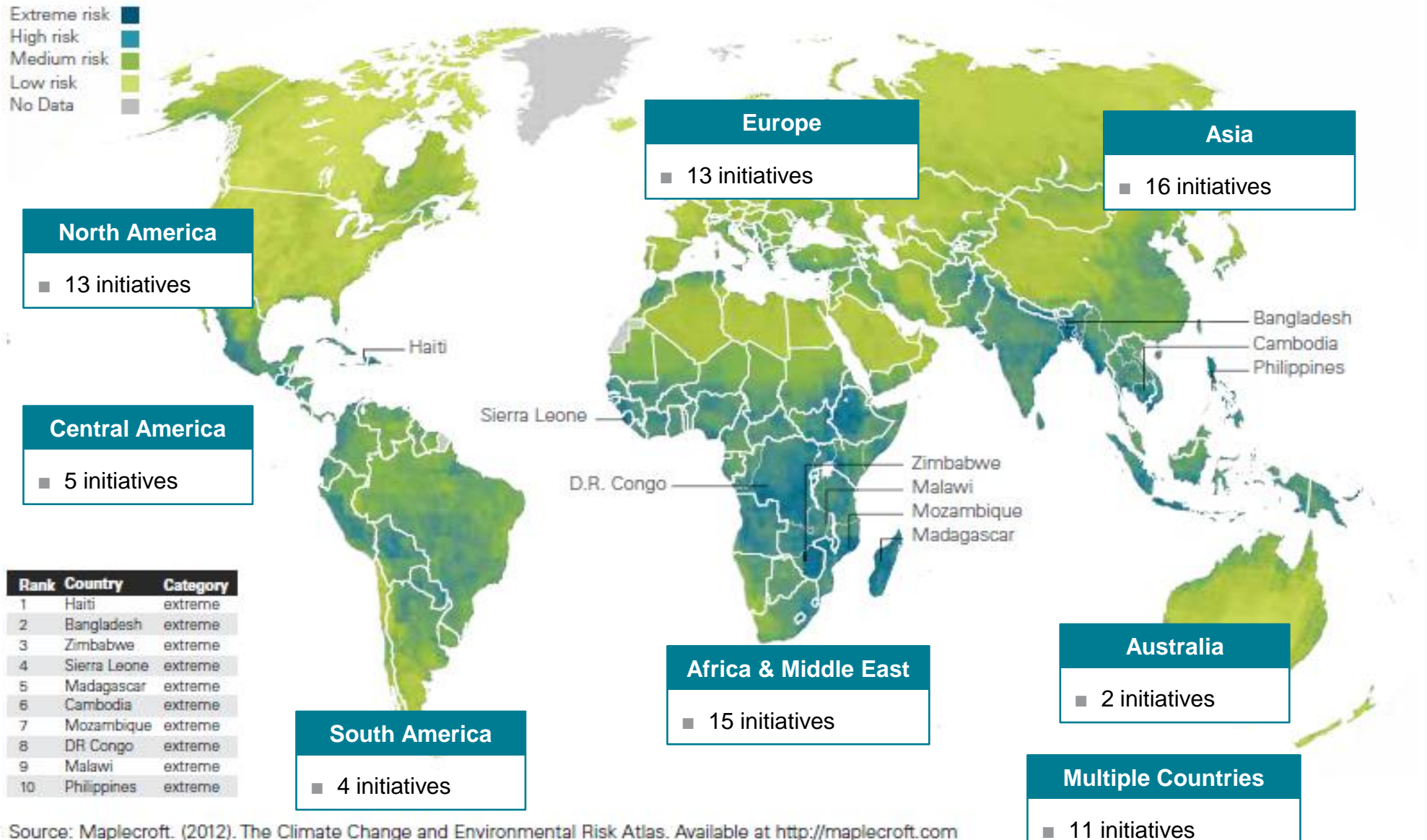
Internally developed	
Targets	Business drivers
Own infrastructure and supply chain	Reduced disruption to production/services
Surrounding communities	Improved ability to do business
	Reduced operational costs
	Social licence to operate and reputation
	Wider social advantages
	Changing demands for goods/services.

**What are the regional trends
in adaptation?**

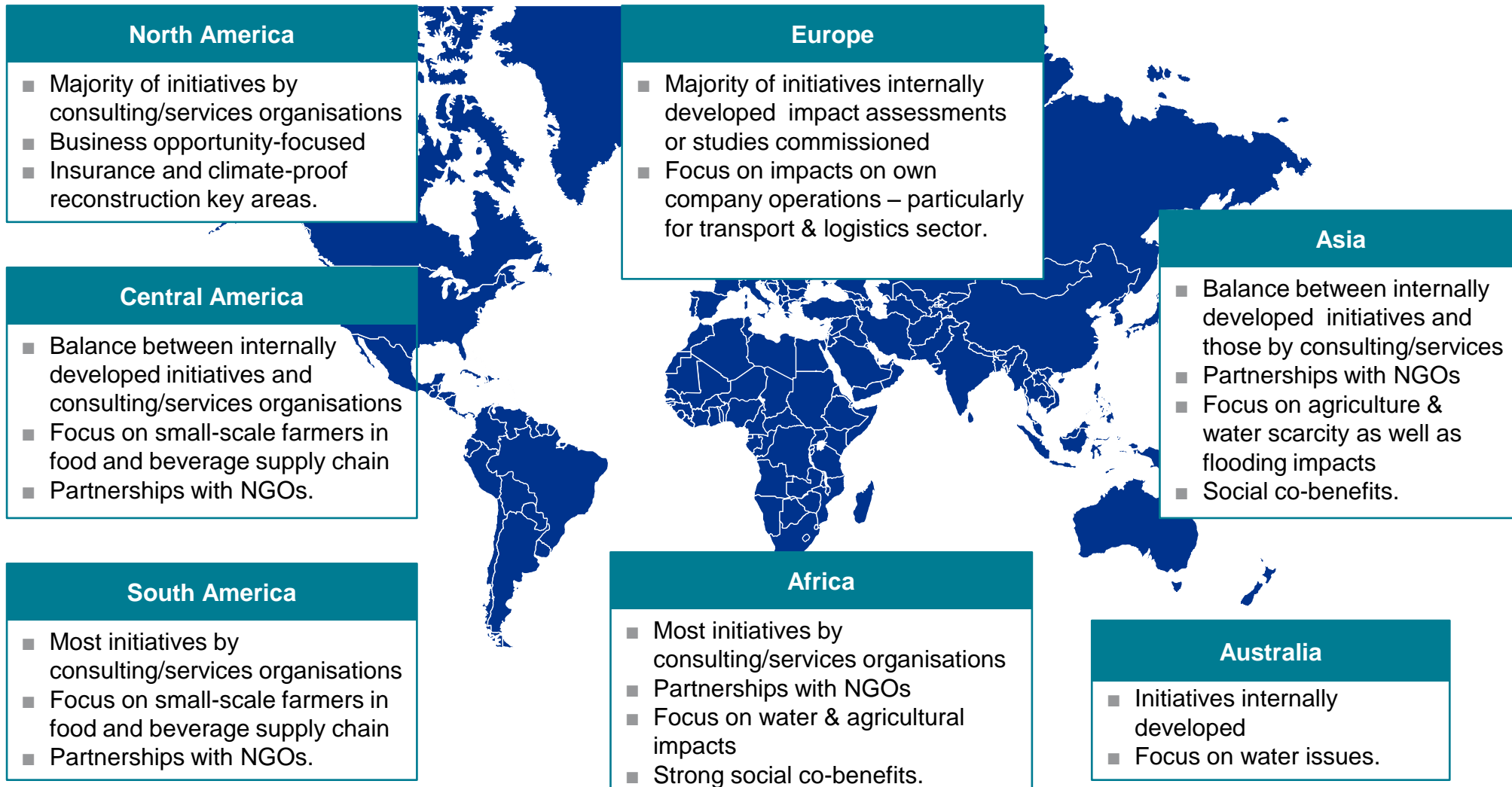


What are the regional trends in adaptation initiatives?

Number of private sector initiatives represented on the UNFCCC database as per 24 February 2012.



What are the regional trends in adaptation initiatives?



What are the regional trends in adaptation initiatives?

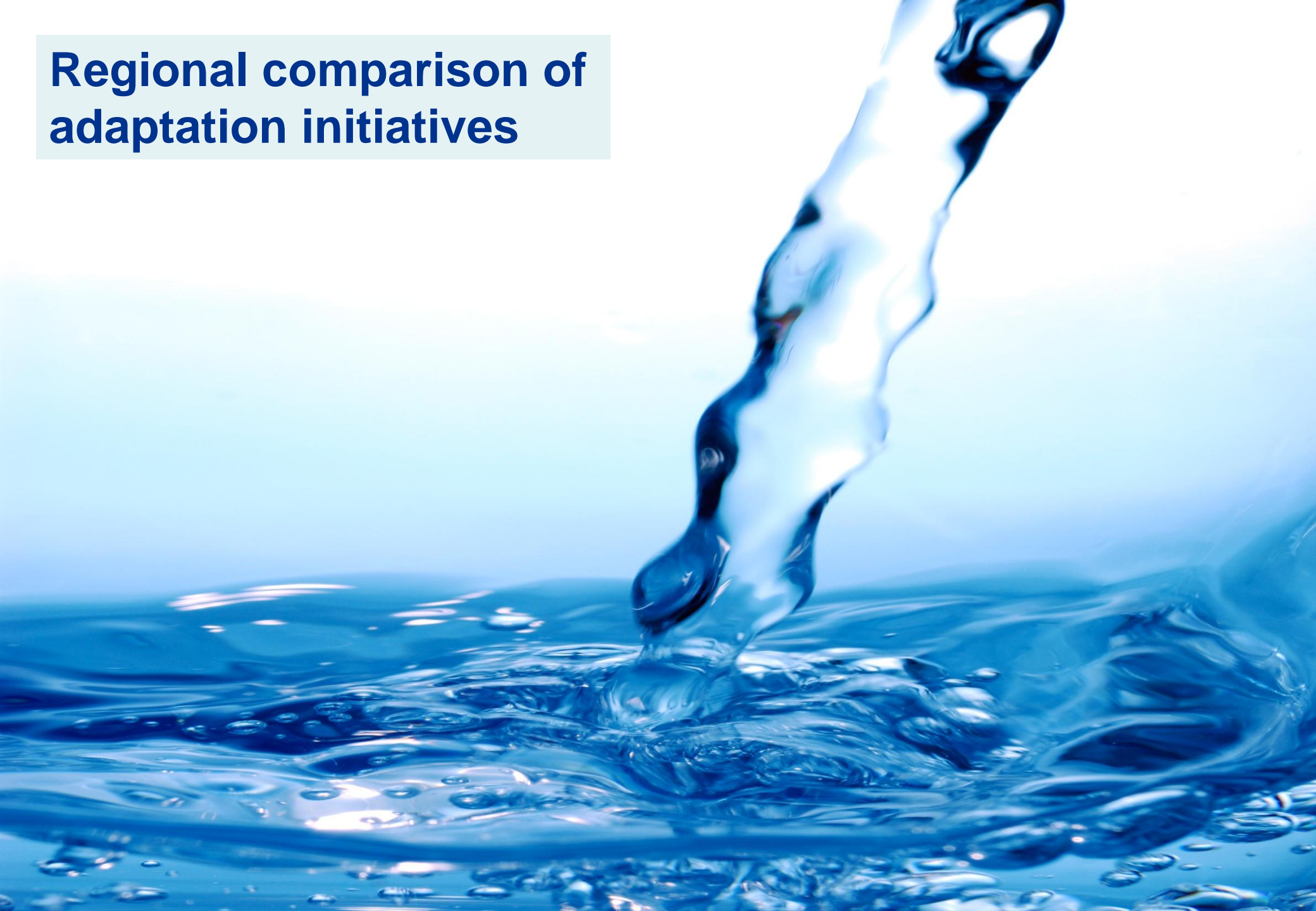
Key findings

- Private sector adaptation initiatives in developing countries generally have a strong social development context, and were often undertaken in collaboration with either NGOs or development banks.
- Private sector initiatives undertaken in developed countries generally focus on either business opportunities in climate sensitive sectors, or on companies' own infrastructure, value or supply chains.
- The business sectors with the highest number of adaptation initiatives include food and beverages as well as energy and water utilities.
- The financial services sector has developed a suite of climate-sensitive insurance and investment products, with the consulting, environmental services and IT sectors taking advantage of many business opportunities arising from climate change adaptation.

Key areas for future analysis

- How many private sector adaptation initiatives are being undertaken in areas of highest vulnerability – such as the top 10 vulnerable countries listed in the graph above?
- What are the conditions for facilitating a climate change adaptation initiative by a private sector company?
- What are the lessons learnt from existing adaptation initiatives from the business perspective, such as challenges, opportunities, drivers and business case?
- How can climate change adaptation initiatives be monitored to ensure their long-term effectiveness and limit the degree of maladaptation?
- How can private sector climate change adaptation initiatives link with local development priorities as well as the Millennium Development Goals?

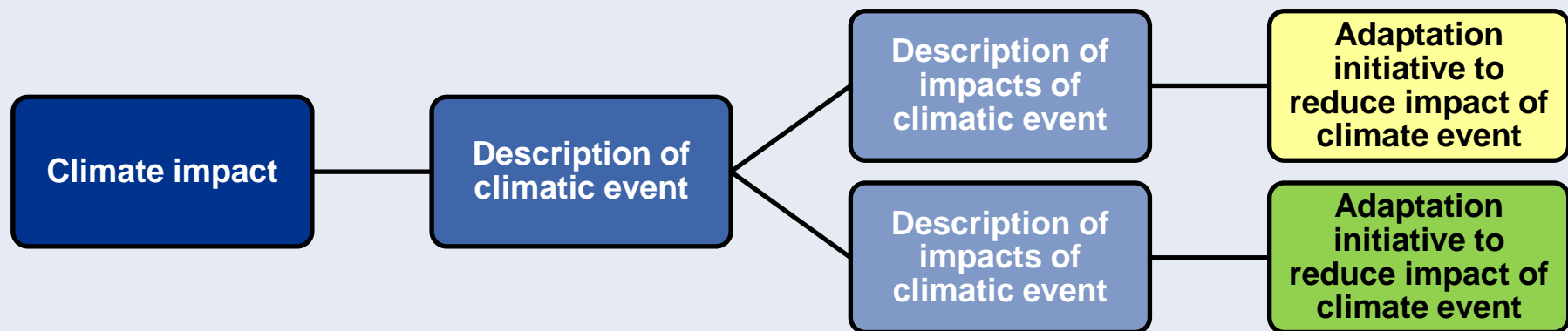
Regional comparison of adaptation initiatives



Regional comparison of adaptation initiatives

The following set of slides describes the private sector adaptation initiatives on the UNFCCC database*, grouping them per region and the type of organisation undertaking the initiative. Where there were similar types of initiatives in the same region, these were grouped together.

The diagram below illustrates how the data is represented:



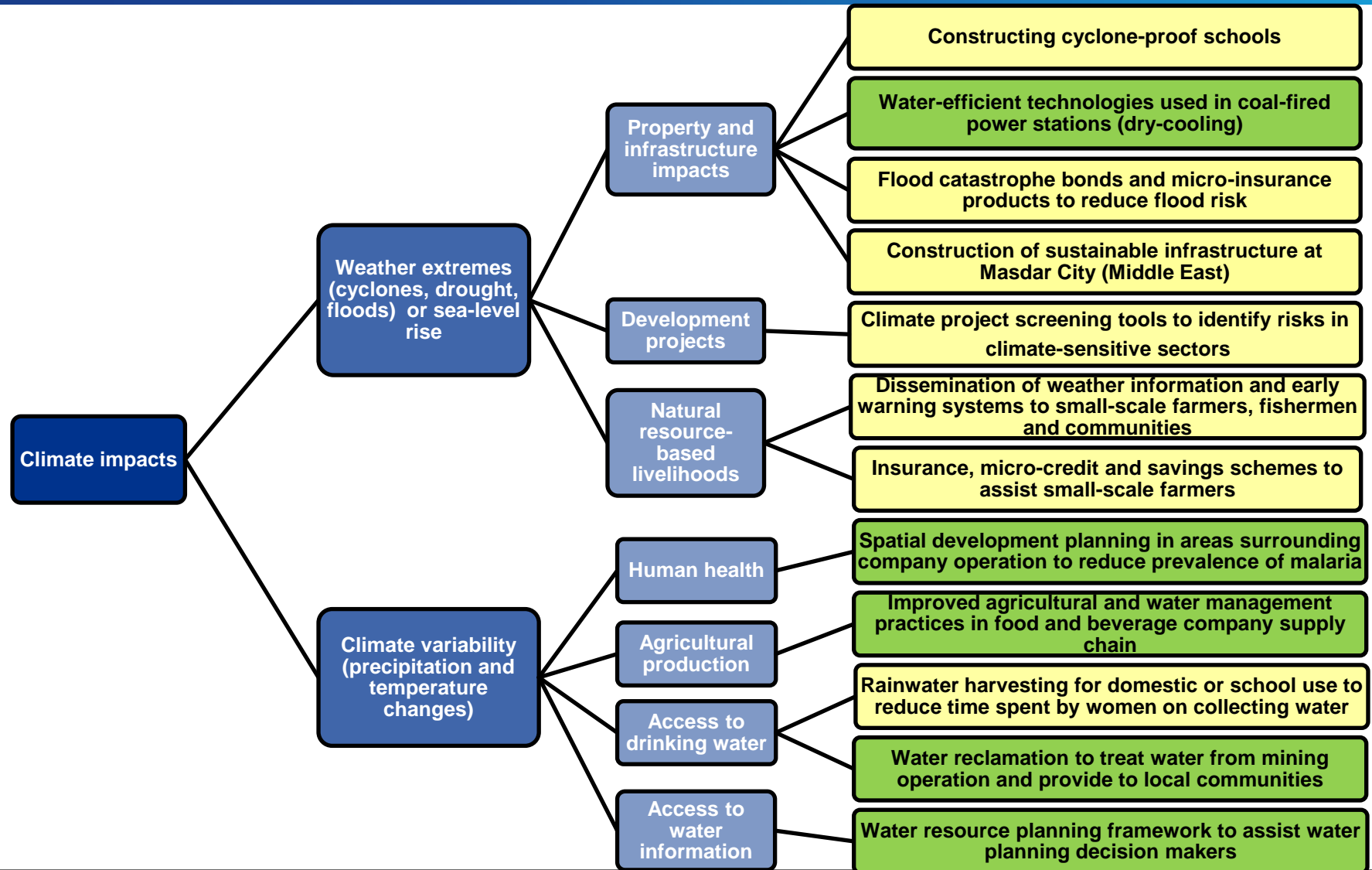
**Internally developed
adaptation initiative**

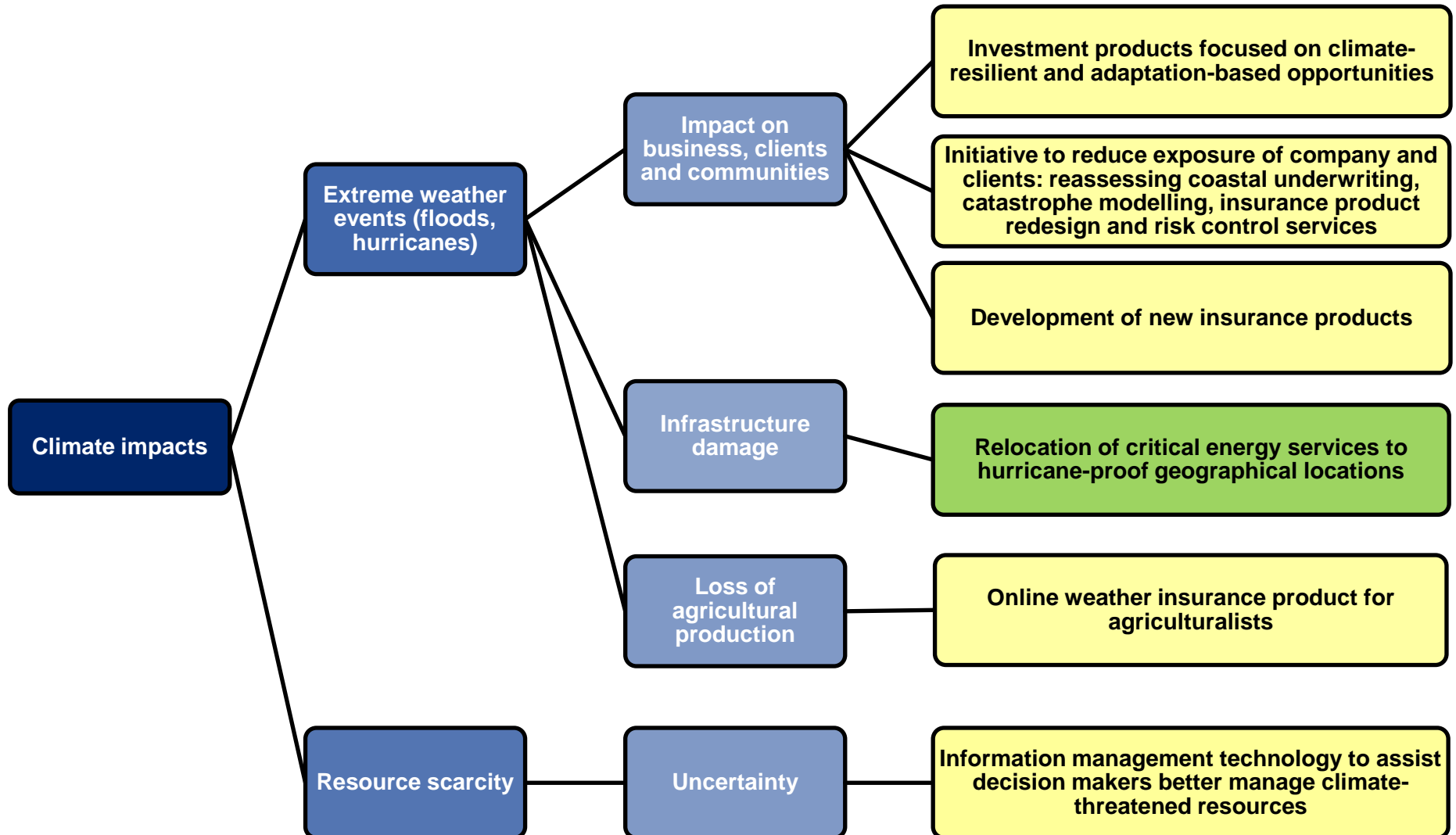


**Consulting/services organisation
developed adaptation initiative**

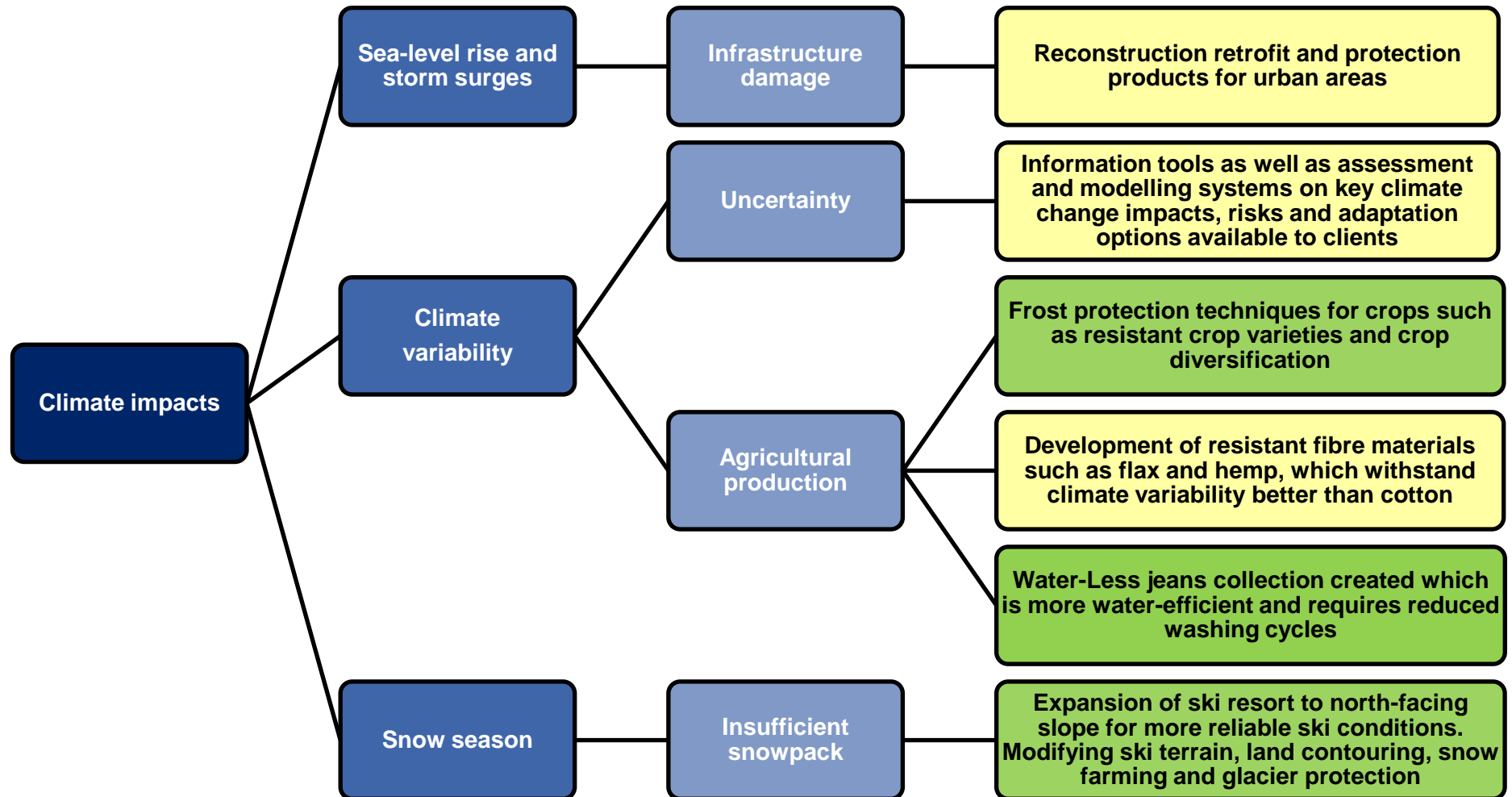
* Initiatives reflected on website as at 24/02/2012

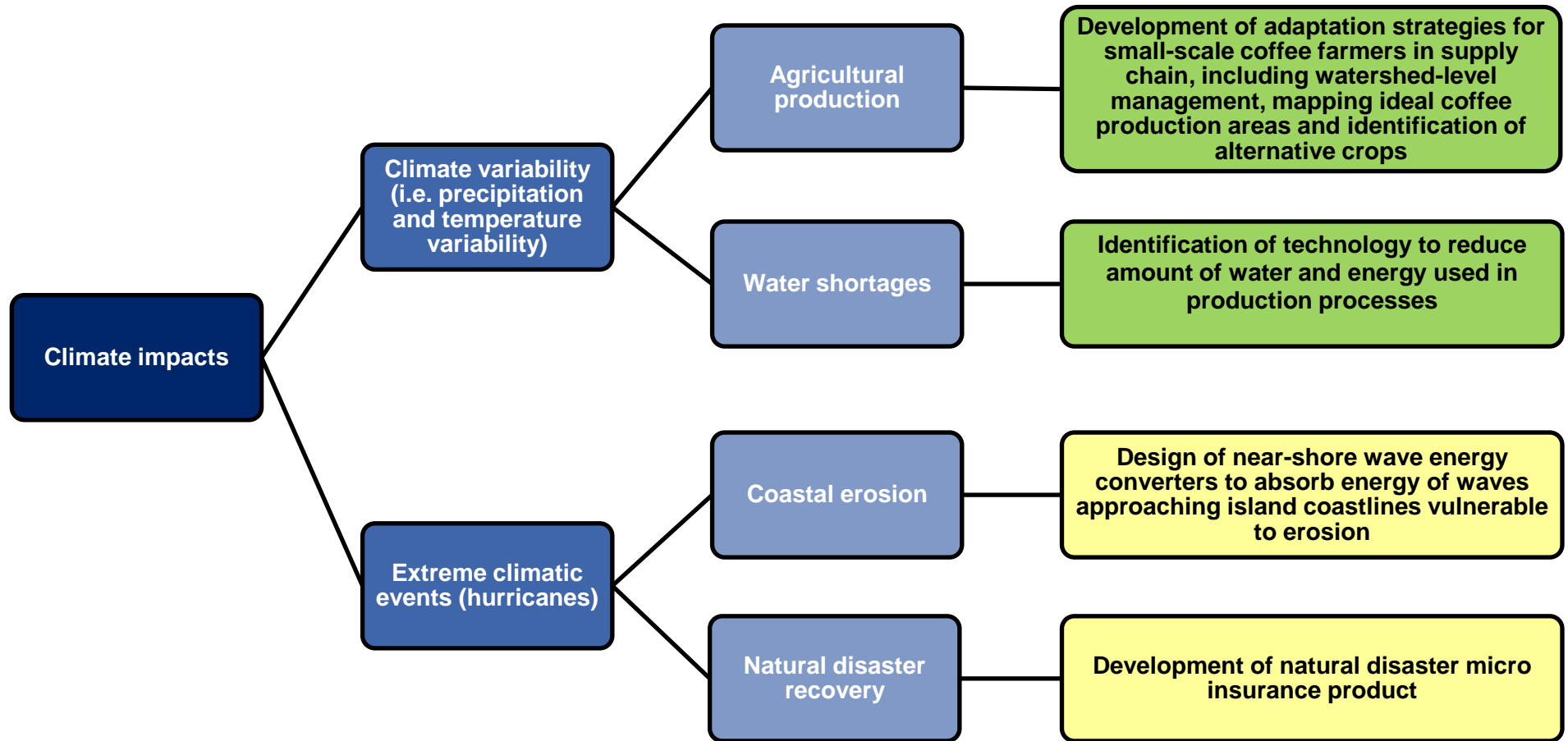
Africa and Middle East

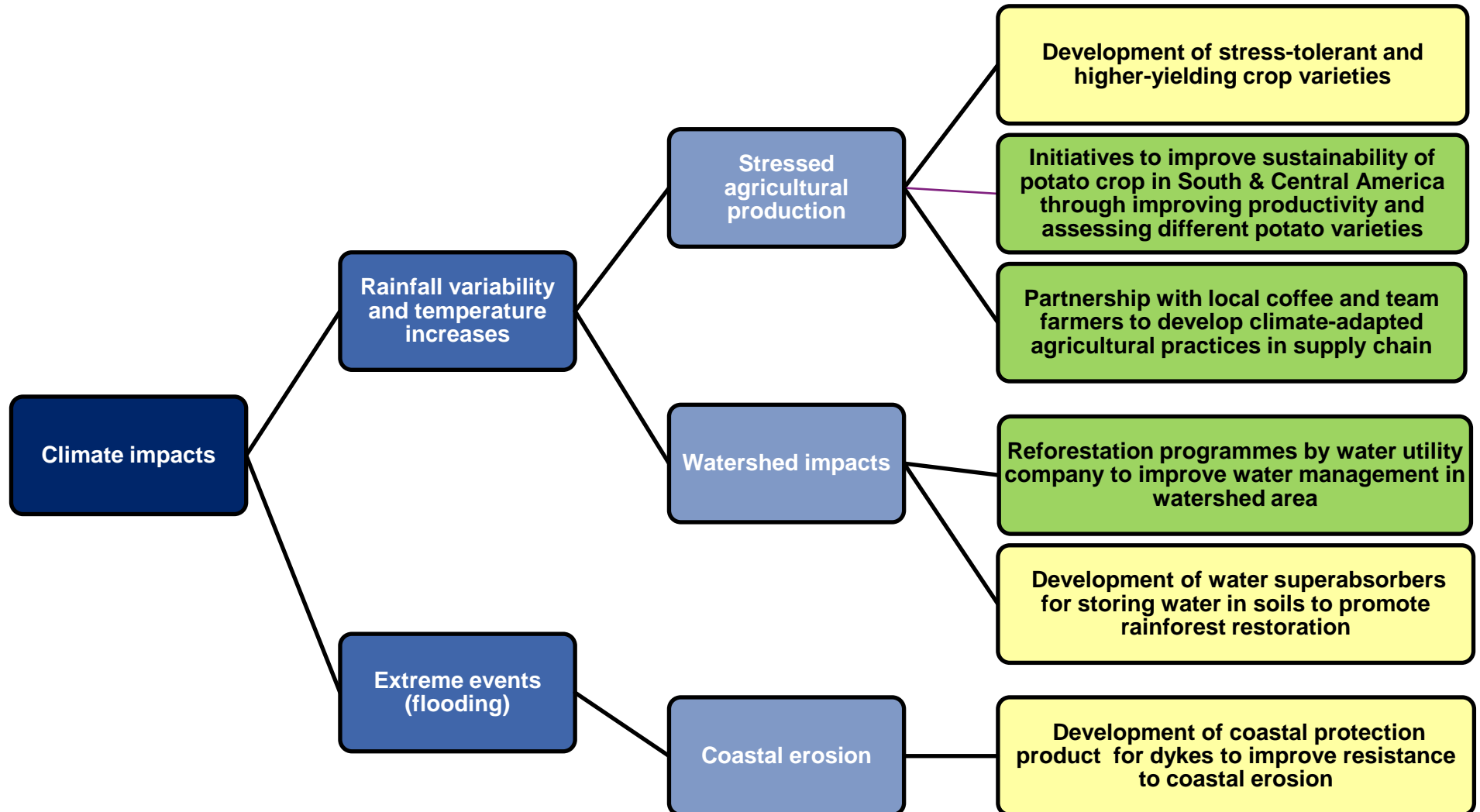


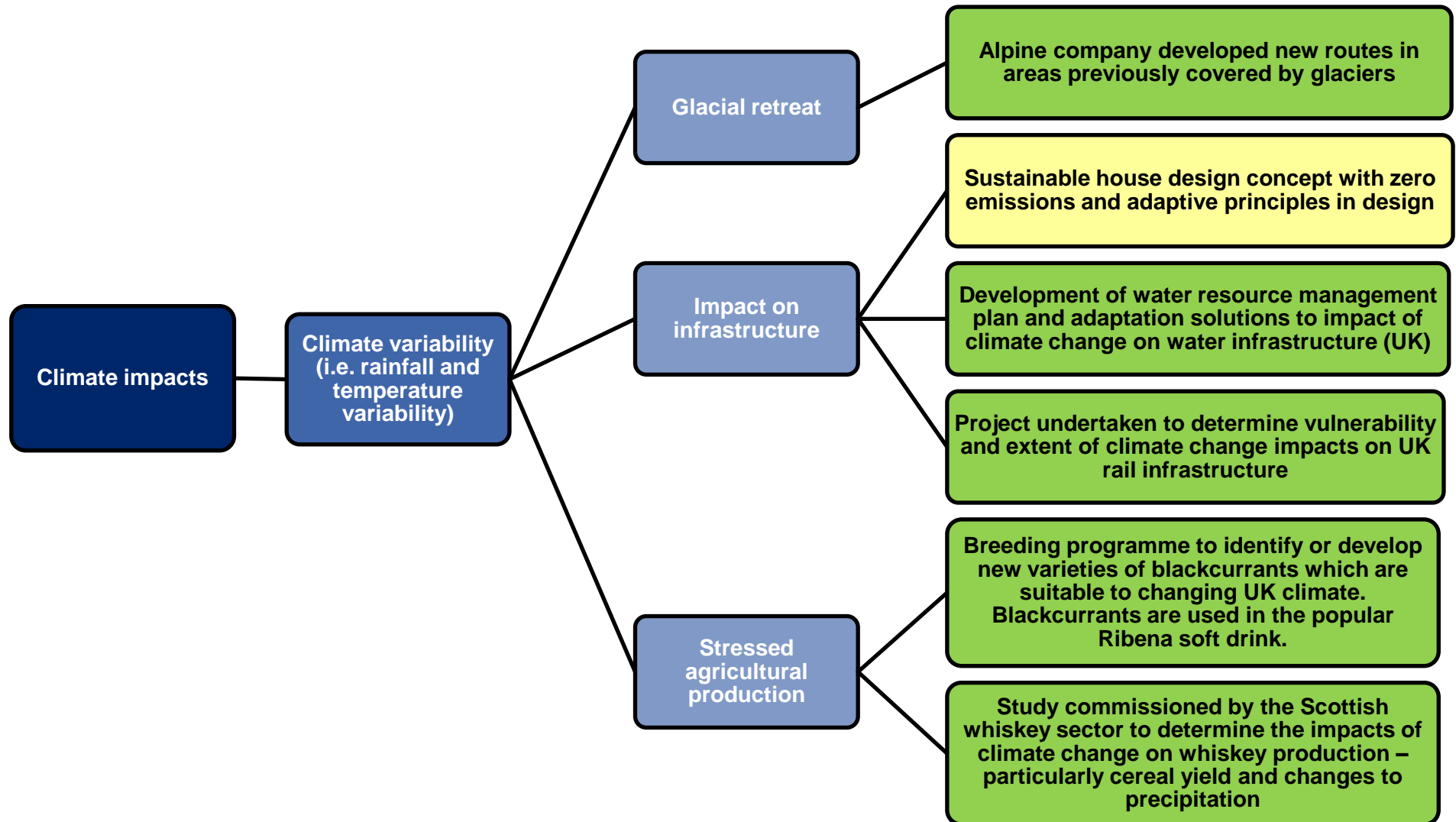


North America (cont.)

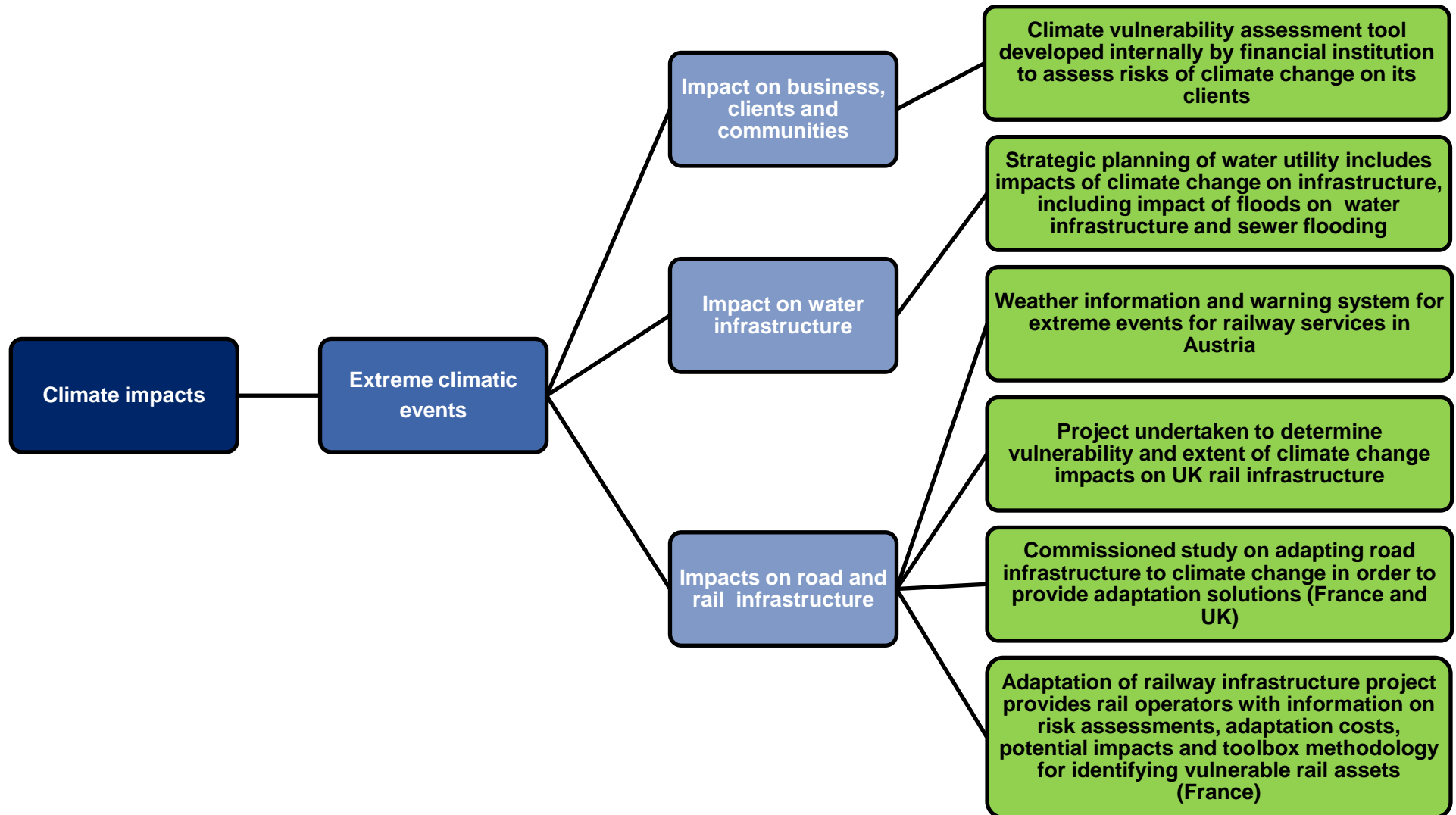


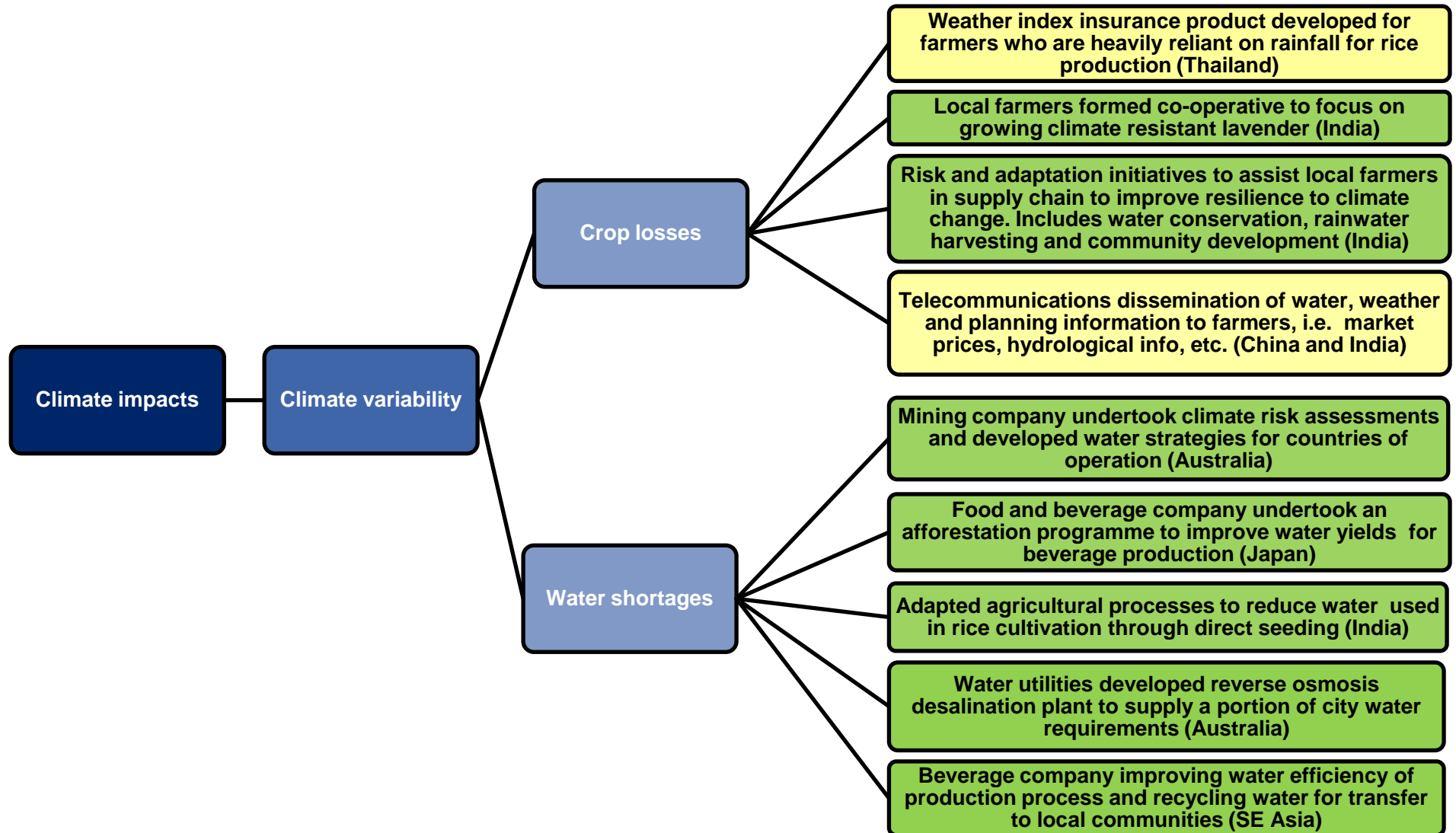




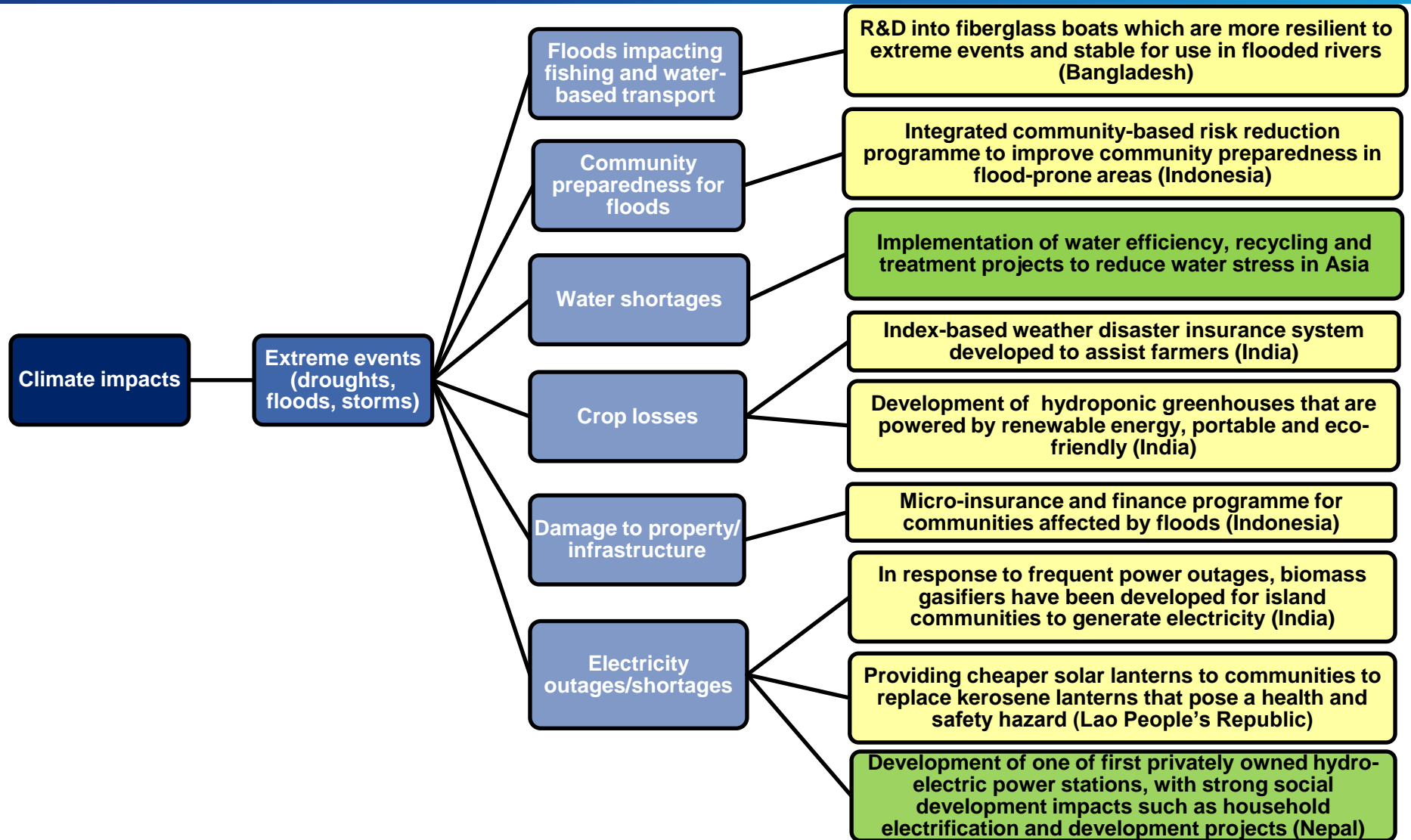


Europe (cont.)

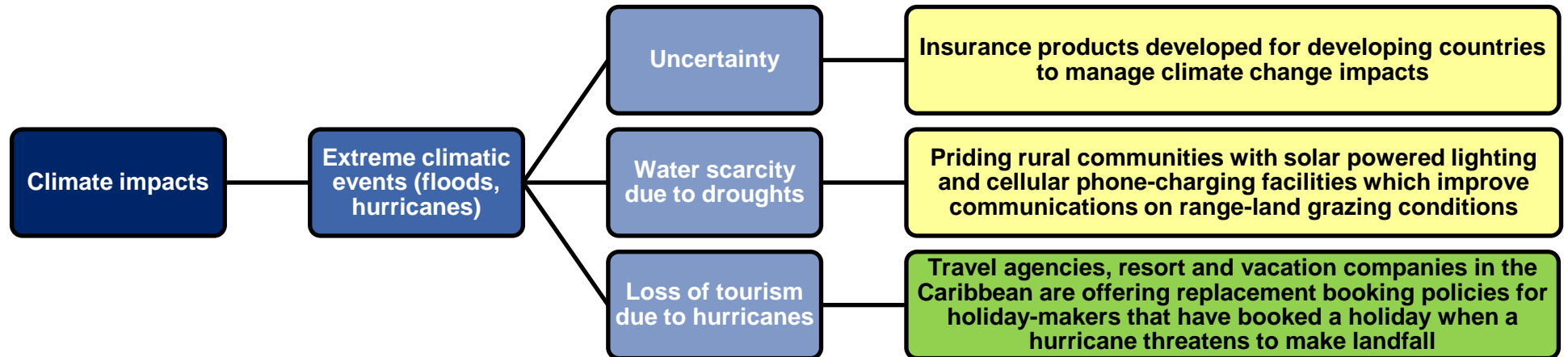




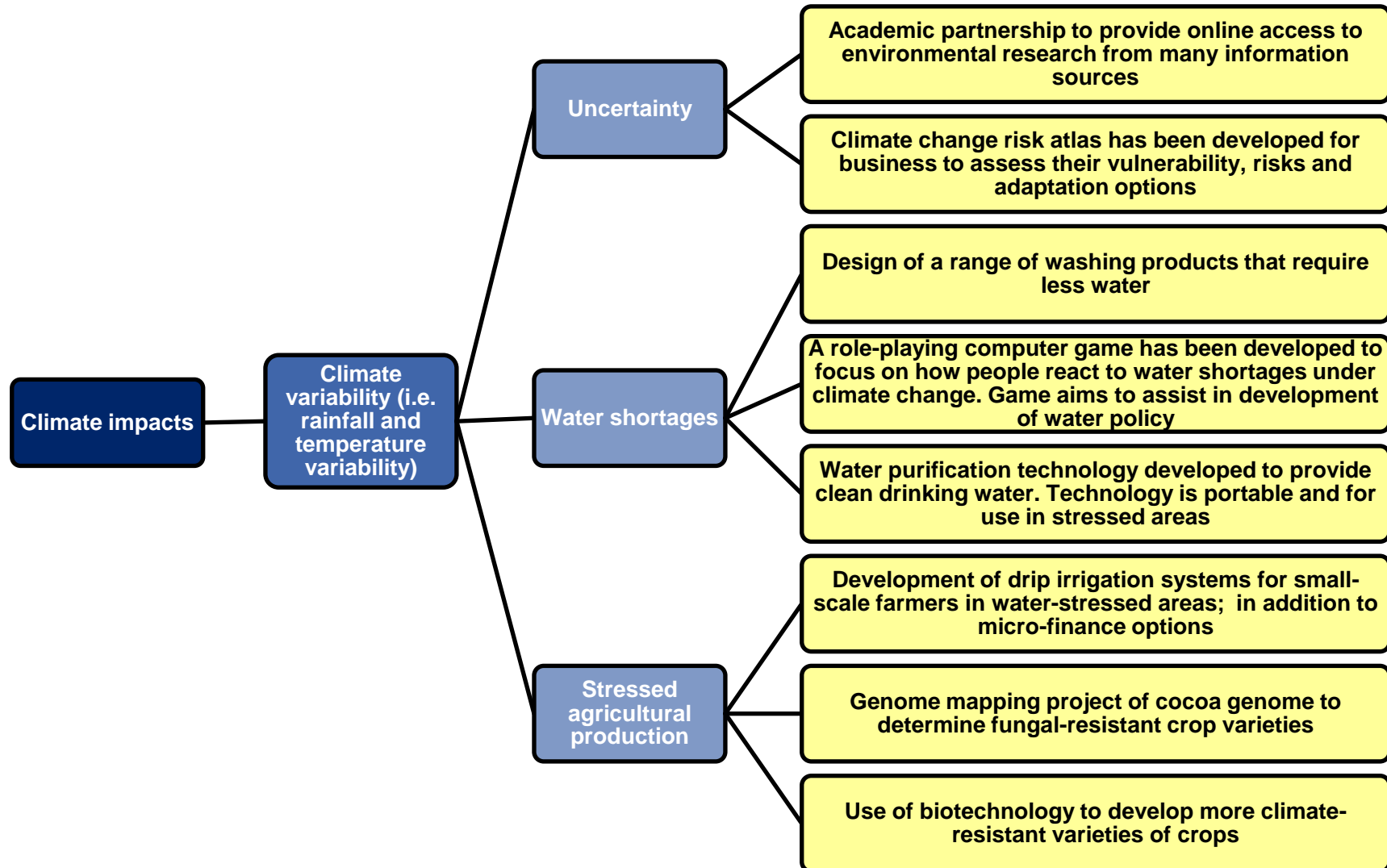
Asia & Australia (cont.)



Multiple regions/countries



Multiple regions/countries (cont.)



Summary of adaptation initiatives



Summary of adaptation actions per region and business sector

Sector	Region						
	Africa & Middle East	North America	Central America & Caribbean	South America	Europe	Asia & Australia	Multiple countries
Mining & metals	✓					✓	
Transport & logistics					✓		
Agriculture/ food & beverages	✓	✓	✓	✓	✓	✓	✓
Textiles		✓					
Energy & water utilities	✓	✓	✓	✓	✓	✓	✓
Tourism & recreation		✓			✓		✓
Financial services	✓	✓	✓		✓	✓	✓
Telecommunications	✓					✓	✓
Consulting & environmental services (incl Information Technology)	✓	✓		✓	✓		✓
Real estate/ construction & engineering	✓		✓		✓		

Summary of business drivers per type of company & region

± Consulting or services organisations
 ○ Internally developed initiatives

Business drivers for adaptation initiative	Regions													
	Africa & Middle East		North America		Central America & Caribbean		South America		Europe		Asia & Australia		Multiple countries	
	±	○	±	○	±	○	±	○	±	○	±	○	±	○
Business opportunity	✓		✓		✓		✓		✓		✓		✓	
Wider social advantages	✓				✓		✓	✓			✓	✓	✓	
Social licence to operate		✓						✓						
Reputation				✓										
Reduced operational costs		✓		✓		✓		✓				✓		
Reduced disruption to production/services		✓		✓		✓		✓		✓		✓		
Improved ability to do business		✓		✓				✓		✓		✓		✓
Changing demands for goods/services	✓		✓	✓	✓		✓		✓					✓

Equal distribution of initiatives

Majority of initiatives



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