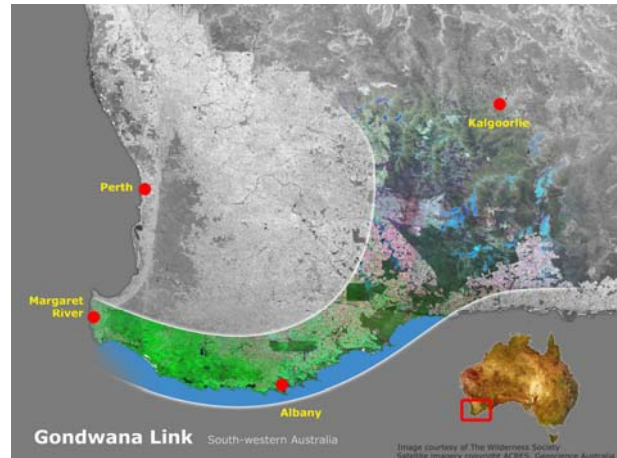


GONDWANA LINK

A landscape scale restoration project in south-west WA

Summary

Gondwana Link is an ambitious program that aims to secure, through conservation and restoration, a 1,000km band of healthy native habitat across south west Western Australia (WA). This effort involves a number of organisations working collaboratively, including Bush Heritage Australia (BHA), Friends of the Fitzgerald River National Park, Fitzgerald Biosphere Group, Greening Australia (GA), Green Skills, The Nature Conservancy (TNC) and The Wilderness Society (TWS).



Building on a foundation laid by the strong regional landcare movement, the end of old-growth logging and the end of government support for large scale land clearing – the work has a strong emphasis on strengthening ecological resilience, and uses a wide spectrum of conservation tools. Ninety per cent of the 1,000 kilometre link is still in its natural state, so work initially focused on the gap between the Fitzgerald River and Stirling Range National Parks (Fitz-Stirling). Additional work is now underway in the area now known as the Great Western Woodlands and between the Stirling Range and Porongurup National Parks. In the Fitz-Stirling gap progress to date has seen 11,900 ha of land protected and 1,830 ha revegetated to natural systems. The distance between protected bushland patches has already been reduced substantially by this work, and overall catchment health further improved through a commercial program which now manages 9,700 ha for sustainable agriculture and carbon bio-sequestration, including 81 km of protected and buffered watercourse. A major science report has been produced for the Great Western Woodlands and bi-partisan political support gained for improved protection and management of this 16 million ha area.

The project is now nationally recognized as being a leading example of a collaborative, landscape scale approach to ecological rehabilitation and restoration.

Biodiversity of the south-west West Australian biodiversity hotspot

South-west WA is one of the world's top 34 biodiversity hotspots, where exceptional concentrations of endemic species are undergoing exceptional loss of habitat. Though only covering 5% of the



Australian land mass, this area has an estimated 8,000 plant species - more than one-third of Australia's known flowering plants. Of these, 48% of the plants discovered so far are endemic to the south-west and around 20% are yet to be scientifically described. Plant diversity is concentrated in complex patterns, with rapid turnover across the landscape. Areas of similar soil and slope as little as half a kilometre apart may have less than 50% of their species in common. [For a more detailed outline of the many ecosystems involved, see Deegan (2006), Deegan & Sanders (2008) and Watson et al (2008).]

Broad vision and why it is needed

The vision is ‘‘Reconnected country, from the wet forests of the far south west to the woodland and mallee bordering the Nullarbor, in which ecosystem function and biodiversity are restored and

maintained". Since 2002 the overall strategy has been to build momentum and demonstrate tangible results by concentrating effort into two areas, initially in the Fitz-Stirling area and then in the Great Western Woodland. In Fitz-Stirling the aim is to create an ecologically permeable landscape between two national parks (i.e. the Stirling Range National Park to the west and the Fitzgerald River National Park to the east). In the Great Western Woodlands (GWW) the aim is to improve conservation protection and management over 16 million ha of largely natural area. Some initial work started between the Stirling Range and south west forests in 2006, and this is now developing into an on-ground restoration effort.

The Gondwana Link vision grew out of an appreciation of key factors, including:

- the inherent ecological problems (including loss of species) associated with fragmented landscapes;
- the ecological importance of both the South West Botanical province and its Transitional Rainfall Zone;
- the opportunity for landscape scale restoration of both species and function across the south coast of Western Australia (as evident from satellite photos).

Stakeholders

Local people from the Albany and Jerramungup areas initiated Gondwana Link in 1999. When that first effort faltered they asked for wider support. From 2002, the project became a wider coordinated effort, involving the range of major organisational partners listed above

We are achieving our goals through close collaboration with indigenous communities, farmers, businesses and government:

- There is strong engagement with indigenous (Noongar and Ngadjju) Traditional Owners. The meeting place established in the Fitz-Stirling sees over 2,000 visitors a year, mainly indigenous. A cultural mapping program involving Noongar youth and Elders has been underway since May 2007. In the GWW a Memorandum of Understanding with the representative body of the Traditional Owners, the Goldfields Land and Sea Council, is being progressed.
- In Fitz-Stirling 18 local farmers have been involved in 470ha of biodiversity plantings. Additionally, landholder neighbours of properties now owned by conservation organisations are regularly involved in on-site activities.
- Significant funding for the Gondwana Link effort has come from WA businesses (including Wesfarmers, Shell Development Australia and Consolidated Minerals) and local businesses (Mt Barker Free Range Chicken). The Great Southern Arc fundraising campaign, for Fitz-Stirling area, was supported by the Urban Development Institute (WA).
- The Commonwealth Government has provided support through regional NRM and National Reserve Scheme funding. The State Government has engaged at operational level.
- Key mining companies in the Great Western Woodlands have provided good early support and strong engagement continues.

Scientific inputs and monitoring

The program has, initially at least, focused on implementing available science. Ecological and restoration specialists are now employed through the various groups involved and additional scientific input has been received through the Wild Country Science Council and a strong network of scientists in Western Australia and further afield. A set of ecological principles was developed and adopted in September 2005 which is available through the project's homepage



Satellite image of WA showing the location of the Fitz-Stirling and Great Western Woodlands areas within Gondwana Link.

(www.gondwanalink.org). Though currently under revision, this has been agreed across the main groups to provide guidance on the type of activities which meet a general Gondwana Link standard. These principles include respect for the diversity of cultures across the Link.

More detailed scientific underpinnings have been achieved through:

- The use in Fitz-Stirling of TNC's CAP process to produce a detailed 'Functional Landscape Plan' (Deegan & Saunders 2008);
- The application of a rigorous and ecologically informed restoration planning and implementation approach which bridges the gap between theory and practice (Jonson, unpublished);
- The development of the Fitz-Stirling Carbon Research Data Set, including 8 species specific allometric equations for local natives, and estimates of regional carbon sequestration capacity, underpinning carbon as a commercial driver and informing estimations of regional biomass (Jonson, unpublished);
- A widely based team effort in the Great Western Woodlands that has involved over 20 leading scientists (Watson, et al 2008);
- Research to establish biomass and carbon tonnages in the Great Western Woodlands (Berry, in draft)

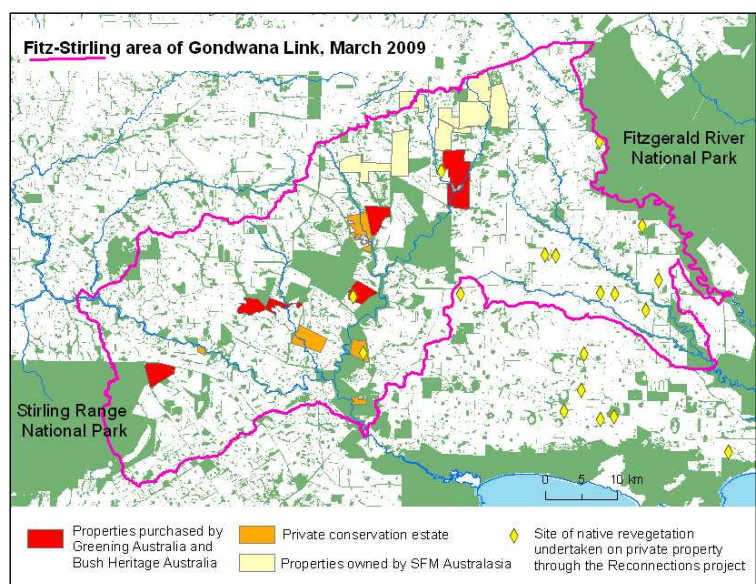
Informal and formal monitoring has been carried out by the individual groups for their specific projects and is designed to feed directly back into ongoing management. More recently, the Functional Landscape Plan (Deegan & Sanders 2008) has been prepared which provides a detailed monitoring framework for the program. However, extensive monitoring programs are yet to be implemented.

Progress to Date

When working at landscape scale, improvements in ecosystem function are challenging to evaluate over short time frames. Nonetheless, we can confidently report that a solid foundation for habitat protection, site restoration, improved ecological function and expansion of activity over the wider Link has been established. Through extensive land protection and restoration activities ecological benefits are becoming evident in the 254,000 ha Fitz-Stirling, and the future of a largely unknown and ignored area, The Great Western Woodlands, is now on state's, if not yet the country's, political agenda. Some more specific achievements are listed below.

In Fitz-Stirling:

- 9,400 ha of land have been protected, through a mix of purchase by GA and/or BHA and individual conservation buyers plus incentives to attract convenanting by farmers.
- Large scale restoration technologies and management processes have been developed and tested. A total of 1,290 ha have been planted with over 120 locally indigenous species on many sites (led by GA, on land owned by GA, BHA, private conservation owners or farmers), with an additional 540 ha planted as part of GA's biodiverse carbon and sandalwood programs. Another 9,700 ha has been managed for sustainable agriculture and carbon biosequestration by SFM Australasia Pty Ltd, including 2,500 ha of protected bushland and 81 km of



protected and buffered watercourse, as well as the planting of 1,250 ha of woody perennials (local and exotic eucalypts).

- The distance between protected bushland patches has been reduced by an average of 37% (between 10-74%). The largest gap between secured bushland has been reduced from 22.4km to 15 km while the most strategic land purchase (Monjebup) reduced a gap from 14.3km to 3.7km. Populations of numerous endemic and threatened species have been protected, and the population size of a number of locally endemic plants increased through revegetation.
- In one 85,000ha catchment, Corackerup Creek, we have increased the area protected for nature conservation by 63% (existing and restored bushland) so that protected land is now 17% of the total catchment). We have supported the conversion of 13% of farmland in the catchment to carbon-based agro-forestry.
- A Conservation Action Plan (CAP) has been developed for the Fitz-Stirling, detailing an ongoing program of both implementation and science investigation and monitoring (GA, BHA, TWS, TNC). The CAP system is now being rolled out in other sections of the Link.



Direct seeding and tree planting on one of the Gondwana Link properties in the Fitz-Stirling.

In the Great Western Woodlands

- A synthesis of science knowledge has been produced for the 16 million ha Great Western Woodlands has highlighted the irreplaceable conservation significance of that area (TWS)
- A three year funded program is now in place to secure those values (supported through TNC and Pew Environment Group).
- Bi-partisan political support has been gained for improved protection and management of the area, and processes established within government.



Culturally

- Indigenous communities are strongly engaged in both the Fitz-Stirling and the Great Western Woodlands (GA, BHA, TWS), with some of the first dancing on country in Fitz-Stirling since the 1930s.

Elsewhere

- An initial collation and analysis of science knowledge was compiled for the Fitzgerald River area (Fitzgerald Biosphere Group and Friends of the Fitzgerald).
- First stage of initial community engagement, education and liaison was conducted in the Stirling Range to Forests section (Green Skills).



Noongar Elders and younger generations spread native seeds at the launch of Gondwana Link properties.

- Planning and funding for a web of linkages between the Stirling Range and Porongurup national parks is now established, with significant on-ground action and improvement in 2009.
- A Business Plan for the whole of Link effort to 2015 has been established.
- There has been national recognition of Gondwana Link as a leading example of the landscape scale approach. For example, GA has transformed its national structure and programs, based on its experience in Gondwana Link, to focus on ‘big projects’.

Lessons have been learnt at all scales (and perhaps not even applied well, yet, by those learning them):

- Collaboration, while sometimes challenging, is essential if cross tenure and large landscape work is to proceed and succeed.
- Collaboration is like democracy - you don't have it, you do it. There needs to be sufficient resources allocated to enable groups to engage and collaborate.
- Flexibility and tenacity go well together.
- Building and maintaining personal and professional relationships is critical.
- To move forward, existing knowledge should be used to undertake ‘no-regret’ actions which make the vision and aims tangible and build the momentum, relationships and capacity. More detailed science and planning can follow.
- Restoration success is maximised by choosing a small number of ecological targets that are achievable within set timelines and which work at various scales.
- Think big but continually consolidate – do not spread sparse resources too thinly.
- There are many valuable local experts.
- Climate change is already making restoration work more challenging. Start now – avoid the rush.
- If working across a large landscape, learn to enjoy dancing across the scales – there is no other way.
- Working in a genuine manner with Indigenous cultures is both very challenging and very rewarding.



Current and future directions

Gondwana Link groups are currently in discussion on proposed changes to the structure of the collaboration. These are aimed at ensuring greater inclusiveness, operational efficiency and continuity. Regardless of structure, the overall approach is unlikely to deviate from the implementation of a diversity of management measures. In privately owned areas these range from ensuring endowment income is available as part of the purchase package, seeking commercial income streams as part of the restoration approach and looking for re-sale opportunities where ongoing conservation management is guaranteed. In public land areas, such as the Great Western Woodlands, the primary intent is to engage Government in long term management, through an arrangement which includes Traditional Owners as rangers and for which privately financed Trust Fund may be used.



University of Western Australia Restoration Ecology students visit the Gondwana Link property Nowanup.

Further reading:

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