Senator Duniam written question/s on notice for WWF AUSTRALIA

Re: Email from Senate Environment & Communications Committee (ec.sen@aph.gov.au), 6 July 2023

QUESTION:

1. WWF's submission advocates for provisions to be added to this legislation that would "allow the Commonwealth to offer incentives (e.g., co-payments or top-ups) to encourage private investment in projects that deliver high priority conservation outcomes". What quantum of money does WWF advocate should be set aside for this purpose: is it a certain percentage of the cost of projects that should be funded by public money, and/or particular amounts through other forms of incentives?

WWF RESPONSE:

1a. What quantum of money does WWF advocate should be set aside for this purpose [to encourage private investment in projects that deliver high priority conservation outcomes]?

Economic theory says that society should invest in biodiversity up to the point where the marginal costs of conserving or restoring nature exceed the marginal benefits obtained. In practice, there are only a few plausible national-level estimates of the costs of conserving and restoring nature. On the benefit side, we are not aware of any comprehensive analysis of the value of conserving biodiversity in Australia, aside from case studies and experimental environmental accounts. Moreover, economic valuation of biodiversity and ecosystem services remains contentious. As a result, it is impossible to state with confidence exactly how much should be invested in conserving nature.

What we do know is that many of the benefits that nature provides are public goods (i.e. they are 'non-rival' and 'non-excludable'). For this reason, the market, if left to its own devices, will tend to under-supply biodiversity in the absence of government intervention. We also know that current levels of public spending and current regulatory settings are failing to prevent ongoing biodiversity loss. In short, there are sound reasons in both theory and practice to believe that additional public support is required to halt biodiversity loss and restore nature in Australia.

In the absence of a clear basis for budgeting, the optimal quantum of public expenditure on nature is a political choice as much as a technical question (as with many other areas of public spending, e.g., health, education, social security). Nevertheless, WWF believes that Australia's Federal Government should invest at least double, in the short term, and ultimately several multiples of the A$235 million budget allocated to 'building a nature positive Australia' in FY24[1]. Future budget allocations will need to be reviewed based on the results achieved in the Nature Repair Market and other government programs. WWF stands ready to assist in any further technical analysis of the nature funding gap.

[1] Budget Paper No. 2 for 2023-24, published 9 May 2023, shows the following allocations:

- $49.5 million in FY24 "to deliver the Nature Positive Plan";
- $76.7 million in FY24 "to protect Commonwealth National Parks and marine reserves";
- $118.5 million over 6 years from 2023-24 for "the Urban Rivers and Catchments Program to fund projects to improve local waterways, fund activities that restore the natural habitats of aquatic species and create recreational spaces for local communities", or about $20 million in FY24; and
- $439.2 million over 5 years from 2023-24 for the Natural Heritage Trust (excluding agriculture support) "to protect and restore World Heritage properties, restore Ramsar wetlands, and conserve threatened species and ecosystems", or about $88 million in FY24 (assuming constant spending year-on-year).

Justification:

The level of investment required to halt biodiversity loss and put Australia on a 'nature positive' trajectory is uncertain. What we do know is that current investment and regulatory settings are insufficient to prevent continuing decline in biodiversity and essential ecosystem services.

At a global level, the UN has called for a 3-fold increase in financing for nature-based solutions "to limit climate change to below 1.5°C, halt biodiversity loss and achieve land degradation neutrality," from US$154 billion per year in 2022 to US$484 billion p.a. by 2030[2]. Another widely cited global analysis estimated that "domestic budgets and tax policy" would need to rise from US$75-78 billion p.a. to US$103-155 billion p.a. by 2030 – a multiple of 1.3-2 times current spending (in addition to subsidy reform and other government actions)[3].

In Australia, a recent analysis of the biodiversity finance gap focused on the costs of threatened species recovery[4]. The authors estimated total government spending on threatened species recovery by state, territory and commonwealth jurisdictions at A$122 million p.a. (in 2018 prices). The study then benchmarked Australian government spending against US government budget allocations for 284 species listed under the US Endangered Species Act, which had been independently assessed as adequately funded. The authors argued that Australia would realise comparable species recovery outcomes if we spent at least as much *per species* as the US government, on average. On this basis, they estimated that Australia would need to spend A$1.69 billion per year (in 2018 dollars) to match the results of successful US spending on threatened species[5]. After allowing for inflation to mid-2023, this is equivalent to A$2 billion p.a., or about 9 times the total federal budget for nature in FY24[6].

The global studies cited above used a 'top down' approach or, in the case of Wintle et al. (2019), estimate the costs of halting extinctions in Australia based on the costs of conservation in the US. Another recent national study used a different approach, estimating the costs of achieving the full recovery of threatened species from the 'bottom up', based on the costs of typical methods used in Australia[7]. The authors reported wide variation in the unit costs of threat management, from as little as $24/km2 p.a. for mapping climate refugia, up to $879,985/km2 for restoring tropical rainforests. This study is particularly helpful for understanding the relative costs of different conservation interventions, which is a key consideration for priority setting.

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[2] United Nations Environment Programme. (2022) State of Finance for Nature, Time to act: Doubling investment by 2025 and eliminating nature-negative finance flows, Nairobi.

[3] Deutz et al. (2020) Financing Nature: Closing the global biodiversity financing gap, Paulson Institute, Nature Conservancy, and Cornell Atkinson Center for Sustainability, https://www.paulsoninstitute.org/conservation/financing-nature-report/

[4] Wintle, B.A., Cadenhead, N.C.R., Morgain, R.A., et al. (2019) Spending to save: What will it cost to halt Australia's extinction crisis? Conservation Letters, 12:e12682, https://doi.org/10.1111/conl.12682

[5] This is a partial estimate, given that threatened species recovery does not address all conservation priorities. This estimate includes state and territory spending but excludes conservation efforts by local governments, the private sector and NGOs.

[6] Other published estimates of the biodiversity finance gap in Australia vary but are generally higher. For a review, see: Ward, A., and Lassen, M. (2018) Scoping Paper: Expanding Finance Opportunities to Support Private Land Conservation in Australia, ALCA, https://www.conservationfinancenetwork.org/sites/default/files/2020-05/Conservation-Finance-Scoping-Paper-30-October-2018%20%281%29.pdf

[7] Yong, C., Ward, M., Watson, J. E. M., Reside, A. E., van Leeuwen, S., Legge, S., Geary, W. L., Lintermans, M., Kennard, M. J., Stuart, S., & Carwardine, J. (2023) The costs of managing key threats to Australia's biodiversity. *Journal of Applied Ecology*, 00, 1–13, https://doi.org/10.1111/1365-2664.14377

1b. Is it a certain percentage of the cost of projects that should be funded by public money, and/or particular amounts through other forms of incentives?

WWF recommends that the Commonwealth establishes an overall conservation budget (as above) and uses best-practice methods to allocate these funds, rather than offer a uniform percentage of cost or a fixed amount per project. In most cases, this will involve the use of reverse auctions to maximise value for money, or fixed price offers that reflect government conservation priorities.

Justification:

In principle, public money should be used to bridge the gap between private willingness to pay and social benefit. The size of this gap varies from one property or project to another. Key determinants of the funding gap include the value of current and potential land uses, landholder preferences, and the relative importance of the property or the project for biodiversity conservation.

Paying a fixed fee or a fixed percentage of project costs risks paying more than necessary for some projects and, conversely, not enough for others. Determining how much funding is needed for any given project requires a flexible approach. Governments know how important a particular property or project is from a conservation perspective, but they may not have easy access to information about land values or landholder preferences. Landholders, on the other hand, will have a good understanding of the value of their properties, and may know how much they would be willing to accept to undertake a conservation project, but they may be reluctant to reveal this information in the hope of gaining a windfall profit.

To overcome this information asymmetry, governments can employ reverse tenders (or reverse auctions) to determine the minimum amount of funding required to secure a desired conservation outcome. Reverse auctions are used successfully for publicly funded conservation programs in North America and the EU, and in Australia by the NSW Biodiversity Conservation Trust and the Queensland Land Restoration Fund. WWF supports the use of reverse tenders or reverse auctions for the bulk of Commonwealth funding of Nature Repair projects.

Note that reverse auctions work best if the desired outcome can be achieved on more than one property and if competing bids are offered by multiple landholders without collusion. In this case, government can solicit and select those bids that offer maximum conservation value for money within the available budget. However, in cases where a single property has unique conservation value (e.g., a wetland used as a rest stop or nesting site by migratory birds), it may be more cost-effective for government to purchase or lease the property. Here again, the determining factors are the conservation value of the property, the total government budget, and the willingness of the landholder to sell or lease their land, rather than any fixed fee or share of project costs.

Although auctions can be an efficient way to spend public money, they can be costly to administer and are therefore most appropriate for relatively high value government purchases. In other cases, the government may choose to minimise administrative costs by establishing a schedule of fixed price offers. These offers can vary according to the type of project or region, reflecting their relative priority for conservation. Fixed price offers run a risk of paying more than necessary, but their lower administrative costs may compensate for the loss of efficiency.

For further information, please contact: Dr Joshua Bishop, WWF-Australia,