Improving water productivity: from data to action



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Research and consultancy for a sustainable future of our water resources

Challenges

- > Water scarcity and a changing climate
- > Increasing water demand
- > Scope for improvement



Water productivity

- > Crop (kg) per drop (m³)
 - Crop: harvested yield, or biomass production
 - Drop: water consumption
- > Solutions from farm level t
 - Farmer: timely irrigation, fe
 - Policy maker: water allocati







Monitoring

- > Identifying temporal and spatial trends
- > Different spatial scales









Modelling

- > Scenario analysis:
- > Short and long time scales

0.25 0.2 0.15 Scenario	Intermediate		Coastal Lowlands		Northern Mountains		Southern Highlands	
o.1 Current	1.3		1.1		1.0		1.2	
2040's Impact	1.2	(-3%)	0.9	(-21%)	0.8	(-19%)	1.1	(-9%)
Increased Fertilizer Use	1.6	(+28%)	1.1	(+5%)	1.1	(+9%)	1.3	(+12%)
Enhanced Varieties	1.4	(+13%)	1.1	(-1%)	1.0	(+0%)	1.3	(+10%)
Soil Moisture (cm3/cm3)Field Capacity (cm3/cm3) Plant Water Stress Point (cm3/cm3)				Soil Moisture (Plant Water Str	cm3/cm3) ress Point (cm3/cm3	Field Capacity (cm3/ 3) Wilting Point (cm3/c	cm3) m3)	CRO

Tools to support decision making

Concluding remarks

- > A higher Water Productivity can help to alleviate pressure on water resources, enhance food security, and improve farmer livelihoods
- > Using state-of-the-art technology, water productivity can be measured, monitored and even projected
- > Data are available on different spatial and temporal scales, each suitable for different types of applications



Now is the time to develop practical tools to enable farmers and policy makers to improve Water Productivity in water-scarce regions!



FutureWater

- "Research and consulting on water resource management"
- Topics: Water for Food, River Basin Management, Water Shortage, Water Excess, Climate Change
- Outputs: technical reports, policy reports, scientific publications, training, datasets, models, operational services
- Partners/Clients: World Bank, Asian Development Bank, Governments, River Basin Organizations, Research Entities
- Offices: Wageningen (NL), Cartagena (ES): 13 staff

