Case Study

NEW ZEALAND PILOT OF THE CORPORATE ECOSYSTEM SERVICES REVIEW CASE STUDY: URS

"URS has been a member of SBC, and before that NZBCSD, for over a decade and we pride ourselves on actively encouraging sustainable development in New Zealand. The Business and Biodiversity work stream appealed to us as it addresses issues related to New Zealand's most important asset - its natural environment - and the benefits our society and economy derive from it. The project introduced a new language of ecosystem services to our planners and engineers and helped build a business case for developing further capability in green infrastructure and ecosystem services assessment."

Mark Drury, CEO,
URS New Zealand

ABOUT URS

URS provides engineering and environmental services to public agencies and private sector companies around New Zealand internationally, for a variety of industries, including transportation, water resources, property development, facilities, forestry, agriculture, manufacturing, mining, oil & gas, telecommunications, power and waste industries.

The company seeks to continuously improve sustainability of internal operations, as well as services provided to clients, through their 'The Things We Value' programme.

Internationally, URS has leading experts who apply ecosystem services methodology to a range of projects. This includes assessments of the environmental and social impacts of large infrastructure projects; incorporating ecosystem services values into public and private decision-making; development of ecosystem services markets; and natural capital accounting.

WHY URS PILOTED THE ESR

The Sustainable Business Council's Business and Biodiversity work stream offered an opportunity for URS to test the Corporate Ecosystems Services Review (ESR)[1] methodology in the local context, working in conjunction with a range of stakeholders. The URS internal '3i Programme' focuses on innovation, integration and involvement in all aspects of the business. The company saw the potential for the ESR process to enhance all three aspects of this programme by encouraging cross-disciplinary thinking and cross-sector cooperation with clients, regulators and other stakeholders.

The company hoped that the project would allow them to engage with a number of strategic clients and explore how the ecosystem services approach could enhance their own traditional services.

Justine Bennett and Caroline Secretin, Water Quality Scientists at URS inspect green infrastructure in Auckland Victoria Park. Victoria Park is an example near our office where green infrastructure provides multiple benefits including amenities, air quality and storm water management.

[1]www.wri.org/publication/corporate-ecosystem-services-review

HOW URS USED THE ESR PROCESS

URS created a dedicated project team of five specialists who combined technical knowledge with business development responsibilities. The team remained the same throughout the project to ensure they could build on shared understanding developed at each stage of the project. They ensured that the key driver of the project was to link the ESR results to the way URS generates value for their customers. The project was strongly supported by senior management.

URS expected that the review was likely to generate more valuable insights if external stakeholders were engaged in the process. Consequently, the project involved clients, regulators and the academic community. Clients' contributions helped cement the business case for taking an ESR approach, and the regulators and academics facilitated access to some specialised data.

The project ran from the end of 2013 until mid-2014 and consisted of three workshops – an ecosystem services introduction and scoping in December, a prioritisation workshop in February 2014, and an opportunities, risks and action plan workshop in June 2014.

URS used New Zealand academic papers on ecosystem valuation and ecosystem classification, international literature on green infrastructure, and ecosystem services case studies from URS UK experts to undertake the review of conditions and trends. The team already held a lot of knowledge in regards to trends and opportunities. Interviews with clients and other stakeholders were also very useful, especially to better understand future plans, strategic direction and aspirations. The research was an iterative process, revisited at each stage to support first the analysis and then to underpin the action plan.

SCOPE OF ASSESSMENT

The scope of the review was confined to the services offered to the water sector customers in Auckland. Both the location – Auckland - and the selected service category – water - are of strategic importance to URS, and the company felt an investigation of impacts and dependencies on natural ecosystems would generate valuable insights for themselves and customers alike.

PRIORITY ECOSYSTEM SERVICES

The ESR enables the company to prioritise a few key ecosystem services by evaluating the degree of the company's dependence and/or impact on a range of ecosystem services.

URS water services include planning, consenting and design of water infrastructure and as such they closely interact with a number of water-related services provided by ecosystems in natural systems. In the urban context with high population levels and often significantly degraded environment, the engineering services either enhance the services provided by nature or, in some extreme cases, substitute it entirely. There is a clear understanding of the need to appreciate the natural systems and to account for them in planning and design, as well as a desire to incorporate ecosystem solutions to provide a variety of wider benefits. As a result, the prioritised ecosystem services include:

Provisioning - Freshwater

Regulating - Global and regional climate change, erosion control, natural hazard mitigation, regulation of water timing and flows, water purification and waste treatment

Cultural - Ethical and spiritual values

TRENDS, RISKS AND OPPORTUNITIES

The ESR guides an analysis of the conditions or trends in the ecosystem services prioritised, as well as drivers of environmental change that significantly influence those trends. The ESR then helps evaluate how trends can impact the company, either positively or negatively.

Ecosystems in the Auckland region (Figure 1.) provide services valued at 10% GDP.[2] Of that 10%, wetlands, waterways, estuaries, and native forest play the most important role in providing the services prioritised in the URS review. Urban open spaces also play a relatively important role due to their location and proximity to populations. Overall, the level and quality of ecosystem services in the Auckland region is declining due to growing demand and increasing pressure related to urban development and intensive farming.

The key risks identified by the project concern the increasing costs of infrastructure related to supplementing or substituting ecosystem services such as freshwater, water purification or natural hazards mitigation. Climate forecasts for Auckland suggest increased intensity of rainfall events, as well as more frequent droughts, which in turn will result in increased performance requirements for the infrastructure and increased likelihood of damage. This will mean additional costs related to the upgrade and maintenance of existing infrastructure.

Application of ecosystems-based solutions such as green infrastructure to manage storm water at source could reduce those costs, while providing other benefits like improved air quality, amenities and noise mitigation. Other key opportunities identified in the process include incorporating the ecosystem services approach into catchment planning and land management, demand management, and development of market mechanisms for biodiversity related values.

[2]Paterson et al. 2011. *Ecosystem service appropriation in the Auckland region economy: an input-output analysis.* Regional Studies 45: 333-350

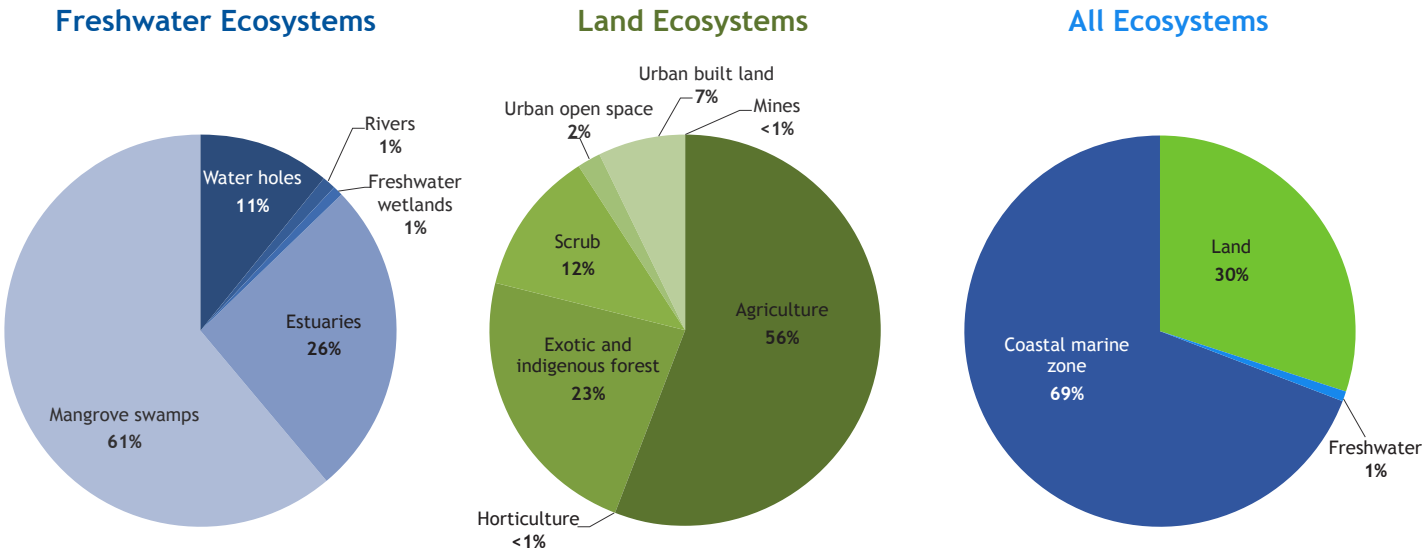

Figure 1: Ecosystems in Auckland region (*Landcare Research 2013. Ecosystem Services in New Zealand. Manaki Whenua Press*)

STRATEGY AND NEXT STEPS

As a result of the review and conversations with stakeholders, URS has confirmed the business case for applying ecosystem services framework to their work. They plan to support the regulators and clients in the development of appropriate mechanisms to incorporate ecosystem thinking into planning and infrastructure design. They will use the results of their ESR project to increase awareness of ecosystem-related risks and opportunities, and to actively participate in policy development in this area.

URS is also investigating how to expand local capability in relation to green infrastructure design and ecosystem services valuation.

The company plans to contribute to ecosystem services awareness in New Zealand, by engaging with both clients and regulators and looking for practical ways to apply local and international expertise.

"The ESR approach aligns well with the objectives of the National Policy Statement for Freshwater Management and provides a potential mechanism for increasing stakeholder input in the management of NZs water resources. This is empowering for those directly involved and it will be exciting for us in the industry to experience the interplay of community and stakeholder values and environmental outcomes."

Justine Bennett, Principal Water Resources Engineer,
URS New Zealand

OUTCOMES AND ADVICE

ESR proved to be a very relevant methodology for URS as it connected clearly to the way the business generates value – through the engineering and environmental services they provide. They see potential for an ecosystems approach to further enhance services by better engaging stakeholders, providing opportunities for synergies in mitigation strategies, and encouraging innovation and the use of ecosystem components in infrastructure design. URS found the ecosystem services approach worked best when carefully dovetailed into an existing framework of sustainability reporting, Assessment of Environmental Effects (AEE) processes, spatial planning, infrastructure development, and stakeholder engagement.

Some of the key benefits that application of the ecosystem services thinking is likely to generate include:

- Better quantification (economic and social) of environmental considerations for inclusion in feasibility studies.
- Consideration of dependencies on ecosystem services (e.g. water quality) as well as impacts.
- Cross-disciplinary review of specialist reports in the AEEs.
- Ability to define mitigation measures so that they provide ecosystem benefits for the project or the organisation undertaking it.
- More holistic view of stakeholders (the beneficiaries) and a judgement-free language to use in consultation.

Overall, the project team agreed that the ESR was a well-structured methodology, which provides a checklist to ensure that ecosystem considerations are fully understood. It can also provide a holistic framework to engage stakeholders in discussions on strategic plans for water management in the region.

Internally, it provided an opportunity to engage new staff, question company practices, and search for new ways of improving what they do. The project explored impacts of their advice on activities of clients and, as such, went beyond current scope of Environmental Management Systems (EMS) reporting, challenging URS to include wider ecosystem considerations as well.

"Although the language of sustainability is well embedded at URS, it was a great way to explore new thinking and to challenge ourselves."

- Marta Karlik-Neale, Senior Associate Sustainability,
URS New Zealand

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ABOUT SBC ECOSYSTEM HEALTH PROGRAMME

The Sustainable Business Council (SBC) is an executive-led group of companies that catalyses the New Zealand business community to have a leading role in creating a sustainable future for business, society and the environment. Ecosystem Health is one of the priority areas in the SBC work programme, with projects that aim to help members understand their dependencies and impacts on the ecosystem and how this affects their business strategy and resource use.

www.sbc.org.nz

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