

Three rectangular images showing different aquatic environments: a fast-flowing river with white water rapids and rocks, a wide river with a large meander loop in a green valley, and an underwater view of a coral reef with various marine life.

The business benefits of engaging with the Sustainable Development Goals

This brief aims to highlight the benefits to business of engaging with the UN Sustainable Development Goals (SDGs) and how the EU Horizon 2020 project AQUACROSS can assist with the SDGs focused on managing aquatic ecosystems. AQUACROSS aims to support EU efforts to protect aquatic biodiversity and ensure the provision of aquatic ecosystem services, by advancing ecosystem-based management (EBM) of aquatic ecosystems.

KEY MESSAGES

- Engaging with the SDGs represents an important opportunity for new markets, investment and partnerships for businesses working directly and indirectly with marine and freshwater environments.
- Achieving these SDGs will **improve environmental performance and reduce risks** for business, including those related to biodiversity loss. Businesses that engage with the SDGs can benefit from **new market opportunities and improved engagement with customers and stakeholders**, as well as from increased water productivity across supply chains and products.
- Research contributes to this process by enabling businesses to **access and use data** for monitoring risks, identifying future trends and reporting their contributions to the SDGs.
- AQUACROSS's **ongoing delivery of knowledge, tools and approaches** for assessing threats to aquatic ecosystems and resources, understanding the policy landscape, and developing scenarios support businesses in this process.

THE AQUATIC ECOSYSTEM-RELATED SDGS

Business has a crucial role to play in the implementation of the SDGs, contributing innovation and technical capabilities, and vital financing. It also has a responsibility to avoid negative social and environmental impacts that threaten the achievement of the goals. But

What are the SDGs?

The Sustainable Development Goals were agreed at the UN level to guide the world's progress towards sustainable development until 2030. They were agreed by Heads of State and Government in September 2015 to make progress on ending poverty while restoring and protecting the natural environment.

They include 17 interrelated goals, each associated with a set of specific targets. They should be implemented in an integrated way, and should be systematically monitored and reviewed.

The EU is aiming to be a leader in implementation of the SDGs. The current policy framework addresses all 17 goals, but they will also be integrated into the EU's longer term vision, and sectoral policies post 2020.

this is not just a responsibility – the SDGs are an important opportunity for businesses that choose to engage with them (WBCSD, 2017). Engagement can facilitate risk management, reveal business opportunities, and improve environmental performance. These opportunities and how they can be realised are explored in this brief.

For businesses that directly or indirectly use freshwater, coastal and marine ecosystems, or water as a resource, three goals are particularly important: Clean Water and Sanitation (SDG 6), Life Below Water (SDG 14) and Life On Land (SDG 15). SDG 6 aims to ensure that water is available for all, through improving water

quality and water efficiency and restoring ecosystems. SDG 14 calls for the conservation and sustainable use of marine ecosystems and resources, by reducing threats to marine environments and establishing marine protected areas. SDG 15 aims for the protection, restoration and sustainable use of terrestrial and freshwater ecosystems.

Progress towards these three goals supports a wide range of economic activity, including drinking water supply, hydropower, fisheries, aquaculture, tourism and recreation, extractive industries, and shipping, through sustainable management of the resources on which they rely. For example, reducing threats to the marine environment helps sustain fish production. The data and knowledge produced as part of global action towards the goals can also support business decision making. For example, the World Resources Institute's Aqueduct tool (WRI, 2013) allows companies to assess the risks of water scarcity for their direct operations and supply chains and make appropriate investment decisions. While some of the aquatic ecosystem-related targets, including avoiding pollution and protecting ecosystems, could represent constraints for some of these businesses (UN-Water, 2016), they are important opportunities for others.

Achieving these goals relies on reducing specific threats to ecosystems, including overfishing and invasive alien species, and requires enhanced regulation, and incorporation of natural capital into decision making. This will need strong scientific understanding of the functioning of freshwater, coastal and marine ecosystems. SDG 17 calls for partnerships that allow researchers, business, NGOs, governments and other actors to work together towards the goals. In this context, strong partnerships between the researchers that produce knowledge on aquatic ecosystems and the businesses and other actors that use it are critical (IUCN, 2017).

Added value of addressing risks using the framework of the SDGs

The SDGs offer a common language for addressing water and biodiversity challenges, which facilitates engagement with the customers, employees and stakeholders who expect commitment. They signpost the likely direction of policy changes, and redirect investment flows. Businesses that are engaged with the SDGs can be aware of upcoming regulatory risks and well-placed for new market opportunities (GRI et al., 2015).

BENEFITS FOR BUSINESS OF ENGAGING WITH SDGS

Although the aquatic ecosystem-related SDGs are generally less well known in the business community, they offer many opportunities (PWC, 2015). Businesses that engage with these goals can benefit from improved risk management, seizing new opportunities, and taking advantage of a better business environment (WOC, 2015).

Risk management

Water scarcity and biodiversity loss are significant risks to business operations (WEF, 2015), especially for businesses that use water or rely on healthy ecosystems. These risks include (WEF, 2010):

- ➔ Disruption of operations from natural disasters. For example, loss of wetlands can increase risk of flooding;
- ➔ Scarcity of resources, such as fish;
- ➔ Litigation due to biodiversity exploitation;
- ➔ Tightening of legislation, such as reduced fishing quotas
- ➔ Loss of market access due to increased customer awareness and changing preferences;
- ➔ Loss of social licence to operate; and
- ➔ Reduced credit quality and difficulty accessing finance.

Engaging with the SDGs can assist in better management of these risks. For example, participating in decision-making processes for the SDGs such as zoning of marine protected areas, can allow businesses continued access to resources and a forum for communicating their needs (WOC, 2015). Taking actions that benefit biodiversity can also reduce operational costs – reducing biofouling of ships helps to avoid transportation of invasive species and improves fuel efficiency (WOC, 2017).

Being aware of legislative and policy changes driven by the SDGs will help reduce their impacts on business activities. For example, the impacts of new taxes and fines can be reduced through proactive supply chain management or efficient resource use, such as targeted fertiliser applications in agriculture to reduce pollution (GRI et al., 2015). Lastly, proactive alignment with the SDGs can improve stakeholder engagement and maintain a positive perception from customers, thus reducing the risk of losing social licence to operate or market share.

Seizing opportunities

The SDG process not only helps maintain existing business operations, but presents many new business opportunities. For example, the need to trace fish through the supply chain to maintain product certification creates opportunities for innovative technological solutions (GreenBiz, 2016). New markets may arise as global investment flows are redirected towards meeting the SDGs (GRI et al., 2015). Those that engage with the SDGs may be particularly well placed to take advantage of the growing range of sustainable financing mechanisms, such as green bonds and impact investment, which

Restoration of the Old Rhine River by Electricité de France (EDF)

The EDF group aimed to increase the social and economic benefits of a hydropower plant on the Old Rhine River to reduce the risk of failing to maintain the right to operate the plant. Several measures were put in place to restore wetlands and wildlife passage. The project helped the EDF group meet the requirements of environmental legislation and ensured the plant was relicensed.

ECOALF, an innovative fashion brand that relies on the oceans

ECOALF repurposes waste products into high quality, durable fabrics for their clothing line to create a more sustainable fashion line. The company collaborates with Spanish fishing ports to collect discarded fishing nets, which otherwise get caught on corals, turtles and other marine life. The nets are repurposed into fabric that can be used in jackets and other items of clothing.

require reporting on environmental metrics for their appropriate evaluation. The market for sustainable products continues to grow, as customers favour strong performers in sustainability (PWC, 2015). By announcing their commitment to the SDGs and reporting on progress, companies demonstrate their performance and take advantage of these markets (GRI et al., 2015). They can also recruit and retain talented employees who prefer to work for employers that create positive impact (GRI et al., 2015).

Partnerships with research

Effective partnership between research and business is critical for achieving the SDGs, as called for by SDG17 – partnerships for the goals. Research can help businesses to

"Research projects must share their results in a way that can be used. User-friendly web and/or mobile applications allow businesses to get key location insights, create reports and take action based on them," says **Ramiro Aznar Ballarín, CARTO (a data visualisation platform)**

monitor risks and report on progress towards the SDGs, enabling them to exploit opportunities from new market segments, increase productivity through sustainable natural resources management, and achieve relevant industry certifications. These knowledge outcomes may be particularly important for small and medium sized enterprises that do not have the resources to produce them themselves (WOC, 2015).

Businesses are particularly interested in future trends relevant to their markets and ecosystems, as well as changes in policy and regulatory issues. Therefore, analyses of these potential future changes are particularly useful for business to plan their future operations. It is also important to provide information at a large enough scale to inform investment decisions.

To effectively communicate these messages, research projects should tailor their offer to business to better match their target audiences, Robert Sanders of the European Business & Innovation Centres Network (EBN) suggests. Specific communications about opportunities or meetings with specific experts at events are more likely to be taken up than general messages.

"To reach business, the research community needs to anticipate how their offer can add value to companies, and communicate this dynamically and succinctly," says **Robert Sanders, EBN**

Identifying the right individual in a business is key

– Twitter and LinkedIn are especially useful at getting the right messages to the right people. Inviting companies to projects' advisory boards allows them to get results first hand and stay ahead of their competition. It is crucial that research projects communicate in a way that meets businesses' needs if their results are to have an impact.

The added value of AQUACROSS for business

AQUACROSS research can help businesses working with aquatic ecosystems to contribute to the SDGs, reduce risk, and identify opportunities.

Business need	AQUACROSS contribution
Potential policy directions	AQUACROSS research on the current EU policy framework governing aquatic ecosystems suggests that future policy directions should mainstream environmental action in sectoral policies by diverting economic support away from activities that harm aquatic ecosystems and promoting change in sectoral practices. This would represent a regulatory risk for businesses that rely on this economic support or operate in those sectors, including fishing and agriculture. However, greening of sectoral policies would also allow environmentally-friendly innovation and create new business opportunities.
Understanding threats to aquatic ecosystems and resources	AQUACROSS provides guidance on indicators and methods that could be used to assess the effects of business activities on ecosystem state, and possible approaches to model the effects of biodiversity loss on ecosystem functioning and services. For example, indicators for the effects of marine energy development include change in electromagnetic fields, underwater noise and water temperature. The AQUACROSS modelling framework can be used to assess how those changes result in loss of biodiversity and ecosystem services. This knowledge could help businesses identify opportunities for innovation to reduce threats, and help energy developers and others to assess and mitigate risks.
Scenario development for future forecasting	Assessing possible future management measures and policy and regulatory development is critical for bringing clarity to investors for innovative products and services. AQUACROSS guidance for participatory scenario development can be adapted by business for this purpose and can support them in their decision making.
Concrete insights in case studies	The tools, approaches and guidance described above are applied in the AQUACROSS case studies to explore the effects of threats to aquatic ecosystems, the potential for ecosystem-based management to deliver improvements, and future scenarios. This work offers the opportunity for businesses operating in the case study areas to participate in improving ecosystem management, and to understand threats to aquatic ecosystems, and their biodiversity and ecosystem services. The data will be accessible on the AQUACROSS information platform to help businesses outside these areas identify opportunities. The case studies include the North Sea, the Intercontinental Biosphere Reserve of the Mediterranean, the Danube River Basin, Lough Erne (Ireland), the Vouga River (Portugal), Lake Ringsjon-Rönne å catchment (Sweden), the Swiss Plateau, and the Azores.

Next steps

To accomplish the systemic shift needed for the SDGs to be achieved, new forms of investment are required that create a positive impact for society and the environment (Clarmondial, 2017). These include national and regional fiscal approaches to support the environment, impact investment to leverage private funding for the environment, and instruments to create markets for biodiversity, using both public and private sources of funding.

The Fish Tracker Initiative aligns global capital markets and sustainable fisheries

The Fish Tracker Initiative assesses whether companies listed on the stock exchange that generate revenue from fishing and related industries are contributing to overfishing. This assessment allows the risk premiums for particular fisheries or companies to be correctly priced. Communicating this information across the finance sector should help to redirect capital away from over-exploited fisheries (World Forum on Natural Capital, 2017).




Impact investments, for example, aim to generate both social and environmental impact and financial return. They cover a wide range of asset classes with varying return expectations, such as cash equivalents, fixed income, venture capital, and private equity. For example, Nature-Vest bridges the gap between conservation and investors. Its Balanced Water Fund in the Murray Darling Basin, Australia, invests in permanent water rights for farmers and donates other al-

locations to wetland ecosystems that otherwise do not receive water. It delivers ecosystem restoration, water security for farmers, and financial returns for investors (TNC, 2017).

Payment for ecosystem services involves beneficiaries of ecosystem services compensating communities and landowners for taking or not taking certain activities that maintain their provision. For example, the water company Vittel compensates farmers around the source aquifer in France for modifying their practices to avoid nitrate contamination of the groundwater (Perrot-Maitre, 2006). An understanding of where ecosystem services are provided, how they are affected by management measures, and their economic value is needed for the market to function (UNDP, 2017).

Responsible investing needs partnerships between different actors, including scientists, business, investors and conservation organisations, to develop the investment potential in ecosystem-based management of aquatic ecosystems. Existing experiences are a source of inspiration, and effectively communicating the benefits of these investments is essential to attract capital. A set of impact metrics are needed that have a scientific basis, and are measurable, cost-efficient to monitor, and materially relevant to investors. The research conducted in AQUACROSS on the relationships between human activities and aquatic ecosystems can help innovative business to identify and measure their impact for lasting results.

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