

Ecosystem services-based approaches to water management : What opportunities and challenges for business?

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Ten years after the Millennium Ecosystem Assessment: A Global Perspective on Water Ecosystem Services



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Businesses depend and impact on water ecosystem services (ES)

Diverse water ES used by business:

- Agribusiness / farming
- Tourism industry
- Pharmaceutical industry

- Trade-offs in use of ES
- Impacts on downstream users

Business risks linked to water ecosystem changes

- Water availability/biophysical and ecological risks
- Water infrastructure/energy-related risks
- Policy environment/regulatory risks/legal licence to operate
- Reputational risks/social licence to operate

USING ECOSYSTEM SERVICES BASED APPROACHES: EMERGING OPPORTUNITIES FOR BUSINESSES

Water scarcity, poor water quality, degraded water infrastructure, and stricter regulations are already generating demand and new markets for:

- water-efficient products;
- water quality and pollution monitoring/control devices and systems;
- increasingly effective wastewater treatment solutions, including for acid mine drainage and nanoparticles/chemicals
- water consulting services to find innovative solutions for water sourcing and permitting, as well as for water cost management and reduction.

What does ES based approached bring to the table?

USING ECOSYSTEM SERVICES BASED APPROACHES: EMERGING OPPORTUNITIES FOR BUSINESSES

Recognition of importance of:

- Biodiversity and healthy ecosystems;
- Value(s) of nature to bottom-line and / or stakeholders (costs savings, competitive advantage) ;
- Measurement & valuation ;
- Stakeholders (consultation, collaborations) for behaviour change.

=> for the management of the biodiversity & geodiversity which underpin the ecosystem services that are directly or indirectly influencing their activities

=> Affects organisational objectives, strategies, plans, budgets, and routines

For instance, **food and beverage companies** have specific water quality, volume, and delivery timing requirements so as to be financially viable

Examples of **Vittel** & **SAB Miller**: efforts to improve the water quality in agricultural supply chains and to engage with local farmers, communities, scientists, and NGOs to address local and watershed-level water challenges and generate reputational benefits, in addition to operational savings and competitive advantages.

€ million	Water use	GHGs	Land use	Other air pollution	Waste	Total	% of total
	33%	33%	25%	7%	2%	100%	
Total	47	47	37	11	3	145	100%
PUMA Operations	<1	7	<1	1	<1	8	6%
1	1	9	<1	1	2	13	9%
2	4	7	<1	2	1	14	9%
3	17	7	<1	3	<1	27	19%
4	25	17	37	4	<1	83	57%

PUMA's environmental impacts across operations and supply chain



'Gaining a better understanding of the source of the natural goods and services PUMA relies on and the declining availability of the basic resources required for our business growth, will help PUMA build a more resilient and sustainable business model and ultimately better manage its impacts on the environment.'

Jochen Zeitz, Chairman and CEO of PUMA and Chief Sustainability Officer PPR

BEYOND INDIVIDUAL COMPANY APPROACHES: OVERCOMING CHALLENGES FOR MAINSTREAMING ECOSYSTEM SERVICES-BASED APPROACHES TO WATER MANAGEMENT

However, such approaches limited to small numbers of companies:

- Large companies with corporate image issues and strong stakeholder pressures;
- Production assets which cannot be moved away because of huge capital investment and long life-span of assets to be financially profitable ;
- New projects under intensive public and NGO scrutiny (i.e. social licence to operate needs to be secured) and increasing/stricter environmental regulations.

Many challenges for mainstreaming ES-based approaches to water management!

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1- Mapping / Measurement & Valuation:

- Time and temporal issues / Tracing supply of ES and beneficiaries
- Legal control over land / water resources
- Cost versus accuracy of assessments (data quality, etc.)

2- **Financial aspects** (not values!!) are critical to driving organisational changes

- Water ES degradation/loss needs to imply immediate and tangible costs while changes in practices required for their conservation / restoration /sustainable uses need to become financially viable (accounting for opportunity costs).
- Economic valuation of water ES may be useful to identify and rank priority ES for business and their stakeholders, but are not sufficient to influence corporate behaviours in favour of an ecosystem services-based approach
- Critical importance clear rights of use / ownership & responsibilities (e.g. Vittel's legal context over "natural mineral water")

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- **Mainstreaming monetary incentives** (e.g. PES schemes) and **disincentives** (e.g. Impact mitigation hierarchy, inc. offset mechanisms)
- **Collective action, watershed-based policies and regulations, industry-specific standards**
- Improving corporate water **performance disclosure** and **accountability**

Thank you! Any question?

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