Landcare-led Landscape Resilience

Tools and data for restoration decisions Ongoing Adaptive Managment

OBJECTIVES

Gone are the days when a simple photo point is the only measure of how a site is progressing. So the objective was to set up a long-term adaptive management plan for the site, which will allow management of the site to be adjusted over the years.

WHAT IS ADAPTIVE

MANAGEMENT?

Adaptive management combines targeted monitoring with actions to guide decision-making in ecosystem restoration. Implementing an adaptive management plan allows for the adjustment of site-specific interventions to address the complex and dynamic nature of ecosystems. With the use of technology, these systems are easy to set up and follow, with landholders able to collect real-time data and help guide future decisions based on quantifiable data.



Screen shot of a photo point monitoring site on the Mullers property in COVRAM ap where data is being collected and stored.



Landcare-led Landscape Resilience project managers Kylie Durant and Leigh Mathieson conducting Vegetation Surveys trialing different adaptive management resources.

KEY STEPS

- Contact your local Landcare organisation or Natural Resource Management (NRM) agency. They likely use an established platform for monitoring and data collection, which allows for long-term access and regional site comparisons. In this case, COVRAM is being used.
- Conduct baseline surveys of the site, capture data on the entire site, establish specific monitoring points for sensitive or troubled areas
- Research historical ecological data and consult local experts to understand your target reference community. Define specific interventions and create an implementation timeline to address identified issues. This approach ensures a wellinformed and structured restoration process.
- Repeat your surveys and monitor or alter course of interventions with the aim of tipping the scales back to full ecological function.

HOW DOES COVRAM

WORK

1.Field Data Collection

Users assess vegetation condition through a structured process:

- **Site evaluations:** Criteria include structural layers (e.g., presence of large trees, shrubs), weed density, and regenerative capacity.
- **Photo documentation:** Captures site visuals with automatic geolocation tagging.
- Simplified inputs: Uses dropdown menus and minimal text entry to reduce complexity (e.g., selecting "sparse," "common," or "abundant" for weed coverage).

2. Condition Scoring

- Assigns a numeric score to vegetation characteristics, translating into one of five condition states. Which intergrate with the Vegetation Assessment State and Transition (VAST) model to predict ecosystem trajectories.
 - 1. **Protect/Maintain:** The highest-quality vegetation with minimal degradation. Requires ongoing protection (e.g., controlling minor weed incursions) to preserve biodiversity and ecosystem function.
 - 2. Upper Middle (Natural Regeneration Potential): Moderately healthy vegetation needing minor interventions like selective weed removal or controlled grazing to stimulate natural regeneration.
 - 3. **Middle (Assisted Regeneration Needed):** Degraded sites requiring active management, such as seedbank stimulation, supplementary planting, or prescribed burning to restore ecological processes.
 - 4. Lower Middle (Active Intervention Required): Severely compromised vegetation demanding intensive efforts like large-scale revegetation, soil rehabilitation, or invasive species eradication.
 - 5. Question Intervention: The lowest condition state where restoration may be impractical due to extreme degradation or prohibitive costs. Managers must assess whether resources are better allocated elsewhere.

3. Evaluation & Analysis

- Apply prescribed management actions: based on initial assessments decide interventions needed and to start the process. implement.
- **Conduct regular timed assessments:** by using the quick inspections regularly on a pre planed timetable.
- Revise management strategies: levels based on updated condition scores.

4. Adapt and Adjust

• **Modify approaches:** where needed or extend treatments to larger parts of the project where desired results are gained.

"The standardisation of assessments reduces a reliance on botanical expertise and therefore empowers diverse stakeholders to manage ecosystems restoration effectively."

RESOURCES

- Revegetation Guides are a great place to start to learn about available adaptive management tools: <u>www.revegetation.org.au</u>
- COVRAM app site: <u>https://app.covram.com.au/</u> <u>https://www.youtube.com/@Covram-dd2us</u>
- Vegetation Assessment State and Transition model <u>https://vasttransformations.com.au</u>
- International Standards for the Practice of Ecological Restoration <u>https://www.seraustralasia.com/wheel/index.ht</u> <u>ml</u>







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