

Paper Title:
**SERA national standards for the practice of restoration in
Australia**

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Paper: *Ecological restoration is increasingly needed in Australia to repair past and current degradation and raise awareness of the need to avoid future environmental damage.*

The Australian continent carries a legacy of extensive environmental degradation in urban, industrial and production landscapes and seascapes that will not be overcome without active and ecologically appropriate intervention. Degradation from past activities and current developments will not be adequately mitigated without a strong restoration standards framework - and future degradation will not be avoided without society becoming more aware of the cost and benefits of protecting ecological communities from damage in the first instance.

The Draft SERA National Standards for the Practice of Ecological Restoration in Australia has been prepared collaboratively by the Board of the Society for Ecological Restoration Australasia and its not-for-profit Partner organisations. The draft has been sent to selected parties, including the SERA private sector reference group and RIAWA, the Revegetation Industry Association of W.A. This presentation will, for the first time, share these standards with the broader professional environment community. The SERA Board members and the contributing partner organisation are listed later in this presentation.

The standards adopt the definition of Ecological Restoration articulated by the world peak restoration organisation i.e., Society for Ecological Restoration (SER) as a process in assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. It recognises that restoration is a process and not a one off action plan with the process guiding an outcome aspiration being accepted as somewhat open ended but with restoration as the clear objective.

The Standards identify the need and purpose of ecological restoration and explains the relation to other forms of environmental repair practiced in a range of zones in the landscapes and seascapes of Australia. The Standards outline the principles underpinning restoration philosophies and methods, and identifies a framework for identifying appropriate ecological goals, objectives and measurable standards for

projects - ranging from those that are least well-resourced to those that are resourced by commercial gains attached to industrial and residential developments. The Standards provide a blueprint of principles that will also aid regulatory frameworks governing development approvals, to encourage and measure ecological appropriate restoration and rehabilitation.

Ultimately, the intention behind this work is to drive standards higher to avoid low ball restoration and encourage higher levels of rehabilitation, to underpin the high and true value of habitat and to guide practitioners and regulators. It may be that in time the final work becomes formalised within Standards Australia.

Principal Features of the Draft Standards.

1. Restoration to be based upon a locally indigenous reference system as to composition, structure and function.
2. Full restoration is the outset aim. It recognises other forms of ecological works that are not aimed to achieve full recovery and those that are not based upon locally indigenous reference systems are not restoration and simply represent environmental repair.
3. Restoration inputs will be dictated by the level of degradation.
4. Restoration requires clear objectives and measurement of achievement to particular recovery attributes. 6 attributes of restoration are assigned viz;
 - Mitigation of threats
 - Physical condition
 - Species composition
 - Community structure
 - Ecosystem function
 - Ecosystem exchanges
5. 5 levels of objective measurement of each attribute are called for. The attributes and measurement thereof is presented as a circular matrix from which a recovery rating scale of 1 to 5 stars can be determined for a project. Examples are attached.
6. The establishment of synergy across practice and science within projects is a core requirement.

Planning, implementation & monitoring.

Standards Section 3 lists the matters requiring assessment under headings;

- Planning & design
- Implementation
- Monitoring, documentation, learning & reporting.

It also deals with reference ecosystems in times of acute environmental change and provides guidance to identifying the appropriate restoration approach.

Standards Section 5 provides appendices covering;

- Relationship of Restoration to other environmental repair activities.*
- Generic principles that underpin Restoration.*
- Examples of detailed objectives using quantifiable indicators.*
- Generic 1 to 5 recovery scale against the 6 restoration attributes.*

Conclusion and future directions.

It is recognised that the standards are high in aspiration in a commercial world. However, it is clear that regulators have wanted industry and community driven work in this area to assist and guide responses to environmental impact proposals.

Setting standards for restoration is not only intended to guide high level long term work but also to drive higher standards into what is currently described as revegetation or rehabilitation. There is a clear need to do better and for improved standards in the sector.

The standards are intended to dovetail with an overdue revision of the Florabank guidelines for native seed collection, processing and storage now underway and this work represents a logical and practical extension of the SERA standards project. This work also compliments the commercial seed accreditation system recently launched by the Revegetation Industry Association of W.A.

There is the distinct possibility that the standards will also drive the establishment of a higher level of nursery accreditation for supply of native plant stock for restoration and revegetation projects, given genuine hygiene concerns with current industry arrangements and as recognised in the National Phytophthora Threat Abatement Plan.

On behalf of the Board of SERA, I commend the draft standards to the attention of EIANZ leaders and individual members and trust that you will take the time to review and provide professional input to assist completion of the project. We also leave it to you to decide if this work qualifies within the conference theme – Challenging the Status Quo. We believe it does just that.

Thank you the opportunity to present this brief outline of our work to date.

*David Hancock
SERA Board member & Treasurer.*

The Society for Ecological Restoration Australasia Incorporated.

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The SERA board's Principles and Standards Reference group acknowledges the close collaboration of the following Partners and Advisors in the preparation of these standards:

Australian Association of Bush Regenerators (AABR)

Australian Institute of Landscape Architects (AILA)

Australian Network for Plant Conservation (ANPC)

Australian Seed Bank Partnership (ASBP)

Bush Heritage Australia (BHA)

Gondwana Link

Greening Australia (GA)

Indigenous Flora and Fauna (IFFA)

The Nature Conservancy (TNC) (Advisor)

Trees for Life (TFL)

Trust for Nature Vic (TFN Vic)

Wetland Care Australia (WCA)

Matrix of Ecosystem Attributes

