Final report to Land & Water Australia on UNE 40:

Creating a contemporary Common Property Resource (CPR) management institution

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... learn from the past, try to understand the present, and feel inspired to help plan a better future for all Australians. Herb Wharton, retired Aboriginal drover and author

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Executive Summary

Boundaries on the land and in the human mind need to be rethought. …More often, existing boundaries merely need to become more permeable. Along with changes in laws, changes are needed in the ways private property fits into the story of the land's health, …sustainability,… [and] responsibility.

Eric Freyfogle 1998

Rural communities face an uncertain future. These communities are reliant on the long term resilience of their productive resources, but often utilise these resources to resolve short term pressures. Their survival is dependent upon their ability to sustain their families by balancing social demands and the biophysical capacity of their landscapes with the requirements to meet debt repayments from declining returns, increasing pressure from government regulations and policies, and global markets that ignore all these factors.

To deal with these issues, the options available to landholders are generally limited to efforts to increase production from the same piece of land. Early in this cycle is reduced maintenance leading to run-down of infrastructure. The increased demands on the system leads to a loss of ecosystem function and resilience as the natural capital base is undermined, ultimately resulting in resource degradation. A decline in the productive resource base occurs through the loss of functional biodiversity, soil structure, organic material and moisture content, resulting in the gradual loss of resilience. This initially manifests by extending the recovery period from events such as drought (ie, lost resilience). In a relatively short time, production systems, even some traditionally considered 'secure and productively stable' start collapsing, farms (firstly those with debt commitments) become non-viable. Eventually broader scale economic and social breakdown occurs across rural communities

There is also increasing evidence of poor management of ecosystems with conventional prescriptions of resource management in many cases not resulting in sustainability. In fact, some of the resource crashes of recent years are of greater magnitude than those observed historically. These may reflect Hardin's 'tragedy' associated with open-access to widespread resources, but also the lack of success of privatisation as a solution.

Several studies of enduring, self-governing collectives managing common property regimes reveal that, despite relatively intensive use and unpredictability of some environmental and social elements, they sustained the natural resources under management over several centuries.

Common Property resource (CPR) management institutions have demonstrated the capacity of these collaborative systems to survive dynamic flexibility - delivering social and environmental stability. The lessons synthesised from resilient, age-old social-ecological institutions are useful in our own time by generating opportunities for people to participate in collective decision-making. Although it is not fully understood why the commons institution is such a successful vehicle in integrating social and ecological components for enduring sustainability, there is a clear need for on-ground demonstration projects in order to examine these institutions in contemporary times. The brief review of CPR systems provided above highlights some lessons and principles that are valuable and applicable in the development of sustainable solutions for our ailing agro-ecological systems today. While these regimes might be employed in a variety of ways from a property level through Landcare groups to government agencies, it is most likely the synergy of all elements in establishing and managing contemporary CPRs has the tremendous potential to lead us towards a sustainable future.

The lessons synthesised from these resilient social-ecological institutions may be valuable in the development of sustainable solutions for the ailing rural sector of our own time. Initial, on-the-ground, experimental development of a modern CPR institution is demonstrating that

contemporary commons can provide a vehicle through which issues associated with rural decline may be addressed. This is principally achieved through collective decision-making, efficient resource allocation, capacity building, and risk reduction. Yet many hurdles arise and novel solutions are required when crafting a contemporary CPR to systems of a modern, industrialised federated Nation.

An important aspect of a contemporary model CPR is the ability to allocate the available resources more efficiently, but within their functional capacity. This necessitates assessing natural capital across an ecological landscape that equates also with the collective of landholders that will learn to share, nurture, conserve, restore and harvest across the entire area. Areas better suited to certain activities allow farming such as cropping and haymaking to be performed on those areas most suited to cultivation and the remaining land may be used for grazing, conservation, restoration or a suitable diversification. This removes the pressure for individual landholders to conduct these activities independently and on unsuitable locations and cropping only the most suitable area in the sub-catchment. Collectively these farming enterprises are more efficient and include the potential for more suitable grazing and crop rotations. Members of the collective need to understand the distinction between resource utilisation and land tenure these landholders may consolidate their herds and graze them across all properties involved in the CPR. This would allow the utilisation of grazing techniques such as rotational grazing regimes over a much wider area, offering benefits including improved pasture and weed management, drought management, as well as addressing issues associated with internal parasite resistance without the fencing costs normally associated with the adoption of these regimes. This allocation of the productive resource within the ecological landscape is resembles the methods adopted by early commons with their *strips-in-the-arable*, *common-of-shack*, and *common-waste*. This indicates an early recognition of the importance of the distinction between farming and grazing land at a broader scale, the capacity of the resource, as well as allowing for broad scale (resource and ecological) recovery.

The establishment of a common piece of land appears to be an important part of a contemporary CPR (Brunckhorst *et al.* 1997) - the property of no-one member of the CPR, but the responsibility of all. This piece of centrally located land appears to serve several functions for development of the CPR collective. Initially the members of the CPR benefit through the up scaling of the productive resource simply through the benefits obtained by additional acreage. It provides buffering against drought, relieves current productive pressures, and is seen as a zone of focus throughout the CPR by providing connectivity for members of the CPR. The common land also serves a more important function in that it provides an area for experimentation, group decision-making and collective management (Brunckhorst et al. 1997). It is this area of land that the institutional learning develops and as members become more confident in their ability to manage collectively these lessons will be applied across all landholder members areas even though in this modern CPR, individual property title is retained. This institutional learning as it evolves provides the framework for building collective responsibility; the monitoring of activities and environmental condition of the sub-catchment; and, self regulation and adjustment (flexible adaptive management). In turn through a sharing and management of infrastructure as well as natural resources, other capacities and resources such as time, labour, equipment and money are freed up for allocation in other activities or diversification.

The acceptance by landholders to participate in this type of institution is likely to be determined in the first instance by the ability to improve scales of economy and address financial viability through cost restructuring. The initial collective planning phase is substantial however, as issues relating to enterprise consolidation and operation, the establishment of the managing body (including determining the rules, voting rights and formula for the distribution of CPR proceeds), and the identification of key infrastructure and equipment are considered.

The establishment of a contemporary Common, based on individual parcels of private tenure, requires the flexibility to accommodate issues relating to existing corporate structures and providing security of tenure while managing the resources associated with the land as common property. This illustrates a novel yet important aspect of the CPR - distinguishing between the property rights associated with land tenure and the utilisation of the resources associated with the land.

The CPR institution enables efficient management of the resources while not affecting the tenure associated with the land. Another benefit of the CPR structure is the efficient utilisation of the labour resource. Grazing and farming enterprises have an uneven seasonal labour requirement and the ability to call on labour when it is required from within the common is valuable as it provides an opportunity to redeploy these resources to investigate alternative on-farm and more importantly off-farm diversifications. Labour is also available to undertake projects at a more suitable sub-catchment scale such as ecological restoration of the riparian areas.

The CPR provides the structural vehicle for buffering the long-term risk associated with existing and new primary production ventures. An important aspect in relieving the productive pressure from these resources is the development and integration of off-farm income sources. Some landholders have had enough time freed 9as opposed to working full-time on their individual farm and still needing an off-farm income) to be able to undertake off-farm work. Overall, this contributes better utilisation of the combined benefits of on and off farm earning potential – including, better utilisation of collective time and increased resilience through diversity of time utilisation.

This work would not have evolved if it hadn't been for the brave group of New England graziers, the Tilbuster Commoners, who took a leap of faith to do something different. Their actions to develop their own particular version of a common property resource system have broken the ice on seemingly intransigent property rights issues that lead to many interrelated social and ecological resource problems. Now other groups in other places can see it is possible and even palatable to retain their individual title, but extend their resource base through a common property resource management arrangement and benefit from making collective decisions for a shared enterprise. Such an experimental project and indeed, this book would not have happened without Land and Water Australia, through its Social and Institutional Research Program, also capturing the vision and providing support for the research and knowledge-building component of the project. A CPR system approach that combines flexibility, collaboration and appropriate scale, may be the much-needed tool capable of addressing the critical issues of environmental and socio-economic decline in rural areas.

The Tilbuster Commons model, enables the landscape scale resources of the collective to be managed as 'wholes'. The size of the combined landholdings allows for improved scales of operation and the additional benefits of improved grazing methods. The model provides security of tenure to the members of the common while enabling the resources under the management of the common to be planned and understood in the larger scale landscape context, which more closely approaches landscape functional scales.

The group is also meeting their objectives. Considerable time has been freed up for all participants along with increased income and reduced input costs. Creek rehabilitation (stream bed, banks and riparian is progressing well and water quality has improved 300%. Some 14,000 trees and shrubs have been planted and more are planned. While it is reasonable to argue that three and half years down the track is still early days for the Tilbuster Commons, the model has generated sufficiently robust formal and informal institutions for its members to explore innovative options that should generate a premium return to the landowner directors of Tilbuster Commons Pty Ltd.

David J Brunckhorst July 2003

Creating a contemporary 'Commons'

Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse the land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.

Aldo Leopold 1949

The Project

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Finally, without the foresight of Land and Water Australia (LWA) and its willingness to fund innovative (though high-risk) projects such as this one, we would never have been able to build the understanding, new knowledge and practical applications that have resulted. Indeed, we have learnt, applied and communicated far more than we ever expected. Thanks are also due to the many LWA staff and directors who have contributed to discussions and, have been encouraging and supportive.

Project Objectives

The L&WA UNE 40 Project Schedule, states the objectives for the project as follows:

1. Experimentally establish a model Common Property Resource (CPR) management institution for rural (grazing) resources management.
2. Demonstrate the capacity of the CPR to deal in an integrated way with the decline of ecological and social elements of rural production systems.
3. Development of a transferable methodology or approach for the establishment of other CPRs.

Summary of results against objectives

1. The "on-ground" model, "Tilbuster Commons" was established with the participating land owners across 4 property titles. The landholders rearranged stock ownership shared amongst them with 'dividend' returns reflected in shares. Grazing and environmental resources planning was undertaken across all properties.
2. The project has demonstrated improved resource planning and integration leading to more efficient and sustainable grazing, improved pasture (cover and mix of returning native pasture; improved water quality), reduced labour and other input costs, increased drought resilience and improved financial returns (7 to 12% over 3 years).
3. The approach, application and structural arrangements are transferable to other farming systems, resource uses, and communities. It could be particularly useful in areas where farm sizes have become too small to be viable or sustainable; and, to the more marginal landscapes of Australia. One important application might be across large landholdings in marginal lands to establish native resource industries for local communities (such as kangaroo meat and other products).

Further details are given in the following description of the project and the book, *Reinventing the Common…* , which is a major additional outcome from the project.

Background

Broad areas of Australia are suffering the loss of ecological function. The direct impacts of this loss on biodiversity and agricultural systems, coupled with the social consequences arising in communities who depend on the natural resource base illustrates that this global

issue should be Australia's number one policy priority. Local to National economies also depend ultimately on the capital stock of natural resources[1]. Many conventional attempts to address these issues invariably fail to capture appropriators 'wholes' and are hampered through; narrowly focused programmes, entrenched individual property rights, institutional impediments, economic incentives and inappropriate spatial and temporal scales.[2]

The collective decision making, monitoring and resource allocation characteristics of successful common property resource systems (CPRS) appear to contribute ecological and social resilience. The sustaining vigour of successful common property regimes has provided the interface through which the demands placed on the natural environment by these communities were more closely matched to the broader scale natural processes that supplied these environmental goods and services, both spatially and temporally.

There is a need to further determine and demonstrate, through application, how such organisational and institutional arrangements contribute capabilities to maintain healthy social and ecological functions towards sustainable rural futures. A critical step in this endeavor and one of the greatest challenges facing researchers undertaking this type of study is to strategically commence adoption of common property management concepts. This may be achieved by utilising the knowledge gained by case studies and interpreted by institutional and political theorists. By applying this experience to on-ground scenarios, as experimental models in a variety of contexts, we can learn much more about the implementation and benefits of future CPRSs[3].

Farmers, in western nations, are driven both, by an individualist property rights system. "My property" is my own to do what I like – despite 'property' also conferring responsibility not to affect others rights, including through negative environmental externalities (a fact recognised in Common Law but apparently rarely used)[4]. This view constrains farmers capacity for sustainable resource use, which is further exacerbated by a politico-economic system which demands more dollar profit. The result is often the pressure on farm families to service ever increasing financial debt without accounting for externalised costs. Although accounting procedures incorporate asset scheduling for livestock, buildings and plant, there is no measure for land quality. Indeed, within our accounting systems, capital land value can be increasing, while land quality (including productivity and soil health) is decreasing. Changes need to be made to our accounting systems to incorporate land quality as a capital asset, in terms of its ecological resources base. Similarly the economically driven trend away from the family farm to corporate farm ownership, often by multi-national companies, appears to intensify this problem.

An approach to parcelling up private titles of adjacent farms that will be acceptable to farmers and their families is needed. To allow title to be retained while bundling up a much larger collective resource pool with scales of economy and production benefits requires a novel application of CPR principles[5]. In practice, the essential questions become: How do we work out how to do it? How do we organise the production and resource use? Can we learn how to do it and how to adjust? What variety of options are available to set it up? How can it remain flexible, but protect both individual landholders' and the collective interest?

This project developed (through an "on-ground" active-adaptive experimental model) understanding of the arrangements to establish CPRS's in Australia. Once demonstrated through application, the CPRS approach, with its unique qualities of flexibility, collaboration and scale, may evolve into a powerful tool capable of addressing critical issues that have to date evaded the institutional constraints of conventional approaches and policies.

Approach and Development

This project's CPRS model was developed in the ecological and social context of the New England Tablelands of north-eastern New South Wales.[6] Holistic integrated management of the social and natural resource components has created a novel grazing and conservation CPRS – *Tilbuster Commons*.[7]

The following summarises the efforts of this group of graziers. Details of the process and legal arrangements for further transfer and application are contained in the book, *Reinventing the Common*, which was a major outcome of the project[8].

Resource Allocation and Scale

An important capacity-building objective in assembling a contemporary CPRS model is the ability to allocate the available resources more efficiently, but within their functional capacity. This necessitates assessing natural capital across an ecological landscape that equates also with the collective of landholders who will learn to share, nurture, conserve, restore and harvest across the entire area. Areas better suited to certain activities allow farming such as cropping and haymaking to be performed on those areas most suited to cultivation and the remaining land may be used for grazing, conservation, restoration or a suitable diversification. This removes the pressure for individual landholders to conduct these activities independently and on unsuitable locations and cropping only the most suitable area in the sub-catchment.

Collectively these farming enterprises are more efficient and include the potential for more suitable grazing and crop rotations. Members of the collective need to understand the distinction between resource utilisation and land tenure so that they might consolidate their herds and graze them across all properties involved in the CPRS, as well as make other resource allocations across the whole (collectively managed) resource base. This would, for example, allow the utilisation of planned grazing techniques such as timed rotational grazing over a much wider area, offering benefits including improved pasture and weed management, drought management, as well as addressing issues associated with internal parasite resistance without the fencing costs normally associated with the adoption of these regimes.

This allocation of the productive resource within the ecological landscape resembles the methods adopted by early commons with their *common fields*, *common-of-shack*, and *common-of-waste*[9]. This indicates an early recognition of the importance of the distinction between farming and grazing land at various scales, understanding the capacity of the resource, as well as allowing for broad scale (resource and ecological) recovery.

Institutional Development and Scale

Institutional and organisational learning, as it evolves, provides the framework for: building collective responsibility; the monitoring of activities and environmental condition of the sub-catchment; and, self regulation and adjustment (flexible adaptive management). In turn through a sharing and management of infrastructure as well as natural resources, other capacities and resources such as time, labour, equipment and money are freed up for allocation in other activities or diversification.

The acceptance by landholders to participate in this type of institution is likely to be determined in the first instance by sharing similar objectives and lifestyle goals and a long-term commitment to their property. Secondly, the ability to improve scales of economy and address financial viability through cost restructuring. The initial collective planning phase is substantial however, as issues relating to enterprise consolidation and operation, the establishment of the managing body (including determining the rules, voting rights and formula for the distribution of CPRS proceeds), and the identification of key infrastructure and equipment are considered.

The establishment of a new 'Common' requires the flexibility to accommodate novel corporate structures in order to do business and return profits in appropriate proportions to members. Another benefit of the CPRS structure is the efficient utilisation of the labour resource. Grazing and farming enterprises have an uneven

seasonal labour requirement and the ability to call on labour when it is required from within the common is valuable as it provides an opportunity to redeploy these resources to investigate alternative on-farm and more importantly off-farm diversifications. Labour is also available to undertake projects at a more suitable sub-catchment or landscape scale such as ecological restoration of the riparian areas.

The CPRS provides the structural vehicle for buffering the long term risk associated with existing and new primary production ventures. An important aspect in relieving the productive pressure from these resources is the development and integration of off-farm income sources. The CPRS providing an excellent vehicle for managing the risk associated with the start up and operational phases of these off-farm investments. In addition to economic savings and greater sustainability of grazing, a common covering a large area has the opportunity to greatly enhance ecological conservation. The freeing up of labour within the common increases the likelihood of conservation works being undertaken and reduces the overall pressure on the landscape. Collective decision making enables more effective conservation due to allocation of a more appropriate scale in terms of landscape connectivity.

Tilbuster Commons – 'Beyond the Boundary Fence'

Regional and local context

The regional setting for this CPRS project is the New England Tablelands (northern New South Wales). This ecoregion is characterised by higher elevations sufficient for light falls of snow in winter and mild summers. There are a variety of soils, from poorer granite and trap through to richer basalt derived soils. Most of the original vegetation has been cleared, especially on the basalt soils. The Tilbuster Commons project is located in the Tilbuster creek sub-catchment, 20 kilometers north of the nearest city, Armidale. The elevations of the Tilbuster creek valley range from 1000 meters along the creek lands in the base of the valley and rises to around 1400 meters on the surrounding ridges, which rise further in the north to a highly productive basalt soil plateau around Guyra.

The area is diverse and consists of prime New England grazing land. There is some opportunity for farming activities along the higher quality soils along the creek. There are also remnants of native vegetation within the Tilbuster Commons area, much of which is considered high quality conservation areas particularly those present on the basaltic soils. Some of these native vegetation communities are quite rare and poorly represented in the ecoregion.

While the group of landholders and their families "self-selected" on the basis of their shared values, concerns and future aspirations, the project area was selected as it contained many of the social and ecological issues and challenges that face rural communities. The social issues facing the community of the Tilbuster Valley include elements of an aging rural population, succession issues, and rural unemployment. There is also a general concern for long-term future of the valley and its inhabitants.

The Tilbuster Valley is quite picturesque and the resource base is still in reasonably good shape despite heavy impacts on the creek land and surrounding vegetation due to access by livestock and early vegetation clearing regimes. The area remains reasonably resilient and productive, largely due to the relative elevation and the location of the valley, which is at the top of the watershed and still provides reasonable quality water. Consistent with many rural communities, the members of the valley also tend to provide both a supportive environment and assistance to each another. A major highway passes through the Valley, which provides an audience for the demonstration project.

These combined variables made the inhabitants of the Tilbuster Valley an excellent group to approach for the development of a contemporary CPRS. It was also their initial enthusiasm for the

project along with their willingness to recognise many of the issues associated with collaborative management that finally resulted in the selection of the Tilbuster Valley as the area for the CPRS.

The Evolution of the Tilbuster CPRS

The Tilbuster Commoners, as they now enjoy being referred to have taken for themselves the motto "Beyond the Boundary Fence" referring to the philosophical and conceptual position, upon which they have agreed, for managing collectively the resources of their individual properties.. The group's holistic goal, which encapsulates their values and aspirations, is:

"As individual owners, we're working together as a collective for improved lifestyle, prosperity and land health."

The four grazing families own adjacent properties. They have embarked on a challenging project to form a contemporary Common. Individual graziers have contributed land, livestock, infrastructure and labour to form the common property arrangement. These combined resources are managed collectively by the entire group as a single enterprise. Collectively known as the Tilbuster Commons the members and their families are establishing a grazing arrangement with the aim of demonstrating that the CPRS model is capable of delivering improved economic returns while ensuring the sustainability of the productive resource through the allocation of resources for the maintenance of ecological integrity, achievable only through an integrated management regime at a more appropriate scale.

The four farms participating in the project are largely nestled within the Tilbuster Valley and manage a total land resource base of approximately 1300 hectares. Individual properties vary in size between 60 hectares and 600 hectares. The land types associated with each members land parcel vary greatly. The smaller properties are not insignificant, because they consist almost entirely of very high quality alluvial or black soils. Two of the larger landholdings consist of more variable soil types, but also contribute some high value conservation areas. Whilst there are larger single landholdings on the New England Tablelands these four farms are typical of many of the landholdings managed in the area and issues associated with small farm size.

After nearly two years of discussion, the landholders formed an informal (un-constituted) arrangement in 1999, known as the Tilbuster Common Resource Cooperative (TCRC). While this had no legal standing, it provided an important social vehicle for the group to begin building necessary social capital[10] required for the transformation towards whole system planning, resource allocation and collective decision making.

The decision to participate was based initially, not on a set of hard and fast rules that were already in existence, rather only on a guiding CPRS philosophy, together with shared values and aspirations, in which issues that affected the group would be managed collectively. Three core values became expressed as objectives that could be used to test and monitor decision making. In order of importance to the group, these were:

1. Freeing up of time.
2. Improving the natural environment and the resilience of the resource base.
3. Improved financial returns and reduced input costs (including reduced labour).

This 'philosophy' and explicit, shared direction has become, and continues to be, an important set of criteria on which to test decisions. This probably marks the, albeit informal, beginning of the

institutionalisation of the Tilbuster Commons. Since its inception, trust, credibility and acceptance of each others strengths and weaknesses have grown. Over time, each participating member has been able to see the advantages of collaborating. Increasingly, there was (and still is) increasing confidence in the group's capacity to negotiate equitable outcomes with multiple benefits. In terms of transfer and adoption, clearly every group and situation along with there objectives, will be different. It is important however, that these are solidly based on a core set of shared values that can be agreed upon also for use to examine and test decisions.

Further discussion and more intensive planning over the next eighteen months led the group to start considering the kind of legal structures and corporate arrangements they needed. The group felt strongly, however that the simplest structure providing flexibility would best serve them. The range of issues discussed included livestock management, planned grazing and pasture management, the strategic allocation of conservation and environmental rehabilitation areas, and the issues associated with the operation of the Commons (such as management structure, bookkeeping, accounting). Other issues at the forefront of discussions included the allocation of land to the common (small areas are retained for private use, primarily the areas around each member's home), the selection of key infrastructure, the development of a "formula" which represents the interests of each member in the common and the allocation of land / resources to the maintenance of ecosystem function which is recognised as underpinning the productive sustainability of the common. Since that time the processes that guide the management of the Tilbuster Commons have been continually evolving and developing through this collaborative process.

Developing a Legal Structure for Tilbuster CPRS

The group considered various legal structures to establish an entity to undertake the management and enterprise development of the Common, including a Partnership, Trust, Co-operative and company. Towards the end of the year 2000, the group decided that a private company structure seemed to provide the best arrangement.

In January 2001, Tilbuster Commons Pty Ltd was registered and the group worked towards getting various elements in place for the company to start functioning in the next financial year. With an arrangement of a CPRS and the collective decision making and 'holistic' goals of the group, there is an apparent 'conflict of interest' which is established in the company, because the Landholders are also directors of the Company. It is appropriate and useful to the CPRS to deliberately create a tension between the individual landholder's interests and the collective interests of the group of landholders represented in the company. With both hats on, individuals are always considering the best options of benefit to themselves and the other members through the company. The landholders, as directors of the company have a share issue based on the "formula" agreed by all (representing proportional contributions of land, stock, equipment etc contributed by individual landowners), which also forms the basis for sharing profits. As Company directors they are making the collective decisions for running the enterprises of the collective and managing the whole resource base their land, and the creek that runs through it, represents across the landscape (Figure 1).

Initially an informal tenancy at will was created with the landholders and Lessors and the company as Lessee. This allowed the company to start the rotational grazing component across all properties. This has now become a fixed term lease, with options to renew. A fixed term lease provides a mechanism with some stability and protection for both individuals (retaining land title) and the company (using and managing the whole resource base represented by all properties collectively).

Individual and collective social benefits of this CPRS include freeing up of time and labour and pooling of various expertise. This in turn helps build flexibility and resilience. For example, some simple but highly regarded benefits enjoyed by the Tilbuster Commoners include more efficient accounting and management practices, shared labour (but also less labour such as eliminating the need to crop for winter feed), the chance for families to 'get away' to have a real holiday and being able to leave the gate open when the livestock herd are on another property. Based on individual landholders previous 5 years of incomes, the project also demonstrated 7 to 12 % improved incomes for all (despite the drought, which was the lowest year of returns).

Resource Management 'beyond the boundary fence'

Under conventional property rights regimes primary producers are required to fully utilise the resources available within their own property title boundaries in order to survive economically. A typical landholding may comprise some high quality soil that is suitable for farming, grazing land that is generally not suitable for farming, and some poorer areas barely suited to grazing. The type and mix of these areas will vary depending on the topography and soils of the region.

Faced with various family and economic pressures and with only these resources at the landholders disposal, there is often no option but to over-use, or inappropriately use, each type of resource. The productive riparian land is inevitably cropped, possibly for summer as well as winter feed for livestock. But grazing land might need to be cropped also. Stock will usually have access to the creek for water. The mid quality land will be grazed throughout the year and the poorer areas will slowly decline due to the impacts of livestock 'wintering over'. Input costs tend to increase to help production and counter negative trends of water quality, parasite load and reducing production from both, farmed and grazed areas.

A valuable aspect of the Tilbuster Commons CPRS arrangement is the ability to allocate the available resources more efficiently, but within their functional capacity.

The collective provides a unique opportunity for a group of graziers, who together own most of a sub-catchment and have collectively agreed to work and learn together how to operate a CPRS system, while still retaining their individual land title. By recognising the distinction between resource allocation and use (geographical), and tenure (institutional), these landholders may consolidate their herds and graze them across all the properties involved in the CPRS. This allows the utilisation of grazing techniques such as planned grazing regimes over a much wider area (across all properties), with substantial gains in pasture cover, biomass and resilience.

Input costs have been greatly reduced and production increased offering benefits including improved pasture and weed management, water and drought management. In addition pest issues such as external and internal parasite control is now managed far more effectively, but with reduced costs in terms of fencing or chemical needs. No cropping for winter feed (nor purchase of feed) has been necessary so far and, while essential natural minerals are provided for stock, no super phosphate or similar fertilizer applications are now used.

The Tilbuster Commons has managed to completely remove the impacts of livestock on the creek system. Water quality in the creek has substantially improved. This is partly due to the landscape scale of pasture management and the grazing plan, which allows long rest periods, and generally a high standing biomass of pasture, together with fencing and rehabilitation of the creek across the properties. Alternative stock water has been obtained from a range of sources across the common and piped (cost effectively) across the previous barriers of "land title" boundaries.

At broader and more meaningful ecological scales across the landscape, the project is providing opportunities for long-term conservation and maintenance of rare basalt associated ecosystems and the restoration of woodland and stream environments (eg, creek bed and riparian vegetation). This necessitates assessing the natural resources base across an ecological landscape that equates also with the collective of landholders that will learn to share, nurture, conserve, restore and harvest across the entire area.

Through this process, all members learn and understand the ecological system better and together, they can plan for the future more effectively.

Areas better suited to certain activities allow farming such as cropping and haymaking (if needed) to be performed on those areas most suited, and resilient, to cultivation and the remaining land may be used for grazing, conservation, restoration or a suitable diversification. This removes the pressure for individual landholders to conduct these activities independently, on largely unsuitable locations and cropping only the most suitable area in the landscape. Collectively these farming enterprises are more efficient and include the potential for scaling-up to more suitable resource use across all properties of the collective.

Discussion – Future Applications

The separation of social systems and natural systems is more of a recent artefact of science than an observation of the real world. Building resilience for adaptive capacity . . . brings together understanding for self-organisation, scale, governance and external drivers. Building social-ecological resilience also requires evoking change in social structures. Carl Folke, Johan Colding & Fikret Berkes, 2003.

Social-Ecological Synergies

Synergies arise when resources are managed by a collective. The Tilbuster Commons model, enables the landscape scale resources of the collective be managed as 'wholes'. The size of the combined landholdings allows for improved scales of operation and the additional benefits of improved grazing methods. The model provides security of tenure to the members of the common while enabling the resources under the management of the common to be planned and understood in the larger scale landscape context, which more closely approaches landscape functional scales.

The group is also meeting their objectives. Considerable time has been freed up for all participants along with increased income and reduced input costs. Creek rehabilitation (stream bed, banks and riparian is progressing well and water quality has improved 300%. Some 14,000 trees and shrubs have been planted and more are planned.

While it is reasonable to argue that three and half years down the track is still early days for the Tilbuster Commons, the model has generated sufficiently robust formal and informal institutions for its members to explore innovative options that should generate a premium return to the landowner directors of Tilbuster Commons Pty Ltd.

Current plans of the Tilbuster Commoners include; diversifications that seek niche opportunities supported by the sound risk management base provided by the common; organic certification and chemical free alternatives, and examining local native vegetation for therapeutic medicines coupled. Possibly, with Lavender oil production. These future options for the members of the common would not have been possible prior to the formation of the common.

There are many possibilities beyond Tilbuster Commons. The project as resulted in the likelihood of 2 other CPRS 'Commons' arrangements on the New England Tablelands near Guyra and Glenn Innes. Various groups in Tasmania, Queensland and South Australia are considering, tiered or nested resource allocation CPRSs for a variety of natural resources, their use and management.

In partnership with the Australian Museum "FATE" program, the Institute for Rural Futures is examining application of this CPRS to large landholdings in marginal NSW (Western Division) to develop regional kangaroo industries with local benefits. The model is also transferable to issues of peri-urban development and assisting sustainable production of collectives of "hobby farms". There is also considerable interest in application in Canada and the USA.

There are also clear applications to other resource management issues. Based on classical economic theory of the capacity of markets to manage demand and supply, current water reforms are moving narrowly down the road of individual water property rights – an institution which has not delivered sustainable resource use to date.

The old enclosure movements – privatisation – of the enduring sustainable agricultural commons, in hindsight, was based on such incorrect economic assumptions that has intensified both ecological and social degradation. Nevertheless there are other forms of property and economic models (eg, new institutionalist economics) that are much

more appropriate to natural resource use allocation and management.

Application of nested CPRSs in water property rights and irrigation systems, however, might be one of the most significant potential applications of the model. Further research and development of "on-ground" models of Common Property Resource institutions and, related ecological resource, monitoring, regulation and management systems are needed.

Further understanding of the applications, development and opertational aspects of CPR systems will be of significant major benefit for transformations towards more sustainable resource use and ecosystem health management across our complex, linked social-ecological systems.

Communication

Communication Activities Summary

Considerable time and effort has gone into consultation and communications. The primary audience for communication and transfer are farmers, farmer associations, Land Care groups and coordinators, agricultural advisors and consultants, agriculture and natural resource agencies, as well as policy makers, planners and program managers at all levels of government, and across portfolios and administrative areas, but with a particular focus on natural resource management related areas.

Communications have also targeted different administrative levels of potential adoption, from government Ministers and senior policy makers, advisors and bureaucrats to other officers and managers and 'regional' staff at all levels of government (including local government) to land care groups other farmer associations and interested farmers. We have also accessed various community interest groups, quasi-government agencies, government co-ordination mechanisms. Meetings with government ministers (eg, the NSW Premier, Local Government Minister, Land & Water Minister, Planning Minister in NSW; and Federal Ministers Truss and Anderson).

The Tilbuster Commons project has featured on the white pages and in a very large number of media articles, including local, regional and national newspapers, TV, Radio; and some international media (TV and Radio in UK and Canada). Two feature TV programs were made for 7:30 report and Landline. A separate attachment contains copies of most of the media coverage. The enclosed CD contains video excerpts from the 7:30 Report and Landline programs.

An international conference dinner was held on Tilbuster Commons and a grazing workshop. Four field days have also been held (2 Land Care). International visitors have come from USA, Canada, Japan, Sweden, UK, France, Germany, South Africa, Zimbabwe and New Zealand.

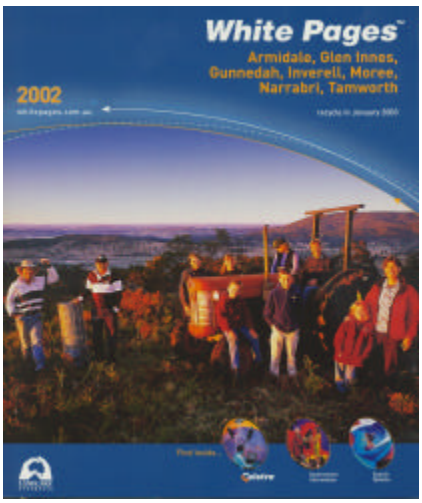
Approximately fourteen conference presentations have been given on the project (including Fenner Conference 2002) and numerous workshops around country towns in NSW, Vic. and Tas.

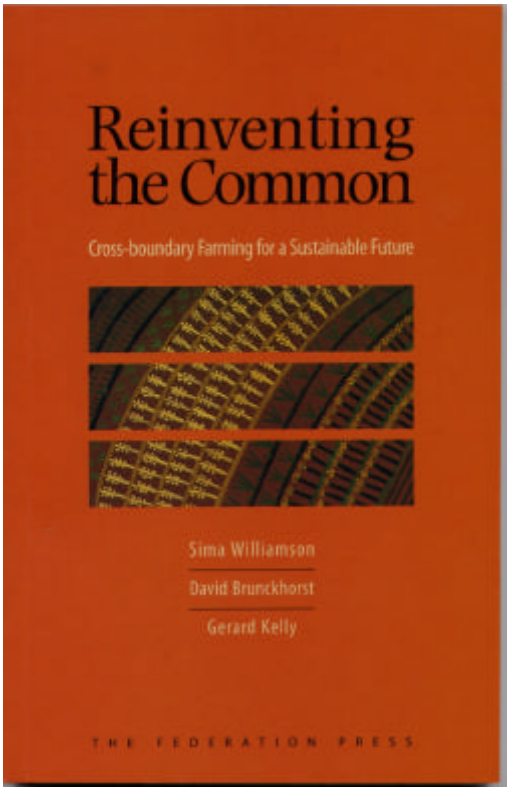
A brochure on the project was prepared and made available at field days, workshops and through various outlets.

A major output from the project has been the book, *Reinventing the Common* – details are given on the following page (LWA has been provided with 100 copies).

In addition a wide range of academics, other researchers and professional staff (Government and other agencies, including LWA) have been consulted and kept informed throughout the project.

A collection of examples of media and related communications over the life of the project is attached separately.





Reinventing the Common

Cross-Boundary Farming for a Sustainable Future

by Sima Williamson, David Brunckhorst and Gerard Kelly

Published March 2003 Paperback / 189pp / ISBN 1862874360

Across Australia, farmers and rural communities are seeking ways to salvage ailing land and struggling communities. Many farms are too small to be economically viable and region's environmental issues cannot usually be resolved within a single farm's boundaries.

This book suggests a potential solution, a possible means of achieving better land care, more sustainable and profitable production, and greater community. It argues that common property resource systems, where neighbouring landowners make decisions together to manage their land as a common region can provide scales of economy benefiting the environment, time and labour and the 'bottom-line'. The book discusses how this can be done.

The authors, a researcher in landscape ecology and specialist property lawyers, explain how the old idea of "commons" works and how it fits into modern Australian real property law. They recount the experience of four grazing families in the New England Tablelands who got together to form Tilbuster Commons across their adjoining properties. They finish with two chapters discussing the major legal issues, particularly business structures and leases, and including precedents.

CONTENTS

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Summary Abstract

A 310 word summary abstract of the project follows

There is ample evidence of poor management of ecosystems with conventional prescriptions of resource management in many cases not resulting in sustainability. In fact, some of the resource crashes of recent years are of greater magnitude than those observed historically. These may reflect Hardin's 'tragedy' associated with open-access to common resources, but also the lack of success of privatisation as a solution. Several studies of enduring, self-governing collectives managing common property regimes reveal that, despite relatively intensive use and unpredictability of some environmental and social elements, they sustained the natural resources under management over several centuries, clearly satisfying the criterion of sustainability. Such Common Property Resource institutions have demonstrated capacity to survive dynamic flexibility - delivering social and environmental stability. Lessons synthesised from these resilient institutions have been valuable in the development of sustainable solutions for the ailing rural sector of our own time. Initial, on-the-ground, experimental development of a modern CPR institution, Tilbuster Commons, is demonstrating that contemporary commons can provide a vehicle through which issues associated with rural decline may be addressed.

This is principally achieved through collective decision-making, efficient resource allocation, capacity building, and risk reduction. The Tilbuster Commons model, enables the landscape scale resources of the collective be managed as 'wholes'. The size of the combined landholdings allows for improved scales of operation and the additional benefits of improved grazing methods. The model provides security of tenure to the members of the common while enabling the resources under the management of the common to be planned and understood in the larger scale landscape context, which more closely approaches landscape functional scales. Members have benefited in gaining more personal time, reducing financial and labour inputs, improving the environment and resource base, and better financial returns. Contemporary Common Property Resource management institutions are applicable to many rural and natural resource issues that extend across properties and landscapes.

Publications and Conference Communications Summary

Publication and conference communications from or describing some part of this project.

Brunckhorst D.J. & P. Coop, 2003. Tilbuster Commons: Synergies of theory and action in new agricultural commons on private land. *Journal of Ecological Management and Restoration* 4 (1) 13-22.

Brunckhorst D.J. 2003. Forming Common Property Resource Management Institutions. *Journal of Ecological Management and Restoration* 4 (1) 72-73.

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[10] *Social Capital* refers to the cohesiveness of people in their communities (at various scales). It comprises relationships of trust, reciprocity and exchanges between individuals which facilitate co-operation. After D J Brunckhorst "Building Capital through Bioregional Planning and Biosphere Reserves" see note 2 above.

List of enclosures to this report

Collection of Media and other communications clippings (soft bound)

CD containing

- copies of this report (MS Word Document and PDF)
- copies of ABC TV 7:30 Report (excerpt) and ABC Landline segment, and
- Powerpoint presentation on the Project.