Funding Rural Stewardship

The case for meaningful reform

An evidence-based report by the Australian Centre for Agriculture and Law on funding and incentives required for land stewards and volunteers to carry out effective rural environmental conservation and restoration.

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This report should be cited as: Martin P.; Lawson A.; Luiza Luz M.; Nauschutz S.; Davies K. (2021) *Funding Rural Stewardship: the case for significant reform,* Report. Landcare NSW et. ors.

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Version: 1.3.1, Wednesday, June 18, 2021

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Funding Rural Stewardship: the case for meaningful reform

Australia needs a viable investment system for frontline rural stewardship to achieve sustainable primary production and protect its declining biodiversity. The current business system does not provide the sustained and adequate investment needed to restore and protect the rural environment, and to implement sustainable farming and environmental works. This problem of feasibility is reflected in the continuing, significant decline in Australia's natural environment. Together with the impacts of climate change, environmental and farming pressures are predicted to increase, which will increase the environmental stewardship funding gap.

What governance approach will maximise environmentally beneficial behaviour? Incentives, resources, frustrations etc. Changing the paradigm. Creating an effective pro-nature system (to complement control over harm, and active restoration).

This report presents overwhelming evidence that a comprehensive investment strategy, and business system for rural environmental stewardship, is in Australia's national interest, and is fundamental to many public and private interests. Political and stakeholder commitment to developing a feasible national/state and public/private business model for exemplary stewardship of the rural environment is desperately needed.

This research involved the review of more than 120 published reports that discuss approaches to environmental protection and restoration investment[1], along with many other documents. There are

[1] See for example:
Aust. Government Dept of Agriculture Water and the Environment. (2019). Ecosystem services; Ball, A., Reid, N., Kahn, L., Admassu, S., Fox, T., & Craik, W. (2019). Managing agriculture's ecosystem services. (R. Heath, K. McRobert, & S. Beech, Eds.) (Vol. 16). Sydney Australia: Farm Policy Journal; Coggan, A., & Whitten, S. M. (2005). Market Based Instruments (MBIs) in Australia : What are they, important issues to consider and some applications to date. CSIRO Sustainable Ecosystems. Canberra ACT; Ferguson, I., Levetan, L., Crossman, N. D., & Bennett, L. T. (2016). Financial mechanisms to improve the supply of ecosystem services from privately-owned Australian native forests. Forests, 7(2), 1–22; Fitzsimons, J. A. (2015). Private protected areas in Australia: current status and future directions. Nature Conservation, 10; Gumley, W. (2004). Investment markets and sustainable agriculture: a case for ecological tax reform. Revenue Law Journal, (April), 190–213; Martin, P., & Werren, K. (2009). The use of taxation incentives to create new eco-service markets. In L. Lin-Heng, J. Milne, H. Ashiabor, K. Deketelaere, & L. Kreiser (Eds.), Critical Issues in Environmental Taxation Volume VII (Vol. 7, p. pp 511-530). Oxford University Press; Martin, P., Dormer, T., Eyre, D., Toni, P., Broadbent, G., Sammon, M., … Sammon, M. (2007). Concepts for private sector funded conservation using tax-effective instruments (No. UNE 57). Land and Water Australia. Canberra ACT; Mech, T., & Young, M. D. (2001). VEMAs: Designing voluntary environmental management arrangements to improve natural resource management in agriculture and allied rural industries: A report for the Rural Industries Research and Development Corporation. CSIRO Land and Water; Miller, K. L., Trezise, J. A., Kraus, S., Dripps, K., Evans, M. C., Gibbons, P., … Maron, M. (2014). The development of the Australian environmental offsets policy: From theory to practice. Environmental Conservation, 42(4), 306–314; Pearse, O. (2020). Australian Farm Biodiversity Certification. National Farmers Federation; Pittock, J., Cork, S., & Maynard, S. (2012). The state of the application of ecosystems services in Australia. Ecosystem Services, 1(1), 111–120; Reeson, A., Whitten, S. M., Coggan, A., & Shelton, D. (2009). Tools and Techniques to Design Market Based Instruments for Ecosystem Services. Canberra ACT; Smith, F., Smillie, K., Fitzsimons, J., Lindsay, B., Wells, G., Marles, V., … Atkinson, I. (2016). Reforms required to the Australian tax system to improve biodiversity conservation on private land. Environment and Planning Law Journal, 79(December 1993), 443–450; Toyne, P., Cowell, C., & Mech, T. (2004). Marketing Agricultural Sustainability: Driving Environmental Improvement with Marketplace Benefits from Environmental Labelling. Canberra ACT; Werren, K. A. (2015). Utilising Taxation Incentives to Promote Private Sector Funded

positive signs of the awareness of the need for better financial incentives and resources for better stewardship, but the scale of the challenge dwarfs these initiatives. At the time of writing, the Commonwealth has created a farm biodiversity scheme ($AUD 34M), and is investigating a farm stewardship program. The National Farmers' Federation has endorsed a rural Payment for Environmental Services concept, and the Pew Charitable Trust (Australia) and 70 organisations are engaged in the "Outback to Oceans Australia" stewardship initiative[2]. Many environmental and farming bodies (including some involved in this study) have investment programs. However, though each initiative is laudable, they will not be enough to meet the increasing rural stewardship challenges.

This study shows that a significant increase in future funding is required. Environmental and business issues (including cycles) that limit the capacity of land stewards and volunteers need to be accommodated in funding models. An investment business system is required that is comprehensive, with low transaction costs for frontline stewards and volunteers. This funding system will require transparent accountability for its operation, and its performance in conserving Australia's unique environment.

A new model will require a coordinated 'cocktail' of public and private sector instruments and institutions, "whole of landscape" investment, a transactionally efficient business system, and disciplined implementation. It will require flexibility to accommodate chronic, or episodic, constraints on landholder and volunteer capacity. It will have to accommodate the needs of first-nations landholders (often impoverished stewards of more than half of Australia) and ageing land stewards, and the constraints on landholder and volunteer funding. Some investment planning approaches used to create landscape-scale, coordinated stewardship investment strategies, discussed later in this report.

In 2022, Australia's new government will have an opportunity to reshape rural, environmental, and fiscal policy, to reposition Australia to meet its future challenges. The time will be ripe for innovation in the funding of effective, efficient and equitable rural stewardship to protect biodiversity and agriculture. It is in no-one's interests to miss this opportunity.

Though agricultural and environmental stakeholders often have different views about environmental management, they have a common economic problem and generally concur that current business models for rural stewardship do not meet their needs. Reforms are needed that will motivate and enable stewardship by landholders and volunteers, and enable innovative approaches such as payments for environmental stewardship or private conservation programs. Importantly though future programs should transparent and accountable, they should not impose unreasonable burdens on environmental stewards, for example through unduly complex funding and reporting requirements.

An improved approach to rural stewardship is essential to meet Australia's legal commitments under the *United Nations Convention on Biodiversity* (CBD*),* to ensure adequate incentives and resources to implement biodiversity strategies. Reforms that provide stronger stewardship incentives and support could also enable effective "light touch" regulation[3]. Political parties and interests have

Conservation. School of Law, University of Western Sydney; Whitten, S. M., & Shelton, D. (2005). Market for ecosystem services in Australia: practical design and case studies.

[2] https://www.pewtrusts.org/en/projects/outback-to-oceans-australia

[3] Martin, P (2018), *Australia needs a feasible business model for rural conservation*, in Farm Policy Journal, vol. 15, no. 3, Spring 2018, pp. 49-55

differing priorities, but there is a strong, shared interest in solving the resource stewardship resourcing challenge.

2.Rural stewardship funding overview

Australia has committed to ensuring sufficient investment and incentives to implement a national strategy in accordance with the CBD (Preamble, Art 11, Art 20, Art 21). The Australian Government states that:

> Responsibility for sustainable development and environmental stewardship for current and future generations is shared across the community. Governments, businesses, Indigenous organisations, philanthropists, research and not-for-profit organisations and communities all have a role in this vital undertaking.[4]

Australia's Biodiversity Conservation Strategy 2010-2030[5] and *Australia's Strategy for Nature 2019–2030*[6] also argue for a whole of community approach, but neither discusses how sufficient incentives or resources will be secured. The *Report on the Review of the first five years of Australia's Biodiversity Conservation Strategy 2010-2030*[7] highlighted this lack of funding mechanisms. Generally, the environmental stewardship funding role of all levels of government, industry, NGOs and private citizens is not clearly defined.

Rural incomes vary due to seasons, rainfall, commodity markets, pests and disease and variable productivity. Government funding programs are subject to political agendas. The result is inefficient stop/start investment, and community frustration. Landholders do have a stewardship responsibility, but better mechanisms are needed for society to shoulder its "shared responsibility", particularly when times are difficult, or problems occur that are not caused by landholders.

A broadly based investment mechanism is needed to share practical responsibility, to ensure sufficient funding for the rural environment. Funding models, such as stewardship payments, purchasing of ecosystem services, industry co-regulation, offsets and market instruments are often proposed. However, to date no viable funding source and administrative mechanism has been identified to make their widespread use feasible.

In 2001, the National Farmers' Federation, Australian Conservation Foundation and Land and Water Australia found an environmental investment need of around AU$6.6 billion per annum, with AU$3.7 billion funded through public sources. At that time, public investment was less than 10 percent of that requirement[8]. A later study for the Victorian state government[9] estimated that an

[4] Partnering for a sustainable environment: An invitation to partner to sustain Australia's unique environment. (2019). Canberra ACT: Australian Government Dept of the Environment and Energy,p8
[5] Australia's Biodiversity Conservation Strategy 2010–2030, Prepared by the National Biodiversity Strategy Review Task Group convened under the Natural Resource Management Ministerial Council, Commonwealth of Australia (2010), https://www.cbd.int/doc/world/au/au-nbsap-v2-en.pdf
[6] *Australia's Strategy for Nature 2019–2030,* Commonwealth of Australia (2019), https://www.australiasnaturehub.gov.au/sites/default/files/2020-11/australias-strategy-for-nature.pdf
[7] *Report on the Review of the first five years of Australia's Biodiversity Conservation Strategy,* Biodiversity Working Group, 2016, Commonwealth of Australia (2016), https://www.environment.gov.au/biodiversity/publications/australias-biodiversity-conservation-strategy-five-year-review
[8]Madden, B., Hayes, G., Duggan, K., The Virtual Consulting Group, & Griffin nrm Pty Ltd. (2000). National Investment in Rural Landscapes: An Investment Scenario for NFF and ACF with the assistance of LWRRDC. Canberra, ACT: Commonwealth of Australia.
[9] Martin, P., & Werren, K. (2009). *Discussion paper: An industry plan for the Victorian environment?* Unpublished, Victorian Govt, Department of Sustainability and Environment. Melbourne.

amount roughly equivalent to Australia's defense budget, around two percent of gross domestic product (GDP), is required. This is consistent with another estimate that biodiversity funding globally requires around two percent of GDP[10].

At a state level, the NSW Government biodiversity protection approach includes; a Conservation Trust, Biodiversity Offsets, Biodiversity Conservation Program, Biodiversity Conservation Investment Trust, and the network of Local Land Services under the Dept of Primary Industries. While these initiatives encourage voluntary conservation and stewardship, they do not address landholder and volunteer funding, market incentives, low and fluctuating rural incomes, and rural disadvantage. Other Australian states and territories also lack solutions to the fundamental investment problem.

Calls for increased funding from governments are not unusual. As government budgets are under increasing pressure, rural environmental investment are often de-prioritised. Political factors can also render public funding as unreliable and unpredictable. Local government is hampered by insufficient funds, administrative transaction costs and difficulties in accessing state and commonwealth government funds[11].

Australia is not alone in lacking a feasible environmental investment strategy.

> A top-down study conducted at a global level estimated that USD 150 billion to USD 440 billion per year (0.08-0.25% of global GDP) would be needed by 2020 to achieve the CBD Strategic Plan, noting that some synergies could be achieved by coordinating actions and thus reducing the total amount of funding required. Estimates by other credible experts back this figure up. John Tobin-de la Puente, cofounder of the Coalition for Private Investment in Conservation (CPIC) and a professor at Cornell University, suggested that USD 250 billion to USD 350 billion would be required each year to conserve healthy terrestrial and marine ecosystems on land and in the oceans, and restore the Earth's natural capital stock of clean air, fresh water and species diversity. Other estimates suggest that USD 300-400 billion in annual conservation finance is needed … Currently, around USD 52 billion per year flows to conservation projects, the bulk from domestic government budgets and philanthropic sources, and as a co-benefit to investment in sustainable land management subsidies and green product certification.[12]

The report asserted that US$200 - $300 billion per annum will have to come primarily from private sources. Another study on funding the Aichi targets globally found that 'current allocations of funding to biodiversity are between an eighth and a sixth of the levels required'.[13]

Private citizens invest substantial funding through; philanthropy, matching government grants, and private investment. Their voluntary contributions with on ground works is equally valuable, but we lack reliable data about their activities. From 1992 to 2018, tax-deductible donations to environmental organisations amounted to AU$2.2 billion, with an upward trend. Between 2009 and 2018 tax-deductible donations received by environmental organisations was AU$1.4 billion[14].

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[10] Morgenstern, R. D., Pizer, W. A., & Shih, J. (1998). *The Cost of Environmental Protection* (No. 98- 36 REVISED). Washington D.C.

[11] McKenzie, H., & Pini, B. (2007). *Factors Impeding and Facilitating Natural Resource Management by Local Government*. Canberra ACT.

[12] Ward, A., & Lessen M., (2012) Scoping Paper: *Expanding Finance Opportunities to Support Private Land Conservation in Australia*, October 2018, Australian Land Conservation Alliance, pp 21-22

[13] CBD High-Level Panel, 2014, p. 87

[14] *A Decade of Donations for the Environment, The Register of Environmental Organisations Report,* Commonwealth of Australia 2019.

Despite an awareness of the importance of private funding, no strategy exists. The Commonwealth Government created the *Threatened Species Prospectus* (2017) to attract private and philanthropic investment. Fifty-one recovery projects were identified requiring funding of more than $AU50 million. By 2018 $AU5,564,958 had been raised. This comprised of a non-government contribution of $AU3,658,116 or 65.73 percent, and a government contribution of $AU1,906,842 or 34.27 percent.[15] While a useful start, this amount is inadequate when contrasted to the $AU50 million target. In 2017.the NSW Office of Environment and Heritage introduced a Biodiversity Conservation Trust. The Trust aims to leverage private funding and government investment. The government has provided $AU240 million over the first five years, and $AU70 million in ongoing annual funding.[16] The Trust's key objectives are to expand the private conservation estate and for the protection and connectivity between protected ecosystems.

[15] ANAO. (2018). Performance Audit No. 32 : Funding Models for Threatened Species Management:
[16] NSW Office of Environment and Heritage. (2018). *Biodiversity Conservation Investment Strategy 2018*. Sydney Australia.

2.1 The challenge summarised

If the funding issues are not addressed, community pressure to protect Australia's declining biodiversity is likely to generate further pressures on the agricultural sector. Ecological loss will continue, because without sufficient resources, policy mechanisms will be ineffective. Rural environmental and economic opportunities will be missed, creating 'lose/lose' outcomes where 'win/win' scenarios are possible.

Australia needs an improved investment model. While committed citizens are addressing the problems, institutional reforms are needed to ensure:

- a principled funding cross- sectoral approach to implement 'shared responsibility' and 'duties of care';
- Increased frontline funding that is consistently available;
- resources from non-farming sources including private sector incentives for good stewardship;
- efficient, effective and equitable 'citizen-friendly' investment administration systems; and
- an over-arching governance mechanism for accountability and continuous improvement; including reliable and transparent investment tracking, monitoring and reporting.

3.Summary of the literature

Through a literature review over 6,000 documents and websites were analysed. These documents were distilled down to 730 that were the most relevant to this study. A summary of the key issues and literature follows.

3.1 What is the funding problem?

More than 60 reports and studies consider the pressures causing environmental and economic damage in rural areas. While other sources of literature consider the social aspects of the problem. In summary, estimating how much should be invested requires assumptions about the desired end-state. Methods, implementation, and conditions to be encountered are factors to be included in any scenario modelling. The process of estimating potential investment by landholders and/or volunteers needs to be incorporated into future models. Aspects such as their willingness to participate, financial and human capacity, tax position and administrative competency require consideration. Funds available may vary according to; seasonal conditions (e.g., drought or flood) and economic, including market conditions. Government investment (funding, personnel and other support) is difficult to estimate but there are indications of a continuing decline.

- Key Australian Government resources include: National and State of Environment (SOE) reports are available via https://www.environment.gov.au/science/soe. The 2016 national SOE reports and data are available at https://soe.environment.gov.au . The reports on Biodiversity, Land, and Water are the most relevant to this study. Many specialist studies address particular issues (e.g., soil, invasive species, habitat loss etc; and with agricultural aspects of environmental issues).

- Examples of journal articles include: Deutza, A., Healb, G. M., Niuc, R., Swansonc, E., Townshendc, T., Lic, Z., … Tobin-de la Puente, J. (2020). *Financing Nature: Closing the Global Biodiversity Financing Gap* at https://www.nature.org/en-us/what-we-do/our-insights/reports/financing-nature-biodiversity-report/

  Wintle, B. A., Cadenhead, N. C. R., Morgain, R. A., Legge, S. M., Bekessy, S. A., Cantele, M., … Lindenmayer, D. B. (2019). Spending to save: What will it cost to halt Australia's extinction crisis? *Conservation Letters*, *12*(6), 1–7. https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12682?af=R

3.2 Who should be responsible for funding?

Concepts such as 'shared responsibility' and 'duty of care' are increasingly popular in the government sector. An example is the legal biosecurity duty of care in NSW and Queensland. These broad principles do not clarify who should, or can, pay for stewardship. They are difficult to apply to complex scenarios with a complex history. Under the CBD, Australia did commit to providing sufficient incentives and funding to implement its biodiversity strategies but, it hasn't any strategy to implement this commitment. Responsibilities for funding and activities between the tiers of government, the private sector, and government and citizens, for stewardship investment, remains unclear.

Key documents include the following:

- United Nations, & UNEP. Convention on Biological Diversity (1992). https://www.cbd.int/convention/text/

- Australian Government. (2019). *Partnering for a sustainable advantage: an invitation to partner to sustain Australia's unique environment*. Canberra ACT. http://www.environment.gov.au/Partnerships

3.3 Possible future funding

Effective future funding models will require: (a) suitable instruments; (b) coordinated strategies; (c) strong administrative systems and (d) reporting, evaluating and accountability systems that facilitate continuous improvement. There are many concepts and examples for (a) and (b), but (c) and (d) are under-explored. Funding strategies and options are discussed in greater detail later in this report.

Some key documents are:

- OECD. (n.d.). Policy Instruments for the Environment. http://www2.oecd.org/ecoinst/queries/

- UNDP Biodiversity Finance Initiative. (n.d.). BIOFIN Catalogue of Finance Solutions. http://www.biodiversityfinance.org/finance-solutions

- Deutza, A., Healb, G. M., Niuc, R., Swansonc, E., Townshendc, T., Lic, Z., … Tobin-de la Puente, J. (2020). *Financing Nature: Closing the Global Biodiversity Financing Gap*. https://www.nature.org/en-us/what-we-do/our-insights/reports/financing-nature-biodiversity-report/

- Kissinger, G. (2014). *Financing Strategies for Integrated Landscape Investment.,*. Washington D.C.: EcoAgriculture Partners, on behalf of the Landscapes for People, Food and Nature Initiative. http://landscapes.ecoagriculture.org/global_review/financingstrategies

3.4 An efficient, effective and equitable investment system

Stewardship funding requires more than money alone. An effective governance and business system is needed to; identify investment sources and instruments: match needs to resources: allocate and administer funds: ensure accountability: and support continuous improvement. Currently, transaction costs and frustrations affecting citizens and stewardship groups impede the work of landholders and volunteers. Generally, funding program administration is not 'citizen-friendly'. Survey data from active land stewards, provided later in this report, reinforces that Australia needs a more effective, equitable and efficient funding approach that enables citizen action.

Some key documents include:

- Australian National Audit Office. (1997). *Commonwealth Natural Resource Management and Environment Programs: performance audit.* Canberra ACT. http://nrmonline.nrm.gov.au/downloads/mql:2411/PDF

- Martin P, Low Choy D, Le Gal E and Lingard K. (2016). *Effective Citizen Action on Invasive Species: The Institutional Challenge*. Invasive Animals Cooperative Research Centre: Canberra. This, and other reports on the institutional issues, are available at https://community.invasives.com.au

4.Government and stakeholder reports

This section summarises some of the documents that were reviewed, from government programs.

4.1 NSW Natural Resources Commission

NSW NRC documents reveal the need to strengthen the relationship between Local Land Services, landholders, NGO's and non-government investors. They highlight the need to address the following issues:

- timely and responsive communication;
- sufficient notice of funding rounds and of successful grants;
- consistent recognition of funders in communication and marketing materials;
- the continuing decrease in annual funding.

The reports suggest that Landcare groups have a significant role in connecting government agencies with landholders, to deliver on-ground projects. This is strategically important to strengthen the connection between landholders and program developers.

The following documents were reviewed:

- Annual Reports 19/20 - 12/13
- Audit of LLS implementation of sustainable land management reforms
- Performance Audit: Local Land Services Communications
- Mid-term review of Catchment Action NSW funding to Local Land Services
- Review of Catchment Action NSW funding allocation to Local Land Services - 2015-16 and 2016-17
- Review of Catchment Action NSW 2014-16 funding allocations to Local Land Services
- Review of Catchment Action NSW funding allocations to CMAs
- Standard for quality natural resource management (NRM) (recommended to Government)
- Revising the Standard and state-wide targets for NRM in NSW
- Performance Standard for Local Land Services
- Progress towards healthy resilient landscapes: implementing the standard, targets and catchment action plans
- Environmental Trust Major Projects program review (Final report)
- Linking Landscapes through Local Action Evaluation Report
- Environmental Trust Restoration Rehabilitation Program Evaluation
- NRM Roundtable Summary of Discussion
- Landcare Baseline Study (Final Report)
- Advice to Minister for Primary Industries: NSW Local Landcare Coordinators Initiative

4.2 NSW Biodiversity Conservation Trust

These documents focus on three types of private land conservation agreements under the *Biodiversity Conservation Act* (2016). These are: biodiversity stewardship, conservation and wildlife refuge agreements

Key targets to be achieved by 2022 include:

- private land conservation agreements that will protect an additional 30 NSW Landscapes currently not represented, or inadequately protected based on 2017 figures

- diversified income streams intended to improve the financial sustainability of landholders participating in programs, compared with similar landholders.

The following documents were reviewed:

- Annual Reports 2019/20 - 2017/18
- BCT's Business Plan 2017/18 to 2020/21
- Biodiversity Conservation Investment Strategy (BCIS) 2018

4.3 NSW Natural Environmental Trust

The following documents report on Trust support for a range of programs with varied aims, objectives and outcomes. For each program, the Trust reports on how much funding has been applied for, compared to that which has been allocated, demonstrating a consistent shortfall.

The following documents were reviewed.

- NSW Environmental Trust Strategic Plan 2020-2024
- NSW Environmental Trust Annual Report 2019/20 - 2010/11

4.4 Landcare

In relation to the National Landcare Program (NLP2) - July 2018-23, the amount of a $AUD 1.1bn investment over six years is a 20 percent reduction on the previous program. Landcare NSW has estimated that the underlying funding required for an effective Landcare movement would be $8 million per year, in addition to the support from Local Government, industry and others.

The Landcare documents identify that:

- The Landcare community contributes over $500 million p.a. to the economy; and the return on investment is 6 to 1 from coordinated support;
- Government investment is a catalyst for further investment;
- Longer term funding is needed to minimise “phasing up and down” and to respond to policy changes;
- Fragmented funding, and poor administrative integration, create problems for Landcare groups;
- High transaction costs for citizens are often attributable to inappropriately designed administration and reporting;
- The costs and benefits of Landcare activities are not equitably shared;
- A lack of Landcare participation in program design retards improvement in government programs.

The following Landcare documents were reviewed:

- Landcare capacity in NSW diminished by National Landcare Program focus and delivery 2018-2023
- Developing a Commonwealth Strategy for Drought Preparedness and Resilience
- Update October 2018

- Sustaining Landcare - the next chapter
- You Asked We Delivered (Summary of achievements)
- Community Landcare Literature Review - National Landcare Network
- Landcare NSW regional data snapshots - Impact of a supported Landcare in NSW
- You Asked, We Delivered Reports
- The Value of Landcare - a Landcare NSW position statement
- A New Farm Environmental Stewardship Program - Landscape Outcomes and Landholder Buy-In
- Measuring the Capacity of Community Organisations Contributing to Sustainable Land Management
- Submission to the Senate Inquiry - National Landcare Program
- Submission to the Federal Senate Standing Committees on the Environment and Communications Inquiry into History, Effectiveness, Performance and Future of the National Landcare Programme
- NSW Regional Landcare Support Forum, Dubbo
- The Evolution of Landcare
- The Multiple Benefits of Landcare
- NSW State Landcare Conference (Sutton)
- Senate Inquiry - NRM and Conservation Challenges

4.5 Australian Conservation Foundation (ACF) and World Wildlife Fund (WWF)

The ACF and WWF in their 2017 Pre-Budget Submission to the Department of the Treasury[17] proposed that Australia needs an, independently administered, $AUD 4.5 billion National Environmental Fund to support the long-term protection and recovery of threatened species and ecosystems across Australia. In May 2021, a press release from the ACF documented a significant long-term decline in the proportion of federal funds spent on environmental programs "from half of one percent (0.5%) of the total federal government budget in the 2013-14 budget to 0.37% in the last budget." It also notes a significant decline in climate spending, and a 28% decline in biodiversity programs over the last 8 years[18].

4.6 Department of Agriculture, Water and the Environment Agriculture Stewardship Package

The Department of Agriculture, Water and the Environment is now implementing an Agriculture Stewardship Package, a $34 million project that consists of the Agriculture Biodiversity Policy, Agriculture Biodiversity Stewardship Pilot Program, and the Australian Farm Biodiversity Certificate Scheme[19].

[17] Australian Conservation Foundation, & World Wildlife Fund (2017). Ongoing underinvestment in environmental protection puts all Australians at risk. Pre-Budget Submission to the Department of the Treasury.
[18] Federal government spending on Australia's environment and climate. ACF, May 2021
[19] https://www.agriculture.gov.au/ag-farm-food/natural-resources/landcare/sustaining-future-australian-farming

5.Landholder and volunteer surveys

A survey of individual landholders and of landholder/volunteer groups was conducted from February to March 2021 in NSW.

5.1 The surveys

The objective of the survey was to capture a 'snapshot' of the views of landholders and community groups on rural stewardship funding. The survey had the following limitations:

- Respondents self-selected from a sample biased towards active land stewardship.
- Individual landholders were private agricultural landholders. We did not survey other landholders, including public land managers.
- We did not obtain evidence of costs, notably the time and cost of leadership, training, and coordination of land stewardship[20].
- Respondents were not asked to consider future pressures, such as climate impacts.

48 landholders and 16 community groups participated. Their landholdings were spread across eight NSW Local Land Service (LLS) regions, and one whole-of-state group (Figure 1).-

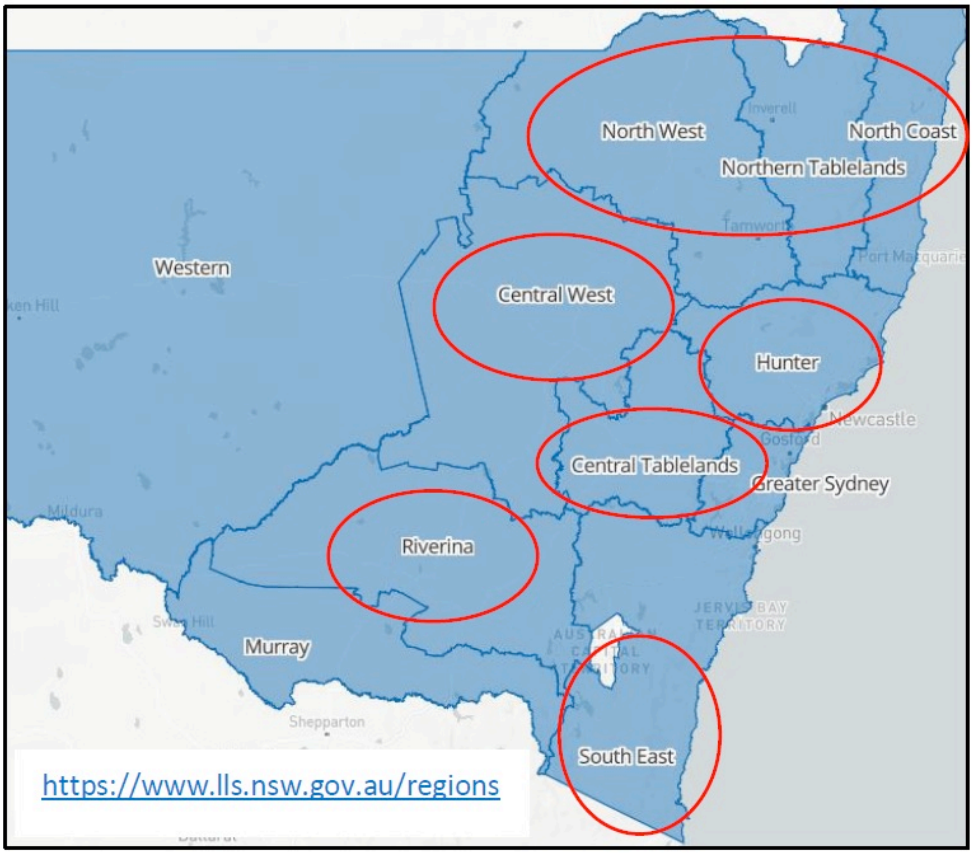


Figure 1: NSW locations of respondent's land holdings. Source: Local Land Services

[20] Some evidence of these contributions is indicated by the unpublished diary-based analysis in J. Williams "Tamar Valley TFGA Farmers Public Good NRM contributions" 2012. This showed NRM management activities estimated at $195,052, for NRM work with a value of $519,684.

Generally, respondents were experienced environmental and natural resource managers. Individuals had an average of 19 years' experience, while groups had an average of 18 years' experience. The groups that responded were non-government 'care' groups who support and coordinate landholders and volunteers engaged in on-ground environmental works. Groups included: Landcare, rivercare/watercare, wildlife care, community nurseries, a Soilcare network and other community NRM groups. Individual landholders were: commercial farmers, hobby farmers or private landholders managing acreages for lifestyle and conservation.

Respondents were asked to focus on their operations for 2019 (to avoid the COVID-19 impacts of 2020). The results found that groups and individuals undertake a comprehensive array of activities, including:

- Building community capacity and social capital, collaboration, and training;
- Nature conservation and restoration activities;
- Sustainable landuse, sustainable agriculture, and NRM;
- Citizen science tasks; and
- Management and governance of groups.

5.2 Evidence about workforce and funding issues

Tables 1 and 2 show respondent's estimates of their environmental workforce and funding matters for 2019, for groups and individuals. It is important to note the unpaid 'frontline' stewardship. The data below show this is more than one and half times the value of Federal and State investment. The figures do not include the unvalued leadership and co-ordination roles in community groups, which our case studies indicate is substantial. The median values represent the mid-points of the data set – in other words, half of the responses show values equal or less than the median. For example, while the average Federal and State Government funding for respondent groups is about $47,000 for 2019, at least half of the groups and individuals received no Federal and State Government funding in that year.

Table 1:

	Average per group	Median
Private sites on which groups supported environmental work	19	10
Public sites on which groups supported environmental work	6	2
Paid full-time staff	0.6	zero
Unpaid volunteers & landholders	39	17
Unpaid time of volunteers & landholders (excluding leadership and coordination work)	2,545 hrs. or 344 working days = $77,455 @ $30/hr.[21]	1,000 hrs. or 133 working days = $30000 @ $30/hr.
Total group cash expenditure	$56,721	$5,000
Federal and State Government funding	$47,463	$ zero

Table 2: *Individuals* – Environmental workforce & funding estimates for landholders for 2019

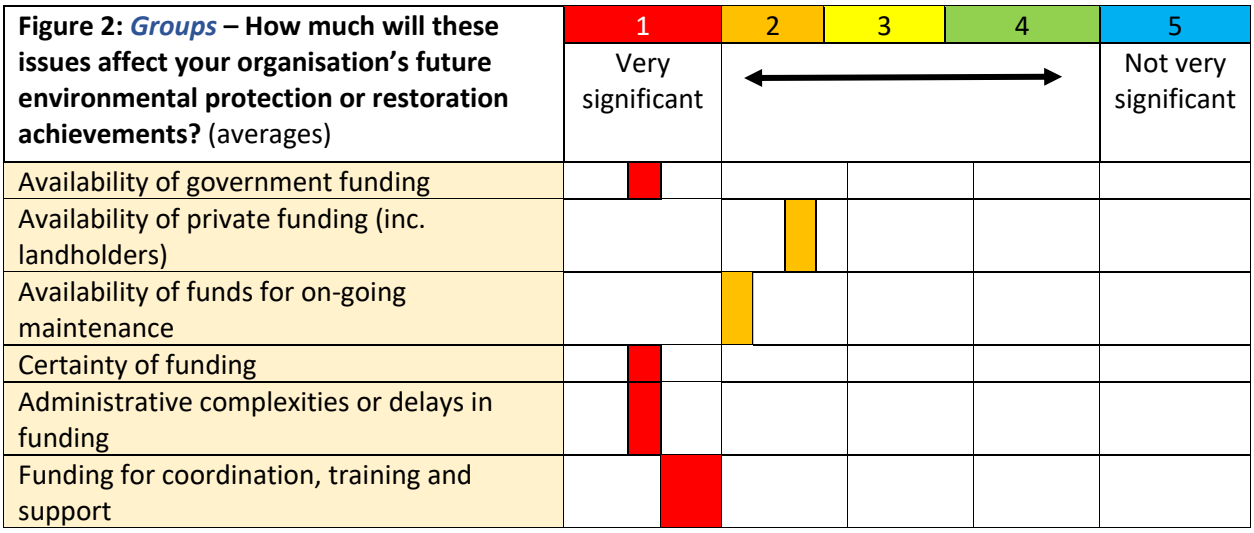
	Average per landholding	Median

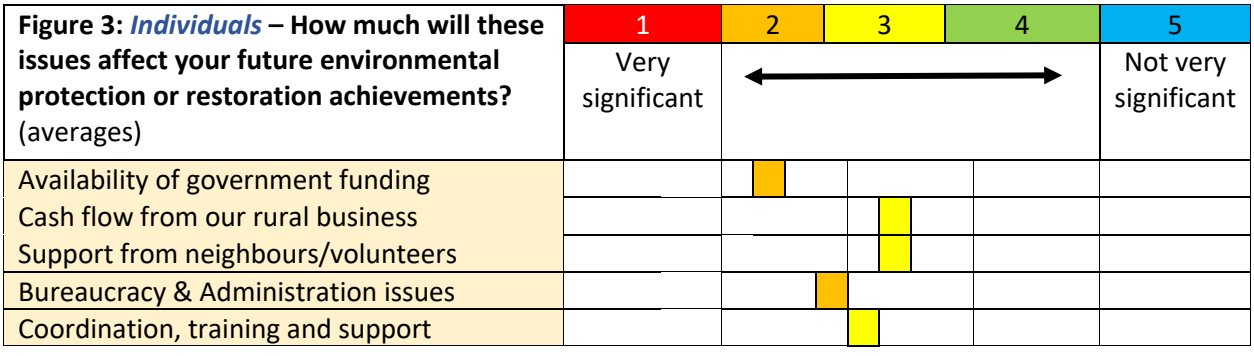
[21] Using in-kind labour rates of the NSW Environmental Trust's *2020-21 Environmental Restoration and Rehabilitation – Sample Application Workplan*: https://www.environment.nsw.gov.au/funding-and-support/nsw-environmental-trust/grants-available/environmental-restoration-and-rehabilitation

Unpaid time of self, staff or family	531 hrs. or 71 working days = $15,926 @ $30/hr.	250 hrs. or 33 working days = $7,500 @ $30/hr.
Total cash expenditure	$11,003	$3,000
Government funding	$5,803	$ zero

5.3 Future funding issues

Figures 2 and 3 show responses – on a scale of 1 to 5 – to questions about future funding issues, for groups and individuals respectively. Future funding concerns are more significant for groups than for individual landholders, perhaps because groups aim to provide continued support for on-ground activities. Groups believed that the availability of government funding and certainty of funding were very significant. Equally, they highlighted the importance of avoiding administrative complexities or delays in funding. Individuals were found to prioritise as 'significant', the availability of government funding, bureaucracy and administration issues.





5.4 Open-ended survey responses

Responses to open-ended questions provide insights into the issues affecting frontline stewardship.

- Landholders are increasingly time-poor. The time available for stewardship activities has reduced.

- Many landholders are interested in ongoing private land conservation, but lack the capacity to follow-through in terms of carrying out the works.

- It is increasingly difficult for volunteer groups to demonstrate 'matching funding' in cash (rather than in-kind) for government grants[22].

- Respondents note insufficient recognition of the public good contribution of private landowner's environmental stewardship activities, and of a lack of urban understanding of the value of rural stewardship: 'Only with the commitment of private land holdings can we ensure a future for these species.'

- There is recognition by rural landholders that funding systems must be fair, accountable and have effective integrity safeguards.

- A changing ethic is illustrated by comments such as; 'We have shifted our mindset from looking at ourselves as livestock producers and, instead, to consider ourselves more as stewards of the landscape.'

- The decreasing availability of funding for Landcare support positions and for on-ground works was often noted.

- Responses indicated the perception that success rates in obtaining grants are declining, and that grant opportunities are oversubscribed. It was suggested that eligibility criteria are getting tougher.

- There was a concern about declining volunteer participation, or no participation at all, because volunteers have 'run out of steam.'

- Landholders and rural volunteers are ageing, reflected in comments like: 'I am worried that there won't be anyone to take over from me. I am in my 70's. Maybe we need some leadership training for people in the community.'

- Drought, bushfires, and COVID-19 limited the opportunities for groups to get together, and reduced time for environmental activities (including volunteering), due to increased time demands for other tasks (e.g. on- and off-farm work). Recent drought, fire and flood have taken a toll on vegetation and wildlife, making restoration work more important and difficult.

- Some respondents expressed their belief that grants should better reflect market costing of the tasks.

- A number of responses suggested that the investment system needs to be overhauled largely because administrative systems 'reforms' to satisfy bureaucratic needs created more transaction costs, uncertainty and administration for frontline land stewards and groups.

- Concerns were expressed about the volatility and unpredictability of government funding.

[22] Many rural areas of NSW have been 'hit' by fire, drought and floods in recent years

- There is a perception that programs and projects are fragmented, short-term, and can have incompatible objectives (particularly conservation and agricultural development). Some respondents advocated a more strategic, landscape-scale approach, with connectivity between private and public landholdings.

- The inefficiencies and administrative overheads involved in funds being 'passed down' from one level of government to another, were noted.

- A concern about a lack of longer-term thinking is reflected in comments like: 'We must work at the pace of nature. Grants work within election timeframes. If we are going to spend money wisely, there needs to be a long-term view.' Funding and support need to take account of the on-going maintenance costs of conservation and restoration.

- Respondents reflected a perception of the funding system as un-strategic and unnecessarily complex, with comments like: 'We need a one stop shop, where communication is simplified and targeted, where there is a vision and a strategy.'

- There were concerns about habitat policy inconsistency, noting that land clearing and deforestation occur at the same time as revegetation and regeneration work. Similarly, for misaligned weed policy: 'This plant is still sold [at the garden shop] as a fruit plant.'

- A concern was expressed about a misperception by some farmers and policymakers that 'best practice environmental management is somehow not congruent with best practice farm management.'

- It was suggested that more attention needs to be given to the private benefit of improving landscape function, for productivity and profitability.

- Respondents often indicated skepticism about carbon trading or offsets schemes, with comments such as: 'We are looking at carbon farming but it is very complicated, expensive and the entire risk and cost rests with the farmer.'

- Administrative overload, complex applications, short timelines, and excessive reporting with inadequate timeframes are significant concerns, reflected in comments, such as: 'I almost completely gave up on seeking government grants. The amount of work in reporting was almost equal to the amount of on-ground work we do.'

- Respondents indicated the need for improved baselines, as well as follow-up and monitoring (noting however the need for citizen-friendly systems) – for example: 'We need someone to visit, photograph and document, before, during and after restoration work', and 'More routine MER [monitoring, evaluation, and reporting] approach is needed in nature conservation on private land. It is done very poorly.'

- The perception that biobanking and biodiversity offsets do not achieve nature conservation objectives in practice, was reported.

6.Frontline case studies

Case studies were conducted to provide insights into frontline citizen action, to better understand how this work is resourced and coordinated. Summaries of the case studies follows:

6.1 Restoring hydrological services in the landscape

The Upper Mooki and Wallabadah Landcare groups[23] are examples of citizen-led frontline work to protect and restore streams, creeks and aquifers. These two groups in NSW are independently restoring hydrological functions across their production landscapes. In both cases, one motivation is to rebuild the resilience of the landscape, for production and environmental purposes, to cope with future droughts. NSW Landcare and the LLS regional bodies have been important in facilitating this community action including financial support. However, the bulk of the total investment of funding and labour has been made by the community.

6.2 Catalysing and supporting citizen action

Southern New England Landcare[24] is a support and coordination organisation that works with 29 Landcare groups. It facilitates funding and frontline action in urban and rural settings. This case study identified many challenges in delivering support to frontline groups . One is the administrative burden that the complex business system for public funding can impose on community groups, which can affect frontline capacity and morale.

6.3 Hybrid funding of a complex collaboration

The Great Cumbung is the largest remaining reed swamp in the Murray-Darling Basin system. The Nature Conservancy[25] adopted a hybrid investment approach involving; private philanthropy from Australia and overseas, public funding, and bank finance to acquire the land and underpin ongoing cashflow for its restoration and sustainable use. This case study demonstrates the use of a coordinated funding strategy to enable large-scale conservation for nationally-significant values in predominantly agricultural landscapes.

6.4 Long term stewardship of a 1000km landscape

Commencing in 2012, with initial support from The Nature Conservancy, this major multi tenure stewardship programme covers around 1000 km of biodiverse landscape in the Southwest corner of Australia. A feature of the initiative has been its innovative approach to funding. This model utilises a cocktail of private conservation investment, many government programmes, and income generating uses of the landscape. This deliberately diverse mix of funding is designed to ensure 'flexibility, strategic focus and continuity in achieving the Gondwana Link vision.'[26]

6.5 Summary

In every case study, securing sufficient funding and human resources is a challenge that must be met if important environmental and productivity improvement work is to be carried out, by positively motivated landholders and volunteers. They demonstrate that the resourcing task is difficult, and

[23] *See*: https://landcare.nsw.gov.au/groups/upper-mooki-landcare-group/ and http://www.trla.org.au/become-involved/projects/wallabadah-creek-catchment-community/
[24] *See*: https://snelandcare.org.au
[25] *See:* https://www.natureaustralia.org.au/what-we-do/our-priorities/land-and-freshwater/land-freshwater-stories/saving-the-great-cumbung/
[26] *See:* https://gondwanalink.org/about-us/gondwana-link-ltd/

that there are many transaction costs and impediments that need to be overcome, which could be reduced by an improved funding system. What the case studies also demonstrate is that insufficient attention is generally paid to enabling and facilitating voluntary work, and that the administrative burdens imposed on them are a significant problem which should be addressed.

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7.Environmental investment planning

Funding challenges are often complicated and difficult, and proposed solutions often fail to reflect that complexity. Typically proposals advocate the implementation of particular instruments, such as specific taxes or funds, or market instruments. Rarely do they suggest systematic solutions to address the whole problem. In this section we discuss a variety of market, regulatory or social instruments within the context of approaches to developing integrated investment strategies. Though solutions can address a great variety of stewardship issues, our focus is rural biodiversity.

There is many possible funding approaches: i) grants, subsidies, and transfers; ii) concessional debt; iii) commercial debt; iv) equity and own funds; v) payments for ecosystem services; vi) biodiversity offsets; vii) water quality trading and offsets; viii) forest and land use carbon offsets. The Biodiversity Finance - BIOFIN website identifies 156 solution types. Regulatory (65.4 percent), market (50 percent) and fiscal (43.6 percent) categories report the most solutions. A small number, 9.6 percent, of the solutions, rely on purely private funds, 32.7 percent use public funding, and 57.7 percent can rely on public and private funding. Different instruments can be combined to tackle different aspects of the overall investment problem.[27]

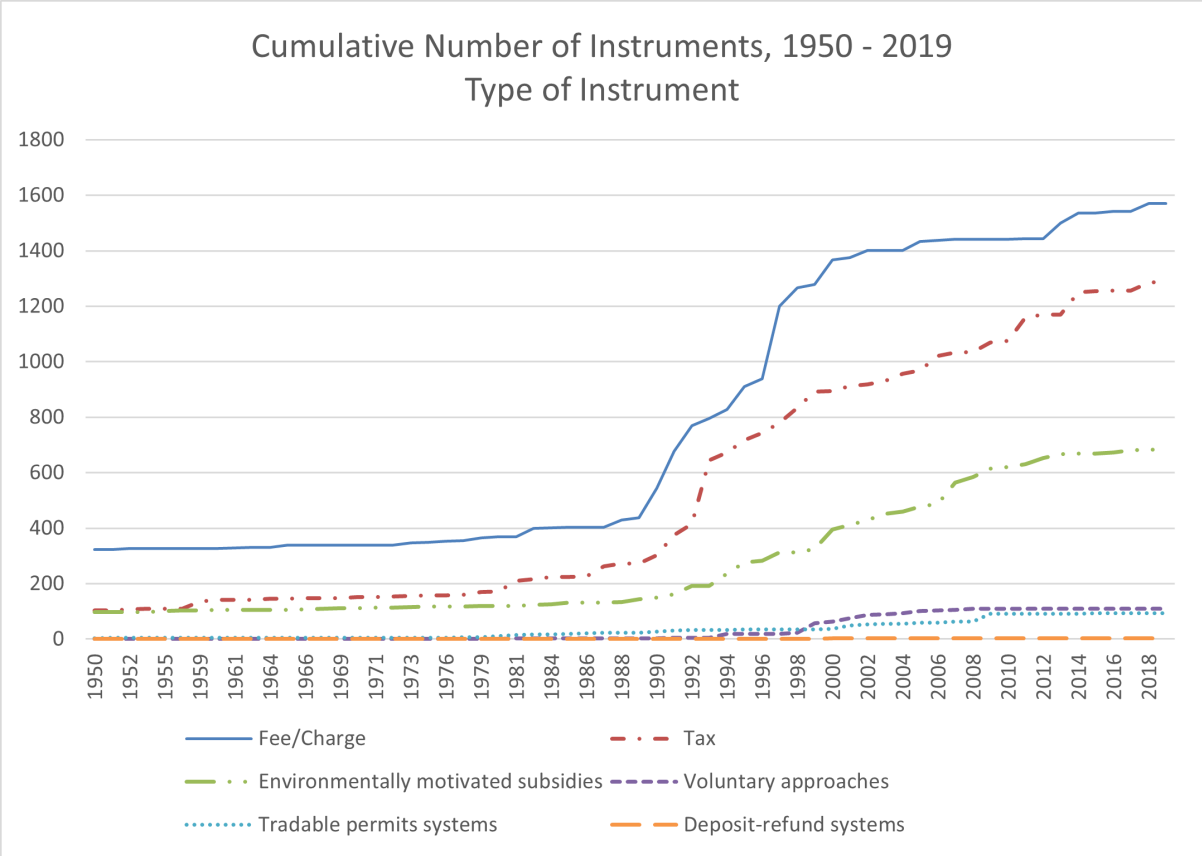

Figure 4: Cumulative number of funding instruments 1950-2019, type of instrument Source: BIOFIN

[27] *See:* BO|IOFIN

The Organisation for Economic Co-operation and Development (OECD) Policy Instruments for the Environment – PINE[28] - commenced in 1996. The PINE database considers taxes, fees/charges, tradable permits, deposit-refund systems, environmental subsidies, and voluntary approaches. Today, more than 90 countries report on the instruments they implement. In 2017, 52 countries identified (approx.) 490 biodiversity related policy instruments. Taxes, fees, and charges are the most frequently used instruments.

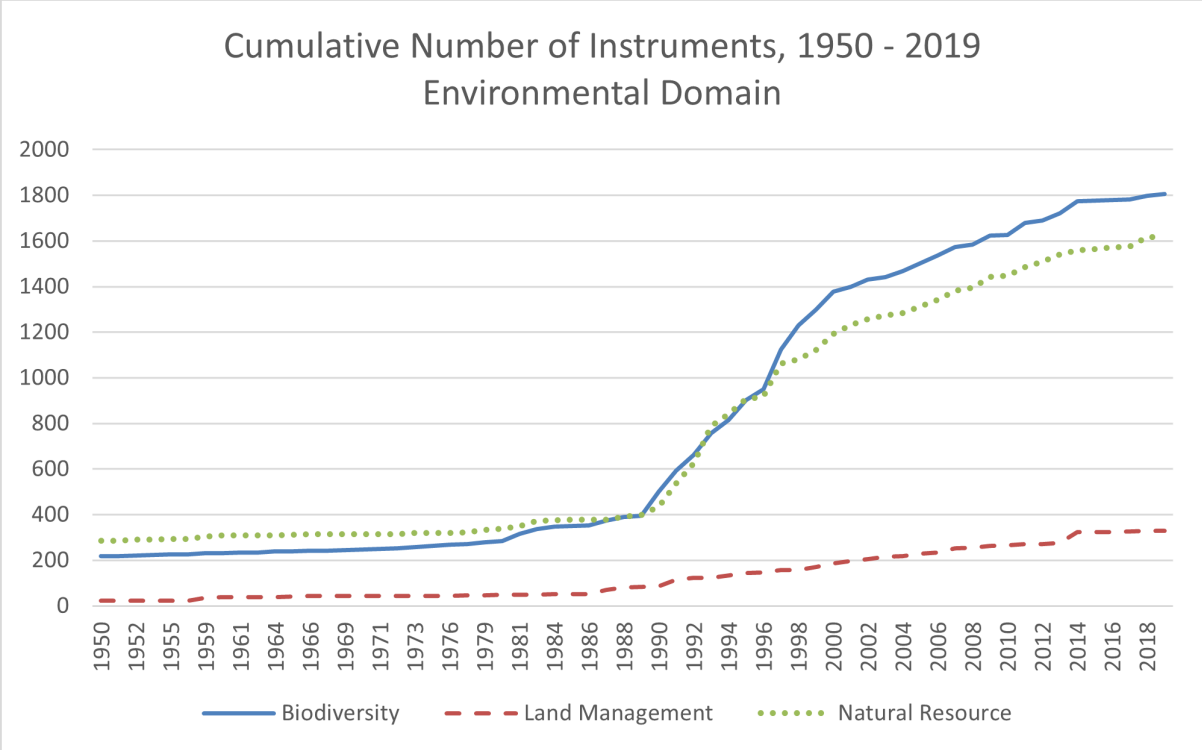

Figure 5: Cumulative number of funding instruments 1950-2019**,** Environmental Domain. Source: BIOFIN

As previously discussed, an effective approach requires that instruments are integrated within a viable business system. The Biodiversity Finance Initiative (BIOFIN) provides a framework for developing integrated funding strategies which 35 countries have adopted. However, there is little guidance for the business system/administration aspects of environmental funding, though the need for effective meta-governance is increasingly considered [29].

7.1 Examples: Funding strategies in South Africa and India

The following discussion summarises two examples of nations using BIOFIN and other planning approaches to develop coordinated strategies.

South Africa

The 2018 the South African financing strategy team reported that they had prioritised 16 of 64 possible finance solutions after consultation with stakeholders. Their funding focus was: protected

[28] *See*: https://pinedatabase.oecd.org
[29] Martin, P., Cosby, A., & Dutra, C. (2020). Governing the governance system. In P. Martin, M. D. Leuzinger, S. T. da Silva, & G. Leuzinger (Eds.), Governing for Megadiversity (1st ed., pp. 210–235). Routledge.

areas, ecosystem restoration and the sustainable use of biodiversity. Eight types of market instruments were proposed, and three direct government funding approaches, two fiscal instruments and three regulatory instruments. All solutions required supporting regulation and 80 percent of the projected investment was through private funding. Annual net investment from the 12 solutions was predicted to be ~USD16 million in 2018, and an estimated 10-year amount of ~USD1,08 billion. For most solutions, government support for implementation is needed. In addition, revolving land trusts and a Tourism Conservation Fund required NGO leadership or co-leadership. Approximately 50 percent of the quantified environmental benefits would be ecosystem restoration, 45% from protected areas and 5% from the sustainable utilisation of biodiversity. The greatest expected benefit was from tax incentives, land user incentives, biodiversity offsets, protected area property rates reform, and protected areas revenue. [30]

India

BIOFIN in India is nationally driven, and enjoys a high level of Government ownership. Out of the twelve possible finance solutions, five were valued. These included; mainstreaming biodiversity in public schemes: Corporate Social Responsibility (CSR), Augmenting Public Finance, Ecological Fiscal Transfer (EFT) and Access and Benefit Sharing (ABS). The expected annual contribution from these five solutions was (approx.) $USD2.2 billion. However, this leaves an annual funding gap of (approx.) $USD3.7 billion. The National Biodiversity Authority prioritised three solutions for implementation: mainstreaming biodiversity in public schemes (mainly agriculture), CSR and ABS. In addition to national plans, eight states have partnered with BIOFIN to develop sub-national Biodiversity Finance Plans. The BIOFIN process helped to create a stakeholder base of 200 public and private sector entities, NGOs and experts that are expected to aid implementation [31].

7.2 Funding gap, trends and problems

The international literature highlights aspects of the funding gap: fragmentation between institutions, governments and policies; insufficient capacity, coordination and awareness; insufficient knowledge of potential solutions and the tools, methods and strategies to implement them. The lack of knowledge of what funding is needed for what purpose also impedes targeted allocation of funds to biodiversity goals.

Subsidies and unsustainable sectoral policies and practices are of concern to biodiversity outcomes. Governments internationally spend five to six times more supporting activities deemed to be harmful to biodiversity - approximately $US500 billion per year more than in pro-biodiversity funding (estimated at $US124 - $US143 billion in 2019). [32]

Expenditure to support biodiversity is slowly increasing. Data for 2012 from the *European Report on Development* shows a total of $US 51–53 billion p.a., and an average of $US78 - 91 billion p.a. for

[30] Department of Environmental Affairs (DEA). 2017. Biodiversity Finance Initiative (BIOFIN) – South Africa: Biodiversity Finance Plan. Draft Report written by Hugo Van Zyl, Tracey Cumming, James Kinghorn, Mark Botha, Kamleshan Pillay, David Meyers, Massimiliano Riva and Lucia Motaung. Department of Environmental Affairs and United Nations Development Programme, Pretoria.
[31] National Biodiversity Authority (NBA), 2019. Biodiversity Finance Plan (Working Document). GoI-UNDP project on Biodiversity Finance Initiative (BIOFIN).
[32,] OECD, 2020. Tracking Economic Instruments and Finance for Biodiversity 2020.

2015-2017, a growth of 40 percent.[33] However, in 2019 the biodiversity financing gap remained and was estimated at $US598 billion - $US824 billion p.a. [34]PINE data indicate that biodiversity-relevant taxes generated $US 7.7 billion p.a. (2016-2018 average). Biodiversity-relevant fees and charges generated $US 1.2 billion p.a. in 2015-2017. [26] The United Nations Development Programme (UNDP) manages a large biodiversity portfolio, with more than 500 projects financed by the Global Environment Fund ($US1.5 billion) and other sources ($US3.5 billion). [27]

There are many possible instruments and strategies being adopted globally For example, as of June 30, 2020, there were 534 sustainable index mutual funds and exchange-traded funds, with assets under management of $US250 billion. [35] The number of products and funds invested has more than doubled over the past three years. Environmental certification and branding are also increasing [36] . Estimates for certified forest products and certified agricultural products suggest potential income exceeding $US190 billion. Ecotourism could generate $US100 billion, and conservation schemes up to USD42 billion. Subsidies, incentives, and tax exemptions have been estimated at $US8 billion, and $US9 billion could be generated in credits for carbon, biodiversity, water, and other offset markets.[25]

[33,] Büge et al., 2015. International financial instruments for biodiversity conservation in developing countries – financial mechanisms and enabling policies for forest biodiversity. Background paper for the European Report on Development 2015.
[34,] Deutz, A., et al. 2020. Financing Nature: Closing the global biodiversity financing gap. The Paulson Institute, The Nature Conservancy, and the Cornell Atkinson Center for Sustainability.
[35] Morningstar, 2020. Passive Sustainable Funds: The Global Landscape 2020. Morningstar Manager Research.
[36] Ecolabel Index. (n.d.) http://www.ecolabelindex.com/ecolabels/#C

8.Finding feasible solutions to Australia's funding challenge

Sufficient incentives and resources are essential to enable effective protection and restoration of Australia's biodiversity, and to meet the nations specific commitments under the CBD. Australia's biodiversity decline is documented in SOE Reports, and limited resources or missing incentives for protection and restoration are often blamed for the failure of government or private sector stewardship initiatives.

Differing estimates of how much funding is required has been discussed in this report, reflecting a range of assumptions about the extent of the problems, and the cost of effective stewardship. Three studies we have discussed provide an indicative investment requirement of around two percent of GDP being required to support the conservation of Australia's biodiversity. In Australia's case this would suggest a figure of around $AUD 28 billion, though of course any such estimate depends on assumptions about the desired outcomes, the strategies to be used, and the efficiency of program delivery.

Organisations involved in frontline stewardship activities report increasing difficulties in accessing public resources and rural cash flows limit stewardship investment. The underlying capacity of rural landholders has been affected by droughts, floods and fires, and quarterly agricultural GDP fell from $AU1184 million in July 2018 to $AU9038 million in July 2020[37]. Environmental volunteering is pressured by ageing, time pressure, and loss of motivation. The ACF reports that federal government funding for biodiversity programs has fallen by over 50 percent since 2013/14.[38]

The wealth available outside of government dwarfs that available to governments. Since 2010, the private share of Australia's GDP has hovered around 75 percent. This wealth imbalance suggests the potential for non-government actors to share a greater share of the environmental funding burden. The many innovative non-government environmental investment instruments and strategies, through philanthropy, private conservation areas and programs, offsets, carbon credits and biobanking, and private covenants, point to the potential for increasing the private share of stewardship investment.

Market instruments also make an increasing contribution, and agricultural industry voluntary stewardship programs and consumer environmental branding are growing. Taken as a whole, private stewardship investment is increasingly important to Australia, but would have to grow dramatically to fill the growing environmental stewardship investment gap.

Achieving a significant shift in the sources of environmental investment (and increasing the amount of investment) will require sophisticated strategies and stronger private incentives. Substantial institutional change will be essential to achieve this.

[37] Trading Economics, Australia's GDP from Agriculture https://tradingeconomics.com/australia/gdp-from-agriculture accessed May 20, 2021

[38] Australian Conservation Foundation *Federal government spending on Australia's environment and climate* May 2021 https://d3n8a8pro7vhmx.cloudfront.net/auscon/pages/18803/attachments/original/1620346645/Federal_Environment_and_Climate_Budget_Analysis_-_May_2021.pdf?1620346645

8.1 Recommendations for a national stewardship investment reform

It is unlikely that there will ever be one stewardship investment solution for Australia. Different instruments and approaches will be needed to deal with the range of issues and situations, and the engagement and enablement of landholders and volunteers is absolutely essential. Effective investment will require coordinated strategies and plans, reflecting consensus and commitment, disciplined implementation and continuous adaptation through learning from experience. Additionally, investment models will have to be politically feasible.

The responsibility to provide stewardship incentives and resources has to be genuinely shared between governments, industry, and land stewards. Importantly, resourcing strategies must be realistic and achievable for those involved, otherwise the result will be stewardship failure causing further declines in natural capital. Quite simply, to expect people to do things that are not possible for them, given the resources that they have available, is simply a recipe to fail!

A comprehensive system will require public and private instruments, and needs to be well coordinated. Public funding must be maintained to offset market failures, and include the inbuilt flexibility to address new challenges, and overcome chronic and episodic stewardship incapacity. Investment systems that are 'user friendly', from the perspective of the investors, stewards and volunteers who interact with them, will facilitate uptake and participation. Leadership is needed to substantially grow the total investment pool (including private and hybrid arrangements), and to ensure that the investment system has clear goals, sound strategies, adequate resources, accountability, and transparency.

Developing economically and politically feasible solutions requires the engagement of all levels of government, and the private sector (including agricultural and environmental non-government organisations). Its design must be informed by high level expertise in agriculture, NRM and community action. These requirements indicate the need for a permanent or interim Authority to lead the design and initial implementation of a national rural stewardship investment strategy.

A successor to the Council of Australian Governments (COAG) or a special purpose national/state body would be an appropriate mechanism for federal/state government participation and oversight. We suggest that the Authority should be responsible for initiating a national stewardship funding program within a specified time frame (viz. 3 years). Proposing ongoing institutional arrangements would be part of that design task.

The Authority would be supported by research from an expert body, such as the Productivity Commission. Environmental and primary production stakeholders (including First Nations) would need to be consulted, and involved in design decision making processes.

The terms of reference for the Authority should include:

1. Identifying a viable Australian investment model for natural resource protection and restoration, to advance the sustainability of agriculture and the natural environment.

2. Identifying mixes of public, private and hybrid investment instruments and mechanisms that are likely to optimise environmental stewardship outcomes, and equitably share stewardship responsibility.

3. Considering what institutional arrangements are needed to encourage investment innovation, and the rapid 'scaling up' of those innovations to have a significant impact on environmental outcomes.

4. Specifying the administrative and governance arrangements for a national stewardship investment organisation.

5. Determining mechanisms for public accountability that delivers transparent and objective performance reviews, focussed on the effectiveness and sustainability of that investment approach; and

6. recommending an institutional structure for an ongoing national stewardship investment programme

The recent *UK Dasgupta Review*[39] provides a clear economic argument for the protection and restoration of biodiversity. In particular it draws attention to the many human benefits from intact natural systems. It highlights how natural capital influences human capital, and how both, together can influence economic capital. Australia's 2016 national SOE Report reveals that rural natural capital has been depleted, and Australia needs more effective protection and restoration, which requires adequate incentives and sufficient resources. Protection of environmental services through a more effective stewardship approach is the fundamental benefit that can be achieved from implementing the recommendations of this study.

More effective protection of the rural environmental should also help protect Australia's valuable 'clean and green' reputation as a supplier of agricultural products in international markets. Fixing the stewardship funding system would benefit primary producers, volunteers and other stakeholders who voluntarily work to protect or restore the environment, and more equitably share the stewardship load.

Australians can see the results of inadequate investment in protecting and restoring the rural environment in the many declines in rural biodiversity that reflect stewardship failings. There is little justification for persisting with a stewardship resourcing approach that has, thus far, not served us well, while hoping for better outcomes in the future. We do need to restore public funding, but we need to more to deliver the incentives and resources needed to engage more of society in conservation and restoration. There are many instruments and strategies that might be used, and the benefits from a more effective approach will be substantial. Australia needs an integrated approach to rapidly diversify and grow stewardship investment, and to deliver the required resources effectively, efficiently and fairly.

[39] Dasgupta, P. (2021), The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury)