



# Climate smart agriculture, water and food in deltas

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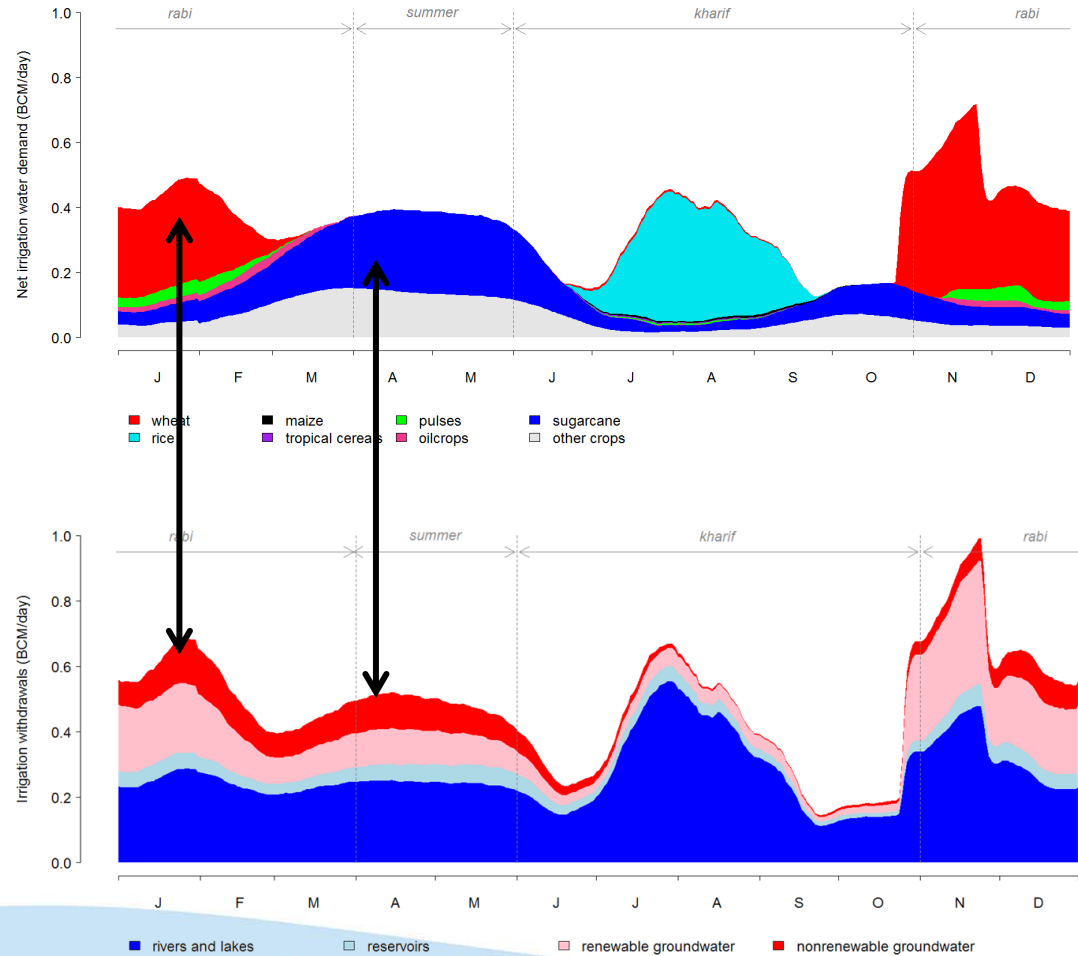
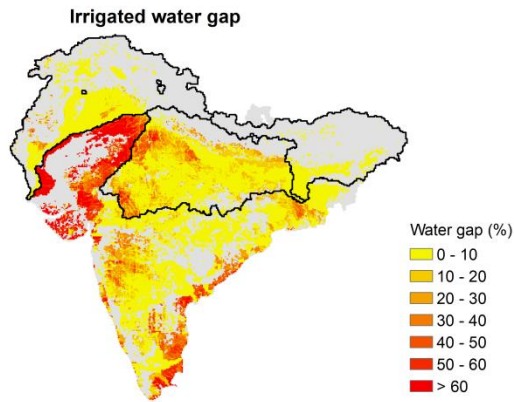
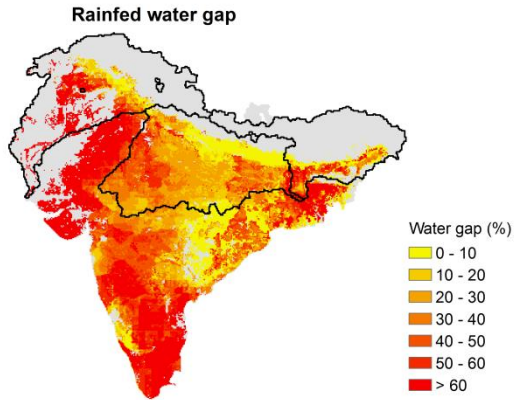
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## Reduction in yield of food crops due to water shortage



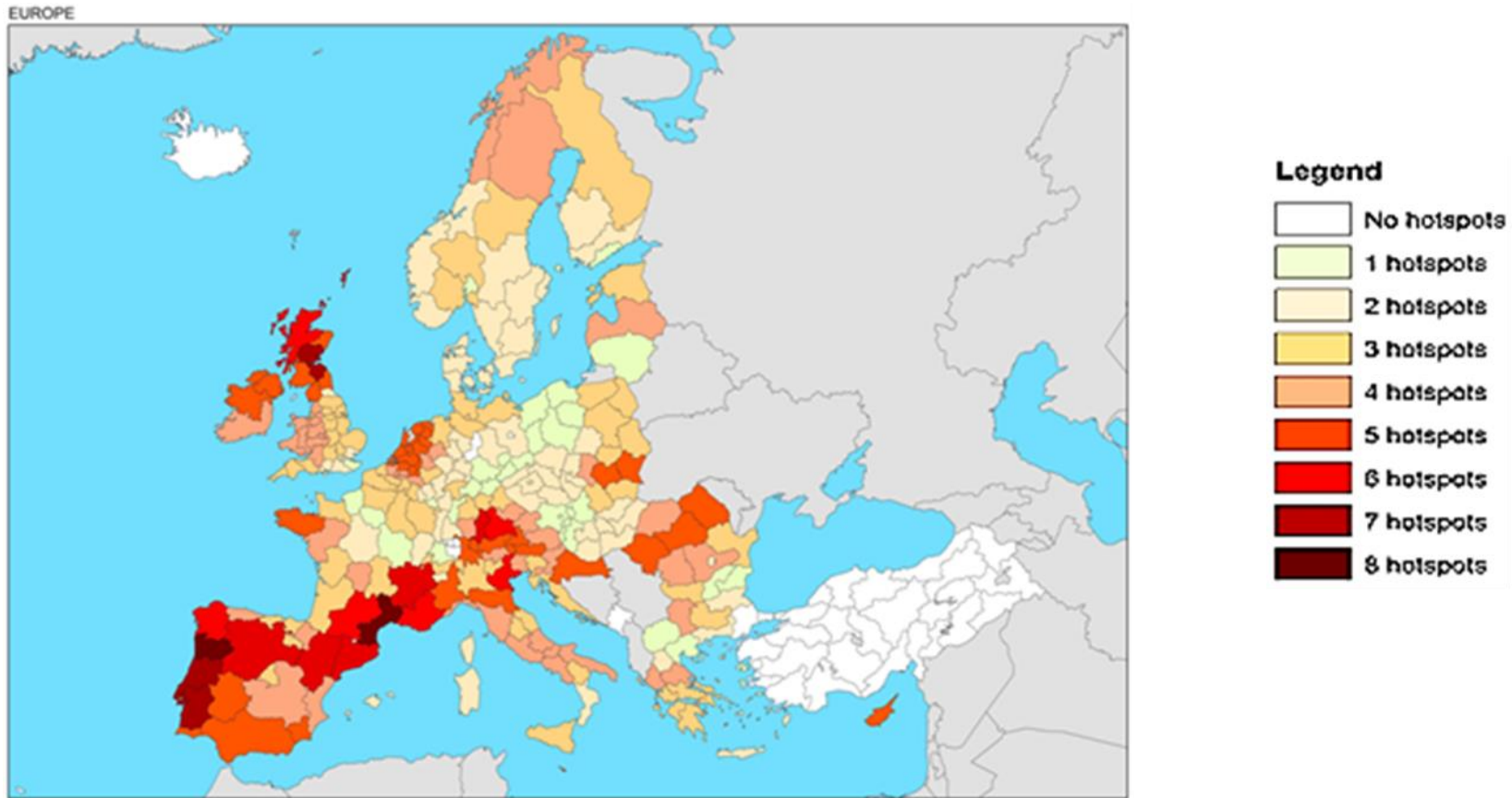


## Overview of 'hotspots' – solutions Fit4Regions

Countries	Adaptation						Mitigation					Total Hot-spots
	Water limited crop yield and forestry production	Non – water limited crop yield and forestry				Rural Economic Resilience	Land use and Land Use Change and deforestation.	Agricultural GHG emissions				
	Crop yield-water limitation	Soil erosion	Flood risks	Pests and Crop Diseases	Forest Fire	Tourism	Topsoil organic	CH4 Emissions agriculture	N2O Emissions agriculture	Renewable Energy		
Austria				n.a.		yes	yes	yes	yes	yes	5	
Belgium	no		yes	n.a.				yes	yes	yes	4	
Bulgaria	yes		yes	n.a.		yes					3	
Croatia	yes	yes	yes	n.a.		yes		yes			5	
Cyprus	yes			n.a.	yes	yes		yes		yes	5	
Czech R	no		yes	n.a.						yes	2	
Denmark	no			n.a.				yes		yes	2	
Estonia	no			n.a.	yes	yes	yes				3	
Finland	no		yes	n.a.		yes	yes				3	
France	yes	yes	yes	n.a.	yes	yes	yes	yes	yes	yes	9	
Germany	no		yes	n.a.	yes		yes	yes	yes		5	
Greece	yes			n.a.	yes	yes		yes	yes		5	
Hungary	no		yes	n.a.		yes					2	
Ireland	no			n.a.			yes	yes	yes	yes	4	
Italy	yes	yes	yes	n.a.	yes	yes		yes	yes		7	
Latvia	no			n.a.	yes	yes	yes			yes	4	
Lithuania	no			n.a.		yes					1	
Luxembourg	no			n.a.				yes	yes		2	
Malta	yes			n.a.		yes		yes	yes	yes	5	
Netherlands	no		yes	n.a.			yes	yes	yes	yes	5	
Poland	no	yes	yes	n.a.	yes	yes	yes		yes	yes	7	
Portugal	yes	yes		n.a.	yes	yes		yes	yes	yes	8	
Romania	no	yes	yes	n.a.	yes	yes	yes				5	
Slovakia	no	yes	yes	n.a.		yes					3	
Slovenia	yes	yes		n.a.		yes		yes			4	
Spain	yes	yes	yes	n.a.	yes	yes	yes	yes	yes		8	
Sweden	no	Yes		n.a.		yes	yes				3	
UK	no	Yes	yes	n.a.		yes	yes	yes	yes	yes	7	



## Regional distribution of a total of 6 generic hotspots and 9 detailed hotspots for 28 EU Member States at NUTS2 level





## CSA Solutions finder

1 Where in Europe do you live?

- user clicks on location of interest
- "This is what we know from you: ...": climate statistics, soils, farm typology of the NUTS2 region

2 Which are your farming activities?

- farm specialization (arable, beef, dairy, ...), size (small, medium, large), output (€/ha)
- agricultural practices: residual tillage, manure digestion, ....
- check and correct your details (sliders)

3 Which are your risks and opportunities?

- map of regions with GHG emissions from agriculture
- map of vulnerable regions to decreasing crop yield and water availability, forest fires and soil erosion
- map of regions with enabling conditions for CSA solutions: success stories, pioneer farms, PPPs, supportive policy conditions

4 Potential solutions

- alert systems, for crops and soils, manure, risk assessment, water management, sourcing strategies, insurance, policy options
- companies and innovations nearby

5 Which CSA solutions fit your situation?

- multiple solutions available with scores for each and in combination, based on similarity matrices
- solutions can boost or abate each other
- recognisable example (e.g. Conrad)

6 Recommended CSA solutions

- basket of options with their individual score and scores of combinations
- refine selection by adding farm specific information from Cool Farm Tool
- "How can I get these solutions?": links to CSA Booster partners and to Open Innovation Platform

7 Expected impact

- in terms of productivity, GHG emission reduction, adaptation metric (e.g. increased resilience)
- at farm or enterprise level
- for the region (under assumptions of implementation)

See

<http://csabooster.climate-kic.org/>



## Solutions and knowledge gaps

- Regional detail on water relations (*demand and supply*) will improve the modelling capability to identify solutions that do work
- Develop water demand scenario's and relations in delta's between upstream and downstream factors (e.g. sedimentation, salt intrusion)
- No 'one size fits all': *region specific solutions work* yet require information on local conditions, history and practices
- Development of *benchmarking* and *indicators* and a strong link with *monitoring* will benefit uptake and preparedness to act among industry, agriculture and consumers
- A *mitigation efforts strategy* is preferred over individual measures in agricultural production and will be recognized and owned by regional farmers