

***shinyplanr* — Real-time spatial planning for faster, smarter conservation decisions**



The Challenge

The world has committed to protecting 30% of the land and sea by 2030 but identifying where to act is still too slow. Spatial planning processes are often stalled. Technical tools are inaccessible. Expert-led workshops are expensive and time-consuming. Meanwhile, biodiversity loss is accelerating. The tools to prioritise conservation effectively exist, but they are not designed for the people making real-world decisions – creating a gap between science and action.

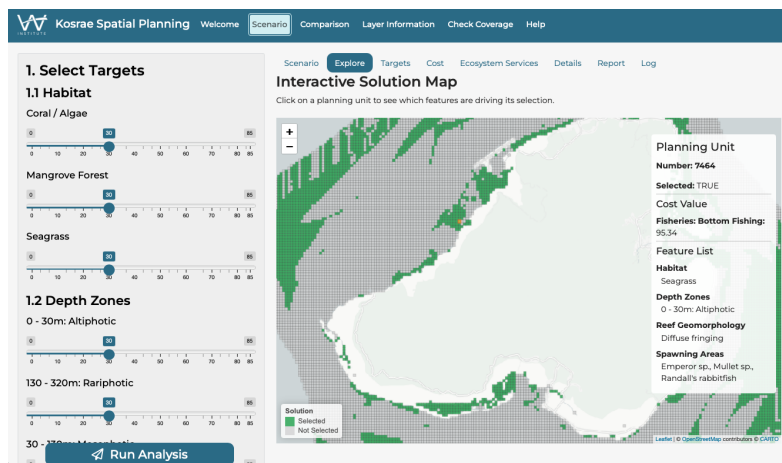
What is ***shinyplanr***?

shinyplanr is a free, open-source web application that enables governments, NGOs, and communities to design efficient, defensible spatial plans in real time – without coding or specialist training.

Developed at The University of Queensland and powered by the [prioritizr](#) R package, ***shinyplanr*** allows users to set biodiversity targets, consider ecosystem services, choose cost layers, assess trade-offs across multiple stakeholder objectives, and explore climate-smart options, all through a simple interface. Optimal conservation solutions are generated in seconds.

By bringing analysis into a real-time interface ***shinyplanr*** lets stakeholders see outcomes instantly – accelerating decisions and focusing attention on the choices that matter most. Crucially, ***shinyplanr*** is fully transferable, with a single codebase that can be customised and deployed to any geography using a combination of global and local data.

Key benefits of ***shinyplanr***



Make decisions in real time. Scenarios run in seconds, enabling users to explore options, and iterate instantly – without waiting for expert analysis.

Fewer workshops, faster consensus. Stakeholders explore plans independently, reducing the need for repeated expert-led meetings – saving time, resources and effort.

Build trust through transparency. Users define targets, costs, and constraints directly, providing deeper learning, greater trust, and faster buy-in.

Climate-smart by design. Incorporate climate protections and prioritise refugia, ensuring conservation investments remain effective under climate change.

Turn analysis into action-ready outputs. Download maps, spatial data, and ready-to-use reports instantly – supporting stakeholder engagement and development of spatial plans.

Scalable to any geography. Deployable across local, national and regional contexts, ***shinyplanr*** adapts to any scale, data and planning focus.

Proven in the Field

shinyplanr is already supporting real-world conservation planning through partnerships with leading organisations. **shinyplanr** deployments span a wide range of geographies and scales including Fiji, Vanuatu, Kosrae and Yap ([Waitt Institute](#)), Weddell Sea ([Norwegian Polar Institute](#)), Kiribati ([Earth Sciences New Zealand](#)) and Côte d'Ivoire ([University of Exeter](#)). **shinyplanr** has enabled rapid scenario exploration, clearer stakeholder engagement, and more transparent, evidence-based decision-making – moving planning processes forward faster with greater engagement.

Who is **shinyplanr** for?

shinyplanr is designed for those working to deliver effective, transparent conservation outcomes:

- **Governments** seeking transparent, repeatable, and defensible planning processes
- **NGOs** facilitating stakeholder workshops or advising on protected area design
- **Research teams** communicating spatial planning outputs to non-technical audiences
- **Community and indigenous organisations** participating in decisions about their environment

A Broader Vision: Science Meets Stakeholders

shinyplanr is part of our philosophy to make cutting-edge science accessible and actionable. Our team develops open, web-based tools that translate complex, data-intensive research into interactive, accessible information that empowers users. Three examples of tools that complement **shinyplanr** are:

[MiCO \(Migratory Connectivity in the Ocean\)](#): An online app that provides access to synthesised global tracking data for over 100 migratory marine species – from sea turtles and seabirds to whales and tuna. MiCO turns tracking data into outputs relevant for conservation planning and to meet international frameworks.

[The Climate Explorer](#): An interactive tool that lets planners visualise future ocean conditions and understand how climate change will reshape marine ecosystems. This feeds directly into climate- smart **shinyplanr** deployments, where decisions are grounded in future projections, not just present-day data.

[Tuna Spawning Hotspots](#): We analysed the spawning distribution of 15 large pelagic fish species based on near-global larval data and machine learning techniques. We developed an interactive app that allows fisheries managers, conservation practitioners, and researchers to explore the spawning hotspots and download the data.

Who we are

We are a team of university researchers advancing spatial planning for real-world conservation. Our mission is to support biodiversity outcomes through transparent, research-driven tools. We work with our partners to co-design planning solutions that support biodiversity conservation, restoration, and sustainable use under a changing climate. We continually refine our tools based on user needs and emerging science.



**Assoc. Professor
Daniel Dunn**

A marine conservation scientist with 20+ years' experience advising internationally on area-based management.



**Professor Anthony
Richardson**

A climate change ecologist with 25+ years of research experience in marine science and conservation.



Dr Jason Everett

A spatial ecologist and data scientist developing tools for designing protected areas and analysing climate change impacts.