CHANGING SOCIAL ATTITUDES SHOULD BEGIN WITH GOOD SCIENCE AND EVIDENCE-BASED DISCUSSION

Maringa Creek, Nungurner Victoria. Here the author is measuring water quality in the farm upstream from one of our early rainforest restoration sites at Nyerimilang Heritage Park. The cows were very interested in the process and the farmer was interested in the result. The purpose being to examine the impact of cattle on the unfenced creek's water quality and to obtain baseline data for the nutrient stripping potential of rainforest restoration. The nutrient stripping impact of the rainforest restoration project immediately downstream was considerable (Figure S57) and these data have been used to obtain funding (because of the protective impacts of such rainforest restoration works on the Gippsland Lakes and its algal bloom problems), as well as to begin the discussion with the local farming community about fencing waterways and rainforest restoration as a means of minimising their agricultural nutrient off-farm impacts. The dissemination of these very powerful results, and the ensuing discussion, has resulted in the further uptake of rainforest restoration projects as a result of this early data collection and the informed debate around such science. In the absence of complete information, however, and where existing approaches (such as legislation, adaptive management and instrumentalities are too slow to deal with threats and novel situations) a proactive approach must be taken (Gilmour 1999).

Clearly: social attitudes towards the environment are improved
if there is good information upon which to base discussion.
This ensures attitudinal change and action.

Introduction

We have yet to encounter a technical problem that would prevent rainforest restoration: in other words, where there is a will there is a way – we can restore rainforest. But our experience has also shown us that in order to generate that will, there are a number of considerations that need to be understood and accounted for before a project can proceed. This could be called a three-tiered approach or trichotomy that is comprised of: social context, the human landscape context and the ecological factors (e.g. Figure S91) relevant to your restoration site. Without the support of local people, organisations, governments and agencies, you are wasting your time. In the end, you may get your project funded, but if you fail to understand the social and the ecological factors operating at your restoration site, no matter what dollars are spent; you will not succeed.

To navigate this maze, this Supplement is divided into three broad parts based on this trichotomy:

- Firstly, the social contract: how to build confidence and networks to obtain your contract to operate. This will enable you to get your project concept up and running (this chapter). A good example is provided in Chapter S2: Case study S1
- Secondly, the human derived landscape is considered from an urban, and then a rural, perspective (this chapter), its physical and biodiversity impacts are documented in Chapter S9
- Lastly, the ecological and landscape aspects of implementing rainforest restoration projects show you how nature can help (dealt with in Chapters S4, S5, S6, S7 and S8).

Human factors: the social context

Introduction

People are strange animals and we own all that we see: that is to say, there are *cultural landscapes* with which everyone has an affinity. How many times have you been offended by a building being knocked down, painted a different colour or a tree being removed? We all 'own' the landscape that we see. It all comes down to the same thing: we do not operate in a social or cultural vacuum and you must take this into account if you are to gain support for your project.

Like it or not, we all live in a community that has certain standards and procedures. These processes can be a minefield for the rainforest restorer and you should carefully consider the social context into which you will be introducing a radical new look to the landscape.

This is especially true of projects on public land sites that occur along roads or walking trails. If your project has a neighbour of any kind, talk with them about what you want to do before you plan to do it. It may take many years to achieve a comfortable fit between your plans and the feelings of your neighbours and the site's users. It is, however, a fundamental process that you must go through if the community within which you work is to support your efforts. At the end of the day, you may end up with community support overall, but a few who just cannot come to terms with what you want to do and the cultural landscape you will be changing forever: but that is life.

Networking

Networking basically means talking to people and establishing relationships. This encompasses a wide range of tasks from consultation, letting people and authorities know what you want to do, to exchanging information about your discoveries, successes and failures. Networks and networking are fundamental to rainforest restoration and require a lot of effort and care in their development and maintenance.

Many people are doing amazing things across a wide range of disciplines, which at first glance may appear not to have any relevance to rainforest restoration. A bee-keeper watching insects visiting flowers in rainforest is collecting valuable information on rainforest ecology; the nurseryman that discovers that the slow-growing vines of the Lily family can be divided while waiting for them to mature for shipping to the restoration site is making great strides forward in propagation; and the householder who rings to tell that White-headed Pigeons are visiting their bird feeding table is adding vital information on range expansion of a species that nearly became extinct in Australia's south-east.

LITTORAL RAINFOREST SUCCESSION

Figure S91. Jemmy's Point, Lakes Entrance Victoria. Once you have obtained the attitudinal change to rainforest restoration (Chapter opener), you need to be able to demonstrate the ***ecological processes*** involved if the community is to become empowered and able to undertake the required rainforest restoration. Being on the lookout for sites and situations that illustrate the key ecological processes is a very important tool for facilitating altitudinal change (it shows what we mean by restoration) as well as improving community capacity (by showing what has to be done). A case in point is this example of rainforest succession, which illustrates the basic ecological process behind the ***Successional Planting*** approach, which is widely used in rainforest restoration. This photograph shows the usefulness of establishing a nursery crop of ***pioneer*** and/or secondary species – in this case Black Wattle *Acacia mearnsii*, which has senesced in the last year to allow emerging Littoral Rainforest species to move the vegetation on to the next stage of succession. The species are: Coast Beard-heath *Leucopogon parviflorus* (left foreground: an understorey shrub), Sweet Pittosporum *P. undulatum* (middle foreground: a future mature canopy species), Coast Cassinia *C. maritima* (right foreground a gap-filling pioneer shrub), Coast Sallow Wattle *Acacia longifolia* ssp. *sophorae* (orange arrows: a gap-filling pioneer shrub) and Coast Banksia *B. integrifolia* (red arrow: a long-lived emergent). All are somewhat shade-tolerant, having established beneath the senescing wattle, before its death.

Each of these contacts widens the circle of the network and puts you in touch with more information and different perspectives. A good example was meeting up again with the wildlife lecturer (and retired Fisheries and Wildlife Officer) Roger Bilney who uses one of the restoration sites as a teaching aid (Figure S92). On that day, information and common interests were shared and it became apparent that he was also very concerned about feral deer and their impacts on the bush (Figure S93). This later led to collaboration on a paper later published in *Victorian Naturalist* (Peel *et. al*. 2005) and a further collaboration in the process of nominating deer as a threatening process under the *Flora and Fauna Guarantee Act 1988*. It also meant meeting his son Rohan, who was at the time doing his Honours on large forest owls and their use of rainforests. This provided additional information (some of which is in the Manual) and an ongoing interaction that includes: further nominations, lobbying to get deer ***monitoring*** set up across the state and the Bilneys taking the first steps towards undertaking rainforest restoration on their own property on the Mitchell River.

NETWORKS LINK YOU TO PEOPLE AND VITAL INFORMATION

Figure S92. Maringa Creek, Nyerimilang Heritage Park, Victoria. Roger Bilney teaching Forestech Conservation and Land Management Diploma students about the impacts of Hog Deer on a rainforest restoration site.

Figure S93. Happy Valley on Nowa Nowa Arm, Lake Tyers Victoria. Roger Bilney collecting data in 2005 on the impacts of Sambar on Warm Temperate Rainforest (browsing of Muttonwood saplings).

These types of people, and a myriad of others, comprise your network and provide important information sources for rainforest restoration, which may otherwise be slipping through your fingers. Don't reinvent the wheel: cultivate a broad range of contacts and develop networks across age groups, experience levels and organisations: but remember to humble so that you have an open mind that can capture the information on offer (Figures S94, S95 and S96).

Networking is the best way of collecting and analysing this important information. Creating a Restoration Manual is one way of sharing this vital knowledge and returning it to the community, but it is, in itself, no substitute for developing a network of contacts and talking to other practitioners and participants.

Project ownership

This is a curious area and sometimes you have to look hard or consult your network of contacts for examples. Since the inception of the Mitchell River Walk Project (which has a rainforest restoration component), there has been a lot of community consultation and involvement in construction of a walking track, the erection of interpretive signs, installation of seating, control of weeds and planting. The obvious care that the community and its agencies are putting into the area has elicited strong community ownership of the project. Consider the following voluntary and completely unsolicited acts by those who use the area on a regular basis:

- The people who carry plastic supermarket bags and collect rubbish along the walk every morning
- The man who cleans the seats of graffiti each day and warns workers of the snakes nearby, but does not insist on their destruction or removal
- The residents who make seats out of the stumps of Grey Poplars when they are removed or mow around seats when the Shire's workers don't quite get there in time
- The many people who have adopted sections of the river bank and are undertaking revegetation or rainforest restoration works there.

These voluntary acts are the members of the community saying "we approve of what is happening here and we want to help". It is the yardstick of a good project. If these types of behaviours start to happen in your rainforest restoration site, then you have done a good job of networking and you have achieved your ***social license***.

- 5 -

NETWORKING TO EXCHANGE INFORMATION REQUIRES AN OPEN MIND AND HUMILITY

Figure S94. Pratt's Bluff, Nicholson River Victoria. Vicki Vuat, one of the principles of Wildseed Nursery – an indigenous nursery and restoration company, standing proudly in front of their weed control fire on a highly degraded Littoral Rainforest site. This scary and unconventional technique was tried by these innovative people and produced some great results: it cleared away the poisoned Blackberries **Rubus anglocandicans*); stimulated the germination of nursery crop species such as Common Boobialla *Myoporum insulare* and Kangaroo Apple *Solanum aviculare* and revealed what native species still persisted beneath the mass of weeds including a threatened species (Figure 8.43). Photograph Richard and Vicki Vuat.

Figure S95. Genoa River, Genoa Victoria. The 'old man of the river' (Robert Allen Far East Supervisor with the East Gippsland Catchment Management Authority) chatting and exchanging valuable information with Damien Cooke of the next generation and one of the founders of Australian Ecosystems (a Melbourne-based wetland nursery and restoration company).

Figure S96. Genoa River, Genoa Victoria. The author and Damien Cooke discussing the excellent riparian and rainforest restoration that has been undertaken by Robert Allen and Ed Thexton of Riparian Australia. Networking: take every opportunity to do it and learn! This site has such a long way to go: recovering from clearing and grazing (it was once Gallery Rainforest): but it is on its way.

Education

Much of what is being learnt about rainforest restoration in south-eastern Australia is new knowledge. This knowledge has no power and no effect until it is passed on (Figure S97). This can take many routes: via networks, friends or schools.

EDUCATION SHARES KNOWLEDGE, IMPROVES RESULTS, CUTS COSTS

Figure S97. Maringa Creek, Nyerimilang Heritage Park, Victoria. Forestech students with their ecology lecturer Richard Owen (a contributor to the Manual) who uses this rainforest restoration project as a teaching site.

Empowerment

People participate in different ways. A small business owner is always going to be busy and cannot necessarily participate in conventional ways, such as donating labour. But there are other options (Figure S98). Your community can do amazing things if they feel empowered or given permission to participate. When these factors come together people become enthusiastic and take ownership of projects. Take the following example:

> A local Landcare group had a big project but fewer people were attending meetings and participation was waning. The president came up with the idea of drawing up allotments across the project site and inviting people or groups to sign onto an "adopt a site" agreement. Participants signed up for two years and undertook to plant and maintain their plot. This approach became quite seductive in the end and all 18 plots were taken up. With training, others were able to implement ***Bradley Weeding*** (see Figures S99 and S100) on a previously established site.

Offering plots to individuals and groups has the following benefits:

- People have ownership
- Training provides empowerment
- Empowerment leads to a sense of permission and independence and co-operation so that individuals or groups coalesce socially and do their work in their own time and according to personalised schedules
- They talk to passers-by and participation and understanding of rainforest restoration can begin to grow
- but not everyone wants to work in groups and that is fine too (Figures S99 and S100).

THE POWER OF ONE!		
		
Figure S98. Pelican Café, Cann River Victoria. Former proprietor Judy Weatherall (nee Anderson) is a supporter of rainforest restoration in the valley. Judy is rather sheepishly showing off her critically endangered specimen of Slender Lignum *Muehlenbeckia gracillima* in August 2005: a plant we both had to concede could be a rampant if weed if no Sambar or cattle were grazing it. The lignum is behind and to the left of Judy (red arrow).	Figure S99. Riverine Road (Mitchell River Walk), Bairnsdale. John Burns, one of the region's most energetic rainforest restorers, on a new site managed by the Bairnsdale Urban Landcare Group. This is a Littoral Rainforest site two months after planting in 2004. The site was prepared by physical removal of a dense stand of Grey Poplars and English Elms with an understorey of English Ivy and Blue Periwinkle, which sends shivers down your spine really!	Figure S100. Riverine Road (Mitchell River Walk), Bairnsdale. The same site 12 months later in 2005. In its finished state, it will be a large self-perpetuating rainforest gap full of shrubs and herbs (a planned decision) that is designed to preserve the river views available from Riverine Road. This site includes the conservation of threatened species such as Grey-headed Flying Fox *Pteropus poliocephalus* and the planting of threatened plants.

Gaining support for your project: the social contract

As has already been noted, people can behave strangely. Gaining support for your project from a range of key people and or organisations can sometimes be a bit tricky, but there are some basic rules and approaches that work. Without a social licence to operate in your area (i.e. a consensus from all stakeholders that the restoration project proposal is the right thing to do) then you will not have a project, simple as that! Much has been written on the subject, with one of the better treatments of this fundamental part of restoration being presented by Rutherford *et. al.* (1999) in *A Rehabilitation Manual for Australian Streams*: Part 2: A stream rehabilitation planning procedure: 12 steps to a stream rehabilitation plan: Step 2: Who shares your goals for the stream? 1 Getting people's support; 2. How to win allies and resist opponents. It is highly recommended that you read that passage of text.

Signage

Signage is a critical factor in gaining support for your rainforest restoration project. If you are spending public money on public land, you have a responsibility to communicate what you are doing to your community and why you are doing it. Do not skimp on your signage: good signage that is graphic, clear, well presented and of a high quality conveys other messages as well: we a serious about what we are doing and we are doing a good job.

Signage that communicates effectively does so by being consistently presented (graphics, colours, messages and themes). Understand who your audience is and what you want to say to them. Use of local issues, people and well-known events or scenic spots all helps to tie in the work you are doing in the community in which you are operating (Figure S101). Remember, community support is essential to the work that you do or want to do.

SIGNAGE IS A LOW KEY BUT EFFECTIVE WAY OF PROMOTING YOUR PROJECT

Figure S101. Orbost Bike Path, Snowy River Victoria. Signage is a critical part of letting people in your community what is going on and improving their knowledge of their natural surroundings. Good signage helps to sell the project to the community, which in turn gets other people interested in participating. Make sure your signage is relevant by including local people, local examples or by tying in the interests of the people using the site.

Signs need to be in the right places as well. Will the audience you intend to communicate with, pass by or visit the site of your sign. If the sign talks about fishing, fisherman should be users of the site where the sign has been placed

(Figure S102). Does the sign's message say something new, or do you wish to reinforce a message already given in other forums (press releases, school or service club visits and so on)? Another very useful message is to illustrate the link between fees, the use of a site and its utility: the fact that it is helping to restore Littoral Rainforest may not be an overt part of the message, but it gets the job done (Figure S103).

Strategic placement of your project

Develop a strategic role for your project by talking with decision makers (Figure S104), and don't forget the locals and your neighbours: they make decisions too; if they do not support your idea, then it is dead in the water (no matter how much cash you get from elsewhere!).

Understanding the planning context into which you want to place your project can help. Here are some useful starting points:

- Make yourself familiar with what the locals are planning to do: look for synergies and then offer your project up as a supporting project (Mitchell River Walk, the Orbost Waterwatch Trail and the Orbost Bike Track are all classic examples of this approach)
- What are the regional (usually agency, but may include tourist or business association) priorities? Do they include rainforest restoration (look at regional catchment strategies e.g. EGCMA 2008, regional vegetation plans, biodiversity action plans or their equivalents and seek out listed rainforest communities in your region)
- Look for the threatened community's habitat to help you identify potential restoration sites in your district
- Look for opportunities for restoration in your local landscape (community projects, erosion control) consult Landcare priorities, look up Local Area Action Plans and Biodiversity Action Plans
- Build multiple benefits into your project where possible (the usual three: social, economic and environmental) remembering not to subvert environmental goals
- Environmental services often accrue as the result of your work, but are of benefit to your neighbours: which may scary to some of them, such as a snake (Figure S105), or as subtle as Boobook Owls feeding on farms each night
- Identify threatened plants or animals that are present, or used to be present, on your restoration site and include these as beneficiaries of the proposal
- Incorporate erosion control and nutrient management as part of your proposal (asset protection always gets a big tick)
- Incorporate aesthetics (local tourist drives/walks etc.)
- Identify helpful people and responsible organisations and cultivate these relationships.

General attitude

People do not only judge a project's on its merits alone, but also make judgements about the capacity and capability of the people presenting the project and whether they can do the job. In other words, your attitude and *bona fides* are also important:

- Let your actions speak for you by doing volunteer work (remember this works both ways: restoration projects get the support they need, you get experience and the project manager gets to know you and your abilities)
- When the time comes for project proposals and letters of support, you are more likely to get them if you have already worked on a restoration project and are known to the decision makers of the region
- Your approach to people is also important:
    - Be humble
    - Be consistent
    - Be quick to praise and slow to criticise
    - Put yourself in the other person or organisation's shoes (be empathetic) when trying to fathom attitudes or decisions that run contrary to your wants or needs.

A lot of this advice may sound like kowtowing, but it isn't. Everyone is very busy nowadays and your project may seem like the best thing since sliced bread to you; but in reality it could be just another great, but poorly thought out idea, so make sure your project concept is not one of those. Also, to be fair, there is a lot of pressure on people in agencies, and there will never be enough money to go around. Projects that will been seen favourably are those that are well thought out and those that already have a track record, or are presented by proponents who have made a favourable impression on those that consider the project for funding.

COMMUNICATE RELEVANT MESSAGES: BE STRAIGHT WITH YOUR AUDIENCE

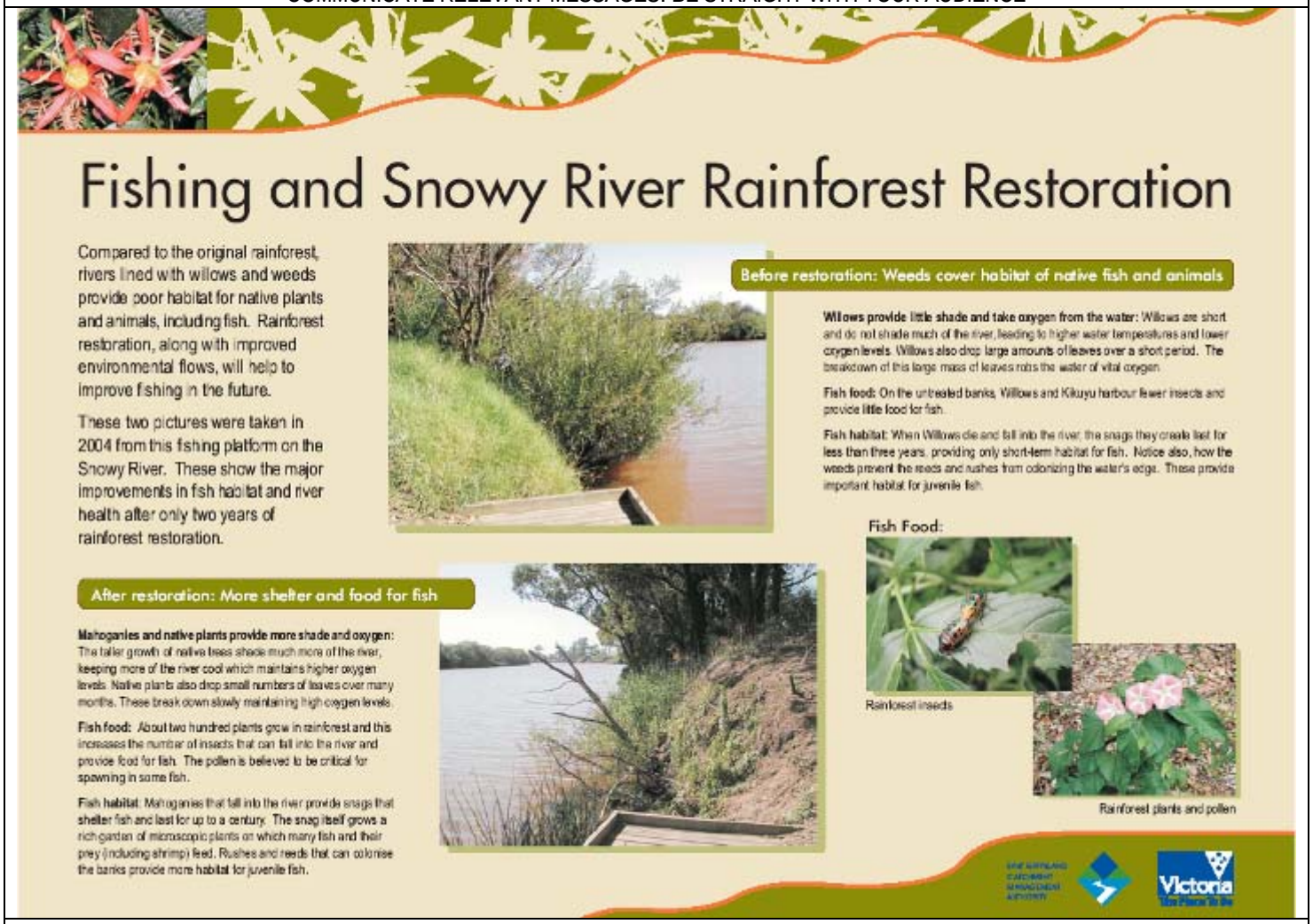

Figure S102. Marlo Road, Snowy River Victoria. Make sure your signage is relevant to those that use the site and that the message ties in with their interests. This sign (placed at a fishing platform pictured on the sign) talks to local fisherman and links willow removal and rainforest restoration with fishing prospects for the future. Don't be patronising or misleading: the public can tell whether or not you are painting a true picture.

LINKING TASKS TO PEOPLE HELPS TO GET THE MESSAGE ACROSS AND THE JOB DONE

Figure S103. Bittangabee Camping Area, Ben Boyd National Park New South Wales. A sign that links works to fees and puts the reader in the loop. In this case, it helps make such camping areas sustainable by protecting and rehabilitating vegetation, which in this camping area includes Littoral Rainforest.

Suggestions for the project proponent

It is not always easy to separate yourself from your project, but it is necessary to retain a clear head and a manner that will help your project's chances of being taken seriously and getting funded. So:

- Be consistent
- Be keen, but not pushy (people who are successful at getting projects funded are usually persistent, keen, but always polite)
- Don't take a negative response to your project proposal to heart; instead discuss the reasons for the unfavourable response and what you may need to do to change your concept and gain the funder's support (you may have picked the right project but the wrong funding source or at the wrong time)
- Think through the scale of your project: make sure it matches your (or your group's) resources and abilities: start small and work up.

Suggestions for agencies and funding organisations

Understanding the funding processes for the average restorer is a very difficult process. Funding processes and requirements are complex and although the guidelines and requirements are getting better (read logical), there is still a long way to go. A proponent does not have to understand the whole edifice, but does need to address the key criteria.

Here is how agencies and funding organisations can help:

- In the first instance, be clear about the guidelines: sit down with the proponent and go through them step by step rather than sending a first-time proponent a load of bureaucratic gobbledygook and letting them try to work it out by themselves. They will either give up in frustration or make a hash of it
- This is an opportunity to make sure that the project is well thought through
- Offer advice and try and anticipate any of the project's shortfalls **before** the funding application is returned to your desk. This will save a lot of anguish, time and effort for all concerned
- Should the project be funded, ensure that you are strategic in your advice and monitoring of the project's progress (it is easy to feel responsible and to mother a new project), but remember: the proponent has to do it
- Give some latitude to new projects or proponents (remember they are learning too). Funding agencies in particular are getting very good at this and the process is a lot fairer as a result: it gives people and communities time to come to terms with what they have to do and allows them to 'grow' into their project.

LOOK FOR SYNERGIES AND FRAME YOUR RESTORATION WORKS WITHIN CURRENT POLICIES

Figure S104. Genoa River, Victoria. The starting point (and the whole of the view of this photograph) was literally bare sand; planting began in 1992 and ended in 2000; this river reach has been on an *ecological maintenance cycle* ever since that time. Now 16 years later in 2006, Paul Wilson and Debbie Brown (right) from Melbourne's Department of Sustainability and Environment and Rex Candy, Strategies Implementation Manager with the EGCMA, along with Sean Phillipson of EGCMA discuss a range of follow-up works including rainforest restoration on the partially restored Genoa River. What range of follow-up works (perhaps including rainforest restoration) is needed to complete the Genoa River rehabilitation? Onsite visits are important: they put decision makers in the landscape and allow them to understand context and options not apparent in an office. The context for proposing rainforest restoration on this river reach is that the initial very successful riparian zone restoration works are nearing the end of their use-by-date. As revegetated areas of rainforest habitat dominated by secondary species such as Black Wattle *Acacia mearnsii* lose their vigour, sun weeds will once more reinvade, because the nearest rainforest remnant is too far away to ensure adequate rainforest species recruitment. Consequently, supplementary rainforest plantings are required to enrich the site to provide a closed canopy before the Black Wattle dies out and the sun weeds rule once more.

Fencing

Introduction

Fences mark boundaries. In urban situations, they usually separate different owners or land tenure (private from public). In rural situations, they can do this too, but more commonly separate two incompatible land uses: summer grazing from winter grazing, cropping from stock and so on.

Just as in urban situations, the fence type, the materials and the means of construction (who constructs the fence, who pays for how much, when it is replaced, whose responsibility, etc.) all need to be clearly understood at the time of construction. Fencing is expensive (footnotes to Table 6.1) so you must carefully consider what the fence is for and whether you really need one because an inappropriate fence can also do a lot of unnecessary damage.

Having made the decision to put up a fence, it is worth putting some serious thought and time into choosing the right fence for your rainforest site. The type of fencing that you use on your site needs to take account of several factors:

- What does it need to keep out (or in)? See Appendix 7.1: Figure AM7.1-1.
- Is it to be a temporary fence because the threat will abate? Or is the fence going to be temporary because you may need to let something out (i.e. gates and their placement may be an important consideration at the time of construction; Appendix 7.1: Figure AM7.1-1)
- Is it likely to be a long-term fence? Some fences should be lightly constructed and materials chosen carefully because they will be destroyed by flooding
- If the fencing is in a remote location, theft is possible and you may wish to choose 'unattractive' or unconventional fencing materials (nylon or plastic netting instead of ring-lock for example to deter thieves (Neyland and Jennings 2002 cited in Poynter and Fagg 2005). Theft and/or vandalism has been a significant problem on some of our sites in East Gippsland
- Will the fence be a threat to animal health or welfare? If this could be an issue for you or your site, then look up: <www.wildlifefriendlyfencing.com> for alternatives.

Floodplain fencing

If your restoration site is on a major river's floodplain, you will lose your fencing to flooding at some time in the future. It therefore makes little sense to construct a heavy-duty fence that will catch a lot of flood debris before it lies over. Consequently, fencing constructed from hardwood posts that use large end assemblies and barbed wire are a recipe for disaster: not only will it sustain heavy damage: you can kiss your barbed wire goodbye as it will either be swept away or be so hopelessly fouled by flood debris as to be unsalvageable. Most floodplain farmers with stock and rainforest restoration sites prefer 2-3 strand electric fencing for the reasons already outlined. Temporary tape electric fencing may be useful where stock from an unfenced property cross the river and gain access to your site from the river bed. However, in the long-term you need to negotiate exclusion of the stock from the other bank of the river.

Animal welfare

There are two types of fencing that can cause problems for animals – barbed wire and electric:

- Barbed wire fences are a great threat to dairy cattle because cows can sustain severe damage to their udders from the barbed wire, so electric fencing is usually preferred on cattle properties, but particularly dairy farms. Barbed wire is also a threat to gliding possums (usually sugar gliders) and bats of all kinds, but particularly Grey-headed Flying Foxes. Barb should be avoided wherever possible (see Chapter S5: Figure S217), because what you are planting is inherently attractive to these species and it makes little sense to 'invite' them onto your restoration site only to tangle them up on your inappropriate fence and leave them to a slow and painful death. The other complication is that you are planting rainforest and one of the major life-forms in it are vines: if you ever had ideas of removing your fence in the future, you can forget it if barbs are used
  - Alternatives: ring lock or netting fences (in areas not subject to flooding).
- Electric fences threaten some wildlife where you are trying to exclude species that prefer to go under rather than over a fence (such as Hog Deer or Swamp Wallabies). Such electric fences usually have 5-8 wires, with the ground wire about 10cm off the ground. This is low enough to catch Long-necked Tortoises and Echidnas. Both are usually killed because unlike other species that flee when they receive an electric shock, these two animals do not run; the tortoises retreat into their shells and echidnas dig in, but still remain in contact with the fence.
  - Alternatives: consider an alternative fence construction material or avoid the need for fencing altogether by the use of *camouflage*, *deterrent* or *unpalatable species* companion planting to protect palatable species from browsing or, as a last resort, culling. There are also echidna-friendly designs on the market these days.

SNAKES ARE A BENEFIT TO THE RURAL LANDSCAPE, BUT URBAN PEOPLE MAY NOT AGREE

Figure S105. Cann River, Victoria. Red-bellied Black Snakes *Pseudechis porphyriacus* feed primarily on frogs (Wilson and Swan 2003) and for that reason are often found near rivers and swamps (Faunanet) and the rainforests which occur beside them (Subtropical, Warm Temperate, Gallery and Littoral Rainforests). However, they also eat other prey (<www.en.wikepedia.org/Red-belliedBlackSnake>; Wilson and Swan 2003) and range widely across floodplains. They are primarily active during daylight hours and are highly visible and, because of their docile demeanour, most landholders leave them alone and tolerate them around their farms. This is especially beneficial to the farm as they are adept hunters of both insects like grasshoppers and pest mammals such as House Mice. For this reason, your rainforest restoration works can provide a significant benefit to your neighbours and their pest management needs on the farm. There are a myriad of other such benefits (Chapter S2: Rainforest values; Rainforests as nutrient traps and waterway health; and Biodiversity; Table S4). Urban people have a different perspective, but this can be managed (see Urban neighbourhood considerations below). Photo: Sean Phillipson.

Urban neighbourhood considerations

Urban restoration sites provide wonderful opportunities to engage the community in the process of recreating rainforests in what are essentially people's backyards. Restoration in built-up areas also entails some important considerations of risk to the public who will enter, traverse and enjoy the site, as well as for those property owners that abut the restoration site. These risks need to be identified at an early stage and minimised, managed or eliminated through careful planning.

Each restoration site is unique and comes with its own special set of constraints. Careful planning and consultation can overcome most constraints and, in some cases, these may be turned to you or your site's advantage. For example, most urban people have a morbid fear of snakes. Successful urban restoration sites will become habitat to a range of native wildlife that will probably include snakes. This apparent constraint can be turned to advantage if sites are well planned and managed. Because rainforest casts extensive shade and so reduces snake habitat: walking tracks can be planned for the shady areas and grass in the sun is mowed, thereby reducing human contact. Rainforest also has an open understorey (compared with long grass and thick undergrowth in ***full sun***) and this allows people a clear view of the snake long before they are upon them, and they can then take steps to avoid it. The remainder of the chapter deals with some of the more major constraints and suggests a number of strategies to deal with them.

Fire

Fire is an important consideration, both ecologically and from the public risk perspective. It is worth remembering that one of the reasons for re-establishing rainforests (especially in urban gully situations) is their inherent lower

flammability and fire suppressant quality compared with sclerophyll forests (Additional Reading: Ignition times). These qualities, however, improve with age as the canopy closes and more mature phase species occupy the site. This may take a number of years to achieve and fire itself must, in the meantime, still be managed like all other threats to the restoration process and to your neighbours (Chapter S7: Fire management). Fortunately, there are a suite of fire retardant early rainforest species that can be employed on your site to reduce the impact and risk of fire (Additional Reading: Ignition times).

In most rural situations (and hopefully rarely in urban settings), fire will occur as a fact of life and the restoration site must be prepared for that eventuality by planting pioneer species. These species will recharge the ***soil seed bank*** with their seed and regenerate following fire and compete with the weeds that occupied the site when you began.

Widow-makers

This is particularly an issue where people can formerly access restoration sites through paths, car parks and picnic areas. Eucalypts are the major concern, but given their ecological importance in rainforest ecology, they should not be left out of plantings. The problem is that they can shed limbs in high winds (which is to be logically expected and people generally avoid being in the bush on such high risk days), but also (unexpectedly for many) on still hot days. The latter is believed to occur because of fungal infiltration of limbs as the trees mature, whereby on such days the fungi withdraw water creating a shear-point, the limb is weakened and falls without warning.

Although the public usually accepts some risk by going to such areas, careful design can reduce the prospects of a tragic outcome, by either not establishing facilities under these plants, keeping the two separated (with fencing or other design) or alternatively avoid planting these trees in such areas (there are a myriad of other species that can be used). Species of particular concern are (but not limited to): Southern Mahogany *Eucalyptus botryoides*, Blue Gums *E. globulus* ssp., Mountain Grey Gum *E. cypellocarpa*, Manna Gum *E. viminalis* and River Peppermint *E. elata*. Planting species with a 'widow-maker reputation' is best left to sections of restoration sites where intensive public use is not encouraged, or on more remote restoration sites.

Box and Ironbark species (Blue Box *Eucalyptus baueriana*, Coast Grey Box *E. bosistoana*, Yellow Box *E. melliodora* and *E. tricarpa*) tend to be more stable and preferable in areas where limb-fall and/or wind throw may be an issue. In highly exposed situations (on sea cliffs, for example), only low profile species such as Southern Mahogany *Eucalyptus botryoides* should be considered (if it is indigenous and therefore appropriate to the site), but the same caution still applies..

Another important consideration in high public use areas, or where assets may be at risk, is the funnelling effect that gullies have during strong wind events. Where windfall may be an issue, plantings should try as much as possible to offset this from the beginning. This is achieved by planting the bottom end of the gully first and ensuring that the emergent tree plantings are as structurally uniform as possible on the windward side by employing the storm shutter planting sequence of small, medium, tall: beginning from the exposed ***edge***. On more remote sites, windfall is a normal event that produces some important ecological responses in rainforest, and it should not be a concern.

Wind-throw

This is an important consideration, especially in linear plantings that occur in exposed situations. A good example is riverside restoration sites on cleared river flats. This leads to frequent damage to trees, especially those that are shallow-rooted and prone to trunk splitting (River Peppermint *Eucalyptus elata*), those that are brittle (Boobiallas *Myoporum* spp. old Black Wattle *Acacia mearnsii*), or those that will eventually become emergents (Southern Mahogany *E. botryoides*).

Respecting access to sunlight: an example of building a good feeling about a restoration project

Some projects, especially those on narrow or steep drainage reserves (Figure S106), need to consider adjacent landholders access to sunlight. Access to sunlight is an important issue for those of us that use our backyards for gardening and recreation (Figure S107): deep shade can even "rot your potatoes and fade your tan" according to some landholders!. The solution to this is very simple. Rainforest has two phases: gaps and mature canopy. To accommodate access to sunlight, simply plant rainforest gap species of less than 2m in height and the landholder gets the sun and the project still retains the rainforest biodiversity and ***contiguity*** required for a successful project (Figure S107). At the same time, good wetland management (Figure S108) in creeks will strip nutrients from urban areas.

TAILORED SITE SPECIFIC TREATMENTS: ACHIEVING DIFFERENT AIMS IN THE ONE RESTORATION SITE		
		
Figure S106. John Street, Lakes Entrance Victoria. From the biological and water health perspective: poor stormwater treatment and reserve management at John Street Lakes Entrance: a situation that prompted the author to arrange a rainforest restoration project for both the residents and the Shire.	Figure S107. John Street, Lakes Entrance Victoria. Gap planting behind houses at John Street restoration site maintains resident's request for access to sunlight in their back yard. This photo was taken in 2006, 4 years after the initial works.	Figure S108. John Street, Lakes Entrance Victoria. Water treatment by riverine wetlands running through rainforest restoration at the lower end of John Street rainforest restoration site, just before it enters the North Arm on the Gippsland Lakes. This photo was taken in 2006, 3 years after rainforest restoration. Compare with Figure S106. Although the site is linear and only 400m long and only 30% of the waterway is vegetated, under flood conditions, 20% phosphorus is still stripped from this floodwater during flood conditions.
POOR URBAN STORMWATER MANAGEMENT	PLANTING ENSURES ACCESS TO SUNLIGHT	GOOD STORMWATER MANAGEMENT

The respect shown for neighbours in the Johns Street Project (Figures S106-S108) engendered great community participation. As a consequence, this project ran on a very small budget because it was strongly supported by residents. Because of this, it did not need any project-specific funding, but was instead supported by negotiating small amounts of money from the East Gippsland Council and the East Gippsland Catchment Management Authority. Such was the feeling on this restoration site, that even the staff of these two organisations provided their labour and weekends free of charge and the local nurseries provided free plants!

Views

The concept of a view is a very much in the eye of the beholder. Although you as the restorer may consider a view of a rainforest preferable to that of a stretch of water – be it river, lake or ocean – few nearby residents, who feel they own such views, will tolerate any diminution of these vistas. Although this is frustrating, and the area you may be working on may be public land, the perspectives of your neighbours are important. It is always best to discuss these issues before you begin planting (especially if you want your plants to stay in the ground longer than overnight).

Rural neighbourhood considerations

Issues relevant to rainforest restoration in the country have some features in common with urban neighbourhoods including: access, fire, views and windthrow. Issues that are unique to rural neighbours include:

- Obstruction of floodways and gulches on rivers by inappropriate plantings (choose to plant the appropriate ecological vegetation class (Gallery Rainforest, Riparian Forest, Riparian Shrubland, etc.)
- Fouling electric fences with vines or other plantings
- Plant toxicity that may affect stock
- Using barbed-wire on dairy farms (this can cause injuries to the cows)
- Planting unstable species (wattles, boobiallas, etc.) that will bring down fences
- Maintenance of fence lines
- Access for pump sites, boat moorings, fishing, etc.

In each of these situations, there is usually a sensible alternative or treatment that can be done to satisfy the needs of your neighbours or the constituents who have an issue. As always, communicate your intentions and discuss the implications of your proposed works before your begin. If you remain flexible, you can usually come to an arrangement that satisfies everyone's needs. People really appreciate being approached from the outset: it gives them a sense of being worth consulting and allows a relationship between you and your neighbours to develop before there is a contentious issue. People find it much easier to adjust and 'cope' if they know what is afoot: so talk, talk, talk!

SUMMARY	
COMPREHENSION: STOP	Rainforest restoration has two components: one is technical; the other is social. The technical (the on-ground and how-to) part of rainforest restoration is relatively easy. Community and human relations are much harder and more complex (but fundamental). Successful rainforest restoration requires social engagement.
KNOWLEDGE: THINK	Social contracts are imperative to rainforest restoration in most instances.
WHAT TO DO? ACTION	Understand your community and communicate regularly, clearly and well with them. • Begin and maintain a genuine, open and appropriate social conversation with all of the people and groups that will be affected by your rainforest restoration project • In that context, you will have negotiated your social contract to operate in your community • Start caring, this is a way to really help, so: get out, observe, learn and adapt • From what you have learnt, begin to plan your restoration approach • Think about candidate sites • Examine your motives and resources (human, physical, social and monetary) • Define your site, then think about its local and landscape ecology: what is its context?

	• Stay grounded: be good to one another (human, living and inanimate).
WHAT NEXT?	We now have the tools to navigate and understand our social framework. We then need to understand the ecological framework in which we will have to operate when restoring rainforests. The next step is for us to explain the ecology of rainforest for you.