Florabank’s potential role in plant conservation

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Around Australia, hundreds of tonnes of native seed are traded for restoration and remediation projects in mining, natural resource management, and for use in the national, state and local government sectors. Florabank is about improving the results of these projects through improving the availability of appropriately sourced, good quality seed for large-scale restoration projects.

At the moment, the supply of native seed is not meeting demand in many places. This compromises restoration work either by reducing the extent of projects, or by limiting them to species where seed or tubestock is easy to obtain and thus compromising the biodiversity values of projects. Seed supplied is often of poor quality, which again lowers the success and biodiversity of restoration projects. There is a need to improve both the availability and quality of seed, and Florabank is trying to meet this need by working with the native seed sector and the research community. We work to improve information access, have developed training, and are working towards industry accreditation and certification for better restoration outcomes.

Florabank’s focus has always been on using local seed banks to supply seed for successful restoration, in the quantities and taxa required for community, public and commercial restoration projects. In this way, it complements the work done by the Australian Seed Conservation and Research Network (AuSCaR), and by organisations such as the Australian National Botanic Gardens (ANBG) which have predominantly focused on threatened species and smaller scale projects. We would now like to work to better incorporate the restoration of threatened species and threatened communities into conventional restoration projects through a new national partnership between AuSCaR, the Australian Network for Plant Conservation (ANPC), ANBG and Florabank.

About Florabank

Florabank formed in 1998 as a partnership between Greening Australia, ANBG and CSIRO’s Australian Tree Seed Centre (then in the Division of Forestry and Forest Products, now in CSIRO Plant Industry). The initial project began with extensive consultation, visits to seed banks around Australia, and two national surveys of people involved in seed and restoration in the commercial, government and community sectors. Florabank continued from there to become a respected provider of information to the on-ground native seed sector. It was realised that much of the crucial knowledge about native seed is hidden in scientific papers and reports (which are not accessible to people working on the ground), or else, hidden in people’s heads because they have been working with seed for decades but do not have the means to widely share that knowledge.

Our Website

The Florabank website (http://www.florabank.org.au/) is a popular and well-used site, and an excellent means of communicating with the native seed sector. It includes a Registered Users facility, which currently has over 650 registered users, and information forums where practitioners ask and answer questions about native seed (for example, how to germinate Macrozamia or Leucopogon seed). We hope to use ‘citizen science’ to enable better transfer of knowledge between researchers and the people who work with native seed across Australia. The website also contains the following tools.

• The Species Navigator assists people to identify the right species for their restoration project, and provides them with information about how to collect, plant and use these species. Landholders and project managers can use this tool to select species suitable for different planting purposes (e.g. saline sites, wood products, biodiversity, etc) so that appropriate species that will grow in specific site conditions can be selected and used. The Site Description Tool works with the Species Navigator and assists people to find out and record the right information about their site. This will enable them to fully use the Species Navigator, or to work with their local seed supplier or nursery to select the most appropriate species for their project.

Florabank training participants visit a seed production area, SA. Photo: Paul Macdonell
• The Seed Collection Advisor assists people to make the right decisions in order to collect seed with a good genetic base. It is a decision support tool which steps users through considering their local landscape, the biology of the species, and the population distribution, and then ends with recommendations to improve the genetic diversity of collected seed.

• The Vegetation Management Tool assists people to plan, implement, maintain and monitor their restoration sites. This is set out like an online book, but with embedded links to further information, references and other resources. This tool can be updated with new information, examples and references.

These tools were co-developed with CSIRO. Florabank plans to build on them over the next five years so they cover more species and include new research. Our aim is to include 600 taxa in Species Navigator, which would then provide information on over 80% of commonly used restoration species.

Our Publications
Florabank has published a range of documents for the native seed sector in Australia, including the Model Code of Practice for Community Based Collectors and Suppliers of Native Seed and ten Florabank Guidelines (1999-2000). The guidelines have been the main reference for people using native seed in the commercial, government and community sectors and have resulted in the development and success of hundreds of local community seed banks and nursery projects.

Florabank has also produced technical articles, and initiated events drawing on native seed science and technical expert sources. This work is continuing: currently we are working with a scientific panel led by CSIRO on a revision of the Florabank Guidelines on Provenance, and also working towards revision of the Seed Production Areas guideline. The results of these reviews will be incorporated into the Florabank Guidelines and the Seed Collection Advisor, industry training, and industry codes of practice.

Supporting Professional Development
In 2007-08 Florabank worked with CSIRO to develop and deliver Florabank Professional Development Training. This is accredited at Certificate III level, and was designed for commercial and agency seed operators who collect and supply seed for restoration projects. Many people working in the seed sector have no formal training but have learnt ‘on the job’. This course aims to provide them with an understanding of recent developments in seed science, including provenance, seed production areas and seed supply planning.

This practically-focused course was successfully delivered in six locations around Australia, with feedback showing 87% of respondents used the information to change their workplace practices. Even experienced and respected operators who had been working in the sector for 10-15 years found the course hugely beneficial. Florabank is continuing the delivery of this course, and is now working towards the establishment of a new Certificate I native seed unit with Agrifood Skills Australia.

Conclusion
By working with native seed researchers, and making information available about better practices in native seed collection, handling and establishment, we hope that more species will be used in restoration projects, and that future projects will better represent the local plant communities and incorporate threatened species and communities. Communicating the results of native seed and restoration research directly to the native plant practitioner community through Florabank will have immense benefits for restoration success.

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