

# Wageningen guide to climate smart future

Adaptation Futures, Rotterdam, 2016



[www.wageningenUR.nl/climatechange](http://www.wageningenUR.nl/climatechange)

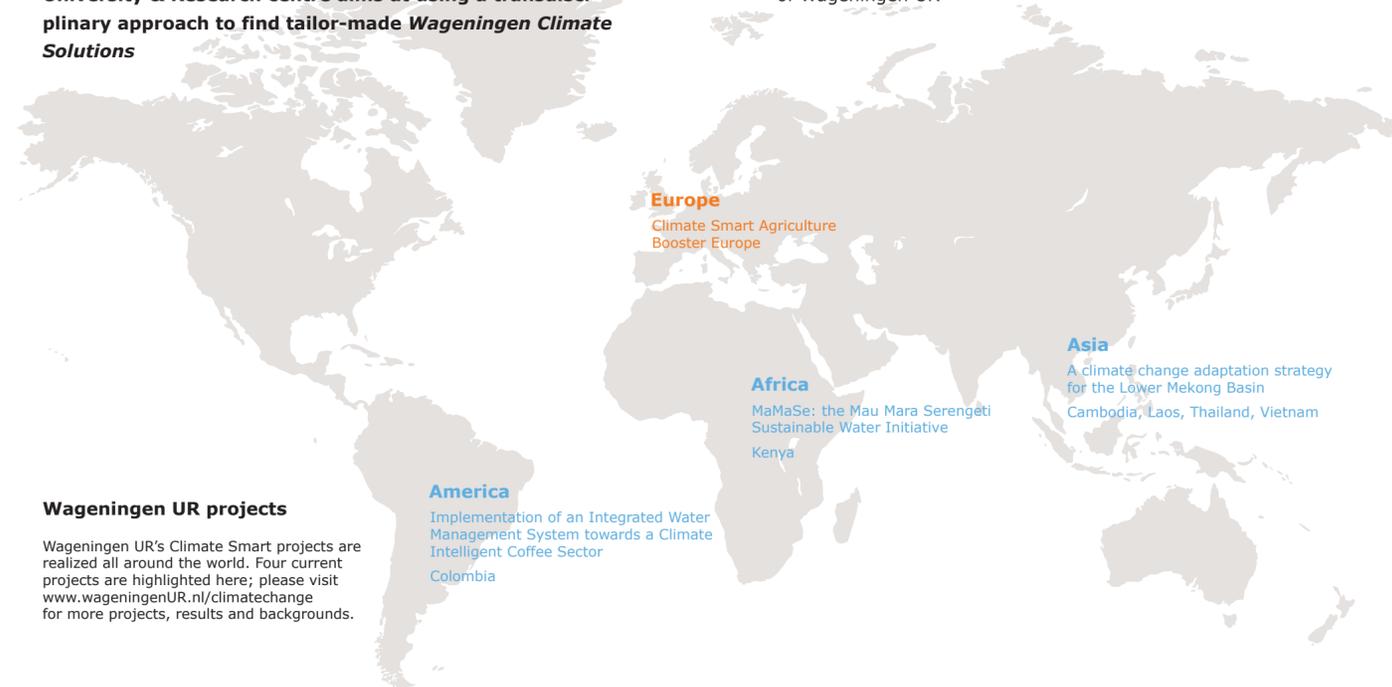


## Wageningen UR working on climate smart future worldwide

Climate change has moved from a long-term environmental issue to a complex global development challenge. To meet future food and other bio-based demands (energy, materials, chemicals) higher production levels are required while greenhouse gas emissions need to be reduced. Wageningen University & Research centre aims at using a transdisciplinary approach to find tailor-made *Wageningen Climate Solutions*

'Climate is a prime topic of cognitive dissonance: everybody wishes that it dissolves itself, without doing much for the present'

Prof. Louise O. Fresco, president of the Executive Board of Wageningen UR

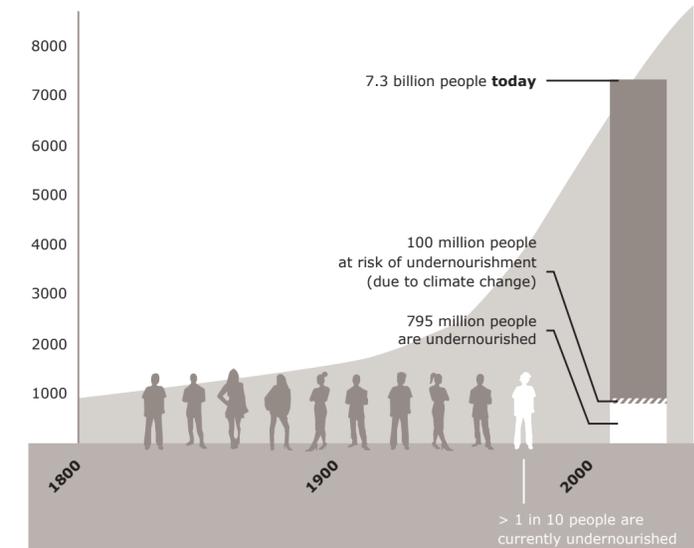


### Wageningen UR projects

Wageningen UR's Climate Smart projects are realized all around the world. Four current projects are highlighted here; please visit [www.wageningenUR.nl/climatechange](http://www.wageningenUR.nl/climatechange) for more projects, results and backgrounds.

## Healthy people

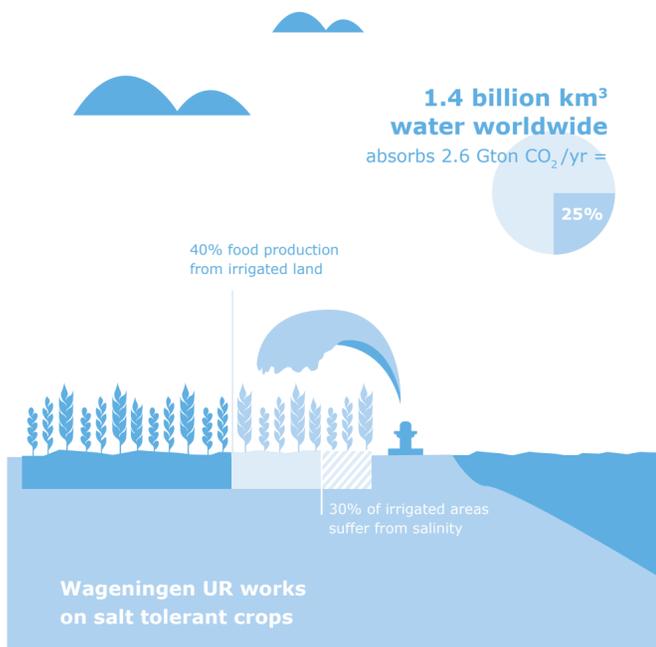
End hunger, achieve food security and improved nutrition and promote sustainable agriculture



Wageningen UR works on healthy food for healthy people

## Water

Ensure availability and sustainable management of water and sanitation for all



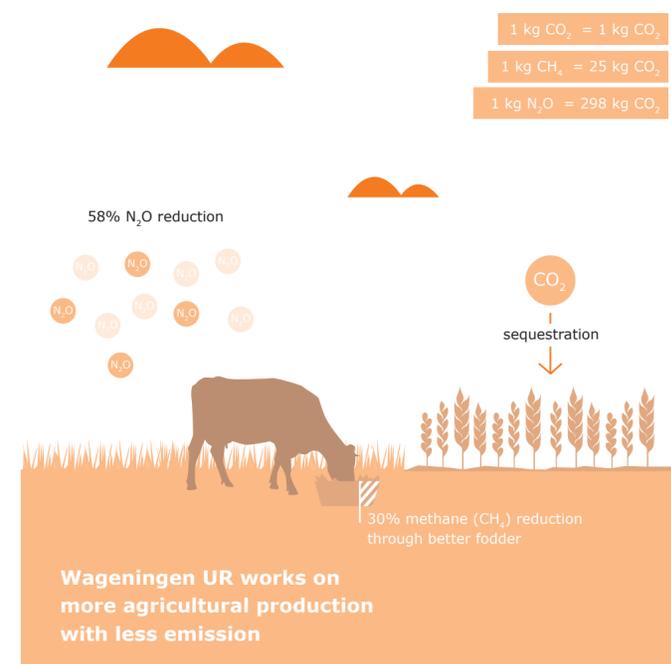
## Forest (REDD+ programme)

Promote the implementation of sustainable management of all types of forests



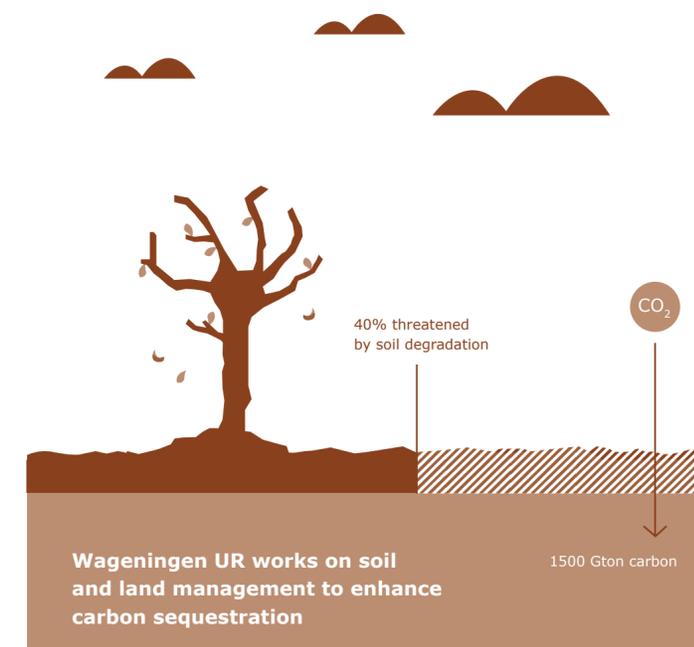
## Climate Smart Agriculture

Take urgent actions to combat climate change and its impacts



## Soil (4‰ initiative)

Protect, restore and promote sustainable use of terrestrial ecosystems



# Wageningen Guide to Rotterdam: planned activities of Wageningen UR



## Guidelines to assess sustainable production limits for irrigated agriculture: Letaba basin (SA)

Theme 3. Fresh water availability and access  
SC 3.2 Fresh water availability and access: guidelines and methodologies  
**Date/Time:** Tuesday, 10 May 2016, 15.45 – 17.30  
**Location:** Leeuwen Room II

In the Letaba sub-basin (South Africa), part of the Limpopo River Basin, interventions and innovations are under consideration to increase agricultural production and livelihood at smallholder farms under water scarce conditions. Possible uncertainties and discrepancies between theoretically plausible and actually realistic and sustainable expansion of irrigated agriculture were illustrated with scenarios, including climate change.

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## Establishing a water sharing mechanism at local level in Vietnam

Theme 3. Fresh water availability and access  
SC 3.2 Fresh water availability and access: guidelines and methodologies  
**Date/Time:** Tuesday, 10 May 2016, 15.45 – 17.30  
**Location:** Leeuwen Room II

Action research on water scarcity in mid-Vietnam has shown that farmers experienced less drought when pilot testing a water sharing mechanism.

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## Critical periods for adaptation in Asia: Irrigation demand by crop linked to water supply by source

Theme 3. Fresh water availability and access  
SC 3.2 Fresh water availability and access: guidelines and methodologies  
**Date/Time:** Tuesday, 10 May 2016, 15.45 – 17.30  
**Location:** Leeuwen Room II

Crop specific seasonal pattern of irrigation water demand in Indus, Ganges and Brahmaputra river basins in Asia has been estimated from different water sources by introducing seasonal crop rotation with monsoon-dependent planting dates in a dynamic global hydrological-vegetation model (LPJm). Crop irrigation water demand differs sharply between seasons (kharif and rabi) and regions (India and Pakistan). Irrigation supply vs. rain decreases sharply from west to east in south Asia. Pressure on groundwater is highest in the hot and dry summer months of April and May in Pakistan. Critical periods for adaptation are defined.

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## How's life on Svalbard?

Theme 7. The Arctic  
SC 7.2 Understanding adaptation in the Arctic  
**Date/Time:** Tuesday, 10 May 2016, 15.45 – 17.30  
**Location:** Van Walsum Room

A survey was held among the inhabitants of Spitsbergen (Svalbard) to investigate how they experience living in the Arctic and what social and economic changes they expect for the future.

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## Role of biodiversity and ecosystem services in climate adaptation and mitigation strategies

Theme 5. Ecosystems and ecosystem based adaptation  
SC 5.1 Ecosystem services for climate adaptation  
**Date/Time:** Wednesday, 11 May 2016, 13.30 – 15.15  
**Location:** Tokyo Room

This research provides an integral understanding on the role that biodiversity and ecosystems play to adapt human society to climate change. To this end, we assess interactions between climate and land-use change and their impacts on biodiversity, and identify adaptation and mitigation strategies where biodiversity plays an essential role in coping with climate change.

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## Role of power in climate change adaptation (CCA): explaining the shaping and adoption of CCA approaches in south Asia

Issue 9. Institutions and governance  
SC 9.2 Power and agency issues in climate adaptation  
**Date/Time:** Wednesday, 11 May 2016, 13.30 – 15.15  
**Location:** Oscar Auditorium

The presentation aims to share the framework to understand and explain the role of power in shaping the climate change adaptation approaches and the interplay between coercive and productive power in CCA policy-making.

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## Interactive visualisation of climate impacts, an interactive session

Issue 8. Risk assessment, adaptation planning and evaluation  
SC 8.9 Use and usability of climate information in adaptation planning  
**Date/Time:** Thursday, 12 May 2016, 08.45 – 10.30  
**Location:** Beurs Lounge

Practical application of climate change data in adaptation processes is often limited. In this research visualisation techniques are explored that might provide non experts insight into climate data.

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## An interactive tool translating complex adaptation information to support policy and decision makers

Issue 8. Risk assessment, adaptation planning and evaluation  
SC 8.7 Adaptation support tools  
**Date/Time:** Thursday, 12 May 2016, 11.00 – 12.45  
**Location:** Diamond Room I

The ToPDAd project developed an integrated methodology to assess and determine best strategies for businesses and regional governments to adapt to expected medium and long term changes in climate, integrating sectoral modelling and broader macro-economic assessments with principles from participative and robust decision making. To communicate the results of such complex integrated assessments to end users, a re-usable, user-centred design approach based on design principles focussed at fitness for use was used to develop a flexible interactive tool.

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## Working with local actors on eco-system-based adaptation of vulnerable delta-city Beira, Mozambique

Theme 1. Cities and infrastructure  
SC 1.3 Regional perspectives on vulnerability and adaptation  
**Date/Time:** Thursday, 12 May 2016, 11.00 – 12.45  
**Location:** Leeuwen Room II

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## Tracking adaptation: an overview of key challenges

Issue 8. Risk assessment, adaptation planning and evaluation  
SC 8.15 Tracking adaptation to climate change for MRE  
**Date/Time:** Thursday, 12 May 2016, 11.00 – 12.45  
**Location:** Tokyo Room

This session outlines and discusses with the audience the key conceptual, methodological and empirical challenges for systematically and comprehensive tracking of adaptation progress and the possible ways to deal with these.

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## Design and assessment of delta strategies: tools and methods in the Bangladesh Delta Plan

Issue 8. Risk assessment, adaptation planning and evaluation  
SP 8.10 Delta approaches: adaptive delta management and other support tools for improving resilience of the world's deltas  
**Date/Time:** Thursday, 12 May 2016, 11.00 – 12.45  
**Location:** Beurs Lounge

The formulation of the Bangladesh Delta Plan is in the final stage. In the session we'll share experiences in working with various tools to introduce longer term planning that we worked with during the last 2-3 years, like working with scenarios, strategy development, delta ateliers, touch table etc.

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## It's getting hot in here: Housing adaptation measures to extreme heat for the urban poor in South Asia

Theme 1. Cities and infrastructure  
SC 1.4 Heat in the city  
**Date/Time:** Thursday, 12 May 2016, 13.45 – 15.30  
**Location:** Room 8, Climate Generations Area

We measure across three cities in South Asia indoor and outdoor heat exposure and show that the urban poor are already regularly exposed to high night time temperature even during off-peak heat periods. Based on indoor heat measurements across 180 households we aim draw conclusions on low-cost heat adaptation measures.

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## Shrimp farming as adaptation to salt intrusion in coastal Bangladesh: a social tipping point

Theme 2. Food, forestry and rural livelihoods  
SC 2.3 Food production systems  
**Date/Time:** Thursday, 12 May 2016, 13.45 – 15.30  
**Location:** New York Room

The research discusses for the coastal region Satkhira in Bangladesh how long adaptations measures and farming systems will be sustainable under climate change. As such it offers a case of farming systems shifting to an alternative livelihood, whether this shift is equitable and what the possible adaptation pathways are.

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## Adaptation by wide green dikes: opportunity to improve biodiversity along the coast?

Theme 5. Ecosystems and ecosystem based adaptation  
SC 5.3 Implementing ecosystem-based approaches for adaptation  
**Date/Time:** Thursday, 12 May 2016, 13.45 – 15.30  
**Location:** Zaal Staal

Wide green sea dikes form an interesting adaptation measure because they harbour more plant species than traditional sea dikes. Furthermore, they form a smooth transition from salt-marsh foreland into dike grasslands.

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### Posters

#### Design guidelines for thermally comfortable and attractive streetscapes in harbour areas

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#### How to select drought adaptation measures? Applying the Nexus approach for a resource efficient and circular economy.

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### PhD Summer School Climate-Smart Agriculture: from fundamentals to application

**Date/Time:** 21-26 Aug 2016 in Wageningen, The Netherlands

This course addresses the interlinked challenges of agriculture and climate change in a holistic manner approaching CSA from various perspectives, including animal & plant sciences, politics & governance, and business & finance. It will provide ample opportunities to network with CSA experts and fellow students from around the world.

More information and registration:  
[www.pe-rc.nl/Climate-Smart-Agriculture](http://www.pe-rc.nl/Climate-Smart-Agriculture)

**Design:** Studio Lakmoes, Arnhem, The Netherlands

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