“From devolved grants … to babysitting. Broadening the horizon of incentives.”

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Abstract

Singular incentive mechanisms are not a panacea for all environmental problems. In the majority of cases, a mix of instruments tailored to specific policy and Natural Resource Management (NRM) goals will be the most effective response to environmental problems. This paper presents a framework that has been designed to act as a guide to the selection, design and delivery of an incentive mechanism (or mechanisms) by aligning the issues, dynamics and operating structure of a group of landholders with a mix of ‘best fit’ incentives. The framework does this by collecting information through a series of checklist questions and subsequently uses a matrix and ranked criteria to analyse the information. The framework has been used on a trial basis and the outcomes have revealed encouraging trends which have helped to move the incentives debate forward.

Introduction

In the last two decades, environmental managers and policy makers have been markedly expanding and emphasising the mix of policies and scope of instruments available to halt trends of unintended degradation, alleviate environmental pressures and improve natural resource condition. This mix of policies and instruments aims to use better valuation of natural resources and reverse the onus of responsibility to create opportunities for good environmental managers while penalising the poor managers. The intent of this mix is to:

- Simplify the overwhelmingly complex structures that exist at present;
- Empower the farming community to take control of the problems;
- Support the farming community with first class science, and
- Provide the farming community with adequate public funds to deliver on-ground solutions.

While no policy instrument will completely align landholder and environmental objectives, some mechanisms are better than others at making conservation in the landholders' interest by effectively turning natural resources into assets.

The framework discussed in this paper reflects a practical problem faced by regional groups faced with implementing the national NRM agenda on the ground. This problem is simply described as follows. Given the above, that there is an expanded range of potential solutions available, to be used as stand-alone, or in combination with others, how does a regional body select the appropriate one or mix. Secondly, there are many case study examples of the use of particular instruments in different locations with different characteristics. How does a regional body determine what is applicable to their area based on the experiences of others. And thirdly, how much does a regional body need to know of its own area to be able to decide from the range of options and relevant case-studies what will provide the best options for a given issue in a given place. As will be discussed in this paper, the QMDC as a regional body was looking to determine a method to help make sense of all the information both theoretical and practical requiring them to develop and implement incentives. WWF-Australia, as a national conservation organisation, was interested in working with a practical partner to determine how a decision making process can be used to help NRM bodies around the country to appropriately select and design incentives that will work for them and the public good. This paper discusses the preliminary results in developing and trialling a decision making framework to meet these needs.

NRM Delivery Arrangements

Recently in Australia, NRM has been undergoing an evolutionary process. To improve on traditional approaches, non-government organisations have increased their emphasis on employing innovative policies and instruments in the new regional management focus for NRM initiatives. Consequentially, as delivery institutions, non-government and community organisations in Australia are in a powerful position to establish, promote and administer these policy mixes – in particular incentive schemes – through current institutional arrangements for delivery of sustainable NRM and as part of their activities and strategies to promote particular environmental outcomes. As a result, the Queensland Murray Darling Committee Inc. (QMDC), has been interested in the potential for incentive mechanisms as one element of a variety of strategies to promote sustainable management practices to private landholders in order to achieve specific environmental outcomes in the Queensland portion of the Murray-Darling Basin (MDB).

Effective devolvement

Through the National Action Plan for Salinity and Water Quality (NAPSWQ) and Natural Heritage Trust II (NHT2), QMDC has had, and will continue to have the responsibility to devolve significant sums of on-ground money to deliver strategic outcomes and meet regional targets. QMDC is looking to leverage maximum outcomes from a range of stakeholders, including those who do not normally participate. To do this and achieve the most desirable outcomes, QMDC has decided to develop a 'toolkit' of optimal policies and instruments, with a major tool being the use of economic instruments and suasive measures, with a primary focus on incentives. QMDC is therefore hoping to use incentives as an important element of this integrated policy-mix approach to on-farm management, together with planning, regulation, education and encouragement of a partnership between private landholders and conservation organisations.

Framework development history

To develop and use this toolkit to the best advantage, QMDC has incorporated the use of incentives in its draft Regional Natural Resource Management Plan and Investment Strategy. Prior to the projects undertaken in the past eighteen months, QMDC had already commenced taking several of the steps required in the approach to implement an incentive scheme. However, the organisation did not have a sufficient knowledge base or framework from which to proceed. Despite extensive literature on the broad topic of incentives, no available document provided a comprehensive guide to the selection, design and delivery of a mix of incentives. Consequentially, the choice of instrument by most organisations, including

QMDC, was usually made without reference to any overall management framework with the result that processes were both less strategic or transparent than required and desired.

Incentive mechanisms are not a panacea for all environmental problems and it is not possible to generalise about what forms are most effective. In the majority of cases, a mix of instruments tailored to specific policy goals with a focus on the social processes that work within the target area or demographic will be the most effective response to environmental problems. Thus, there became a need to strategically and carefully select and design 'optimal' incentive/s to correspond with QMDC's plan and investment strategies that suited the social dynamics of the region. In other words, getting beyond devolved grants … to babysitting … or for that matter, whatever incentive will provide the best outcomes for all parties involved.

This is what the framework developed by the QMDC has been designed to achieve. It has been designed to act as a guide to the selection, design and delivery of an incentive mechanism or mechanisms by aligning the issues, dynamics and operating structure of a group to a mix of 'best fit' incentives.

Framework Development Phases

Phase One:

The focus of Phase One was to provide QMDC with an options' review of incentive mechanisms and other relevant environmental policy tools to develop a framework to guide the selection, design and delivery of these mechanisms. This framework's aim was to help ensure that in future, the correct incentive is chosen for a particular situation, that it is well designed and increases the likelihood of the incentive/s meeting the desired objectives. It does this by matching the dynamics and operating structure of a group, area or issue with a suite of incentive mechanisms for a best fit. It tries to avoid a prescriptive approach, encouraging accelerated implementation of critical on-ground actions through innovative community actions (Dalton, 2003). Additionally, Phase One also provided QMDC with a comprehensive literature review detailing the main reasons for intervention by organisations, background to the main environmental policy tools and a closer look at incentives themselves – including their typology, reasons and benefits for use, private vs public use and past incentive deployment in both Australian and international contexts.

Phase Two:

A number of ongoing projects was required to validate the information and address the constraints and opportunities associated with the deployment of the framework. Before the framework was widely used as a tool to guide the selection, design and delivery of incentives in practical applications, it required further research in the form of testing, evaluation and refinement phases to ensure its validity and usefulness. This phase built on past research and improved its value to QMDC through the use of 'real life' case study trials to give an understanding of how applicable and useful the framework is in a practical sense. Furthermore, this project was designed to also test and evaluate the process of deployment of the framework outcomes to enhance capacity building and the implementation of works at the sub-catchment and property scale, with value-added delivery to the community being an important aspect to ensure uptake and worth.

The Framework

1. Objective Information

1.1. Objective Identification

The first and initial step of the framework is perhaps the most important. It requires the identification of a broad scale objective to work towards using one of the approaches mentioned above. From this broader objective, any sub-objectives that emerge from it may be identified and the remaining steps in the methodology may then be applied to each one. If there are no sub-objectives, the methodology should be applied to the initial broad objective.

2. Target Area Information

2.1. Targeted Area Determination

The second step addresses the specific areas that need to be targeted to achieve the sub-objective and ultimately the main objective, together with the location in the catchment, sub-catchment or region in which they fall. This step will most likely be determined in the very initial stages of the project (that is, with objective identification) but should be reconsidered and refined at this step.

3. Land Management Practice

3.1. Current Practice

The framework then determines the current practice or range of current practices in the targeted area for each sub-objective that is contributing to the current situation and trend.

3.2. Necessary/desired State or Practice

The framework requires us to think about what management actions or practices would address the sub-objective and overall objective identified in the first step. This step is useful for conceptualising the type of changes envisaged and thinking about whether any perverse outcomes are likely to arise, as well as beginning to think about the incentive mix. There could be a variety of answers for this step depending upon the spatial and current practice information gathered above. It is important in this step, however, to continue to fix our focus on the outcome required, not the practice.

4. Target Audience Information

4.1. Target Audience Characteristics

A series of questions is then posed regarding the audience in the targeted area in order to achieve the sub-objective and the broad overall objective. Ultimately, we need to determine the identity and demographics of our audience (that is, their socio-economic and cultural characteristics, as well as their capacities and capabilities) to determine how to influence them. Once again, from this information we can begin to think about the incentive mix needed.

4.2. Constraints to Change

As a part of this step, constraints to landholder change are identified so they can be targeted and incorporated by the incentive scheme selected.

4.3. Benefit Receivers and Cost Bearers

A third part to the step requires us to think about who is benefiting and who is losing under the current practice, as well as the likely ramifications if practices were to change.

5. Incentive Information

5.1. Incentive Design Features

It is likely in this step that various specific questions regarding the possible incentive options and their viability within the context will need to be asked and further specific analysis and design undertaken. Ultimately, this step provides a preliminary sieve on the incentive options. (Moss, W, 2003, pers. Comm, 7 January)

5.2. Incentive Option

This step requires the gathering of information regarding what incentive options are available and background information to these options.

5.3. Incentive Option Selection

Now we are in a better position to select the best suited incentive. This step is ultimately a continuation of the previous steps. Based on the developed methodology in Appendix I, it requires a selection of the relevant incentive option/s using information gathered in previous steps to identify features of the solution required.

6. Preliminary Evaluation and Testing

The final step requires a preliminary evaluation of how each sub-objective rates against the incentive options after the additional methodology has been applied. At this point, a 'step back and look' approach is recommended to holistically consider the sub-objectives and the objective. With the results of this evaluation in mind, a re-consideration of the main objective and the sub-objectives is required, as well as a final determination of the suitable trade-offs to determine the optimal incentive/s for either the broad objective or the sub-objective.

Learnings and Opportunities

There are various learnings and opportunities identified as a result of the process to date:

1. Opportunities exist to extend the range of incentive instruments, as well as the use of incentives to address various issues. A key challenge of improved incentive use is to discover more about the range of circumstances under which incentives can successfully be applied. (Action Salinity and Water Australia, 2002)
2. In the future, it is likely that regional bodies such as QMDC will be given greater autonomy to devise solutions and be primarily responsible for determining what (if any) interventions are required to achieve those solutions. It is therefore important to ensure that these institutions/regional bodies provide for genuine regional consultation and decision-making and are granted sufficient flexibility, authority and resources to implement their decisions. The development of regional solutions in the future should not be overly constrained by the jurisdiction-wide regulations that currently often override particular regional circumstances and needs. (Productivity Commission, 2003)
3. There are important future opportunities – and in some cases, challenges – for regional bodies to develop adequate partnerships and linkages with government, environmental organisations and industry. (Dalton, 2003)
4. In the future, regional bodies are likely to act as brokers to facilitate the desired private sector investment and will include the promotion, coordination and delivery of incentives and monitoring to ensure that they achieve environmental goals. (Robinson and Ryan, 2002)
5. There is a great need for supporting information to be available that is not only comparable and consistent, but that also decreases the likelihood of perverse outcomes at the design and operational level. (Agtrans Research, 2003)
6. Currently there is considerable scope for improving the availability of relevant information and all organisations have the potential to play valuable roles in the provision of this information. (Industry Commission, 1997)
7. One of the most prominent challenges for the future use of incentives is to improve the institutional arrangements that support the use of incentives to foster change in NRM. (Agtrans Research, 2003)

Conclusion

'Incentives' mean many things to many people. Probably for the majority of people who actually receive them, the first thought that springs to their mind is devolved grants or something similar – the predominant way of delivering monetary incentives in exchange for environmental repair work in the past. Even for those innovative processes which are starting to emerge, there is usually still the primary focus on the best biophysical outcome for the money expended. QMDC has deliberately taken a different focus with the goal of still getting the best biophysical/economic balance, but at the same time having a primary focus on using social dynamics to achieve the best possible result. QMDC believes that this focus on social process as a means to the biophysical end (albeit a longer and more tortuous process) will provide the long term benefits of increased ownership, increased participation and an 'extended warranty' on the protection or repair of any given asset. Getting beyond devolved grants may be a process in itself, but QMDC is convinced that a broad range of suasive incentives – including paying babysitting fees, for example – will make a positive contribution to enhancing tangible and measurable on-ground NRM outcomes.

Appendix I

Incentive Option Selection

This section presents additional methodology for Step 5.3 to further guide the selection of an optimal incentive or optimal mix of incentives. It requires the use of information gathered in previous steps to answer a series of questions detailed below for each individual sub-objective in the main objective. This step involves the development a matrix and criteria specific to each sub-objective from a criteria bank to rate incentive options according to how they measure against the criteria standard. Once this has been completed for each sub-objective. the ratings are totalled to determine the highest rated incentives. This step is not designed to provide a definitive answer to which incentives are optimal, however, it provides another preliminary sieve on the incentive options and additional information to that already collected. Using all this information, a final decision should be able to be made using the final step in the methodology.

Specific Steps

What is the main objective?

What is the specific sub-objective?

Step 1: Into which of the following categories does the sub-objective to be addressed fall?

A. Priority Area/Key Threatened Asset	**B. Maintain**	**C. Restore/Recover**	**D. Major Adjustment**
Focus on where there is a clear threat, clearly threatened site or population or where clear priority for action, and is quite localised with identifiable (small) number of players.	Where current practice is acceptable, or could be acceptable if more widely adopted and/or where status of environment affected by practices is ecologically functioning (but trend could be in decline, therefore requiring changed practices).	Where current practices are causing ecological degradation/damage and/or the current environmental state is poor and the trend declining.	Current practices are poor and not sustainably viable, best practice options unlikely to make impact, changes needed on large scale with local community unlikely to be able to generate sufficient resources or practical to rely on private capacity to achieve objective.
Examples: Last population of a community; particular habitat of a migratory species; nationally significant wetland or high salinity hazard.	**Examples:** Extension of remnant vegetation; condition of biodiversity is good or trend – static.	**Examples:** Low remnant vegetation; widespread salinity potential; degraded biodiversity conservation or decline in biodiversity or vegetation trends.	**Examples:** Low profitability over long period or high debt to equity ratios over large proportion of businesses.

Step 2: What are the best suited incentive opportunities in each category for private land?

Mechanisms that are reasonably interventionist and provide security and continuity of management.	Use of duty of care thresholds to identify incentive opportunities and encourage public good actions.	Mechanisms to encourage community wide response for ecosystem services.	Advocate rural adjustment style where biophysical and social outcomes are the drivers rather than maintenance of non-viable users.
Grants (all kinds) Reimbursement of incremental costs Royalty income Special species payments Revolving funds Land acquisition Performance bonds Stewardship agreements Binding management agreements	Resource use and supply Volunteer assistance Regulatory Relief Standards Certification, accreditation and licensing Tax concessions Subsidies Low Interest Loans Rate concessions Grants (all kinds) Reimbursement of incremental costs Exemption from fees Bush Tender/Conservation Auction Revolving funds Tradable credit scheme Environmental offsets/banking Stewardship agreements Management agreements (both types) Development concessions	Resource use and supply Volunteer assistance Regulatory relief Standards Certification, accreditation and licensing Low interest loans Tax concessions Deposit-refund systems Cost share - subsidies Rate rebates Grants (all kinds) Reimbursement of incremental costs Exemption from fees Bush Tender/Conservation Auction Bounties Compensation funds Special species payment Revolving funds Land Acquisition Tradable credit scheme Stewardship agreements Debt for nature swaps Management agreements (both types) Development concessions	Regulatory relief Standards Certification, accreditation and licensing Tax concessions Rate concessions Grants (all kinds) Reimbursement of incremental costs Bush Tender/Conservation Auction Revolving funds Tradable credit schemes Stewardship agreements Changes to leasehold agreements Binding management agreements **Note:** This category also requires the use of additional rural adjustment mechanisms that are outside the scope of this study

Notes: 1.

1. The above lists have been determined through a preliminary evaluation of each incentive option using details from the Summary paper and authors' knowledge. Those that are removed from the above lists were deemed unsatisfactory for use in this situation.
2. Disincentives were not included in the lists above as they are not the focus of the project and are not currently perceived to be available or useful to QMDC.
3. Information and Education provision incentives such as Technical Assistance and Recognition and Empowerment were not included in lists of incentive options above as they underpin all schemes and are thus suasive measures that apply to, and should be used in all categories. (Productivity Commission, 2003)

Step 3: Use of a Matrix to apply criteria and determine how well the incentive rates against each one.

Refer to authors for detail.

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