Agriculture Biodiversity Stewardship Package – An Analysis of Methodology for Environmental Regulatory Efficacy

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The Agriculture Biodiversity Stewardship Package (ABSP) is a Federal government initiative that has the potential to significantly increase biodiversity and provide ecologically sustainable development to the agriculture sector. How well this occurs partly depends on the regulatory framework setting it up which is under review with the enabling Bill currently before Federal Parliament. Key problem areas examined in this article are: operation of the biodiversity certification scheme, methodologies for measuring biodiversity growth and operation of the biodiversity credits trading platform. Getting these areas right in a regulatory framework presents many challenges, not least of which is to account for different farm types and landscapes and presenting a clear dichotomy between regulatory prescription and allowance for discretionary decision-making. This article examines the issue from the perspective of how to address these challenges by examining construction of regulatory frameworks, how this dichotomy between regulatory prescription and discretionary decision-making is managed and what is required in order to achieve regulatory eco-efficacy when implementing the ABSP program.

I. Introduction

The Agriculture Biodiversity Stewardship Package (ABSP) and the *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) (the "Bill") setting it up recognises the connection between agricultural land management and environmental protection.[1] The ABSP involves farmers undertaking land management practices and reporting biodiversity outcomes for certification purposes. The aim is to build biodiversity and reward farmers with an additional income source, and trade biodiversity credits derived from planting a mix of flora and managing biodiversity. This article examines the ABSP from a regulatory perspective to understand what is necessary to achieve regulatory efficacy. This includes assessing the efficacy of market arrangements for sale of farm biodiversity credits. How well this scheme works in terms of biodiversity stewardship establishes a precedent for future developments in Australian environmental land management. These developments also have significant implications for increasing private investment in the agricultural sector and enhancing ecologically sustainable development nationally.

The ABSP scheme includes pilot programs in building and enhancing biodiversity. The Carbon and Biodiversity Pilot Scheme involves plantings for carbon by maximising biodiversity, in accordance with rules covering location, dimension, configuration and compositions of plantings. Contracted projects will receive biodiversity payments over the course of the project. Expected benefits include shelter for animals, improvement of waterways and reduced erosion. Plantings must be maintained for a minimum of 25 years to ensure reforestation of native trees and shrubs. Farmers will have measurement, reporting and auditing obligations under this pilot. Projects under this pilot are eligible to receive Australian carbon credit units for sequestered carbon, which may be sold, retained, or cancelled.

The Enhancing Remnant Vegetation Pilot Scheme aims to improve existing native vegetation on farms. Farmers receive income for protecting, managing, and enhancing high conservation value

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[1] At the time of writing February 2022 the *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) has not yet passed into law; the current Bill is accessible: <https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=chamber/hansardr/25465/&sid=0008>.

remnant on-farm native vegetation. This pilot is trialling mechanisms to pay farmers for biodiversity improvements. Eligible farmers are able to receive payments to manage and enhance existing remnant vegetation on-farm. Participants will be required to actively manage the vegetation which includes installing fencing, managing weeds and pest animals and some replanting and revegetation. There will be a monitoring and reporting obligation on the condition of vegetation for biodiversity in the subject area. Participants will receive regular payments to cover project costs.

The success of ABSP requires processes for measuring, reporting, and verifying biodiversity credits arising from farm biodiversity development and participation rules for trading biodiversity credits.[2] Despite the final form of these rules not yet decided, this article considers the ABSP from a broader regulatory perspective, including the form of the biodiversity certification scheme and biodiversity trading platform. The latter enables farmers to trade biodiversity credits in a specially constructed market. The platform is intended to integrate spatial information with buyer and seller information, which includes verification, monitoring and reporting on biodiversity services. The development of verification schemes with regard to on-farm biodiversity credits has been described as a "meta-standard for agriculture sustainability".[3] This change requires consideration of legal implications in delivering the meta-standard and for farmers in adopting it. The effects are potentially far reaching, including developing a national program for on-farm biodiversity that benefits the environment and providing an extra form of farm income.

To address these developments, it is necessary to extract the key principles that underpin the ABSP and understand how they should be regulated. These developments essentially fall into four categories: (1) on-farm native species planting (Carbon and Biodiversity Pilot (CBP)) and enhancing remnant vegetation (ERV), (2) participation rules and methodologies for biodiversity development, (3) A Farm Biodiversity Certification Scheme, and (4) A Biodiversity Trading Platform.

II. On-Farm Biodiversity Management – Pilot Programs

Biodiversity management requires farm management plans following site assessment.

On-farm biodiversity management is addressed via environmental plantings to achieve biodiversity improvements providing an extra source of income for farmers. It is necessary for farmers to register an environmental plantings project with the Emissions Reduction Fund and enter into an agreement with the Department of Agriculture, Water and Environment (DAWE). This establishes two forms of income for the participant farmer, (1) An upfront biodiversity payment from DAWE, and (2) Australian Carbon Credit Units (ACCU) which may be sold. The plantings must conform to protocols designed to set minimum standards for creation of biodiversity. It is clear that for the pilot programs to work it must have, "defensible baseline measurements, evaluate ongoing changes, justly incentivise participants and demonstrate societal value via the improvement of social capital".[4] These elements require a carefully structured data management framework. The regulatory framework for such a scheme must be clear and transparent so as not to alienate farmers and land managers. This requires, in the view of the Australian Farm Institute, an overarching "meta-standard of biodiversity and sustainability stewardship",[5] ensuring a common understanding of the meaning of gathered data to ensure consistency of interpretation. Further, that this meta-standard inform management standards that are aligned with sustainability objectives. From a regulatory perspective this is a difficult requirement because of the issues surrounding, biodiversity and sustainability measurement and the regulation of data management. The meta-standard should be consistent with global standards to enable an integrated participatory approach to farmer involvement.

[2] The ANU are involved in designing participation rules and processes for measuring and monitoring developments in farm biodiversity.

[3] Agriculture Biodiversity Stewardship Package <https://www.awe.gov.au/agriculture-land/farm-food-drought/natural-resources/landcare/sustaining-future-australian-farming>.

[4] Australian Farm Institute, *Recognising On-Farm Biodiversity Management: Australian Farm Biodiversity Certification Scheme Phase 1 Report* (July 2020) <https://www.farminstitute.org.au/wp-content/uploads/2020/12/Recognising-on-farm-biodiversity-management_AFI_Aug2020.pdf>.

[5] Australian Farm Institute, n 4, 2.

Certification schemes must also not impede new and emerging commercial opportunities for farmers, while adding to existing sustainability programs and arrangements to meet multiple sustainability objectives.

The CBP trials market-based mechanisms valuing biodiversity improvements associated with carbon plantings. This means planting diverse native species in selected regions and a cost-benefit analysis assessing a market-based approach for valuing biodiversity. The biodiversity payment under the CBP involves calculating the present value of the costs of the project, then calculating the present value of carbon revenue that the project is likely to generate over 25 years. The difference between the two amounts represents the biodiversity payment offer. The CBP links with local National Resource Management (NRM) groups to link with landholders to help drive the program, and plantings between five and 200 hectares.

The ERV involves payment to farmers for enhancing existing vegetation that has high conservation value. This objective is to value the improvement and provide payment to the farmer for the biodiversity improvement service. Farmers are required to identify areas on their properties as eligible remnant vegetation. The enhancement requires undertaking one or more of five management activities consisting of, (1) enhancing grazing control, (2) enhancing pest control, (3) enhanced weed control, (4) in-field plantings within the remnant areas, or (5) re-vegetation in buffer areas around remnant management areas. Undertaking one or more of these activities allows the farmer to receive a yearly biodiversity enhancement payment over a 10-year period. The areas are between five and 200 hectares with typical improvements consisting of fencing along riparian areas, weed control, pest management and in-field plantings.

III. The Australian Farm Biodiversity Certification Scheme (AFBCS)

The voluntary AFBCS aims to showcase farmers best practice resource management to improve biodiversity on their land. It is a voluntary farm certification scheme recognising biodiversity supportive farm businesses in maintaining and improving on-farm biodiversity. Biodiversity certification supports access to markets, creating price premiums for their produce, reducing capital costs and improving farmer access to information on land management practices. The certification scheme is also planned to assist farmers in accessing finance by increased investment in farms with biodiversity improvements. The certification process involves procedural requirements through IP Australia certification trademark requirements. The establishment of the scheme itself is, at the time of writing, subject to a Bill before Federal Parliament entitled the *Agriculture Biodiversity Stewardship Market Bill 2022*,[6] with the object of establishing a framework for a market to facilitate projects to enhance or protect, as well as meet international obligations, in relation to on-farm biodiversity. A critique of the Bill is contained in Part VII of this article. The balance of this part contains details of key features of the ABSP.

The certification process involves applicants mapping their farms to support an online application via an application portal. This portal provides applicants with an indicative eligibility assessment. An approved site assessor confirms condition of vegetation on the farm, to then determine eligibility for certification and requisite level. A biodiversity management plan would then be prepared dividing the property into management units and assigning biodiversity condition scores to management units and the farm as a whole. It also contains management guidance to maintain or improve that biodiversity. Certified farms must meet notification requirements requiring report of significant natural or human disturbances that effect or are likely to affect biodiversity condition, and other changes in circumstances such as sale of the property.

The proposed certification scheme involves scoring native vegetation condition between zero and 100, with zero representing complete loss of native vegetation and 100 indicating undisturbed remnant vegetation. Eligibility for certification requires a farms vegetation condition score equal or greater than the national minimum condition threshold of 10 and the applicable regional condition benchmark which may vary between regions. The minimum condition threshold serves as a floor in the certification process.

[6] See <https://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r6832>.

The farm owner would need to commit to either maintaining biodiversity condition on the farm for green level certification or improving the condition of on-farm biodiversity for gold level certification.

Each farm is assessed with respect to land use zones and vegetation types with scoring to follow. Farms located in the same region are assessed in the same way. This enables a comparison between the average vegetation score in the region with the average score on the farm with the same mix of land use and vegetation type.

Farmers are eligible for three standard levels of certification. The highest is gold standard for farmers with high condition vegetation who commit to improving the state of biodiversity on the farm. Farms receive gold level certification, when they meet the national biodiversity friendly condition benchmark which is a vegetation condition score of 50 out of 100, and commit to maintaining condition of biodiversity, or meet the initial certification requirements and commit to attaining specific improvements in biodiversity condition on the farm. The next level is green level certification for farmers who meet the initial certification requirements and commit to maintain the condition of biodiversity on the farm, and the third level is a provisional standard for farmers above the minimum level who are close to their regional average. The provisional certification is available to farms who do not meet certification thresholds but commit to specified management activities to improve condition of on-farm vegetation for biodiversity and are projected to meet higher certification thresholds within a defined timeframe.

Initial certification requirements are based on condition of vegetation for biodiversity of the farm relative to regional condition of vegetation. Once a farmer enters the scheme the plan is to gain re-certification every three years. A biodiversity planning process involves preparation of a bespoke biodiversity management plan designed to maintain and improve biodiversity assets on the farm. Re-certification involves further site assessment and remote imagery verification, to determine the condition of biodiversity on the farm and how it has changed over time. Farmers wishing to maintain their conservation status would need re-certification every three years. Re-certification is based on maintaining or improving biodiversity condition based on the biodiversity condition score.

The stages essentially involve five steps: calculation of vegetation condition score, initial certification, biodiversity management plan, calculation of biodiversity condition score and finally re-certification depending on whether biodiversity has been maintained and improved. A biodiversity management plan is prepared for farms that satisfy initial certification requirements. These plans rely on site assessment data which identifies on-farm native vegetation and areas of high conservation value. The plans outline activities designed to maintain or improve on-farm biodiversity. To maintain green or gold level certification requires maintaining on-farm biodiversity values at the required biodiversity condition score. These scores are based on type and condition of the farms' vegetation, its uniqueness and conservation status and extent it supports endangered species.

Calculation of regional assessment of vegetation condition scores is intended to use existing datasets on vegetation condition and land use including remote sensing information. On-farm vegetation condition uses the same information with site assessments. The latter confirms the status and condition of vegetation, which includes presence and distribution of threatened species and ecological communities and the presence of weeds and pests. Certification eligibility requires a site assessment by an approved assessor.

IV. The Biodiversity Trading Platform (BTP)

A key element of the ABSP is the BTP establishing a market for biodiversity credits. The BTP will link farmer biodiversity credits with potential buyers. It also allows farmers to better understand market opportunities and help them plan potential projects on their land. The trading platform implicitly values the significant potential transactions cost arising in respect to biodiversity and carbon markets. These values arise from costs associated with the complexity of project planning and measurement, reporting and verification cost. The idea of a trading platform is to reduce some of these costs through efficient market transactional functions.

The BTP trading platform consists of a portal containing four platform domains. The first is a project planning domain to assist farmers in project planning. The next is a trading domain which initially is

designed as a bulletin board system allowing farmers to sell direct to the market through the platform. Projects are listed to enable connecting buyers to sellers. These listings will include spatial maps, descriptions and expressions of interest periods. The actual trade will occur off the platform. The third domain deals with monitoring and reporting, consisting of automated systems allowing farmers to undertake projects to report on their environmental outcomes. This is designed to enable farmers to report to relevant authorities or people ministering the scheme, thereby reducing but not entirely removing, the need for third-party verification. The final domain is an environmental assessment and accounts domain. This is meant to allow farmers to generate environmental accounts for their farms through the website platform. The BTP will also help farmers plan biodiversity and carbon projects. Farmers can use spatial information to plan projects and identify high value environmental assets on their properties. The BTP will also enable integration of existing spatial and environmental datasets to provide market information to buyers and sellers.

Key challenges for the platform from a regulatory perspective include defining a tradeable property right for biodiversity services and achieving harmonisation of metrics across jurisdictions, getting transaction functionality right to lower transaction cost and achieving standardisation of verification, measurement and reporting arrangements to ensure transparency and credibility in the market. The aim is to deliver the optimum net benefit to the community, but to do this a number of challenges must be overcome. A report by Frontier Economics for the Department of Agriculture, Water and the Environment, identified a number of areas that must be addressed.[7] In addition to the problem of defining a tradeable biodiversity property right, is the fundamental issue of what role government plays in the biodiversity market. For example, does the government role include guaranteeing the credibility and value of the biodiversity? It is also necessary for detailed enabling arrangements to be set out in regulation for monitoring, verification and reporting arrangements enabling farmers to monetise biodiversity services. Another area is data recording and management which links to the platform in a way that supports and enhances transparency in the trade function.

V. Success Factors for On-Farm Biodiversity Certification Schemes

The foregoing requires careful regulatory alignment between delivery of scheme objectives and on-farm data management. A regulatory framework for on-farm biodiversity certification must also address jurisdictional issues between State and federal governments. For example, planning schemes are State-based and must be considered in relation to changes in land use. Relevant literature highlights that sustainability certification schemes must manage the expectations of stakeholders and ensure accountability for scheme goals and attainments,[8] which could easily be applicable to biodiversity schemes as well. Mori et al also note key characteristics of effective sustainability (compared to biodiversity) certification schemes include the ability to create awareness of sustainable natural resource management with consumers and create positive impacts on social, environmental and economic indicators. Effective schemes include clear monitoring capability, interoperability with other schemes, dynamic stakeholder participation and strong accountability and transparency. While the view of Mori et al is applicable to sustainability schemes there seems no reason in theory why similar issues arise in biodiversity schemes. This is also justification for the proposition that the development of biodiversity schemes should run hand in hand with sustainability schemes, given their approximation in outcomes. In that context reference hereafter to agri-environmental schemes embraces both biodiversity and sustainability schemes which is a key recommendation of this article.

Successful agri-environmental certification schemes should engender market signals to foster participation, and flag total cost, including hidden costs, in order to participate.[9] The latter includes time

[7] Frontier Economics, *Biodiversity Services Platform Scoping Study: A Report for the Department of Agriculture, Water and the Environment* (13 November 2020).

[8] R Mori Jr, DM Franks and SH Ali, "Sustainability Certification Schemes: Evaluating Their Effectiveness and Adaptability" (2016) 16(3) *Corporate Governance: The International Journal of Business in Society* 579.

[9] J Gavin and M Healy, *A Review of Certification Schemes Relating to Sustainable Natural Resource Management* [Certification Schemes Report].

factors and use of participant resources in order to reveal the full cost. Other key requirements include a generally accepted valuation methodology of natural capital enabling a tradeable metric.[10] Another key requirement is the transparency of the scheme which is aligned with the level of involvement from stakeholders.[11] For good design for agri-environmental schemes, the literature highlights the importance of enabling farmers to embrace its characteristics as an extension of their current farming practices.[12] Further, they include factors such as clear and meaningful targets, a ranking system using a robust metric, processes for managing uncertainty, management of expectations and transaction costs.

The issue of managing the cost of transactions for participants is fundamental to the success of biodiversity certification schemes.[13] Transaction cost is reduced by effective program design to ensure objectives are met in a cost-effective manner. The cost of uncontrolled transactions can impact rates of participation and inhibit scheme objectives. It is not just a case of reducing transaction cost to a minimum in order to gain initial buy-in, but also ensuring participants understand cost issues. A review of current literature on agri-environmental schemes for biological conservation reveals only 15% reviewed cost effectiveness of such schemes and less than 50% of studies referred to costs at all.[14] This suggests that a regulatory model must allow for control over transaction cost up front so that scheme participants understand the total cost commitment and are in a position to control it. One way to reduce costs is through stacking and bundling arrangements which refer to packaging multiple ecosystem goods and services, including biodiversity, for sale. This can be used for both environmental compensation schemes and to obtain incentive-based conservation funding. Studies addressing opportunities and risks with stacking and bundling arrangements highlight some cost benefits.[15] These include regulators having reduced monitoring costs and lower transaction costs for landholders. This must be offset against costs of market entry for ecosystem goods and services, which includes costs of "additionality" where a benefit of bundling and stacking is already in existence. Other cost issues include market uncertainty, and issues around standards for demonstrating or proving the existence of any bundling and stacking benefit. Biodiversity certification schemes must also address changing circumstances that require cost adjustments.

Agri-environmental certification schemes benefit from using indicators of biodiversity and sustainability able to measure direct and indirect biodiversity improvements both at site and at landscape level.[16] This is designed to monitor trends over time monitoring land use change biodiversity impacts. Such schemes require a comprehensive monitoring framework to ensure indicators are created and have sufficient adaptability to address changes. Creation of biodiversity and sustainability indicators are often addressed as a departmental responsibility. For example, sustainability criteria and indicators for Victorian forestry are mandated under legislation, although left up to departmental discretion in terms of application and monitoring.[17] While some discretion is advisable, it is suggested that biodiversity certification schemes require a clearer regulatory pathway with appropriate methodologies to address consistency in applying criteria and indicators to different landscapes and entities.

Another key requirement for agri-environmental certification is a reporting capability gauging environmental impact. A mandatory reporting obligation requires suitable reporting metrics that are

[10] KPMG, *A Return on Nature* (2019) <https://assets.kpmg/content/dam/kpmg/au/pdf/2019/kpmg-nff-return-on-nature-report.pdf>.

[11] R Troster and M Hiete, "Success of Voluntary Sustainability Certification Schemes – A Comprehensive Review" (2018) 196 *Journal of Cleaner Production* 1034.

[12] D Ansell, F Gibson and D Salt, *Learning from Agri-environment Schemes in Australia: Investing in Biodiversity and Other Ecosystem Services on Farms* (ANU Press, 2016).

[13] Ansell, Gibson and Salt, n 12.

[14] D Ansell et al, "The Cost-Effectiveness of Agri-environment Schemes for Biodiversity Conservation: A Quantitative Review" (2016) 225 *Agriculture, Ecosystems & Environment* 184.

[15] N Torabi and SA Bekessy, "Bundling and Stacking in Bio-sequestration Schemes: Opportunities and Risks Identified by Australian Stakeholders" (2015) 15 *Ecosystem Services* 84.

[16] J Neldner, "Impacts of Land Use Change on Biodiversity in Australia" in R Thackway (ed), *Land Use in Australia* (ANU Press, 2018).

[17] *Sustainable Forests (Timber) Act 2004* (Vic) s 6.

mandated by government. The literature suggests that the current status of agri-environmental certificate has not yet fully addressed environmental impact reporting.[18] The EIRA report, for example, does discuss the European Initiative of Environmental Impact Reporting in Agriculture in terms of aims and development of benchmarking and aggregation, but highlights the current prototype will not be available as a viable product until sometime in 2022.

Regulatory frameworks for agri-environmental schemes should lower barriers for entry to participants. Some studies suggests that reasons for entering a scheme include, level of awareness and perception of benefits, knowledge of adoption by others, and belief and acceptance in the outcomes.[19] Reason for non-participation identified in the Kragt et al study includes policy uncertainty or ambiguity, information deficit and extent of transaction cost. To address these barriers regulation of agri-environment schemes must overcome information deficits and with a view to minimising transaction costs. Given farmers and landholders must address specific biodiversity improvements, a considerable number of available resources is required for educational purposes.

To ensure strong participation rates, it is important to avoid a one-size-fits-all modality and adopt flexible application options for farms with diverse land and production characteristics.[20] To do this, an agri-environment scheme must be adaptable to cover diversity in farm categories for, production type, landscape variation and farm size. Other requirements include timing of adoption and overcoming hesitancy in entering into contractual arrangements with government and concerns over transaction costs. For example, flexibility in relation to contract negotiation may help improve scheme participation rates.[21] Some studies highlight that participation rates are aided by low administrative burdens and good relationships between agencies and landholders.[22] The literature that highlights diverse factors influence farmer participation rates, including financial, social and psychological factors.[23] These factors will be influenced by levels of awareness of available information and uncertainty over government policy. These studies highlight regulatory frameworks for agri-environmental certification schemes require great clarity over scheme participation rules, flexibility in available options for participation and ability to bundle and stack credits. Simply relying on financial incentives alone may not be enough to guarantee strong participation rates.

Given the importance of certification scheme design, the extent of discretionary decision-making on key design factors is problematic. For example, management obligations for farmers for improved biodiversity outcomes requires a specific management protocol which should be dealt with at a regulatory level. This includes aligning scheme benefits with specified management obligations and defining the extent participants undertaking specified management actions not dependent on results.[24] Other design issues include the right incentivisation process which does not inadvertently incentivise negative actions and outcomes.[25] Arguably, the most important factor, at least in terms of scheme functionality,

[18] C Negra et al, *EIRA: Environmental Impact Reporting in Australia* (2019).

[19] ME Kragt, NP Dumbrell and L Blackmore, "Motivations and Barriers for Western Australian Broad-Acre Farmers to Adopt Carbon Farming" (2017) 73 *Environmental Science & Policy* 115.

[20] J Rolfe et al, "Identifying the Causes of Low Participation Rates in Conservation Tenders" (2018) 12(1) *International Review of Environmental and Resource Economics* 1.

[21] R Greiner, "Motivations and Attitudes Influencing Farmers' Willingness to Participate in Biodiversity Conservation Contracts" (2015) 137 *Agricultural Systems* 154.

[22] L Blackmore and GJ Doole, "Drivers of Landholder Participation in Tender Programs for Australian Biodiversity Conservation" (2013) 33 *Environmental Science & Policy* 143.

[23] G Page and B Bellotti, "Farmers Value On-Farm Ecosystem Services as Important, but What Are the Impediments to Participation in PES Schemes?" (2015) 12 *Science of the Total Environment* 515.

[24] I Herzon et al, "Time to Look for Evidence: Results-based Approach to Biodiversity Conservation on Farmland in Europe" (2018) 71 *Land Use Policy* 347.

[25] A Gordon et al, "Perverse Incentives Risk Undermining Biodiversity Offset Policies" (2015) 52(2) *Journal of Applied Ecology* 532.

is a clear set of metrics that operates under a common framework, ideally applicable across different schemes.[26]

On-farm biodiversity schemes must account for regional disparities in landscapes. Regional forums run by the Australian Farm Institute in 2020 identified a number of issues from participants who were primarily agricultural producers.[27] This identified the importance of a clear value proposition for a farm biodiversity scheme, which required clarity over scheme outcomes and whether improvements of biodiversity and sustainability objectives were connected concepts. The main point here is that a value proposition required clarity as to where each sit, and in the process clearly communicated scheme objectives, parameters and outcomes.

A key success factors identified for on-farm biodiversity schemes in Australian Farm Institute forums is measuring biodiversity through a commonly recognised metric. The corollary of this is a national standardised system for data collection and reporting on biodiversity. For this to happen a number of potentially contentious issues need consideration including how qualitative and quantitative data is used in developing suitable metrics, what technology to use, and the extent of self-verification and reporting by farmers, the nature and extent of third-party verification and alignment with global metric measures.

A viable biodiversity scheme must create a viable consumer response, which is problematic if a scheme does not adequately assist retailers to market the sustainability of their product. Biodiversity as a market concept is possibly not fully marketable when presented as a concept aligned with, for example, concepts like forest resilience. Not that the latter would not appeal to some, but the focus is on a value proposition that translate to actual consumer benefits appealing to the majority of consumers. Aligning sustainability objectives with biodiversity development is one way to address improved consumer appeal.

What is reasonably clear from the participant response in the Australian Farm Institute study is the need for clearly defined measurement metrics that connect to defined outcomes. This must be accommodated within specified timeframes and have an inbuilt adaptability to changing conditions and operational characteristics of the subject land. This creates a level of complexity that becomes extremely problematic for a regulatory framework. The foregoing factors are relevant in assessing transaction cost of the scheme with lower costs key to removing barriers to adoption. The extent of incentives and government assistance to use the scheme are other relevant factors for good participation rates. A viable scheme must address differences in farm types across both spatial and temporal scales and account for farmers who have existing biodiversity improvements on their land. This requires a flexible audit capacity to address diversity and complexity in farm environments, when assessing biodiversity improvements.

As measurement of biodiversity is problematic because it is a public good available to all, it is necessary for government to authorise a commercial market recognising a value for natural capital. To create value the market must have a defined purpose that attracts buyers and sellers. To assist this process a reporting mechanism must address criteria and indicators for biodiversity enabling calculation of natural capital value. The level of complexity in biodiversity justifies a formalised system establishing Criteria and Indicators of Biodiversity and Sustainability (Criteria) which embrace both scientific and economic factors across different natural resource sectors. Such Criteria must align with specific scheme objectives and account for differences, in the context of the BTP for example, between farm types and landscapes. Such Criteria are also aligned with a biodiversity and sustainability verification scheme which address both improvements to biodiversity and progress on sustainability objectives. The use of Criteria to assess natural capital value requires government to support and underpin the payment mechanism associated with a scheme, since it will probably not initially gain broad commercial adoption without government backing.

The foregoing presents issues for regulatory modelling which must articulate objectives that are credible and transparent. This includes addressing classification of data integrating biodiversity improvements with sustainability outcomes. Another problem area is addressing what is referred to in the literature as

[26] C Tayleur et al, "Global Coverage of Agricultural Sustainability Standards, and Their Role in Conserving Biodiversity" (2017) 10(5) *Conservation Letters* 610.

[27] Australian Farm Institute, n 4.

"additionality".[28] This relates in this context, to whether a policy of on-farm biodiversity and sustainability improvements generates additional benefit that would not have otherwise occurred. Regulatory modelling must address these issues across regional disparities and differences in farm type. These elements must be factored into a certification scheme that acknowledges the pivotal role of government in establishing credibility at the initial stage, with possible transition into a purely free market operated scheme once critical mass of participants have signed on.

So, what are the essential characteristics of an on-farm biodiversity certification scheme? The Australian Farm Institute identified 10 criteria necessary elements for a successful scheme.[29] They are: (1) defined objective that is measurable, (2) demonstrate alignment with global and other local standards, (3) choice of policy instrument that minimises transaction cost for farmers and encourage participation, (4) account for participants track record to encourage participation and stack benefits across multiple schemes, (5) adequate provision for measurement monitoring and evaluation of goals, (6) set out costs for delivery of scheme goals, (7) specify time commitment for participation, (8) establish a functional management model that accounts for ongoing maintenance requirements and encourage ongoing participation, (9) establish a track record for scheme administration, and (10) assess commonality of management activities between regions and farm type.

To achieve a basic metric requires construction of criteria and indicators that address both biodiversity and sustainability that ideally align with other schemes through a transferable measurement metric. This requires, in the view of the Australian Farm Institute, an overarching framework for on-farm biodiversity stewardship using a biodiversity meta-standard that verifies existing schemes, rather than separately certifying farms.[30] A meta-standard must align with criteria and indicators of biodiversity and sustainability addressing a natural capital reporting system, on-farm biodiversity certification, and align with existing biodiversity and sustainability measurement systems. This relies on adequate data management procedures that accounts for the value of diversity from a social, environmental and economic perspective.[31] Criteria and indicators include qualitative and quantitative data and sits in a regulatory framework that accounts for decision-making during potential uncertainty over data including where there is a need to integrate disparate datasets.[32] The regulatory framework to enable this should include adequate government incentives to encourage participation and address the data collection imperative. The incentives should therefore connect to collection of data on biodiversity and sustainability improvements. The problem is regulation should not impose an excessive regulatory burden and be user friendly in the data management and reporting process. The complexity of an integrated biodiversity and sustainability factored scheme suggests an excessive regulatory burden on participants. A regulatory framework must address these significant challenges in delivery of a functional certification process.

VI. The Problem of Biodiversity and Sustainability Measurement

The challenge for regulation of on-farm biodiversity schemes is establishing a framework for measurement and reporting of biodiversity improvements. This is a data measurement and management problem which is particularly evident when integrating economic and ecological data. If one is measuring biodiversity there is a reason to consider ecosystem values as well, at least from the perspective envisaged by the ABSP which seeks to encourage private investment in farm biodiversity. A related issue is how to use quantitative data, particularly spatially and temporally comprehensive quantitative data, to enable distinctions between different landscape types. From a risk management perspective, it is important to

[28] This is defined as the extent to which something happens as a result of an intervention that would not have occurred if the intervention had not occurred. See, eg, Axel Michaelowa et al, "Additionality Revisited: Guarding the Integrity of Market Mechanisms under the Paris Agreement" (2019) 19(10) *Climate Policy* 1211.

[29] Australian Farm Institute, n 4, 44.

[30] Australian Farm Institute, n 4, 45.

[31] N Torabi et al, "The Money or the Trees: What Drives Landholders' Participation in Biodiverse Carbon Plantings?" (2016) 7 *Global Ecology and Conservation* 1.

[32] Ansell et al, n 14.

ensure there is adequate data collection to provide early warning of threats or opportunities to address biodiversity risk factors. Therefore, biodiversity management requires data collection on threats to, or things that may impede, farm productive capacity. Therefore, a functional regulatory framework must address integrating disparate datasets to ensure a meaningful narrative on measurement of biodiversity improvements across different farm types. In short, there is an overwhelming challenge in the management and measurement of biodiversity and sustainability data to establish a viable regulatory framework.

What, then, are the key issues in regulation of farm biodiversity measurement? The first issue is the common measures for biodiversity to use in methodologies measuring biodiversity in different farm types. Developing common measures of biodiversity is problematic because there are no generally accepted "common" measures. Therefore, the Federal government must authorise measures for biodiversity for use in methodologies across different farm types under Australian conditions. Current proposal in relation to the ABSP are reliant primarily on the extent of tree cover and focus on such outcomes which may not have enough detail to satisfy a market-based scheme in trading biodiversity and sustainability credits. Establishing viable measures can adopt as a guide the Essential Biodiversity Variables (EBV) which establish a set of measurements needed to track change in biodiversity.[33] The EBV measures would need to be adapted for each farm type in Australia based on size and production capacity. This should also prioritise species composition and genetic diversity as key measures to be included.

While EBVs are described as sitting between primary data and criteria and indicators,[34] the focus becomes how they can be used to construct bespoke Criteria suitable for application under Australian conditions according to farm type. This requires choosing EBV categories enabling development of Criteria that allow development of a unit of measurement that is accepted for measuring biodiversity change and which is adaptable across farm types. However, relying just on EBVs is problematic since there is no general consensus on how they should be used in measuring biodiversity change. That is why it is necessary for Australia to set a standard precedent in specially adapted EBVs for application in developing Criteria for biodiversity measurement for on-farm biodiversity. The EBVs are used to provide the category for multiple Criteria to track biodiversity trends over time according to farm type. Farm type is distinguished according to location, size, and productive capacity. This allows categorisation and recording of data in a systematic way according to categories. The challenge is to ensure this data is inter-operable in order to determine wider trends. The overall objectives are to develop a biodiversity index for on-farm biodiversity to measure system-level change (over time) using different variables. The research challenge is to assess underlying data sources and identify existing biases to optimise the use of available data and cover biodiversity gaps.[35] The overall aim is to establish links between data sources, EBVs and Criteria.

The research challenge is to identify primary data sources which address geographic, taxonomic, and temporal coverage and a clear set of methodologies embedded in regulation to deliver a consistent approach.[36] Data for these categories must account for consistency in monitoring that include ecological field studies and use of remote sensing. This requires high levels of co-ordination of data providers, biodiversity, and remote sensing experts. Use of other data sources, such as the Living Planet Index when seeking baseline data information on selected areas such as vertebrate species distribution, should also be considered.[37] The data needs to be scalable so it can be compared across scales and between sites.[38]

[33] See <https://geobon.org/ebvs/what-are-ebvs/>. See HM Pereira et al, "Essential Biodiversity Variable" (2013) 339 *Science* 233.

[34] Pereira et al, n 33.

[35] V Proenca et al, "Global Biodiversity Monitoring: From Data Sources to Essential Biodiversity Variables" (2017) 213 *Biological Conservation* 256.

[36] D Couvet, V Devictor and F Jiguet, "Scientific Contributions of Extensive Biodiversity Monitoring" (2011) 334(5–6) *Comptes Rendus Biologies* 370.

[37] This is run with the assistance of the WORLD wildlife Fund, and details may be accessed here: WWF, *Living Planet Index* <https://www.panda.org/discover/knowledge_hub/all_publications/living_planet_index2/>.

[38] G Latombe et al, "A Vision for Global Monitoring of Biological Invasions" (2017) 213 *Biological Conservation* 295.

This requires development of new monitoring programs with bespoke protocols for the use and integration of collected data.

Sustainability measurement, assessment and reporting present similar challenges as measuring biodiversity. Both are difficult to measure because there is no generally accepted methodology of measurement. Including sustainability measurement provides a necessary extension to biodiversity measurement as they rely on common data sources. The extended terms of reference to accommodate sustainability presents a wider spectrum of potential Criteria but this allows for enhanced measurement of long-term viability of biodiversity developed on farm. In short, it is another category of biodiversity measurement of farm productivity over the longer term, and in that respect can be seen as an extension of biodiversity measurement.

So, what are the benefits of sustainability measurement for on-farm certification schemes? Such measurement helps to conserve the long-term productivity of the farm's ecosystems for soil and water. It helps to monitor and reduce the impact of farm operations on the natural environment and improve long-term sustainability of the farm productive process and impact on climate and the environment. The emphasis is on the environmental impacts of the farm production process and the resource intensity of what the farm produces. It also allows for assessment in what to develop for on-farm biodiversity that can add to farm productivity, including ecosystem values which can be used commercially.

Addressing sustainability in measurement of on-farm biodiversity measurement creates a stronger matrix of measures and improves the rigor of measurement protocols and methodologies under regulation. Sustainability, in this context, represents another category of data covering long-term maintenance and improvement of valuable ecological resources. The development of Criteria for different farm types enabling assessment of the sustainability across different scales. The types and characteristics of sustainability Criteria benchmarking techniques and reporting guidelines represent the key research challenge. Developing sustainability Criteria requires a framework defining factors of on-farm sustainability. A key focus of this framework is the interaction between ecological and economic factors impacting economic performance of the farm. This aims to measure the increase in ecosystem values from improved biodiversity and eco-efficiency, which helps farmers achieve better resource use.[39] The framework is designed to structure sets of Criteria that help to understand the relationship between ecological and economic factors under investigation. The framework accommodates different farm type both in terms of size and productive capacity with Criteria classified according to input, output, outcome and impact. The input factors measure farm specific resources, and output indicators measure goods and services provided by the farm. Outcome indicators measure short-term results from on-farm implementation, and impact indicators monitor long-term results of farm production.

A set of Criteria is derived in part from the farm project life cycle, which aligns the aforementioned input, output, outcome and impact categorisation to apply to different farm types. The key Criteria are adapted to account for farm type, productive capacity and different landscapes. The OECD Pressure-State-Response model is potentially applicable here to address the impact the farm has on the environment.[40] In this case the *pressure* is the state of the farm activity and what may cause environmental issues. The *state* variable describes a measurable characteristic of the farm environment caused by the *pressure* variable such as the effects of farm chemicals, although the primary focus here is measuring biodiversity cover as a ratio of land use for on-farm production. The *response* variable addresses the ecological problem both directly and indirectly, with the former addressed through things like pollution control, and the latter by alternative income sources for farmers that are less damaging to the environment.

It is essential that data obtained via use of Criteria is collated and used for a sustainability index that provides a snapshot of farm sustainability performance. This could be in similar format to the Environmental Sustainability Index that gauges sustainability progress on a country's resource use and

[39] The World Business Council for Sustainable Development (WBCSD) has recommended this ratio as a means to measure and report eco-efficiency: eco-efficiency = value provided/environmental burden; for more see <https://www.wbcsd.org/>.

[40] H Levrel et al, "OECD Pressure-State-Response Indicators for Managing Biodiversity: A Realistic Perspective for a French Biosphere Reserve" (2009) 18(7) *Biodiversity and Conservation* 1719.

environmental history.[41] The use of an index facilitates a comparative analysis across different farm types and allows for a quantitative systematic analysis of farm sustainability performance. For example, eco-efficiency indicators will assist in assessing goods and services produced and decision-making to move to a more eco-efficient product type. Production and consumption indicators may reflect developments in consumer demand for farm goods and services and is relevant for determining the environmental efficiency of production. Energy, water and waste indicators play an important part in determining material intensity for farms. This enables reporting on eco-efficiency in the same way a commercial entity reports on financial performance.

The overarching aim of sustainability Criteria is to define sustainability standards for benchmarking farm performance and setting standards for farm sustainability that accounts for different farm size and production profile. This means defining reference points on goals relevant to each Criteria. The choice of Criteria and how they are categorised and then prioritised in terms of data collection according to such reference points becomes the research challenge. A potential outcome is the development of a farm benchmarking framework. This assists the reporting process in use of triple bottom line assessments looking at environmental, social and economic bottom lines for on-farm performance. A reporting framework aims for a balanced representation of positive and negative sustainability performance. Key performance indicators for each category of farm type must be identified and evaluated for disclosure in the sustainability performance assessment. Guidance from Global Reporting Initiative (GRI) Sustainability Reporting Guidelines can help define content and quality of reported information.[42] This guidance includes Criteria protocols to help report preparers to ensure consistency in the reporting process. A key research challenge is to develop on-farm sector specific protocols covering technical guidance for farmers in the reporting process.

Categories for on-farm sustainability reporting process include disclosure covering farm performance setting out sustainability strategy, production and management profile. The latter includes disclosures relating to farm organisation and likely impact on sustainability performance. Other disclosures include performance indicators on economic, environmental and social performance of the farm and how they are balanced. These disclosures include direct economic and environmental impacts from farm production and on-farm ecosystem goods and services. A regulatory framework must aid farmers to understand the reporting protocols and receive payment to self-report against key Criteria based on-farm type. This provides the basis for independent third parties to verify sustainability progress across the sector.

A key purpose of sustainability Criteria is to align with biodiversity Criteria on key factors to help improve and measure eco-efficiency, trends in resource management and environmental changes. This helps to identify actions for remediation and respond to negative trends, while helping farmers achieve environmental and operational goals simultaneously. The WBCSD has identified seven key elements of eco-efficiency:

1. Reducing material requirements for goods and services
2. Reducing energy intensity of goods and services
3. Reducing toxic dispersion
4. Enhancing material recyclability
5. Maximizing sustainable use of renewable resources
6. Extending product durability
7. Increasing the service intensity of goods and services[43]

While not all of the foregoing factors are necessarily assessed for each farm, relevant parts will be in order to enable efficiency variables to be included into Criteria. The aim is to measure and report eco-efficiency as a ratio of value compared to environmental burden. This adds to the aims of the

[41] For further information on the Environmental Sustainability Index see <https://sedac.ciesin.columbia.edu/data/collection/esi#:~:text=The%20Environmental%20Sustainability%20Index%20(ESI,indicators%20derived%20from%20underlying%20datasets>.

[42] Details on the GRI Reporting Guidelines can be accessed here <https://www.globalreporting.org>.

[43] See WBCSD, *Eco-Efficiency Learning Module* <https://www.wbcsd.org/Projects/Education/Resources/Eco-efficiency-Learning-Module>.

ABSP in terms of resource stewardship and enhancing ecological performance. It is important for the government provide a standardisation of definitions and decision rules for calculating and reporting on-farm eco-efficiency. A standardisation of this type will enable setting eco-efficiency targets and allow for comparisons between categories of farm type and productive capacities. It is important for regulation to address the standardisation process within a sustainability benchmarking framework enabling a systematic approach to reporting and rating sustainability performance.

To achieve the foregoing, the regulatory framework must include biodiversity and sustainability reporting guidelines defining report content and ensuring quality standards are met in the reported information. This includes standard disclosures and guidelines on technical matters in the reporting process. Each performance Criteria use protocols as an educative and compliance tool to enhance compliance. Such protocols provide definitions, compilation guidance and other key information to ensure consistency in report completion. The aim of the ABSP, in addition to grow biodiversity on farm, is to improve investment in the agricultural sector. Improve sustainability reporting and performance in on-farm sustainability performance will help to do this.

VII. The Proposed Bill – What Is on Offer?

The objects of the Bill before Federal Parliament are to establish a market framework to enhance and protect native species and contribute to meeting international obligations relating to biodiversity.[44] Establishing a biodiversity market involves use of a tradeable biodiversity certificate which represents personal property.[45] This carries with it obligations to meet "protocol" specifications in relation to defined biodiversity projects and certain monitoring, notification and record keeping requirements. The Bill establishes an online platform for trading in biodiversity certificates.[46] Biodiversity is given a broad definition to include "variability among living organisms".[47]

The Bill pertains to "eligible land" which is Australian agricultural land.[48] If certain criteria are satisfied, a biodiversity project can be registered after application by an eligible person.[49] An application must specify the proposed area, the applicable protocol determination to apply to the project, the proposed activity and "permanence" period that applies pursuant to the protocol. The application must be accompanied by a prescribed audit report prepared by a registered greenhouse and energy auditor.[50] In order to obtain approval the project must relate to Australian agricultural land and is in accordance with the applicable protocol determination and meets the eligibility requirements in accordance with the rules.[51] The basis of the whole process is therefore dependent on the application of protocol requirements, the "rules" and biodiversity integrity standards.[52]

The focus is on protocol determinations which are determined under the auspices of the Minster for Agriculture, setting out how each registered diversity project is carried out including the permanence period.[53] These protocols can include added requirements the proponent must comply with, and can confer a broad delegatory power onto the regulator.[54] A protocol must have regard to biodiversity integrity standards and advice given by the Agriculture Biodiversity Stewardship Market Advisory Committee. In making a protocol, the Minister for Agriculture may have regard to significant adverse

[44] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 3.

[45] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 4.

[46] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 4.

[47] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 7.

[48] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 8(1).

[49] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) Pt 2, Divs 1, 2.

[50] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 13(3)(a).

[51] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 16(4).

[52] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 16(4).

[53] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 45.

[54] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 45(6).

environmental, agricultural, economic or social impacts that may arise out of the kind of project that the protocol covers.[55] A civil penalty will apply for any failure to comply with a protocol requirement.[56]

It is clear that the protocol determinations, biodiversity integrity standards and advisory capacity of the Agriculture Biodiversity Stewardship Market Advisory Committee, together represent key elements that will be fundamental to the success of the ABSP. It is also clear that a wide discretionary capacity is given to the Minister of Agriculture, and inferentially DAWE in form and content of the protocols. This power extends to cover revocation provided the Minister has had regard to biodiversity integrity standards and advice given by the Agriculture Biodiversity Stewardship Market Advisory Committee.[57] Importantly, the Minister may direct this Committee to have regard to specific matters in giving advice, which suggests a degree of control that may vary with different ministerial directions. None of the foregoing is unusual in terms of regulatory frameworks in terms of granting discretions in this way, but the extent of the discretion is considerable and is dependent on the application rigor of biodiversity integrity standards. Compliance to these standards will be made where there is "enhancement or protection of biodiversity that would be unlikely to occur if the project was not carried out".[58] Further requirements include the project can be verified, that evidence in support of the project is "clear and convincing", and estimates, projections or assumptions would be "reasonably certain". This leaves considerable room for discretionary decision-making on what is clear and convincing or reasonably certain. The position here on a preferred regulatory construction will be considered further in Part VIII herein, but the obvious conclusion is the current regulatory construction is dependent on the quality of the discretionary decision-making and this may vary. On current indications the determination of biodiversity integrity is "focused on outcomes" and this is determined by the extent of "tree cover".[59] This does not infer that final application of biodiversity integrity standards will not be of the highest quality. It is only to highlight that, current indications suggest a wide discretion which is reliant on the efficacy of protocol construction which, if variable, may decrease confidence in consistency in application of biodiversity integrity standards.

A biodiversity certificate may be issued for a registered biodiversity project in accordance with the relevant protocol determination.[60] This certificate represents personal property and may be transferred.[61] Interestingly, there is recognition of equitable interests in relation to biodiversity certificates, which presumably may apply in the advent of problems with the transfer and registration process laid down by the Bill.[62] The recognition of equitable interests, does not, however, mean an equitable interest that is a security interest within the meaning of the *Personal Property Securities Act 2009* (Cth). The Bill allows for purchase of biodiversity certificates by the Commonwealth, which is an important requirement for establishing a biodiversity certificate market.[63] Once again, the operation of the sale and transfer of biodiversity certificates by the Commonwealth is substantially controlled by the "rules" that are determined separately.

Other key features of the Bill are the reporting and notification requirements. There is an obligation on the project proponent to give project reports over the activity period of the project.[64] Content must be in the manner and form prescribed by the rules, and if subject to an audit must be accompanied by an audit

[55] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 47(1)(b).

[56] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 46.

[57] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 51(3).

[58] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 57.

[59] This was the answer given to the author who asked in respect to methodology for determining biodiversity enhancement at an online briefing session about the ABSP held on 24 February 2022.

[60] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 58.

[61] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 64.

[62] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cll 67, 68.

[63] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) Pt 6.

[64] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cll 89, 90.

report also prescribed by the rules and prepared by a registered greenhouse and energy auditor appointed for the purpose.[65] Importantly, the regulator may require audits of a party's compliance with the Bill.[66]

The Bill establishes an online platform to facilitate the trading of biodiversity certificates and any other purpose relevant to requirements of project proponents and prospective purchasers.[67] Once again, considerable reliance is made on the rules empowering the regulator to set up and maintain the online trading platform. This places considerable reliance on the rules getting the operational guidelines for the trading process in a form that facilitates efficacious trading and enhances value by ensuring the trade process runs without glitch.

Finally, the Bill establishes a general enforcement regime allowing civil penalty order in contravention of the civil penalty provisions.[68] Enforcement powers extend to infringement notices,[69] undertakings,[70] or injunctions,[71] the latter applying to carrying out a declared prohibited activity pursuant to the current clause 121 of the Bill. These powers apply in conjunction with provisions for the appointment of inspectors to assist carrying out enforcement activity, and investigatory powers.[72]

It is clear that content of the protocol determinations and rules prescribing requirements under the Bill and the efficacy in which the Agriculture Biodiversity Stewardship Market Advisory Committee carry out their functions, will be key to the success of the ABSP. The rules are prescribed by the Agriculture Minister and government departments under delegated authority. This level of delegation of discretionary power in relation to natural resource management is not unusual in Australian jurisdictions.[73] It should be noted, however, where a discretion can lead to inconsistency in application of required standards, the risk of non-application and of course, ultimately the risk of misapplication. While a wide discretion is necessary in order to provide a general administrative flexibility, it is a separate thing when a level of discretion risks lower eco-efficiency outcomes. This is discussed in the next section.

VIII. The Preferred Regulatory Structure

This section examines the ABSP primarily from the perspective of regulatory oversight of the Australian Farm Biodiversity Scheme (Scheme). An initial observation is the scheme involves considerable administrative oversight and cost in terms of Commonwealth support of the scheme and initial investment in biodiversity certificates from farmers. Given the substantial cost two initial recommendations are to include biodiversity with sustainability indicators as a combined certification standard methodology rather than biodiversity on its own. The rationale for that is based on increasing eco-efficiency rating of the farm enterprise and improve value of the biodiversity credit. An outcome of this is an increase in the reporting and management responsibilities of farmers and this leads to the second recommendation; recognising the service value provided in a combined biodiversity and sustainability package justifying a massive increase in payments to farmers in educating and paying them for the service provided.

The Scheme is predicated on the development and use of protocols covering biodiversity condition scoring, site assessment, management plans, approved assessor rules and reporting. The biodiversity condition scoring protocol has not yet been defined in detail but will contain the scoring method for certification. Without wishing to pre-empt the proposed method, the key recommendation here is that

[65] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 91.

[66] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 107.

[67] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 133.

[68] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 151.

[69] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 152.

[70] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 153.

[71] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cl 154.

[72] *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) cll 148, 150.

[73] For example, considerable discretionary power is also provided to the relevant Minister in Victoria under the *Sustainable Forests (Timber) Act 2004* (Vic), which controls public forestry in that State.

this be contained in methodologies within regulations connected to the current Bill and not left up to discretionary decision-making at departmental level. The rationale here is to ensure an established standard and consistency in application of protocol according to regional differences. The same recommendation is made for the site assessment protocol and biodiversity management protocols.

The biodiversity assessment protocol should use criteria and indicators for biodiversity and sustainability criteria and indicators in the assessment process. Criteria are not referred to in the Bill which means the content of biodiversity assessment protocols remain a discretionary exercise at departmental level. This risks greater disparity between protocols for different regions and lessens comparative analysis between different regions and farm types. Use of criteria enables consistency across different protocol categories and comparisons within each protocol category across different farm sizes and capacities. The criteria will also be relevant to addressing farm comparisons which account for land-type zoning of farms, regional condition scoring for land-type zones, farm vegetation condition scores, regional condition benchmark and the condition score comparison where the farm vegetation condition score is compared to the regional condition benchmark and the national minimum condition threshold. While regional condition benchmarks are designed to ensure farms are assessed across comparable farms with similar land types, this relies on consistent datasets in protocols. Use of Criteria will enable greater consistency in these datasets. While use of Criteria may be intended as the basis of assessment in the protocols, the explanatory memorandum associated with the Bill does not mention the use of Criteria.[74]

The ultimate aim of the ABSP is to ensure the development of biodiversity on agricultural land and provide an added income stream for farmers. To do this successfully the biodiversity certificate must have inherent value based on the security and consistency of the Scheme. A biodiversity certificate under the Scheme is heterogeneous with only one certificate issued for each project. It is meant to set out consistent, verifiable information on each project which includes biodiversity changes. To do this properly independently determined Criteria are required for use in protocol assessments and as a means to determine compliance and enforcement. These Criteria can factor into methodologies associated with biodiversity development across different farm types which should be specified in regulation and not left to departmental discretionary decision-making. Criteria also enable a greater range of inputs such as those discussed in Parts V and VI.

The Bill has defined the biodiversity certificate as a personal property right, it arguably does not go far enough in ensuring the inherent value of the certificate by an express government backing of its value, nor yet provided the rules for market operation which will also enhance value if information on the value of the product is inadequate. A failure to define the inputs into the protocols represents, at least currently, an information deficit that needs to be overcome for efficient operation of the market. Greater clarity is needed on the precise form of government involvement in potentially purchasing biodiversity certificates created under the Scheme. This clarity will also provide guidance to the private sector on the extent of their involvement. The aim is to enhance private sector involvement to enhance biodiversity development on agricultural land. This will occur where the rules of market operation for biodiversity certificates are clearly heralded in advance and the inherent value of the certificates increases with transparency consistency and strong verification practices in measurement metrics.

IX. Conclusion

The ABSP is a positive government initiative to improve quality and extent of biodiversity on agricultural land. The success of the scheme can, at least in part, be gauged by the extent of eco-efficiency engendered by the Scheme. Success will also be determined by the extent it benefits livelihoods of farmers who participate in the Scheme. It will also be assessed on its capacity to integrate agriculture with biodiversity on the same land and its capacity to engender participation by farmers and owners of farm businesses. Certainly, the Scheme is innovative at a national level for biodiversity enhancement in the agricultural sector and deserves success for its transformative aims. Above all the Scheme is attempting to address the fundamental alignment of agriculture with increased biodiversity and in that context must not be

[74] Explanatory Memorandum, *Agriculture Biodiversity Stewardship Market Bill 2022* (Cth) <https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=chamber/hansardr/25465/&sid=0006>.

allowed to fail. It is an irresistible alignment that must succeed because there will be increased reliance on Australia for agricultural products and this must not occur at the expense of increased biodiversity loss. The combination of agriculture and biodiversity uses Nature's environmental services in such a way as to ensure agriculture becomes a force for biodiversity conservation which improves productivity and marketability of sustainable agriculture.