UNEP Water Footprint, Neutrality & Efficiency (WaFNE) Umbrella Project

Applying water footprinting and related concepts in selected geographical locations

“Water Accounting and Efficiency Stocktaking” Workshop
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Olli Repo

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WaFNE Umbrella project components

- Component 1: Refinement and promotion of methodologies and tools for application of water footprinting related concepts / tools (led by UNEP SCP)
- Component 2: Applying water footprinting, related concepts and management tools in selected industry sectors (led by UNEP SCP)
- Component 3: Applying water footprint concepts, methods and tools in the financial sector as well as exploring and testing innovative loan products tailored to water efficiency improvements (led by UNEP FI)
- **Component 4: Applying water footprinting and related concepts in selected geographical locations (led by UNEP IETC)**

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Applying water footprinting and related concepts in selected geographical locations

- Purpose: to assess and test applicability of water footprint and neutrality concepts in water scarce and water stressed geographical locations, including collective action by public organizations, and to inform related policymaking
- Led by UNEP IETC (International Environmental Technology Center in Japan)
- Budget: 1,5 million US$
- 2-3 pilot locations at national, regional or city level or some other defined area (watershed, catchment area) that is experiencing water scarcity and is highly water-stressed
- Foreseen project activities:
  - Dialogue
  - Capacity building
  - Assessment and demonstration
    - WF accounting
    - WF impact assessment
    - Reduction of the negative impacts of WFs
    - Offsetting the residual impacts of WFs
  - Awareness raising and replication

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On going & starting activities

- Analysis of applying water footprint and neutrality concepts for geographical areas and neutrality/offsetting options
- Identification and selection of pilot locations and partners as well as development of pilot implementation activities
- Global Environment Facility (GEF) proposal preparation

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WaFNE: Target geographical locations

Target geographical areas and industrial sectors to be selected on the basis of:

- level of water stress and scarcity, current and projected;
- level of national industrial output, water use and environmental inefficiencies;
- economic and environmental importance of targeted industries, considering major agricultural exporters and industrial suppliers of global supply chains;
- willingness of decision-makers and organisations in targeted areas / sectors to participate;
- assessment of potential for replication and wider adaptation in country / region.

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WaFNE: Target countries

Considering project criteria, countries will be selected from

(i) Asia: China, India, Pakistan, Sri Lanka, Thailand

(ii) Africa: Algeria, Egypt, Kenya, Malawi, Morocco, South Africa, Tunisia

(iii)(resources depending), also Latin America, where countries face variation internally (scarcity in some areas, abundance in others) and have internal distributional challenges: Argentina, Chile, Mexico, Peru

(iv)(resources depending), also Eastern Europe, where countries face water challenges: Ukraine, ...

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Analysis of applying water footprint and neutrality concepts for geographical areas and neutrality/offsetting options

- The Analysis is carried out by Water Footprint Network (WFN) based on the agreement between UNEP IETC and WFN
- Includes a preliminary assessment to assist IETC to implement the WaFNE project component on the application of WF in selected geographical areas
- Timeframe: November 2009 - March 2010
  - 1st draft reports by 31 January 2010
  - Final reports by 31 March 2010

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Analysis of… (continued)

Purpose #1: To propose a conceptual framework for applying Water Footprint concept in a geographical area

- focus on state of play regarding WF accounting, impact assessment, reduction and offsetting methods and tools, and analyze applications at different geographic scales (i.e country, state, city, municipality, watershed level)

- clarify the similarities and differences between the water and other footprinting methodologies (carbon, ecological), and potential areas of cross-application or complications.

- investigate policy and regulatory decisions as well as instruments that have influenced the application of the water footprinting and neutrality/off-setting measures

- provide recommendations on what components of generic methodology and associated tools for geographic application of Water Footprint exist, which components are under development and what are the main developmental gaps as well as identify next R&D steps.

- identify potential pilots, partners and geographies and scales

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Analysis of… (continued)

Purpose #2: To identify and analyze measures to reduce water footprint and offset the impacts of water footprint.

- identify WF reduction & offsetting measures (best management practices, technologies, products & services, emerging models) for all the main water consuming sectors (agriculture, urban & industry)

- assess measures' applicability at different geographical scales and for pilot implementation including measures' efficacy, stakeholder acceptance, ease of implementation and monitoring etc.

- analyze the effectiveness of equity enhancement of offsetting measures

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Analysis of… (continued)

The study may consider, but is not limited to, measures listed in the following table.

Sector	WF reduction options	Offsetting options
Agriculture	• Irrigation management • Run-off and wastewater treatment for reuse and cascading use ▪ Crop substitution	• Investing in improved watershed management • Supporting underserved communities to set up and maintain water supply system • Supporting initiatives to reduce water footprints in other sectors within the locality or specific watersheds • Supporting offset certificate programmes with proceeds going to initiatives in a specific locality or watersheds
Urban	• Product substitution • Water saving technologies and water conservation measures for households and for public/urban usage ▪ Wastewater treatment technologies to enhance reuse and cascading use ▪ Leakage detection and minimization ▪Demand side management ▪Water efficient/neutral town development and urban planning	
Industry	• Influencing suppliers to reduce their operational footprint or switch to suppliers with smaller footprint ▪ Substitutions of products and ingredients to utilize those with less water footprints, or those from less water-stressed regions ▪ Water saving technologies and conservation measures ▪ Wastewater treatment technologies to enhance reuse and cascading use ▪ Leakage detection and minimization	- II - • Increasing availability of more water neutral products

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Analysis of… (continued)

Research methodology:

- reviewing current literature, assessment reports, case studies as well as other documentation

- interviewing key practitioners, including industry representatives, public agencies and non-governmental organizations working in the field from both developed and developing countries, particularly in water-stressed areas.

Expected results/outputs to be achieved:

1. Report on water footprint and neutrality methodology for a field application at the level of geographical area (municipal, state, or national level)

2. Report on measures to reduce water footprint and offset the impacts of water footprint, and assessment of the effectiveness of equity enhancement of offsetting/neutrality measures

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