

Cross-cutting topic Water Footprint

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- Presentation of developments in water footprinting
“Water Footprint - from virtual water to local impacts”
- Presentation of projects’ relation to the water footprint and discussion of relevant aspects
- Identification of topics that could be worked on jointly:
 - Integration of social and economic aspects in water footprinting
 - Linking ground- and surface water models
 - Modelling aquifer depletion
 - Consideration of water quality aspects and water pollution
 - Allocation of water resources to different users in a basin
 - Virtual water trade: How can trade influence local water stress and vice versa?

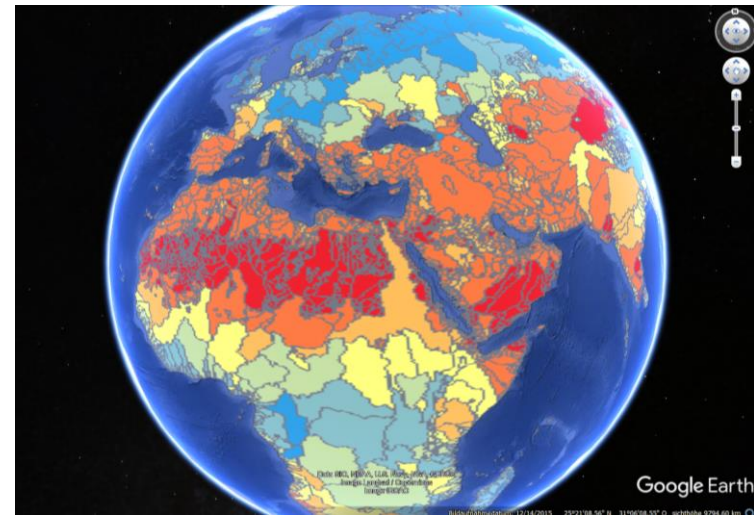


→ Second workshop in September 2018

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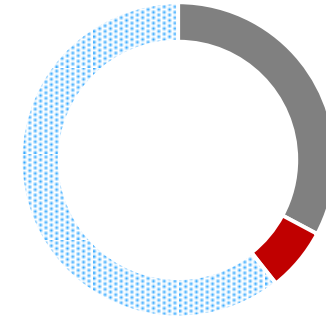
- Water Footprint is mainly perceived as a volumetric index, which is an important first step for a global consideration and awareness raising
- GRoW position: In order to allow for comparability and to support decision making, local impacts resulting from water use should be considered
- Various impact assessment methods are available:
 - Generic water scarcity indexes
 - Methods modelling the depletion of aquifers
 - Methods modelling impacts on ecosystems
 - Methods modelling impacts on human health
- Idea: water footprint toolbox / decision tree



→ Position paper

- Water pollution is neglected in most water footprint studies; if at all, grey WF is considered

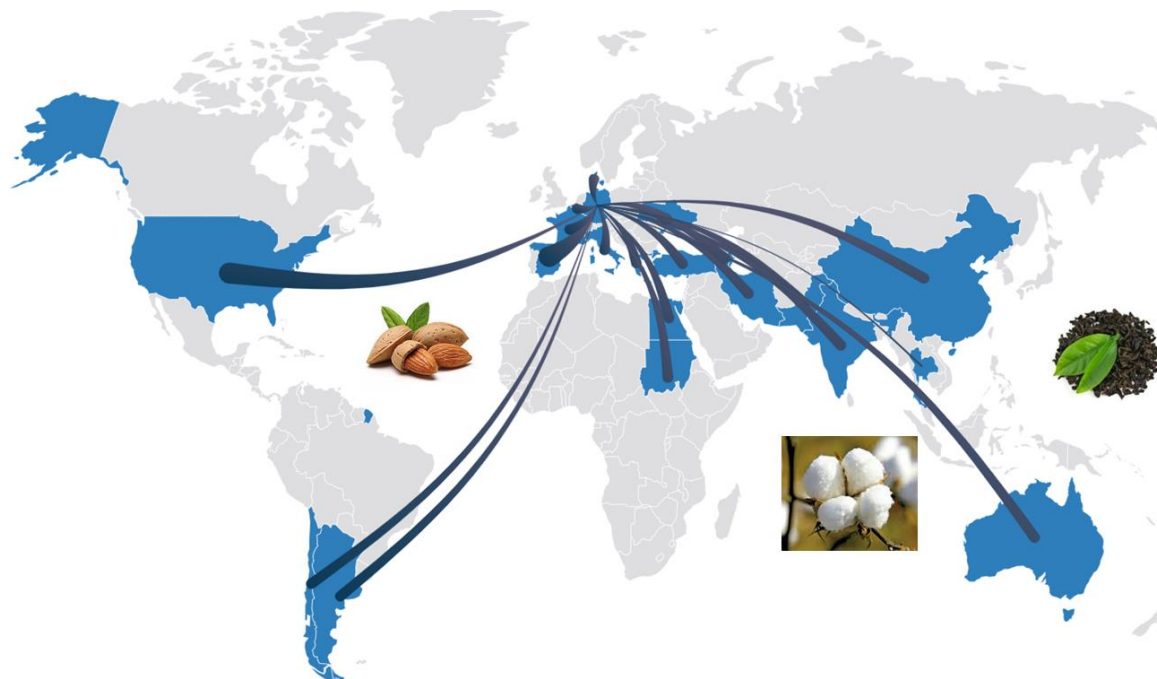
Quantity
only



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Impact
assessment

- GRoW position:
 - It is encouraged to consider water quality aspects in water footprinting
 - Grey water footprint is easy to apply and communicate but has severe methodological shortcomings; should only be used for awareness raising
 - In order to allow for comparability and support decision making, impact assessment models (acidification, eutrophication, human- and eco-toxicity) should be used
 - Idea: Water footprint toolbox / decision tree
 - Position paper



- Trade can increase local water stress, if water scarce countries export water intense products, e.g. cotton from Pakistan
- Trade can reduce local water stress, if water scarce countries import water intense goods, e.g. Saudi Arabia imports most of its food products
- Water availability hardly seems to influence global trade patterns;
The water scarcity-export paradoxon (Hoekstra 2014)



- Fair water prices: inclusion of externalities (Hoekstra 2013)
- Virtual water taxes (Hoff 2009) and trade barriers on water intense products produced in water scarce countries (Hoekstra 2013)
- Virtual water trading council within WTO (McKay 2003)
- Virtual water trading units in analogy to emission permits under the Kyoto protocol (Mori 2003)
- Abandoning food sovereignty
- Etc.



- Critical on proposed measures
 - Policy suggestions can result in major inefficiencies
 - Water is only one sustainability aspect → Trade-offs to social and economic aspects
 - Proposals deny the ability and maturity of developing countries to make trade decisions in their own best interest (Gawel and Bernsen 2011)-> “Eco-imperialism”

- GRow proposal:

- Carefully constructed water footprint label
- Monitoring of global virtual water flows to
 - A) Use them as **one** aspect in decision making on future trade flows
 - B) Identify local hotspots in global trade flows and start mitigation measures at places where it is most efficient





- Critical discussion of the current use of the Water Footprint
 - Development of the Water Footprint and existing methods
 - Methodological and practical challenges
- Water Footprint Toolbox
 - Guidance for users to apply the best suited method depending on the question to answer
- The Water Footprint - Opportunities for achieving the SDGs
 - Awareness raising to support responsible consumption
 - Analysis of companies' indirect water use in supply chains
 - Identification of hotspots & optimization potential
 - Analysis of consequences of trade on water scarcity in exporting countries
 - Policy measures (incentives for efficient water use, technical support)



Thank you very much for your attention!

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