

Improving our understanding of the multiple benefits of Indigenous Land and Sea Management Programs (ILSMPs)

Science summary

by Natalie Stoeckl (James Cook University) and others



Northern Australia
Environmental
Resources
Hub

National Environmental Science Programme

World class research to support sustainable
development in northern Australia

Other researchers on this project are Dr Jane Addison, Dr Diane Jarvis, Dr Silva Larson and Dr Michelle Esparon. Assisting with the research in the Fitzroy are Emile and Celia Boxer from Yakannarra and assisting in Qld are Dr David Dahwurr Hudson and Sharon Prior, Traditional Owners of Ewamian Country. In WA, this project is partnering with Bunuba, Gooniyandi, Yanunijarra and Nyikina-Mangala Traditional Owners. In Qld, this project partners with Ewamian Traditional Owners.

In addition to providing environmental benefits, do ILSMPs:

1. **Improve quality of life for Indigenous people?**
2. **Help promote northern development and close the (income) gap?**
3. **Help promote Indigenous economic independence?**
4. **Help Indigenous communities meet their wider aspirations?**

and thus help promote sustainable development in northern Australia?

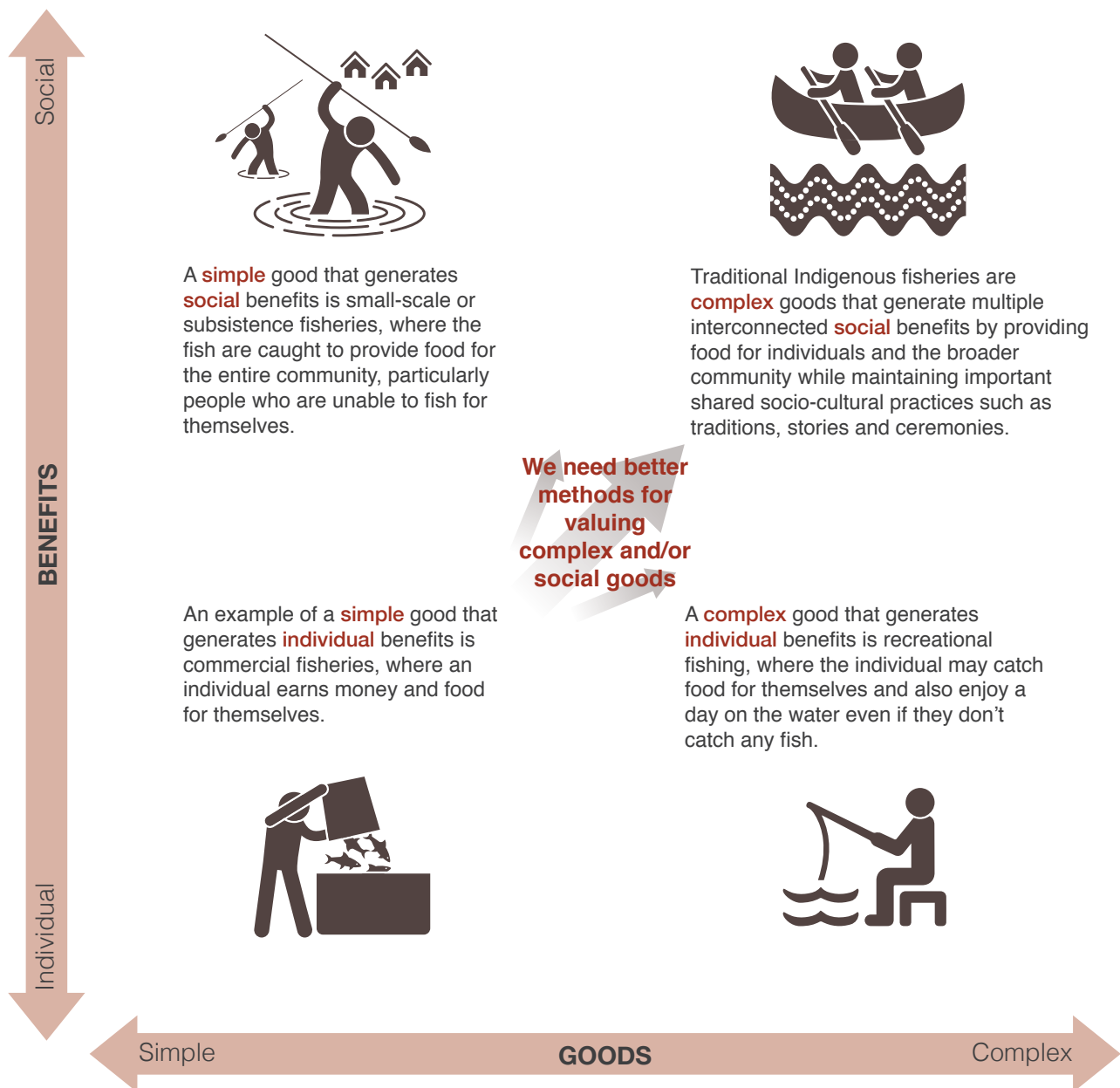
WE NEED BETTER METHODS TO VALUE COMPLEX GOODS AND SERVICES THAT BENEFIT THE ENVIRONMENT AND SOCIETY MORE BROADLY

Indigenous Land and Sea Management Programs (ILSMPs) generate a range of benefits. These benefits can be simplistically classified in two ways: first, according to whether the benefit accrues primarily to an individual or to the broader community; second, according to whether the benefit is relatively simple (e.g. food) or complex (e.g. food and the maintenance of culture). The valuation tools developed by economists over the last 100 years are differentially suited to assessing particular types of goods and services. The most common methods are adept at highlighting the benefits of simple individual goods. Recent developments have also seen progress towards the valuation of complex individual goods. Much less well developed, however, are methods to

estimate the benefits of complex social goods. We need to develop methods that are able to do so, or risk 'crowding out' these complex social goods because we focus most attention on simple individual goods which are easier to measure.

Failing to account for complex social goods and other values, social norms, and motivations that support them has several implications:

- economic logic suggests that investment should be directed to programs with the greatest benefit per dollar spent. If, due to their complexity or because we lack methods for assessing them, entire classes of benefits are routinely omitted from deliberations, spending will invariably be directed towards interventions and projects that generate more easily monetised benefits (i.e. towards simple individual goods) rather than to projects that generate the greatest benefit, per se (at least some of which are likely to be associated with complex social goods).
- dominant valuation methods assume that an ecosystem service may be 'valued' as the amount an individual is willing to accept (in monetary terms) as compensation for its degradation or disappearance. This framing contrives the price at which an otherwise socially unacceptable trade-off may be sanctioned, belies the true nature of social goods, and trivialises difficult decisions regarding the best course of action for society as a whole.
- cost-benefit analysis (CBA) and associated valuation methods assume that the value of a good (or project) to society can be estimated simply by adding together the values that accrue to individuals. Yet just as the value of a shoe is critically diminished in the absence of its partner, so too are complex social goods likely to be fundamentally complementary. In other words, it may not be possible for an individual (e.g. Natalie) to forgo receipt of a complex social good (accepting money as compensation) without diminishing the overall value of that good for everyone else.
- the institutionalisation of CBA and the valuation methods that underpin it has crowded out alternative methods and institutions capable of dealing with complex natural resource management issues. The emphasis on financial incentives in environmental protection has



Methods to value simple individual goods are well developed, however methods to evaluate complex goods and/or goods that benefit society are limited. ILSMPs provide many of these difficult-to-value benefits in addition to benefits such as improved environmental outcomes.

been shown to weaken other intrinsic values, social norms, motivations and behaviours crucial to the protection of the environment and the promotion of the public good.

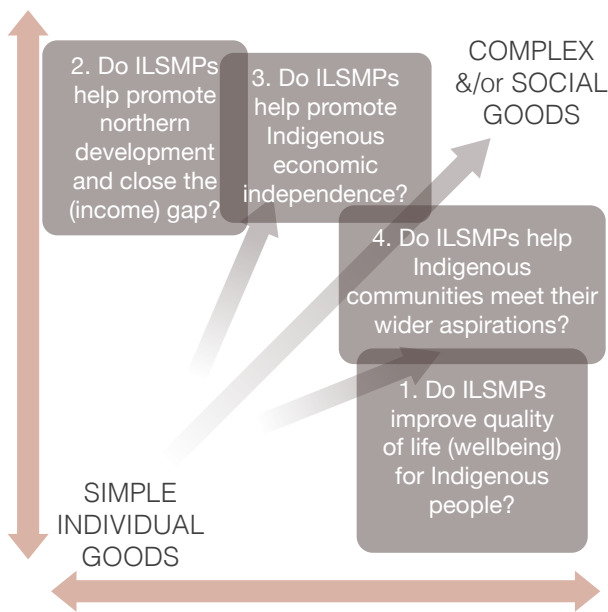
Our most well-developed methods for putting a price on nature don't ask "What is right for society as a whole?" but rather "What would generate the greatest benefit for individuals within society?". It is important to consider what individuals want, but focusing on this alone risks the crowding out of social goods, institutions and norms that support the environment and individual and community wellbeing. Should we abandon traffic signals because some individuals are willing to pay to do so or would this incur an unacceptable cost to society? If we are to produce a truly complete valuation of

nature – or of complex social goods such as ILSMPs that support and protect nature – then we must include the complex social interactions and bonds which are rooted in nature, not just focus on the potential for individual gain or loss. The challenge, of course, is to work out how to measure them.

More info

- Stoeckl N, Hicks C, Farr M, Grainger D, Esparon M & Larson S. 2018. The crowding out of complex social goods. *Ecological Economics* 144: 65-72. <https://doi.org/10.1016/j.ecolecon.2017.07.021>
- Farr M, Stoeckl N, Esparon M, Grainger D & Larson S. 2016. [Economic values and Indigenous protected areas across Northern Australia](#). James Cook University, Townsville.

WE USE FOUR APPROACHES TO VALUE SOME DIFFERENT BENEFITS OF ILSMPs



How the four research approaches/questions are helping to elucidate the values of complex and social goods associated with ILSMPs.

1. Do ILSMPs improve quality of life (wellbeing) for Indigenous people?

This research develops a new approach to assessing program impacts (which could be used in numerous contexts) while addressing our first key research question. The approach asks interviewees to identify and rate factors that are important to their wellbeing. It also asks them to rate their satisfaction with those factors now, and before the ILSMP was implemented. Qualitative responses are linked to quantitative data to draw inferences about the existence and importance of impacts, and people’s perceptions of the link (or not) between impacts and ILSMPs.

Interviews with Ewamian people in north Queensland identified ‘Knowing that country is being looked after’ and ‘Having legal right/access to the country’ as important to wellbeing, with perceptions that Native Title determination, Indigenous Protected Area and associated land management programs have had a significant and positive impact on them. Evidently, ILSMPs have the potential to positively impact factors beyond jobs and which are important to the wellbeing of Indigenous people.

We are still analysing responses from people in the Kimberley but early insights suggest that:

- Factors that directly relate to ILSMPs such as ‘Knowing that country is being looked after’, ‘Having legal right/access to the country’ and

‘Having (paid local) jobs’ are important to the wellbeing of people in all of our study areas.

- The lowest levels of satisfaction (and most significant declines in satisfaction during recent years) were associated with reduced numbers of jobs available locally, low incomes, poor or crowded housing, and ‘social ills’ (e.g. grog and gunja) – none of which were associated with ILSMPs.
- Some of the most significant, positive, changes reported during recent years had direct links to ILSMPs – specifically, having legal access to country, knowing that country is being looked after, having more (positive) role models in communities with specific reference to Indigenous rangers.

More info

- Larson S, Stoeckl N, Jarvis D, Addison J, Prior S & Esparon M. 2018. Using measures of wellbeing for impact evaluation: Proof of concept developed with an Indigenous community undertaking land management programs in northern Australia. *Ambio* <https://doi.org/10.1007/s13280-018-1058-3>

2. Do ILSMPs help promote northern development and close the (income) gap?

This research highlights that ILSMPs make a significant contribution to the economies of the Kimberley, NT and far north Qld, with the \$80m of ILSMP expenditure during 2014-15 generating an additional \$106m of knock-on benefits. The ‘multipliers’, or regional economic impacts, associated with ILSMPs commonly exceed those of other key regional industries such as agriculture and mining. ILSMPs in the north can also help ‘close the gap’, with more per-capita benefits flowing to Indigenous households than non-Indigenous households. These benefits can be enhanced by encouraging ILSMP managers to use locally based, Indigenous-owned businesses where possible and to hire Indigenous people at all levels. This research is showing that, far from there being a trade-off between socio-ecological and financial/economic goals, ILSMPs – known for their ecological importance – also have a vitally important contribution to make to the economic development of northern Australia, while potentially also helping to redress observed (significant) income inequalities between Indigenous and non-Indigenous people.

More info

- Jarvis D, Stoeckl N, Hill R & Pert P. In press. Indigenous Land and Sea Management Programmes: Can they promote regional

development and help 'Close the (income) Gap'? *Australian Journal of Social Issues*.

- [Can Indigenous Land and Sea Management Programs help 'close the gap'? Policy note.](#)

3. Do ILSMPs help promote Indigenous economic independence?

This analysis shows that economic policies developed to stimulate urbanised Western economies do not easily translate to stimulating growth in remote Indigenous economies across northern Australia. Rather, if aiming to promote economic development and/or independence in northern Indigenous economies, it's important to stimulate demand for goods and services that 1) are produced by Indigenous people and which 2) generate benefits that align with the goals and aspirations of Indigenous people. We also need to 3) create conditions conducive to innovation. ILSMPs provide all three of these characteristics and more than 65% of ILSMPs undertake commercial activities that generate revenue and create jobs.

Our statistical modelling demonstrates that expenditure on ILSMPs generates positive spill-overs for other Indigenous businesses, even those not engaged in land management ILSMPs – albeit with a three-year time lag.

We observed an increase in the number of Indigenous businesses located in postcodes where ILSMP expenditure occurs during the year expenditure takes place, and in subsequent years. The impact increases with time i.e. there is larger growth in year three than year two, which is larger than in year one.

We can identify three ways to explain how this may be happening but at this stage cannot determine which (if any) is having the greatest effect. For example: 1) ILSMPs may improve people's skills, knowledge and experience with this improved human capital facilitating further business growth; 2) a multiplier effect may exist with Indigenous businesses receiving ILSMP funding then spending more with other Indigenous businesses, thus increasing demand; 3) ILSMPs may contribute to an increase in the general productive capacity of the region.

As to why this is happening, we tentatively suggest that the wellbeing impacts of ILSMPs (see part 1) and the close alignment of ILSMPs with Indigenous aspirations – often associated with empowerment, caring for country and community support – may be helping to create the right environment for innovation and creativity.

All these factors suggest that ILSMPs, known for their ecological importance, also help promote self-sustaining growth cycles and Indigenous economic independence.

More info

- [Are Indigenous Land and Sea Management Programs a pathway to Indigenous economic independence? Policy note](#)
- Jarvis D, Stoeckl N, Addison J, Larson S, Hill R, Pert P & Watkin Lui F. In review. Are Indigenous Land and Sea Management Programs a pathway to Indigenous economic independence?

COMING SOON...

4. Do ILSMPs help Indigenous communities meet their wider aspirations?

Jane Addison has conducted workshops with the Ewamian Aboriginal Corporation, Bunuba, Gooniyandi and Yanunijarra groups, as well as Bedunburra community (within Nyikina-Mangala country, represented by Walalakoo Aboriginal Corporation). Analysis of information gleaned in these workshops and through document analysis (ongoing) will help us to better understand the contribution of ILSMPs to community-level aspirations.

Further information

Contact project leader Professor Natalie Stoeckl at natalie.stoeckl@jcu.edu.au. The project page can be found on the [Hub website](#), along with the [start-up factsheet](#).



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