



action

Salinity & Water

A U S T R A L I A

Integrating Economic and Social Issues in Regional Natural Resource Management Planning

A Framework for Regional NRM Bodies

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EXECUTIVE SUMMARY

The National Action Plan for Salinity and Water Quality (NAP) and the proposed extension of the Natural Heritage Trust (NHT2) are national programs being implemented through a partnership between the Commonwealth Government, State Governments and communities. Regional Natural Resource Management Bodies are developing, and will be implementing, Regional Natural Resource Management Plans and Investment Strategies. A crucial part of regional planning is assessing and managing the social and economic impacts of natural resource management strategies.

These Guidance Materials aim to assist regional bodies to incorporate economic and social considerations in regional planning to meet accreditation requirements. They provide a framework, background information, methods and tools, and references to further sources of assistance.

The materials consist of six parts:

1. **Background information:** An outline of the function of regional and local economies and social systems.
2. **Overarching Considerations:** Key aspects of assessing and managing social and economic implications.
3. **Regional Overview:** The components of an effective overview of the current social and economic situation and trends in a region.
4. **Regional Aspirations:** Determining key social and economic issues in a region and establishing a value or importance for issues.
5. **Targets and Actions:** Various tools and methods for considering economic and social issues in planning, and developing and assessing targets and actions.
6. **Monitoring and Evaluation:** A range of indicators and techniques to evaluate economic and social change resulting from NRM activities.

Background Information

Local Economies: Local economies involve the interaction of markets, resources, “rules”, decision-making and spatial considerations. They are complex systems inherently based on human decision-making, perception, confidence and experience.

The idea of export base splits economies into two parts. The export sector consists of all activities that bring money into a community or region from outside. All the economic activities that occur wholly within a region comprise the non-export sector. Multipliers measure the linkage between these two sectors. They give an estimate of the direct impact of an economic change and the indirect impact as impacts flow through the rest of the economy. The role of economic leakage and the informal economy are also important.

Local Communities: There are many different types of communities and communities consist of many sub-communities. Outcomes at the broader community level often depend on understanding the make-up and interests of sub-communities.

Communities have five main forms of capital – physical, financial, human, social and environmental. Community outcomes rely on building not just physical infrastructure or income but also human capital of skills and knowledge, and the social capital of organisation, networks and collaboration.

Social and Economic Impact Assessment: A socioeconomic impact results from how a change plays itself out in the local economic and social situation. Impacts are dynamic, and change can have the following sorts of impacts - Primary and secondary, local and non local, monetary and non-monetary, private and public, and positive and negative.

The three main stages involved in assessing socioeconomic impacts are assessment and prediction, mitigation and monitoring and audit and analysis.

2. Overarching Considerations

The Moving Baseline: Improvements in resource condition and economic and social conditions need to be measured against not what condition is now but what it would have declined to if nothing more were done.

Distribution across Stakeholders: Social and economic impacts affect stakeholders differently.

Timeframe: Natural resource management decisions often involve short term social and economic impacts to achieve long term improvement in environmental condition. Impacts take time to play out.

Zero Sum: Social and economic change can result in “zero sum” outcomes for regions. Employment or income created in one sector results from an equivalent loss in another sector leading to no net gain.

Impacts across Regions: While regional bodies are focussed on developing and implementing plans for specific regions, it is also important to consider issues and potential impacts across regions.

Uncertainty and attitudes: The uncertainty of change or attitudes towards changes can have a very real impact on economic behaviour and social circumstances. The nature of the regional economy and local communities influences the extent of socioeconomic impacts and the ability to manage change.

3. Regional Overview

A regional overview involves gathering information on social, environmental and economic issues and developing a clear “baseline” view of the current regional situation. It largely involves a “desktop” assessment of community characteristics and trends and includes a range of social/demographic and economic indicators such as population, age profile, employment, and business mix.

A large number of techniques can be used to involve community members in assessing the social and economic situation of their community and in identifying issues. Some key methods most relevant to regional NAP bodies are community swaps, “first impressions”, surveys, nominal group technique, appreciative enquiry, community “conversations”, focus groups, rapid community appraisal, and asset mapping.

4. Regional Aspirations

This section includes checklists, prompts and indices to help scope social and economic issues and aspirations to maintain and improve the regional economic and social conditions. This includes

Scoping Social and Economic Issues: A wide range of social and economic issues relevant to a region are listed, such as maintaining rural population and maintaining local employment.

Value and Importance: A “decision tree” is used to determine what a regional body feels are the most important social and economic issues based on five criteria and a cumulative “index” of scores.

Describing Issues: Highly valued issues are described in detail including the current situation, desirable goals, and opportunities for consideration in planning.

“Do Nothing More” Situation: The impact of not changing current practices gives a moving baseline comparison for likely impacts on social and economic issues of NRM strategies.

5. Targets and Actions

This section provides a basic “laypersons” approach to the complex issues involved in assessing potential impacts of NRM targets and actions. It describes a framework and basic techniques to assist regional bodies ranging from relatively simple assessments through to comprehensive methods requiring detailed data.

The assessment involves more than a simple trade off between costs and benefits to arrive at a maximised net benefit. It also includes strategies to mitigate costs and enhance benefits and the “reframing” of problems or costs into opportunities and the development of incentives for people to pursue opportunities rather than simply absorb costs.

Scoping of Targets: Regional bodies need to scope targets and actions in two steps. First, regional bodies need to specify what exactly targets and actions involve and identify the variables involved. Second, likely costs and benefits need to be initially “brainstormed”.

Assessment of Socioeconomic Impacts: Regional bodies can choose four main levels of assessment of likely impacts of targets and actions. These levels represent a spectrum of increasing complexity, detail and data in the analysis as follows:

1. **Estimated impacts:** Targets and actions are assessed by considering their impact on the key social and economic issues determined earlier. Impacts are estimated using the value and impact scales as before. The “do nothing more” situation provides a baseline from which the impact of various strategy options is estimated. Hence the impacts of the options are the incremental changes expected from the do nothing more situation for each issue, not from a uniform baseline. They are represented on a likert scale of -5 (very detrimental impact) to +5 (very large improvement) from the do nothing more situation.
2. **Simple assessment:** The second level of analysis is a modification of the estimation of impacts. It uses the same principles but considers more detailed and quantifiable parameters such as employment, income or farm profitability.
3. **Basic measures:** simple calculated measures of economic activity such as multipliers and location quotients are used to estimate the impact of changes in the local economy.
4. **Detailed analysis:** detailed socioeconomic analysis involved technical methods and specialist expertise such as cost/benefit analysis, input/output analysis, cost effectiveness analysis and multi-criteria analysis.

Input output analysis examines the structure and interdependences in a community’s economy. It includes the inputs needed by various sectors to create goods and services, transfers of inputs and products between sectors in the local economy, and “exports” such as household consumption, exported goods and additions to inventories.

Cost/Benefit analysis quantifies and calculates the monetary benefits and costs associated with economic impacts. These are then discounted to estimate the net present value (NPV) of proposals. This allows the identification of those options with a positive NPV and benefit to cost ratio and also allows ranking of viable options.

Cost effectiveness analysis compares the cost-effectiveness of a range of options in achieving a specified goal.

Multi-criteria analysis incorporates different elements of impacts by assigning weights (reflecting the decision maker’s subjective values) to each priced and unpriced

component. In this way, each criterion does not necessarily need to be measured in dollar values.

6. Monitoring and Evaluation

Three levels of evaluation of regional plans by regional bodies are proposed:

1. **Activity Evaluation:** inputs invested, activities and outputs achieved,
2. **Process Evaluation:** the effectiveness of processes used in engaging and working with regional stakeholders. The effectiveness of this process can be gauged by criteria such as the level of participation and the involvement of the diversity of the community.
3. **Capacity Evaluation:** change in social, economic and environmental capacity or condition.

Each level of evaluation relies on the same logic where evidence of expected outcomes on particular issues is demonstrated by selected indicators. Variables are measured to illustrate the change in indicators. The change in indicators is evidence that the situation with an issue has improved or declined and whether the expected outcome has been achieved.

Some key methods for measuring indicators are “secondary” data such as census information, informed person feedback, community interviews, and cause and effect mapping.

The Guidance Materials provide extensive references to further information.

INTRODUCTION

The National Action Plan for Salinity and Water Quality (NAP) and the proposed extension of the Natural Heritage Trust (NHT2) are national programs designed to facilitate improved natural resource management. These programs aim to better conserve Australia's biodiversity, ensure sustainable use of natural resources, reverse trends in salinity, improve water quality and secure reliable water allocations. The aim is to secure the long term future of land and water resources and the viability of rural and regional industries and communities.

The programs are being implemented through a partnership between the Commonwealth Government, State Governments and communities. This partnership is represented operationally by Regional Natural Resource Management Bodies (Regional Bodies) who are developing, and will be implementing, Regional Natural Resource Management Plans (Regional Plans) and Investment Strategies. These regional plans are the foundation for decision-making and on-the-ground action. The development and implementation of regional plans involves:

- Comprehensive community input and participation,
- Setting clear aspirations and goals for natural resource management,
- Committing to achievable targets and actions that link to broader aspirations,
- Backing up priorities with knowledge and data where available,
- Building strong partnerships between stakeholders,
- Fostering extensive information sharing and communication,
- Monitoring and reporting on outcomes.

A crucial part of regional planning is assessing and managing the social and economic impacts of natural resource management (NRM) strategies. Sustainable environmental improvements depend not only on managing natural resources, but also on sustaining the economic base of communities, and ensuring social well being. Hence, understanding and anticipating social and economic impacts is important to the effectiveness of regional plans.

Indeed, regional plans will need to demonstrate rigorous analysis of issues, comprehensive planning and prioritisation, and considerable community involvement to be accredited by the partners. Plans will need to include comprehensive social and economic analysis of issues and priorities to ensure that environmental, social and economic aspects are fully considered and that proposed actions are sustainable.

Hence, a key challenge for regional bodies will be incorporating social and economic issues into the design of regional natural resource management plans. They will also need to consider economic and social impacts that result from the implementation of regional NRM strategies.

These Guidance Materials aim to assist regional bodies to incorporate economic and social considerations in regional planning and conduct appropriate social and economic

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analysis. It provides a logical framework, background information, methods and tools, and references to further sources of assistance in laypersons terms. It closely links with the overall guidelines for regional bodies *Guidelines for Developing a Regional Natural Resource Management Plan and Investment Strategy in Queensland* and other modules developed to support these guidelines. Hence, these guidance materials outline approaches that will allow regional bodies to provide the social and economic analysis and consideration to best meet accreditation requirements.

They aim to help regional bodies incorporate social and economic issues into NRM planning in three ways.

1. Comparing proposed options to help formulate strategies, e.g. broad scale soil erosion prevention vs. more targeted soil erosion mitigation,
2. Assessing the “triple bottom line” impacts of existing strategies and targets e.g. improving water quality,
3. Comparing or assessing the impacts of components or actions involved in existing strategies e.g. changes to irrigation practice, vegetation retention.

Ultimately, these Guidance Materials aim to support deliberation and planning by regional bodies to manage a practical “triple bottom line” approach and select environmental management options which maximise net benefits to society.

These guidance materials focus on the social and economic aspects of Natural Resource Management Planning. Other materials are being developed to specifically cover a wide range of environmental considerations and the issues of particular groups, such as indigenous people, that need to be addressed in NRM planning.

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Social and Economic Issues in Regional Planning

Why consider social and economic issues in natural resource planning?

Fundamentally economic, social and environmental issues depend on each other. Natural resources sustain many local communities and their economy. In turn, salinity, for example, not only reduces environmental quality but also has a huge economic and social impact. Change in the use and management of natural resources will also influence employment, mobility and social structures. As a community we have aspirations for good social, economic and environmental outcomes being achieved at the same time – therefore our NRM planning needs to recognise the implications for social and economic outcomes and strive to maximise the net benefits to the community, not just the environmental benefits.

The development and implementation of sound environmental practice is strongly influenced by economic and social situations. The level of local income and employment, and local relationships and collaboration, are very important to supporting good environmental management practices. Environmental decisions also involve economic considerations, such as effects on business profitability, and social circumstances, such as changes to community relationships.

Hence sustainable improvement in water quality and reduction in salinity depends not only on sound environmental planning, but also on managing economic and social issues.

This interrelationship is very complex. Benefits are often long term and unpredictable. There are often unplanned or unintended consequences that impact on different aspects of the economy, environment and society. Environmental, social and economic costs and benefits are not equitably distributed. Public and private benefits differ. Decisions are largely based on values and culture, and trade offs between economic, environmental and social values are complex value-based decisions. It is inherently difficult to identify, analyse, compare and trade off environmental, social and economic implications of a possible NRM management action/strategy.

Managing this complexity requires a framework for considering social and economic issues and impacts. This is particularly important given the significance of NRM decisions in regional planning and potential social and economic impacts. A framework also provides rigour in deciding between implementation options. This ensures that investment decisions in NRM give the best value for money.

Assessment Expectations

The Queensland/Commonwealth NAP Joint Steering Committee (JSC) has provided a general set of expectations for the social and economic assessment of options in regional plans. These expectations will be considered when considering accreditation of plans. Key requirements are as follows (from *Joint Steering Committee Statement of General Expectations for Social and Economic Assessments Undertaken for Natural Resource Management Regional Plans*, 8 April 2003):

1. The assessment undertaken is cognisant of the relevant sections of the NAP bilateral agreement and guidelines for the development of Plans.
2. Without requiring the use of any particular information or methodologies, the assessment should demonstrate the use of broadly accepted relevant information and methodologies. Information on this issue can be sourced from available guidance products, any other relevant documentation and professional advice / input from recognised practitioners in the fields of social sciences and economics.
3. Where strategies and proposed actions are likely to have significant impacts, advice should be sought on appropriate approaches to assessment. This advice may include, but is not limited to, problem specification, the provision of data, assistance with the development of terms of reference for assessments and peer review of assessments.
4. Where Regional Bodies do not have any “in-house” expertise in social and economic assessment, the JSC will seek evidence of the astute use of recognised social science and economic practitioners in the development of the Plan.
5. Social and economic issues should be considered, and where necessary, specifically incorporated at each stage of the Plan development process (Plan scoping, target setting, strategy development, investment strategy development, and monitoring and evaluation).
6. It is expected that the social and economic assessment will become more detailed and robust as the development of the Plan progresses, particularly with respect to investments that may have significant impacts.
7. A social and economic profile of the region should be undertaken to identify general social, cultural and economic trends and to enable the determination of any impacts of proposed investments. This profile should include trend information wherever possible. The profile should demonstrate an understanding of any social and economic dependencies on and linkages to the use and health of the resource base.
8. The social and economic profile of the region including trends should help establish the ‘do nothing more’ or base case against which the impacts of proposed actions and investment strategies are evaluated. This should be clearly described in terms of taking no further action apart from a continuation of current effort.

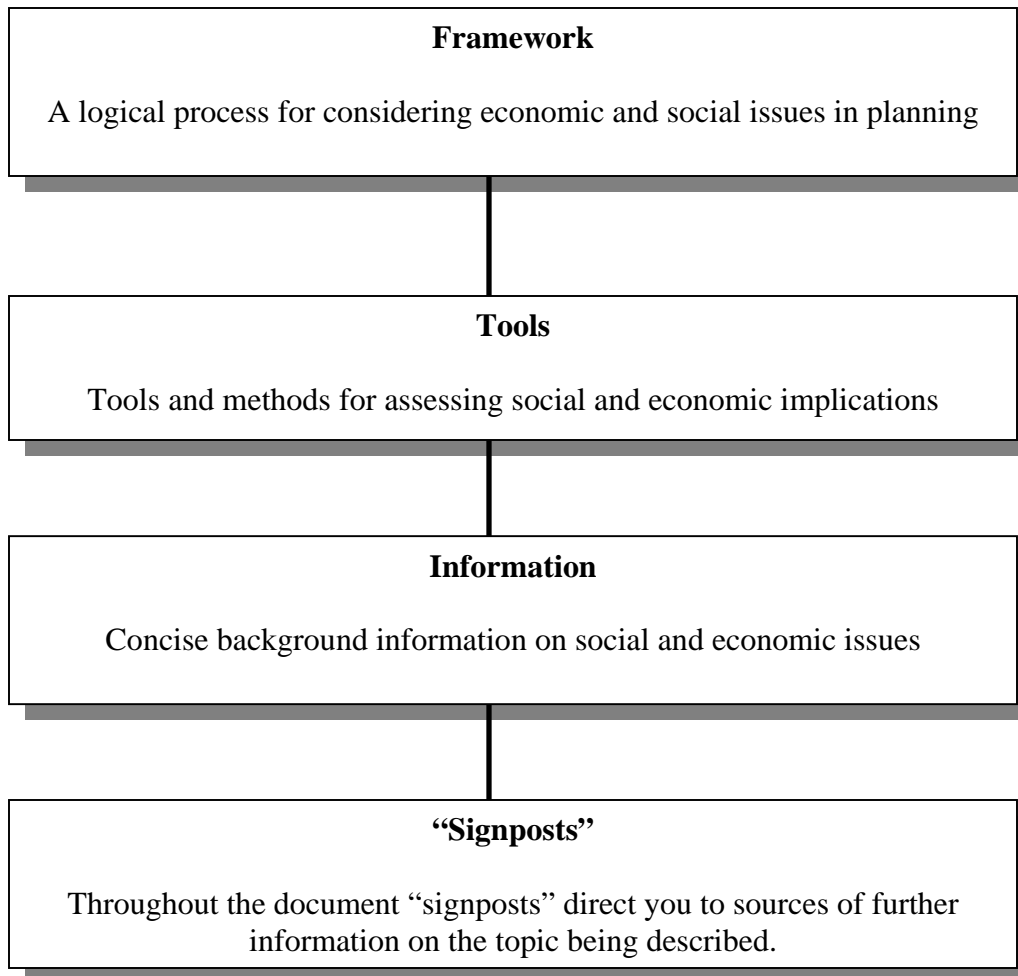
9. Where it is apparent that there are potential material social and / or economic impacts of any proposed investment, the affected parties (individuals, industries, regions, communities, cultural groups etc) should be identified. Immediate, medium term and long term positive and negative impacts should be considered. Each impact should be described, and where possible, evaluated, preferably against a 'do nothing more' base case
10. Where a number of options are available to achieve a desired outcome identified in the Plan's investment strategy, evidence will be sought that the relative social and economic impacts (including potential tradeoffs) of each option are identified and evaluated.
11. Evidence will be required that affected parties have been consulted and any social and economic issues raised by them have been appropriately considered and incorporated into the assessment.
12. As a general rule, the JSC would expect a more detailed and robust assessment where the potential social or economic impacts are significant (i.e. the greater the potential impact – the greater JSC's expectation for a more detailed and robust assessment).
13. All assessments should be transparent, clearly documenting:
 - the information used;
 - the methodologies used and their rationale;
 - the specific application of any analysis techniques used and the assumptions made;
 - how any input / feedback from stakeholders was considered and incorporated into the assessment, and;
 - the findings of the assessment, including clarification of the likely accuracy of the findings.

Meeting these expectations requires a structured framework for prompting and considering social and economic issues, appropriate analysis tools and interpretation and deliberation of social and economic impacts. These Guidance Materials are structured to provide these. They do not provide answers, but aim to support a process of deliberation and informed decision making. They support this deliberation by helping regional bodies make informed assessments of social and economic issues and consider social, economic and environmental impacts.

The Queensland Government is establishing three positions to support the social and economic SIPs including the integration of social and economic assessment into plan development. The positions will have a number of functions to support plan development along with data facilitation, maintaining cross-department and regional links and reviewing the social and economic components of NRM plans as they are developed.

Using the Guidance Materials

The Guidance Materials have four main integrated functions as follows.



The guidance materials follow a logical planning sequence consistent with the overall approach described in *Guidelines for Developing a Regional Natural Resource Management Plan and Investment Strategy in Queensland*.

The materials are structured in six logical parts:

1. **Background information**: An outline of the function of regional and local economies and social systems. This provides important concepts and practical understanding of economic and social issues in a regional NRM planning context.

2. ***Overarching Considerations***: Key aspects of assessing and managing social and economic implications.
3. ***Regional Overview***: The components of an effective overview of the current social and economic situation and trends in a region, and methods of assessing the current situation.
4. ***Regional Aspirations***: Determining key social and economic issues in a region and establishing a value or importance for issues.
5. ***Targets and Actions***: This includes checklists and various tools and methods for considering economic and social issues in planning, and developing and assessing targets and actions. The methods described are not exhaustive and other options for analysis are referred to. Regional bodies can choose to adopt those or other methods rather than the approach described in this document if they wish.
6. ***Monitoring and Evaluation*** – Assessing the economic and social impact of NRM strategies and actions. This includes a range of indicators and techniques that regional bodies can use to evaluate economic and social change resulting from NRM activities.

The Guidance Materials are deliberately simplified for use by community members on regional bodies. Rather than giving a comprehensive description of various analysis techniques, they intentionally give a basic overview with references to further more detailed information.

BACKGROUND INFORMATION

Before assessing social and economic issues and impacts, it is important to refresh basic concepts of regional economics and social function.

Understanding Local Economies

Local economies are like a bucket of water (figure 1). The bucket represents a pool of local resources and economic activity. Money flows into communities through the sale of outputs from the region. Outputs are not just the sale of commodities. They are anything that brings money into the region, such as tourists visiting the community, students from outside paying school fees, or retirees or commuters moving into the region.

Like water in the bucket, money circulates within the region. People purchase and sell goods and services to each other within the region.

Money and resources leak out of regions through:

- non-local purchase of inputs,
- people spending money outside the region,
- resources not being utilised or under-utilised such as unemployment,
- resources being lost such as decline in natural resources or people leaving the region.

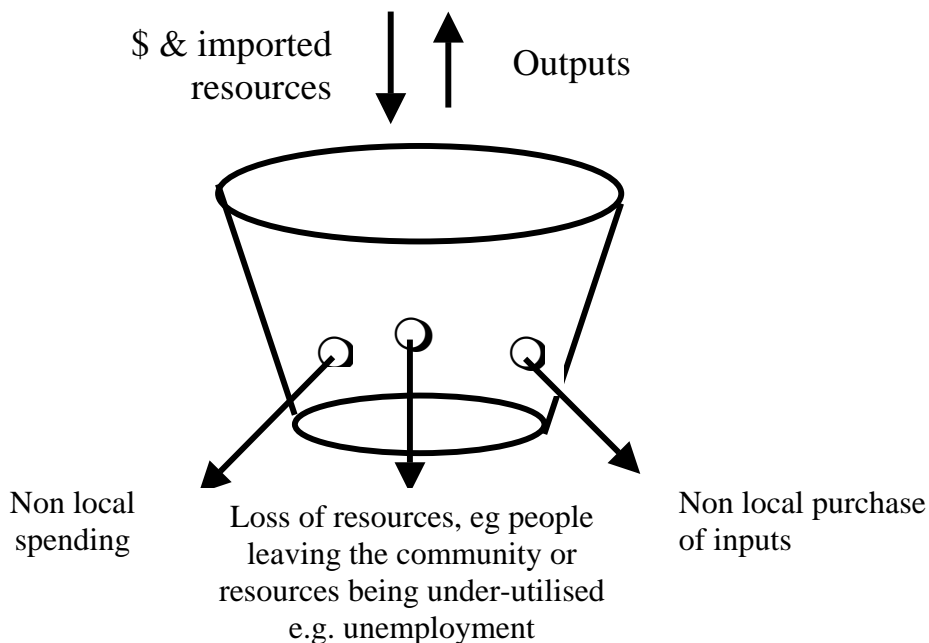


Figure 1. Local economies are similar to a leaking bucket.

In incorporating economic issues into NRM planning, regional bodies will need to consider local economies as far from sterile sites of purchase and sale with the rational flow of dollars, inputs and outputs. They are complex systems inherently based on human decision-making, perception, confidence and experience. Often seemingly small activities accumulate, ideally building the economy a few jobs at a time in a way that is in line with community and natural resource management values.

A good way of thinking of local and regional economies is outlined in figure 2. It involves the interaction of markets, resources, “rules” and decision-making.

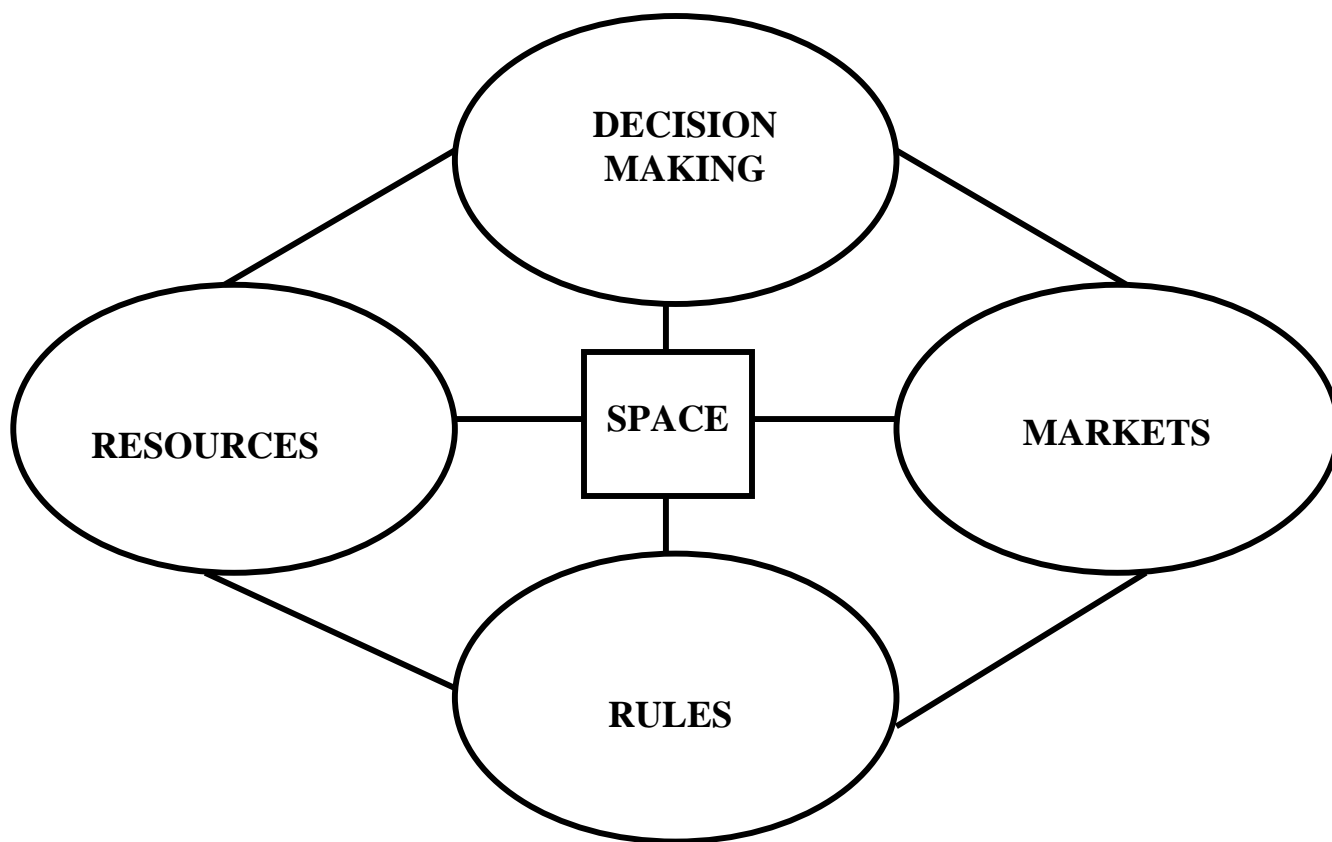


Figure 2. The Shaffer “diamond” – a framework for considering community economies (Shaffer, 1989).

Local economies function and develop as a network of interactions between these four components. For example, communities must derive resources, such as labour, natural resources, and skills, to produce goods and services to meet markets in particular locations. They must also deal with different “rules” (such as regulations) that vary geographically. The ability of people to make decisions also affects how resources meet market demands.

Considering each component individually gives different approaches to economic development for communities.

Markets

A market perspective emphasises the external demand for goods and services and cost competition. Options for improving the economy focus on increasing external demand, increasing the flow of money into the region, and improving cost competitiveness. Major issues are proximity to markets, overall trends in demand for community products, commodity prices, value adding, and the extent of competition.

Resources

The resources part of the “diamond” assumes that a community’s output and income depends on the extent of the community’s productive resources, such as labour, financial capital or technology. It presumes that what is produced can be sold, and focuses on increasing the supply of labour, money and knowledge.

Economic development strategies based on supply focus on the availability, skills and mobility of workers; lending policies of banks; availability of venture capital; extent of infrastructure; and access to new technology.

Rules

Economies are governed by “rules” ranging from government legislation to community beliefs, perceptions and culture. Examples of “rules” are trading hours, minimum prices, workplace health and safety legislation, or accepted ways of conducting business. These arrangements determine attitudes towards resource use, how communities market outputs, how technology may be used, and how people interact.

From a “rules” point of view, communities can create or alter legislation, guidelines, principles, values and beliefs that reduce transaction costs and help their economy function. In turn, economic development needs to be in tune with environmental guidelines, town planning procedures or public acceptability of particular types of enterprises.

Decision-Making

Economic activity depends on decisions. For example, businesses must decide about how to respond to market trends, or how to develop new products or meet new markets. The ability to gain and interpret information and make informed decisions largely determines how well economies function and how regions can pursue new options. Communities must make decisions with poor information, conflict, and uncertainty. Their capacity to do so relies on skills, knowledge, leadership, creativity and cooperation.

To develop economic decision-making, community members can focus on access to information, effectiveness of community organisations, opportunities for community debate, effective leadership, and ability to follow through on decisions.

Space

Distance and the physical location of communities affect local economies in several ways. Ultimately, every economic transaction has a spatial dimension, particularly in rural areas.

Firms locate based on various priorities such as to minimise costs, maximise demand or for “behavioural” reasons such as emotional links to communities. Businesses dealing in bulk commodities tend to locate near raw materials. Firms that produce finished products and services tend to locate near markets.

Businesses locate together to gain economies of scale such as attracting a labour force, supply industries or comparison buyers. Rural communities can benefit from spin off trade from regional “anchors” such as a major attraction or business. Communities can also overcome distance, expanding their “catchment” of customers by specialising in particular goods or services.



Shaffer, R.E. (1989) *Community Economics. Economic Structure and Change in Smaller Communities*. Iowa State University Press, Iowa.

Export Base

Another way of understanding local economies is the idea of “export base”. The idea of export base splits economies into two parts – an export sector and a non-export sector (figure 3). The export sector consists of all activities that bring money into a community or region from outside – sale of goods, tourism, transfer payments etc. It is the “water” pouring into the “bucket”. All the economic activities that occur wholly within the “bucket” comprise the non-export sector.

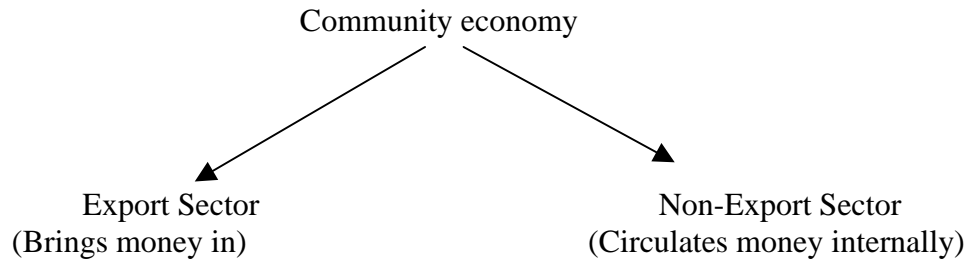


Figure 3. The export and non-export sectors of a regional economy.

The idea assumes that the export sector drives the economy. Businesses that recirculate money locally depend on money brought into the community by the export sector. It also assumes that changes in the local economy can only occur through export dollars.

How the economy grows depends on the extent to which the export sector feeds money into local circulation – the linkage between the export and non-export sectors. This link is called the multiplier effect. It measures the amount of economic activity from the export sector that transfers into the total local economy.

For example, how many jobs or how much income derived from the export sector leads to jobs and income in the whole local economy. Multipliers measure the extent to which export dollars are “captured” in the regional economy – the extent to which they recirculate as opposed to leaking out of the bucket. They can show how connected the community economy is to its export sector and how much leakage occurs from the community “bucket”.

Economic Impacts

Multipliers are an important concept for assessing economic impacts. When an economy is changed by say, a new business opening, the additional money that it attracts to the “bucket” is respent over and over in the community leveraging more output and sales from other sectors in the economy.

It is important to note that each time a dollar is respent some of it leaks out of the economy each time to pay for non-local inputs, or wages paid to non-local workers or as money used by locals to shop elsewhere. Eventually the impact of respending diminishes until it is negligible. Figure 4 gives a hypothetical example of respending and associated leakage.

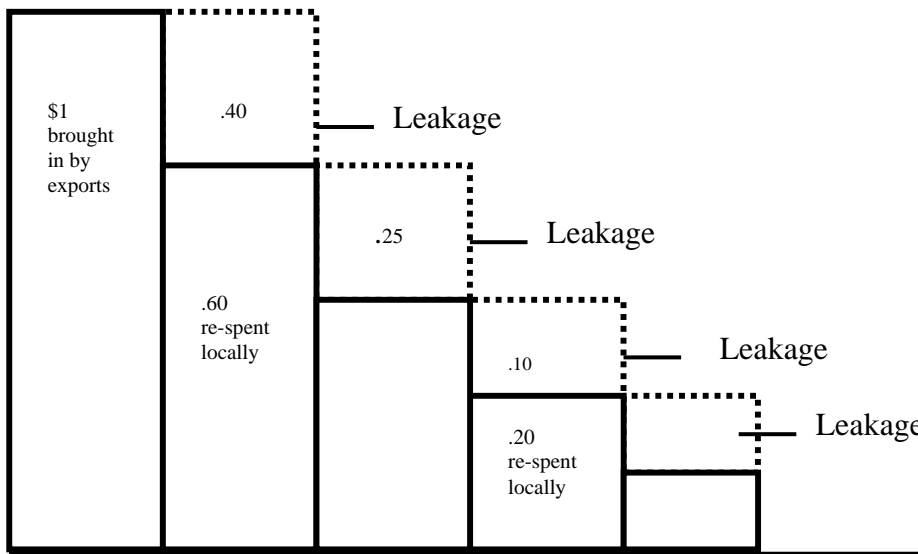


Figure 4. The leakage of export income from a local community (from Hustedde et.al., 1993).

The concept of leakage, the total impact of an additional dollar of output from each sector is the sum of all the diminishing responding effects. For example, say an extra dollar of agricultural output produces an initial impact of 37cents of additional output from all sectors in the local economy in the first round of spending. It levers an additional 17 cents of output from the whole economy from subsequent rounds of responding. An extra 39 cents of additional consumption is also stimulated leading to a total multiplier of 1.94 (which includes the original dollar of output). Conversely, the impact of a reduced dollar of output is the sum of the reduced level of responding in the local economy.

The economic impact of a change in natural resource use such as retiring cropping land to pasture has both a direct and indirect component. The direct component is the direct change in economic activity that the particular change brings such as reduced profitability for the properties retiring land from grain growing. The indirect component is the change in the dollars flowing through the economy as a result of increased or reduced purchases and sales as output is respent over and over in the local economy. The impact eventually leaks out of the economy

The impacts of changes to output in different sectors (e.g. agriculture) varies for each sector depending on factors such as:

- the linkage of that sector with the rest of the local economy and the extent of economic “leakage” from that sector;

- the labour intensity or wage rates in different sectors. Changes in sectors with higher wage rates or sectors that make up a greater proportion of local employment and output will have relatively greater overall impact;
- the relative size of each sector in the economy. For example, in many rural areas, a change in agricultural output will have a greater impact than a similar change in say manufacturing output.

Economic Development Strategies

There are four general strategies to improve regional economic activity:

- increase the flow of money into the community,
e.g. attracting an outside employer or value adding, such as agri-tourism.
- encourage new local business starts,
e.g. mentoring schemes for local entrepreneurs, community investment funds.
- improve the efficiency of existing firms,
e.g. education and training, improved service and inventories.
- increase the local capture of dollars/reduce leakage
e.g. “buy local” campaigns.



Pulver, G. (1989) *Community Economic Development Strategies*. University of Wisconsin Extension, Madison Wisconsin.

Kenyon, P. 1994 *Ready Set Go: Action Manual for Community Economic Development*. Municipal Association of Victoria, Melbourne.

Informal Economy

In considering the structure of rural economies, we must not forget the informal economy. This is the economic activity that occurs “unofficially” without records or sometimes even without the transfer of money. This includes cash-in-hand payments or barter transactions. Rural communities lend themselves to informal transactions and communities need to consider impacts in both the formal and informal economies.

Understanding Local Communities and Social Structure

Community

A community is a collection of people that share something significant in common. What makes a “community” is the way community members think of themselves as a community – not necessarily the way “outsiders” may view a community.

There are many definitions. However, the key components of a community are:

- a group of people,
- discernible boundaries, physical or otherwise,
- a commonality – a shared identity derived from common experience, interest, or proximity,
- communication linkages – that may not always be active, but they do exist.



Christenson, J.A. and Robinson, J.W. (eds) 1989 *Community Development in Perspective*. Iowa State University Press, Ames, Iowa.

Types of communities

There are several different forms of community. The most commonly used idea of a community is a physical locality – “a community of place” - such as a rural town. People share a common physical proximity and have local communication links and social networks.

Yet there are many other forms of community. People in “mining communities”, “forestry communities” or “agricultural communities” have a common economic identity. Cultural communities share an ethnic identity. The “medical community”, “transport community”, or “academic community” consist of people who share a professional identity. People in the Christian or Jewish “community” relate to a religious identity. Government or corporate sectors represent institutional communities. These “communities of interest” can also include members of a club or interest group.

People who share an interest and communicate globally over the internet have even been considered members of “virtual communities”.

Communities are not uniform - they consist of many sub-communities that have their own particular identity, boundaries and communication links.

Sub-Communities

Sub communities form around a specific common interest or identity within broader communities (figure 5). For example, Landcare groups within the broader Landcare movement, indigenous communities, different economic sectors within a town, or towns within a region.

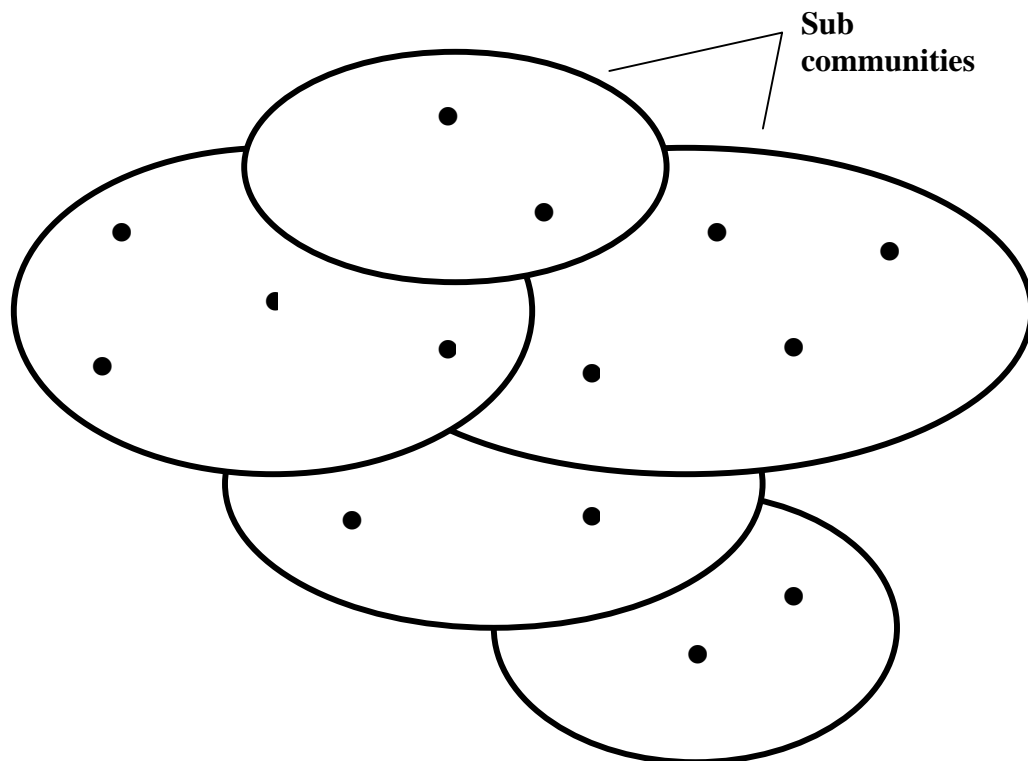


Figure 5. Sub-communities within a broader community at large.

Sub-communities often overlap, with people participating in several simultaneously. Outcomes at the broader community level often depend on understanding the make-up and interests of sub-communities and facilitating their interaction.

How people conceive of community is important because it can strongly influence attitudes and how people deal with economic, social and environmental issues. For example, if people identify with their industry or professional sector they may see particular development options such as changes to legislation. Yet if they think in terms of the broader community or industry new options are likely to arise such as supply contracts between sectors, or diversification.

Communities also change over time. Some fishing and logging communities have become tourism communities. Urban retirees have moved into previously farming areas.

An important way to conceptualise community is to consider the five “capitals” of communities.

Community Capitals

While “capital” is often recognised as money – it also means any resource that can be invested in a community for a potential benefit. Communities – large and small – have five main forms of capital, the levels of which largely determine the vitality and “health” of the community.

1. **Financial capital** – money – consists of savings, credit, mortgages, salaries, wages, transfer payments, profit etc.
2. **Physical capital** - infrastructure such as bridges, roads, buildings and equipment form the physical capital of a community.
3. **Environmental capital** - the quality of water, air, scenery, soil, plants and animals. Communities with clean air and water, and attractive scenery, are more able to remain vital than polluted communities in stark surroundings.
4. **Human capital** - the abilities and skills of individual community members, such as skills, leadership, values, problem solving and organising abilities of people.
5. **Social capital** - the extent of social networks in a community, the level of trust between community members, and local norms.



Flora, C.B. 1997. Enhancing Community Capitals: The Optimization Equation. *Rural Development News*, The North Central Regional Centre for Rural Development 21(1): 1-3.

Maintaining strong rural communities depends on sustaining or enhancing all five forms of capital. It means not only enhancing a community's “bricks and mortar”, but also allowing citizens to change perceptions, build social networks, improve skills and become more organised.

Good natural resource management outcomes also require not just financial and physical assets. It also depends on the human capital of skills and knowledge and the social capital of organisation, networks and collaboration.

Social and Economic Impact Assessment

A socioeconomic impact results from how a change plays itself out in the local economic and social situation. Changes such as access to resources, new policies and legislation, incentives, production costs or logistics, or power arrangements in communities influence the operation of the economy and the functioning of the community. The influence of these changes alters the conditions under which business and communities function. Ultimately this may affect the business mix of the economy, business and social practices, the attraction and location of people, and the provision of infrastructure and services.

Impacts are dynamic, often with consequences “feeding back” to alter the nature of the change itself over time.

Socioeconomic change can have the following main impacts:

- Primary and secondary,
- Local and non local,
- Monetary and non-monetary,
- Private and public,
- Positive and negative.

Primary and Secondary: The primary socioeconomic impact involves the initial influence on stakeholders directly affected by a change. For example, changes to water allocation would directly affect irrigators and other water users. Secondary impacts involve “flow on” affects – indirect consequences of change such as altered profitability of small business or changes to population and services.

From an economic point of view, the linkage between primary and secondary impacts depends on the extent of economic leakage in the local economy and the link between the export and non-export sectors as mentioned earlier.

There is also substantial “elasticity” in many local economies this means that there is considerable extra output that local firms can deliver in response to a change before a new firm is prompted. Conversely, the resilience of local firms to absorb negative impacts is limited in many rural communities particularly in “higher order” businesses such as furniture, white goods etc.

Local and Non Local: Because of the “porous” nature of many regional economies changes outside the region can create local impacts, and changes within the region can led to benefits and costs occurring elsewhere. The extent to which local businesses and communities can adapt to change depends on the pace and magnitude of impacts, the extent of leadership, innovation and entrepreneurship, the development of opportunities and the level of resources and assets.

Monetary and Non-Monetary: The monetary impacts of change are those that are expressed in terms of costs, price profit and income. Non-monetary impacts include changes in population, infrastructure, services, politics, health, amenity and quality of life. Most change involves both forms of impact. While multipliers and other tools can estimate monetary impact it is important to also assess broader non-monetary impacts.

Public and Private: The potential impacts of natural resource planning are often shared between private and public sectors and often a trade off is required. Changes in policy or management of natural resources attempt to achieve an overall public benefit, often with the benefit being realised years or generations into the future. In doing so, they create impacts for private individuals or private sector enterprises. In turn public resources, infrastructure and incentives are put in place to foster private economic development, to alter private sector behaviour, or to ameliorate private sector impacts.

Positive and Negative: Clearly changes affect stakeholders differently. While the best changes are those that achieve a “win, win” result, in most cases for some stakeholders impacts will be positive and for others they will be negative. Ultimately the changes considered in natural resource management plans should be a net community benefit taking into account short term costs, stakeholders affected, opportunities created and long term benefits.

Process of Impact Assessment

There are three main stages involved in assessing socioeconomic impacts (Burgess and Vanclay, 1995):

1. Assessment and prediction: The assessment component involves developing a profile of the current social and economic situation, identifying possible impacts, and scoping social and economic issues that are most relevant or important to stakeholders.

The prediction stage involves using data and community involvement to identify the nature and extent of likely impacts and potential responses to impacts. This prompts a range of options or alternative actions.

2. Mitigation and monitoring: An understanding of potential impacts gives rise to ways of mitigating negative impacts or altering actions to maximising net benefits. A monitoring and evaluation component aims to identify actual impacts, manage any deviations from expected impacts and assess any unintended consequences.
3. Audit and analysis: An audit function tests the reliability of the impact assessment process and informs future assessment procedures.

Each stage involves sequential steps as shown in figure 6.

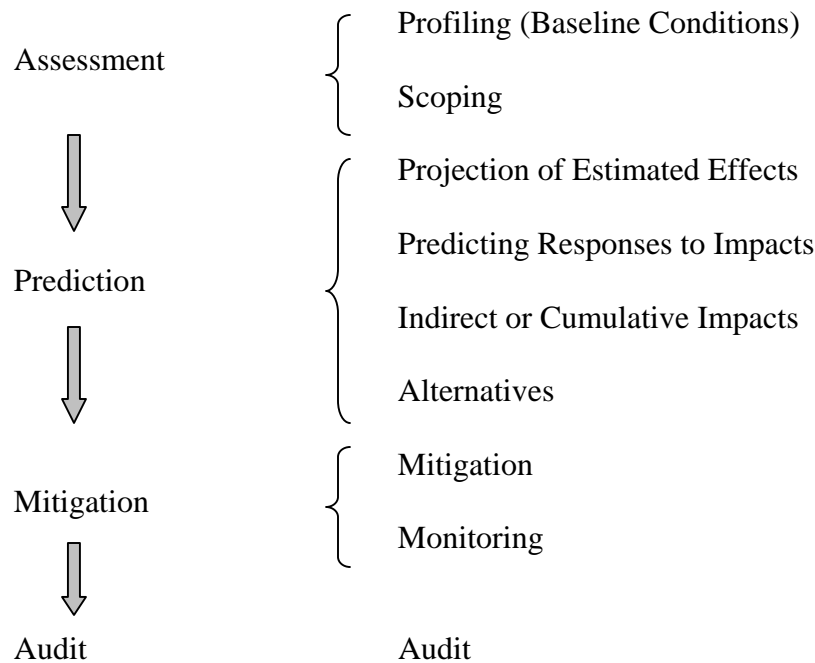


Figure 6. Basic steps involved in socioeconomic impact analysis. (adapted from Interorganisational Committee on Guidelines and Principles of Social Impact Assessment (1995)).

These Guidance Materials broadly follow this process outlining the approaches and methods regional bodies can use to gather data and make informed decisions about natural resource management planning.



Burdge, R. J. (1995) *A Community Guide to Social Impact Assessment*. Social Ecology Press, Middleton, Wisconsin.

Vanclay, F and Bronstein, D.A. (Eds) (1995) *Environmental and Social Impact Assessment*. John Wiley, New York

Vanclay, F (2002, 2003) International Principles for Social Impact Assessment. In *Impact Assessment and Project Appraisal 2003*. International Association for Impact Assessment. (See: www.iaia.org)

OVERARCHING CONSIDERATIONS

There are a wide range of issues to consider in incorporating social and economic issues in natural resource management planning. These include changes in baseline conditions; distribution of impacts across stakeholders; and economic and social characteristics that help communities to manage change and “zero sum” effects.

The Moving Baseline

The condition of natural resources, and related economic and social implications, clearly does not stay the same. Taking an integrated approach to management means that an important first step is to understand the existing trends in natural resource, economic and social condition (the “moving baseline”).

Figure 7 illustrates hypothetical general changes in the interrelated condition of the environment, economy and social “triangle” with and without intervention. Natural resource condition generally is declining. Improvements in resource condition and economic and social conditions need to be measured against not what condition is now but what it would have declined to if nothing more were done.

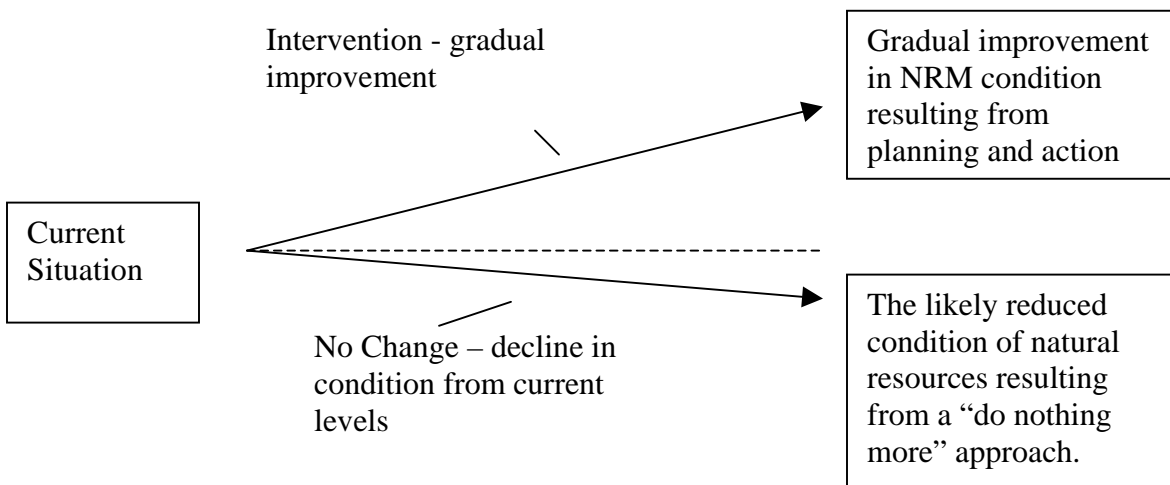


Figure 7. The moving baseline of economic, social and environmental condition.

This moving baseline concept will be used in these materials to consider options for combined economic, social and environmental strategies. Options need to be considered using “with and without” impact, rather than comparison to today’s situation.