



Australian Government

Department of Agriculture, Fisheries and Forestry

**Submission on the draft report of the
Productivity Commission inquiry into
Rural Research and Development Corporations**

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Introduction

The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) welcomes the opportunity to comment on the Productivity Commission's draft report. This introductory section of the submission makes some general comments from DAFF's perspective on the draft report, and is followed by more specific comments in relation to the draft recommendations.

There is a strong imperative to increase total public and private investment in rural research and development (R&D) to ensure that Australia's primary producers are able to deal with the challenges of maintaining productivity growth, adapting to climate change, continuing to be internationally competitive and maintaining the natural resource base. Australian agriculture is strongly export oriented, and competes in an international market that is distorted by high tariffs, farm subsidies and non-tariff barriers in competing countries.

Productivity growth is influenced by a range of factors, including innovation and investment in R&D. While the effect of R&D expenditure can be difficult to measure because of the long lags between investment in research and productivity gain, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) has found that the decline in public investment in agricultural research is likely to have contributed to the slowdown in productivity growth (ABARE 2010: 227). ABARES will provide more detailed discussion of the relationship between public investment in R&D and productivity growth in a separate submission to the Commission. ABARES's submission will also address the areas of the Commission's draft report that relate to the socially optimal level of public investment in R&D and the comparison of public support between rural and non-rural industries.

A key plank in the agriculture, fisheries and forestry policy of successive Australian Governments has been to increase industry productivity and competitiveness by supporting rural R&D, rather than through other more market distorting forms of assistance. A significant proportion of Australian Government spending on rural R&D is channelled through the 15 statutory and industry-owned research and development corporations (RDCs) – a partnership between the Australian Government and industry, funded by a co-investment model based on industry levies and matching government funding.

The RDC model has been operating successfully for almost 20 years and remains fundamentally sound. In its draft report, the Commission acknowledges the strengths of the model, notably the close links with industry encouraged by the co-investment approach and the 'systems integrating' role that the RDCs play in terms of collaborating with other research funders and influencing research priorities and framework reform.

DAFF believes that the success of the RDC model results from the way it combines meeting industry needs with delivering significant public benefits, engages industry in funding R&D and generates industry ownership and adoption of research outcomes. The model has demonstrated flexibility in being able to respond to increasing demand for R&D to deal with priorities associated with managing Australia's natural resources and the challenge of climate change.

The draft report also highlights some areas for improvement in the RDC model, including project evaluation and performance monitoring, and noting the current focus on short-term, low-risk research projects, as well as the lack of good data on funding and expenditure across the rural R&D framework. While DAFF agrees that there are opportunities for improvement in these areas, any changes would need to be made through a structured process that considers the costs and benefits of individual improvements and the need to apportion costs between the government, RDCs and other

stakeholders. DAFF also argues that improvements to administrative efficiency and resource use can be made within the existing model through harmonisation of common processes.

The broad focus of the draft report is that public investment should be based on the ability to generate 'additional' R&D. The Commission argues that, on this basis, public funding for the RDCs should be in part redirected to R&D that focuses on public good outcomes, and there is a case for a reduction in total funding. DAFF acknowledges the importance of public investment contributing to public good outcomes, but also notes the difficulty of distinguishing between the private and public good outcomes of dual benefit research projects.

Public funding for rural R&D recognises that as well as the significant returns for industry, R&D generates a high level of spillover benefits for the broader economy and community. While some spillovers beyond the rural sector can be quantified by conventional methods, other environmental and social spillovers are not readily measurable using existing evaluation tools. Work is ongoing amongst government, RDCs and other research providers to improve the methodology for measuring and hence better understanding these impacts.

The Australian rural sector includes a diverse range of industries, which are largely comprised of small family businesses. These structural characteristics mean that the market failure in the provision of socially optimal levels of R&D is likely to be more severe in the rural sector than in many other sectors of the economy, as the incentive for individual businesses to invest in R&D is less. It is also difficult for rural businesses to capture benefits by the application of property rights to the technology and knowledge generated from investment in R&D in the sector. Government intervention through statutory levies helps to overcome this market failure and associated under-investment by providing rural producers with a means of collectively investing in R&D that will benefit the industry. The matching contributions provided by government act as an incentive for private investment.

DAFF argues that reducing public investment and redirecting a proportion of the savings to a new RDC that focuses on public good research with no industry co-contribution undermines the proven effectiveness of the RDC model:

- The proposed reduction in government matching contributions could result in a larger reduction in overall investment if private investors were to vote to lower their levy rates.
- The creation of the proposed new RDC, 'Rural Research Australia', would be associated with substantial additional administrative costs without the same level of industry engagement that is a key feature of the RDC model.

The desired outcome of increased productivity whilst maintaining sustainable natural resource management could best be achieved through increased collaboration between RDCs—coordinated through an enhanced Rural Industries RDC (RIRDC)—and better communication by government of its priorities, to deliver the appropriate balance between industry-specific projects and cross-cutting projects that have benefits for the wider community. DAFF envisages that the Rural R&D Council's National Strategic Rural R&D Investment Plan will also assist in achieving this outcome.

The National Primary Industries Research, Development and Extension (RD&E) Framework being developed by all governments, the RDCs, CSIRO, the university sector and industry, under the auspices of the Primary Industries Ministerial Council, will also play a major role in identifying priority RD&E requirements and ensuring the allocation of the most effective and efficient RD&E capacity to address them.

Key points of DAFF's submission

Funding for rural R&D

- DAFF does not support the proposed reduction in public funding. Farmers manage over 61 per cent of the Australian landscape and face the challenge of increasing productivity while sustainably managing natural resources. Investment in rural R&D is a key driver of productivity growth, and there is a strong imperative to increase total public and private investment in rural R&D to ensure that Australia's rural industries are able to remain internationally competitive through sustainable and productive management of the natural environment.
- The Commission recommends a reduction in public investment based on the expectation that levy payers will fill the gap, but there is no evidence that this will occur. In fact, the result is likely to be a further reduction in rural R&D investment which would negatively affect productivity growth and competitiveness, and have broader social and environmental impacts.
- The Commission finds that it would not be appropriate to establish a target level for overall spending on rural R&D, but goes on to recommend a reduction in the cap on government matching funding to 0.25 per cent of an industry's gross value of production. Insufficient evidence is provided as to why this is the appropriate level of funding.
- The Commission's question as to why Australian governments should support rural R&D to the extent they currently do, when compared to support provided by key trading partners, fails to take account of the significant overall level of support provided to agricultural industries by most of Australia's trading partners.

Proposed new RDC for non-industry specific R&D

- DAFF agrees that there is a need for more collaboration and cross-sectoral research but does not support the proposed creation of a new RDC. The strengths of the RDC model result from the high level of industry engagement, the model's flexibility in responding to increasing demand for R&D and the benefits that accrue beyond the farm gate. Government and RDCs can work within the existing model to increase R&D into cross-cutting issues with high public benefits, rather than creating a new RDC with the associated costs and lack of engagement with industry.
- Rural R&D generates a high level of spillover benefits, both within the industry and for the broader environment and community. It is difficult to delineate between the private and public good outcomes of rural R&D, therefore outcomes and funding allocation cannot easily be separated.

Improvements to the RDC model

- DAFF believes that the RDC model can be enhanced by:
 - increasing collaboration between RDCs, especially on cross-cutting issues
 - improving communication between government and the RDCs to ensure that government's objectives for use of public funding are met
 - improving data collection on R&D funding to inform investment decision-making
 - increasing coordination between Australian Government portfolios on rural R&D policies and programs
 - improving RDCs' project evaluation and performance monitoring
 - improving the processes for introducing or changing a levy.
- The National Primary Industries RD&E Framework promotes collaboration and cooperation between governments, RDCs and research providers and will assist in delivering improvements to the RDC model.
- It is important to balance the need for RDC accountability with the related costs of imposing new monitoring and reporting requirements.

Funding of the RDCs

DAFF does not support the Commission's recommendation for a reduction in the cap on government matching contributions, and an overall reduction in public funding for RDCs. The enormous challenges that industry is now facing to maintain productivity growth, adapt to climate change, continue to be internationally competitive and maintain the natural resource base require greater investment in R&D from both the public and private sector. DAFF notes that the Commission recommends that the cap on the government's matching contributions should be reduced to 0.25 per cent of an industry's gross value of production, but it is unclear why this figure has been chosen as the appropriate level for the cap. ABARES's submission on the draft report will query the metric that the Commission has used to compare support for rural R&D with support for non-rural R&D, and thus justify a reduction in funding.

ABARES's submission will also cover the effectiveness of the RDC model in improving agricultural productivity. Rural R&D that contributes to increased productivity through more sustainable use of natural resources results in significant private and public benefits and the level of public investment should be considered with this in mind. The Australian agricultural sector plays an important role in environmental stewardship. Agricultural industries have the twin objectives of profitably and efficiently utilising the environment to produce food and fibre while at the same time maintaining and sustaining the natural resources they rely on, that also belong to Australia as a whole. This puts these industries in a unique position, making it difficult to compare them with other sectors in relation to the appropriate level of R&D support.

In 1989 when the RDC model was established, the rationale for the government's involvement was based on recognition of the spillover benefits to the community, the substantial risks in some investment, and the potential for free riding. Notwithstanding the need for increased investment, DAFF argues that government involvement in rural R&D investment is still underpinned by the same rationale. DAFF's original submission in response to the Commission's issues paper provided further detail on this rationale, so it is not repeated here. However, DAFF makes the following key points:

- The Commission suggests that Australia's public support for rural R&D is relatively generous compared to other developed economies, based on OECD data, and implies that this would support an argument for reduced funding. However, this does not take into account the support provided to international rural producers in the form of high tariffs and direct farm subsidies. It is too simplistic to compare the levels of public R&D funding between countries without considering other public support measures. OECD data shows that Australia's producer support estimates averaged 4 per cent of gross farm receipts from 2007 to 2009, compared with 9 per cent for the United States, 23 per cent for the European Union and 47 per cent for Japan. Support for R&D as a percentage of total producer support estimates was over 50 per cent for Australia, but only 2 per cent for the European Union and Japan and 7 per cent for the United States (OECD 2009).
- Options for increasing private investment in rural R&D require further consideration in the Commission's final report. There is little evidence to suggest that public investment in rural R&D is crowding out private investment. Indeed, noting that a number of industries have set their levy rates to collect an amount equal to the maximum government contribution, it is possible that if government reduces its investment in the RDC model, levy payers may see less incentive to invest themselves and may vote to reduce their levy. In the case of the industry-owned companies (IOCs), levy payers might choose to alter the levy proportion so that a lesser amount (equivalent to the reduced government matching amount) is directed

- towards R&D, and a higher amount towards marketing. The Commission has provided no evidence to suggest that industry is likely to respond with increased levy contributions.
- Individual primary producers have a limited ability to access other mechanisms, such as tax concessions or intellectual property rights, that might encourage increased private investment in R&D. The small size and low cash income of the majority of agriculture, fishing and forestry businesses effectively excludes them from access to the current R&D tax concession, with its expenditure threshold of \$20,000. If these businesses do undertake any individual R&D investment, they are generally unable to quarantine an economic return through the creation of property rights, again due to their small business size and the nature of rural research.
 - The Rural R&D Council has identified that improved international linkages can provide significant opportunities for increasing private investment in rural R&D in Australia. Stable legal and government institutions, a relatively well educated workforce and large regional landscapes with good infrastructure make for an attractive investment environment. The council will identify strategies for improving international linkages during the process of finalising and implementing its National Strategic Rural R&D Investment Plan.
 - It can be difficult to delineate where the private benefit of investment in rural R&D stops and the public benefit starts. There are significant spillover benefits from investment in rural R&D. Spillovers may occur from farms in a given industry to farms in the same industry, farms in other industries, non-farm businesses, overseas industries and the community in general. Without sufficient matching public investment to attract private investment, there is likely to be under-investment in R&D in the face of a need for an increased national rural R&D effort.
 - It should not be assumed that research capability is elastic and able to expand quickly if any decision to reduce funding is reversed in future. A reduction in government funding sends a signal to research providers of a change in priorities, and they may adjust their operations accordingly. There may also be more direct effects, in that RDCs are a significant source of funding within Australia's rural R&D system. Any reduction in funding to RDCs should be considered in the context of the potential flow-on effects to bodies such as CSIRO and universities that currently conduct RDC-funded research. The nature of the relationships between R&D investors, R&D providers and the industry recipients of R&D are clearly demonstrated in each of the sector strategies developed to date under the National Primary Industries RD&E Framework.
 - Recognising the demands on both public and private funding, DAFF notes that the Commission has not considered in detail the potential for improving the efficiency and effectiveness of the current model (beyond dismissing the option of amalgamating RDCs and recommending that performance reviews assess administrative efficiency). The benefit of having 15 RDCs is the significant level of industry engagement that is achieved, but there are associated administrative costs and challenges. The significant total expenditure on operating and overhead costs and the variations between RDCs' operating costs suggest there is scope for efficiency gains – to increase the proportion of funding available to direct towards R&D – through shared administration systems, contracted support services and harmonisation of common processes to achieve best practice standards. The RDCs are making progress in streamlining their processes to reduce costs but more work can be done in this area.

Private-public good outcomes from R&D

The Commission has recommended the establishment of a new RDC – 'Rural Research Australia' (RRA) – to sponsor non-industry specific R&D intended to promote productive and sustainable

resource use by Australia's rural sector. DAFF acknowledges that public investment needs to be strongly linked to public good outcomes that occur over and above what would happen without government intervention. Within natural resource management (NRM) there are clear examples where market failure (through information failure or lack of investment) can restrict public good outcomes. There are also examples in NRM where private and public good are inextricably linked, meaning outcomes and funding allocation cannot be easily separated.

DAFF believes that there is no need to create a new RDC to undertake non-industry specific R&D focused on achieving public benefits. The administration costs of establishing a new RDC would be high, and would require industry to spread resources more thinly for engagement. Within the current model, RIRDC has a general industry scope and also works on NRM and new industry activities. DAFF argues that a mixed model, where RIRDC works with the industry-specific RDCs, could achieve outcomes comparable to those foreseen from the proposed RRA, with efficiencies gained through established institutional arrangements and links with industry, encouraging credibility and industry uptake. Some modifications to RIRDC's current remit might be required, such as the allocation of the established industries portfolio to other RDCs. Funding could come from a combination of direct government appropriation and contributions from the other RDCs.

DAFF agrees with the Commission's observation that RDCs should invest in a balanced project portfolio that includes longer-term, riskier and potentially higher-reward research, as well as short-term, low-risk and adaptive research. The existing industry-specific RDCs should continue to undertake dual private-public benefit R&D but this could be enhanced by RIRDC playing a lead role in coordinating and promoting collaboration on longer-term research with a broader focus (either cross-sectoral or with a relatively higher proportion of public benefits). While recognising that collaboration between RDCs has increased in recent times, developing RIRDC's leadership role in this area will provide the stimulus necessary to make this process happen more quickly and effectively. Reducing duplication of investment and increasing the critical mass of investment in cross-cutting areas will result in better value for money. Government can assist in this process by more clearly outlining its research priorities to the RDCs and developing a more transparent performance and reporting framework to assess achievements (as discussed in later sections).

With farmers managing over 61 per cent of the Australian landscape, almost all management practices undertaken on farm have off-site impacts with the potential for public benefits or disbenefits. Agricultural production and management of natural resources are often co-dependent at a farm scale, with ecosystems services received and provided at the landscape scale. Improving land management practices delivers multiple ecosystems services, including the production of food and fibre for the landholder (increasing private benefit) and environmental services such as biodiversity, pollination, and improved air and water quality for the wider community (increasing public benefit). While many improvements are part of good management, there is a case for mixed private-public investment in R&D where there is information failure, or where the public benefits are especially high and where private and public benefits cannot be easily separated.

Research into weeds and pest animals is a field where impacts on the environment and social amenity are currently difficult to quantify. Literature indicates that the cost of weeds and pest animals to the environment is as high, or higher, than the impacts on industries. In such cases, it is appropriate for the Australian Government to invest in research, either in partnership with industry or *in toto*, rather than place the well-being of the environment and society in the hands of a producer striving for economic outcomes, or have no research at all. A case study outlining some of the intertwined private-public benefit issues specific to weeds and pest animals R&D is at Appendix A.

Collaborative relationships between RDCs, governments and stakeholders allow a coordinated approach across landscapes to deliver multiple outcomes, leveraging off individual contributions to achieve improved overall outcomes. Where there is recognised market failure, but high private benefit and limited cost sharing opportunities, information dissemination can be used as a tool to gain dual benefit and assist farmers to take up sustainable farm practices that have high environmental benefits.

Increased benefits are often gained through leveraging public good outcomes from industry research. For example, in a current Caring for our Country project: 'Implementing the grains industry's environmental plan with Australia's mixed system', the Grains RDC, other RDCs, government, industry and the community are helping farmers to improve their knowledge and skills and adopt management practices to improve and build resilience in the natural resource base, while continuing to improve productivity and profitability.

Pure public benefit R&D

As well as private-public benefit research co-funded with industry, there remains a need for government to fund R&D designed specifically for public good outcomes. This can optimise the public benefits gained as spillover from private benefit R&D and address areas where there is a market failure, or clear public benefit. RIRDC is well placed to manage this R&D, complementing its role (discussed above) as a coordinator within the RDC model. Some examples of R&D designed specifically for public good outcomes are outlined below:

- Improvements in social outcomes and capacity building can come from understanding drivers and barriers to practice change, and attracting more people to the research industry to ensure the future capacity of RDCs to deliver quality, cutting-edge research to underpin decision making by government and industry. A current project within this theme is RIRDC's 'Capacity building of rural and remote communities to manage their mental health'.
- R&D aimed at environmental outcomes such as healthy waterways, biodiversity conservation and native vegetation management has a high public benefit, but is often not of direct benefit to industry.
- The Australian Government requires R&D to underpin the development of effective policy tools, such as the 'Environmental Stewardship Program' currently being funded as part of Caring for our Country. Stewardship programs, market based instruments and markets for ecosystems services are all examples of policy tools that industry does not have an incentive to fund and would not develop without government funding. In addition, monitoring and evaluation of practices and resource condition is required to provide information to support decision making.
- Innovation programs and practices can be, and are, a role of the government as they provide seed funding to facilitate research and then leave further development of the research to industry once the level of risk has been reduced. An example is the innovative 'Methane to Markets Program', leveraging Australian Government funds through RIRDC management and guided collaboratively by an RDC/industry/government steering committee.

Should RIRDC's role be changed to take on the provision of public benefit R&D, DAFF believes that RIRDC's funding model should also be changed. RIRDC currently receives the majority of its income through an annual budget appropriation which is subject to regular budgetary pressure and review. A more sustainable funding model, appropriate to a revised role, would be to legislate funding for RIRDC in the *Primary Industries and Energy Research and Development Act 1989* (PIERD Act) as a fixed proportion of total agriculture, fisheries and forestry gross value of

production. This would be similar to current funding arrangements for the Fisheries RDC (FRDC), which the Commission acknowledges are appropriate given the public good nature of a lot of the research undertaken by the FRDC.

Funding rural R&D outside the RDC model

There are certain areas of rural R&D where the Australian Government needs to show leadership and set the agenda, and where there is a case for direct government investment. One example is agricultural climate change mitigation. Climate change mitigation research has been administered mainly by the Australian Government to ensure that R&D investment meets the government's current requirements for domestic and international climate change policy. The benefits from climate change mitigation research flow directly to the government as reduced liabilities under the Kyoto Protocol. In addition, the government negotiates international accounting rule changes to the land-based sector. A targeted research program is required to ensure that accounting rule changes reflect our strategic interests. The government's \$46.2 million Climate Change Research Program successfully leveraged significant investment from the RDCs, universities and state governments through directly targeting research investment to achieve government policy objectives.

Also in the area of climate change, the National Climate Change Research Strategy for Primary Industries (CCRSPI) leads and facilitates the national collaboration, coordination and communication of RD&E activity that supports climate-resilient, productive, and environmentally and socially sustainable landscapes, and aligns with and underpins the National Primary Industries RD&E Framework sectoral strategies. CCRSPI partners—including RDCs, Australian, state and territory governments and CSIRO—lead, participate in or link research activity on agreed themes, and work collaboratively on submissions or projects (CCRSPI 2007).

Set of principles for the RDC model

DAFF broadly supports the principles proposed by the Commission in relation to the RDC model (draft recommendation 8.1), outlining what is expected of the RDCs as a condition of receiving government funding, and the Australian Government's responsibilities in relation to administration of the model and engagement with the RDCs. As discussed below, DAFF recognises the need to improve communication between government and the RDCs and to provide clearer guidance on government priorities for R&D, and the recommended draft principles support this aim. DAFF notes that RDCs are already subject to the provisions of the PIERD Act and the *Commonwealth Authorities and Companies Act 1997* (CAC Act), for statutory RDCs, and, for IOCs, the *Corporations Act 2001* (Corporations Act), statutory funding agreements (SFAs) and constitutions. Care needs to be taken in composing and introducing a set of principles, and in outlining government priorities so that RDCs and other stakeholders have a clear understanding of their operational and reporting requirements.

Priority setting and government-RDC communication

Strong communication and a constructive working relationship between the RDCs and government are essential to the effective functioning of the RDC model. Both parties strive continually to improve this through both formal and informal means but it is apparent that improvements can still be made in the level of communication. IOCs are currently required to have regular (in most cases six-monthly) meetings with the Minister or a delegated representative. This requirement could usefully be extended to the statutory RDCs as an initial step in improving communication.

DAFF notes that concerns have been raised over time by RDCs about a lack of clarity in the priorities outlined to them by government. DAFF also notes the views expressed in a number of submissions to the inquiry that the removal of government directors from statutory RDC boards has reduced the level of communication between the RDCs and government.

DAFF does not support the Commission's recommendation to remove Ministerial involvement in priority setting for the RDCs. On the basis of its funding contribution, it is appropriate for government to remain involved in high level priority setting, for example in the National Strategic Rural R&D Investment Plan and the development of RDCs' strategic plans. The government should work to more clearly articulate its priorities and the reasons behind these priorities. Regardless of the quantum of government funding, it is important for government to be satisfied with the balance of RDCs' proposed investment portfolios, and to have an opportunity to ensure that cross-cutting issues are appropriately addressed. This also aligns with requests that have been received from RDCs for more information from government on its priorities and how they fit in with particular industries' research requirements and strategies. Improved communication, resulting in better collaboration and targeting of expenditure by RDCs, is a way to improve outcomes within the current model.

The National Primary Industries RD&E Framework has already played an important role in bringing together governments, RDCs and research providers to improve collaboration and communication on rural RD&E in Australia, and the completion and maintenance of sectoral and cross-sectoral RD&E strategies will provide clear guidance for long term RD&E investment by RDCs. The Commission's final report would benefit from consideration of how to draw on the framework to improve clarity and consistency in strategic planning and priority setting.

The Commission has recommended the optional appointment of a government director to the board of RDCs. The PIERD Act was amended in 2007 to remove a government director from the boards of statutory RDCs, following the Uhrig Review of the corporate governance of Commonwealth statutory authorities and office holders, and in recognition that there was a 'potential for conflict of interest for serving public servants' (Commonwealth of Australia 2007: 2) who were government directors. As part of this process, the field of public administration expertise was added as a skill set for statutory RDC boards to ensure that the board as a collective had this experience (rather than it residing in the government director). Some IOCs also include experience in public administration among the requirements for a balanced, skills-based board.

DAFF understands the intent of the Commission's recommendation, that a 'government director' would in theory complement existing board skills and increase engagement with government, but the recommendation raises some questions. Given the aforementioned benefits identified by the Commission from the appointment of a government director it would seem sensible to allow government as well as the RDC to recommend the appointment, and to consider making the appointment of a government director a mandatory requirement. Notwithstanding these comments, DAFF also notes that the benefits from having a serving public servant as a government director on statutory RDC boards in the past came from the understanding of current government priorities that such a person brought to the position, as well as the improved information flow between the government and the RDC. However, the Commission recommends, in the case of the IOCs, that the government director should not be a serving public servant (based on AGS advice), and for statutory RDCs, that the government director may or may not be a serving public servant, noting the AGS advice that there is a possibility that a serving public servant could face a conflict of interest (which reflects the 2007 PIERD Act amendments discussed above).

Making provision for appointment of a 'government director', who is not a serving public servant, is unlikely to directly improve dialogue with government and would not in fact be very different to the existing situation where statutory RDCs and some IOCs already target public administration expertise in their board selection processes. The Commission's final report would benefit from further clarification of the intended benefits of this recommendation; that is, how it would improve on current arrangements and how it would lead to improved engagement between the RDCs and government. If this recommendation were to be accepted, administrative issues such as selection processes, remuneration and termination provisions and appointment terms would also need to be carefully considered. DAFF also suggests that the final report include some discussion on alternative mechanisms for improving communication between government and the RDCs.

Program-wide project evaluation process

DAFF supports the recommendation that all RDCs should be required to participate in a regular, transparent and comprehensive program-wide project evaluation process, such as that currently facilitated by the Council of Rural Research and Development Corporations (CRRDC). The RDCs have been encouraged to evaluate their R&D investments and ensure that evaluation becomes an integral component of investment. DAFF notes that while improvements in this area are occurring, there is a need for increased and consistent participation by all the RDCs. As noted in the CRRDC's submission to the Commission's issues paper, collective evaluation will ensure that future prioritisation of investments by the RDCs is based on a sound, systematic knowledge of the impacts of past investments across the RDC portfolio. This is increasingly important as the RDCs collaborate on a wider range of issues such as climate change, trade, energy and natural resource management (CRRDC 2010: 61). DAFF supports the CRRDC's project evaluation program and notes the work that the CRRDC is doing to improve and standardise evaluation methodologies. DAFF also notes that the Rural R&D Council has been asked to establish a high level performance measurement and reporting framework as part of its National Strategic Rural R&D Investment Plan.

Performance reviews, monitoring and sanctions

Each IOC is required under its SFA to undertake a regular formal external performance review. IOCs' performance reviews generally require an assessment of effectiveness and efficiency in meeting the priorities, targets and budgets in their strategic and operating plans, and delivery of benefits to industry and the community in general. For consistency, DAFF supports the recommendation to extend this requirement to the statutory RDCs. While the statutory RDCs have their own internal reviews of programs, a regular external review of the overall performance of each organisation would be expected to improve the transparency, accountability, performance and evaluation of all the RDCs.

DAFF supports in principle the recommendation for publication of a consolidated monitoring report on the activities of the RDCs. However, this should be considered in light of what is already reported on by DAFF, the RDCs and the CRRDC. In addition, producing such reports annually, as recommended, would be quite resource intensive. It would be less costly and more efficient to publish such reports on a less frequent basis, for example every three years. This also takes into account the long term nature of many research projects.

The Commission requested input on 'intermediate' sanctions for underperformance by an RDC. As previously discussed, in relation to governance and performance issues, statutory RDCs operate within the parameters of the PIERD Act and the CAC Act, while IOCs are governed by the

Corporations Act and their SFAs and constitutions. DAFF notes that sanctions (including fines or imprisonment) are available under the CAC Act and Corporations Act for contravention of civil penalty provisions such as not discharging duties with care and diligence or causing detriment to the Commonwealth through improper use of information.

With the aim of strengthening accountability and governance, DAFF has recently tightened SFAs to include:

- sunset clauses, with the requirement for a performance review prior to the negotiation of a new SFA or levy poll where applicable
- requirements for boards to provide the Minister with a response to the recommendations of a performance review
- requirements for annual certification reports by the company Chair and Managing Director certifying that the company has complied with its obligations under the SFA
- a strengthened definition of agri-political activity to preclude a company from directly or indirectly funding agri-political activities
- requirements for development of fraud control, risk management and intellectual property management plans and provision of copies to DAFF, with the plans to be updated at least every three years.

DAFF will continue to explore the available options (and/or whether any new measures are necessary) for the Minister or other relevant organisations to impose sanctions on an RDC for any breaches of their obligations. These options could relate to, *inter alia*, funding provisions, board structures or board responsibilities.

Marketing and industry representation

DAFF recognises the potential benefit of statutory RDCs adding marketing to their functions and notes that several RDCs have already moved to become private IOCs. This has stemmed from the industries' perceived need for a collective industry marketing and promotion effort and the synergies between understanding and meeting market needs and R&D. RIRDC noted in its submission to the Commission's issues paper that market development is often the final phase of R&D, and that its operations could be enhanced if it were allowed to fund work in market development and product promotion as well as R&D (RIRDC 2010: 63). DAFF supports, in principle, the Commission's recommendation to allow statutory RDCs to undertake marketing.

In relation to the issue of industry representation, DAFF firstly wishes to correct the Commission's statement that the Australian Egg Corporation Limited has an industry representation role. DAFF interprets an industry representation role to be one such as is carried out by a peak industry body, or similar, that has industry advocacy and related agri-political objectives. Australian Pork Limited (APL) is the only one of the 15 RDCs that is able to undertake an industry representation role. This is enabled through APL's SFA, which allows it to undertake an industry advocacy role as part of its strategic policy development activities. All of the RDCs, including APL, are precluded from undertaking agri-political activity, either under the PIERD Act or SFAs, but in the case of APL, agri-political activity is narrowly defined so as not to preclude it from undertaking an industry representation function.

DAFF argues that allowing an industry representation role to rest with an RDC creates the potential for a conflict of interest in developing industry proposals for levy changes and in managing accountability to industry members for how levies are spent. The separation of industry representative bodies and RDCs enables the RDCs to focus on the provision of R&D and marketing

services in response to identified market failures. This separation also allows for an independent assessment by the industry representative body on behalf of industry members of the appropriateness of current levies and the performance of RDCs in delivering R&D and marketing services. DAFF does not support the recommendation to consider making industry representation a generally allowable function of the RDCs as part of the proposed future review of RDC arrangements.

Public funding principles for all rural R&D policies and funding programs

In relation to the Commission's recommended high level public funding principles (draft recommendation 5.1), DAFF suggests that there is not a sufficient uniformity of objectives and frameworks across all Australian, state and territory government programs that provide funding to rural R&D to make such principles useful or applicable in practice. DAFF notes that a Framework of Principles for Innovation Initiatives was adopted by Australian, state and territory governments in December 2009. The framework aims to 'enhance consistency and improve the overall accessibility and efficiency of government innovation initiatives across Australia' (DIISR 2009). This framework should, at a very high level, inform the development of rural R&D policies and programs, but the wide range of programs that fund rural R&D are not in a position to share common and consistent rural R&D funding principles as outlined by the Commission. Many programs that have an element of rural R&D funding are not solely or even mainly focused on rural issues. The following sections discuss the need to develop a better understanding of where rural R&D expenditure comes from and how a higher level of coordination might lead to increased efficiency.

Data collection

The Commission has recommended that DAFF establish a process for assembling and maintaining robust data on total funding for rural R&D in Australia. DAFF agrees with the Commission's finding that there is a lack of accurate data on public and private rural R&D funding. However, as discussed above, DAFF notes that many programs that have an element of rural R&D funding are not solely or even mainly focused on rural issues, and are outside DAFF's remit. Current funding estimates are made based on the interpretation of Australian Bureau of Statistics data but problems with inconsistent definitions and groupings mean that the figures are considered to be best estimates only.

As the Commission notes, assembly of robust funding and spending data across all Australian rural R&D programs is not a simple task. Establishing and maintaining a system to collect such data would be complex and costly. Before expenditure on such an exercise could be justified, a business case would be required addressing the objectives and scope of the project, including a comprehensive needs analysis to identify data that is critical to public policy development and investment decision making, clarifying the data definitions to be used and giving consideration to the relative costs and benefits of the process.

In relation to the RDCs, accurate figures are available on their overall expenditure, and this can be broken down program by program for each RDC, but consistency issues arise when collating information across the RDCs. The RDCs collect and present their data in different formats and using different data definitions and accounting procedures. Issues also arise, as referred to by the Commission, in double and even triple counting of funding when RDCs collaborate on projects or when funding is contributed to external R&D agencies such as Cooperative Research Centres or state R&D organisations.

DAFF notes that the RDCs are working towards sharing project management and reporting systems to increase the efficiency and transparency of their operations. In addition, the implementation of the National Primary Industries RD&E Framework will provide an opportunity to standardise reporting systems and make information about public funding of rural R&D across Australia more transparent and accessible. It may also be possible to gather more data about private funding through the framework, but collecting comprehensive and accurate data on private funding is a complex exercise in itself.

Mechanism to coordinate funding across all rural R&D

The Commission has recommended establishment of a mechanism to better inform and coordinate the totality of Australian Government funding for rural R&D. As the Commission notes, there is already significant high level oversight of the agricultural R&D framework, involving the Primary Industries Ministerial Council, the Primary Industries Standing Committee (PISC) and the PISC R&D Subcommittee as well as the Rural R&D Council and the CRRDC. In addition, as implementation of the National Primary Industries RD&E Framework continues, there will be significant improvements in the level of coordination across rural R&D funding programs. The framework's purpose is outlined below:

The National RD&E Framework will facilitate greater coordination among the different Commonwealth, State governments, CSIRO, RDCs, industry and university sectors to better harmonise their roles in RD&E related to primary industries and assure that they work together effectively to maximise net benefits to Australia. The National RD&E Framework supports a strong culture of collaboration and coordination between the bodies, strengthens national research capability to better address sector and cross sector issues and focuses research, development and extension (RD&E) resources so they are used more effectively, efficiently and collaboratively, thereby reducing capability gaps, fragmentation and unnecessary duplication in primary industries RD&E (National Primary Industries RD&E Framework 2009: 4).

Notwithstanding these existing arrangements, DAFF recognises the need for increased collaboration and information sharing across all relevant Australian Government portfolios on the various aspects of rural R&D investment and reporting. The Coordination Committee on Innovation (CCI) has facilitated the engagement of all Australian Government portfolios with an interest in innovation activities, and DAFF and the CRRDC are active members of the CCI. By establishing a subcommittee of the CCI focused particularly on rural R&D, the existing links could be maintained and built upon, and a better understanding of the broad spectrum of Australian Government investment in rural R&D could be developed.

Product-specific maximum levy rates and combining levies

DAFF supports the Commission's recommendation for removal of product-specific maximum levy rates. Under the current arrangements, any change to the maximum rates must be done via amending legislation and can take one to two years. This hampers RDCs' ability to increase levies to address industry needs in a timely manner. The Levy Principles and Guidelines and the *Legislative Instruments Act 2003* require that people that would be affected by any proposed levy increases are consulted prior to amending regulations being made, thereby providing an adequate check against an unfair or inappropriate levy increase. In addition, regulations to increase levy rates are disallowable instruments, and therefore must be tabled before both Houses of Parliament for 15 sitting days, which provides an opportunity for Parliament to disallow the amendments if they believe they are inappropriate.

In relation to the Commission's information request about combining R&D and marketing levies, DAFF notes that this allows RDCs to be more responsive in directing funding to priority projects in a timely way. If levies are combined, mechanisms should be put in place to ensure that RDCs are accountable to levy payers on how they direct levy funds. The RDCs will also need to clearly track and report on the apportionment between R&D and marketing of the total amount collected and spent, to allow for transparent monitoring.

Streamlining processes and performance monitoring

The Commission has recommended that DAFF revise the Levy Principles and Guidelines to ensure that the costs for an industry seeking to change a levy are commensurate with the proposed change, and that an indicative time limit of six months be introduced for the implementation of new levies and changes to existing levies. DAFF is currently reviewing the Levy Principles and Guidelines. The review includes an examination of how to streamline consultation requirements in certain circumstances without compromising the Levy Principles and Guidelines. Once a levy proposal has been formally submitted, many factors influence how quickly it is dealt with and some of these, such as legislative drafting and Executive Council Secretariat reviews, are outside the Minister's and DAFF's control. Therefore it would not be useful to set a maximum time limit. However, levy proposals should be dealt with in a timely manner and there should be transparency around estimated timing, progress of the proposal and any delays encountered. The review of the Levy Principles and Guidelines will assist in identifying ways to streamline the processing of levy proposals.

The Commission has also recommended that the Levies Revenue Service (LRS) in DAFF should routinely monitor its performance and the costs of collecting levies, and promptly communicate the results to stakeholders. The LRS is currently developing a new cost recovery model and will communicate to RDCs and industry representative bodies how fees are calculated under the new model. Performance against the business plan is monitored routinely and the LRS prepares an annual report to stakeholders outlining key matters in relation to its performance and operations. DAFF considers that reporting details of all changes to operating procedures would be unnecessary duplication of the report to stakeholders.

Appendix A: Weeds and pest animals case study

Invasive plants or pest animals result from the accidental or deliberate introduction of these species into areas where they have previously not been found. Some invasive plants or pest animals will impact on one sub-section of our society more than another, but because invasive weeds and pest animals can readily spread and establish across a variety of habitats their impacts are more usually felt across multiple industries, native ecosystems and sub-sections of society.

Effective research to support prevention, containment or ongoing management is only as good as the weakest provider. For example, if a single sector is left to manage the problem caused by invasive weeds and pests the result can be development of control techniques that are useful only within certain industries or technology that is so expensive that an industry cannot afford to commercialise it for use within a small market sector, resulting in market failure. Concern has also been raised that sub-groups of research beneficiaries may adopt a 'free rider' approach, with each group assuming the other will fund the research. This can be overcome if the beneficiaries are industries subject to levies and direction for suitable research can be given by a managing body. The risks in not funding a public good component in the above cases are that:

- only one area will respond, developing an industry-specific method, leaving others to manage an intractable problem
- market failure will occur because costs of research are too high for a single sector to support
- uncoordinated, ineffective research will result between groups attempting to 'free ride' on each other's efforts.

Impacts of weeds and pest animals on the environment and social amenity are currently difficult to quantify but literature indicates that they are as great, or greater, than the impacts on industries. This clearly indicates that it is appropriate for Australian Government to invest in research, either in partnership with industry or *in toto*, rather than place the well-being of the environment and/or society in the hands of the least effective provider or have no research at all.

Government roles and responsibilities are well defined under the Constitution and the Australian Government role is ideally suited to invest in public good weed and pest animals research to achieve benefits across the biosecurity spectrum. This includes investing in high return areas such as pre-border risk assessment, border surveillance and monitoring techniques, eradication and control methods. The Australian Government also has a role in providing leadership, national coordination and capacity building to mitigate the impact of established weeds and pest animals. Public good, nationally directed research in these areas will encourage the development of solutions that address the challenge of invasive species in a sustainable and innovative way and protect our unique environment and cultural values.

Example of return on investment for public good research

Biocontrol programs contribute to the performance of the agriculture sector, government and community, and the wider Australian economy. Many of them are supported by industry investment, but the majority still receive public investment. Because weeds are not restricted to paddocks, even where the program has been industry funded these programs provide a significant number of environmental and social benefits. Few of these benefits are readily calculated in dollar terms. Based on the historical performance of the overall biocontrol effort in Australia, a 2006 Cooperative Research Centre (CRC) Australian Weed Management review of biocontrol programs estimated an annual net benefit of \$95.3 million of which \$71.8 million is expected to flow to the agricultural sector (CRC for Australian Weed Management 2006: 40). The authors suggest that overall benefits are so large that even were biocontrol program costs to double, the overall benefit cost ratio would still provide a return of \$11.60 for each \$1 invested.

Abbreviations

ABARE	Australian Bureau of Agricultural and Resource Economics
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
AGS	Australian Government Solicitor
APL	Australian Pork Limited
CAC Act	<i>Commonwealth Authorities and Companies Act 1997</i>
CCI	Coordination Committee on Innovation
CCRSPI	National Climate Change Research Strategy for Primary Industries
CRC	Cooperative Research Centre
CRRDC	Council of Rural Research and Development Corporations
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
DIISR	Australian Government Department of Innovation, Industry, Science and Research
FRDC	Fisheries Research and Development Corporation
IOC	Industry-owned company
LRS	Levies Revenue Service
NRM	Natural resource management
OECD	Organisation for Economic Co-operation and Development
PIERD Act	<i>Primary Industries and Energy Research and Development Act 1989 (Cwlth)</i>
PISC	Primary Industries Standing Committee
R&D	Research and development
RD&E	Research, development and extension
RDC	Research and Development Corporation
RIRDC	Rural Industries Research and Development Corporation
RRA	(the proposed) Rural Research Australia
SFA	Statutory funding agreement

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