

Social Well-Being, Cohesion and Human Health

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1. Introduction

The Lisbon Strategy (2000) put forward the concept of sustainable development for the European Community with the ambition that the Community and its constituent Member States could move to a system that maximized the gains of economic development without suffering all of the short and long term costs to society or the environment that had occurred in the past. Three pillars were identified as the means by which sustainable development can be attained and supported into the future.

The first two pillars are economic and environmental. These have been identified and impact assessments conducted for several decades. The newest of the pillars is the society or social system in which development takes place. Social Impact Assessment (SIA) is not just the social impacts of environmental policies; rather it includes influence on the development and implementation of decisions, integrated with economic and environmental assessments. The environmental, economic and social systems are complex and interconnected and so need to be considered together in as holistic a perspective as practical. A key point is that society needs to identify its preferred future and then assess, plan and implement

strategies that move it significantly towards this. It is important that environmental, economic and social sustainability factors are fully incorporated in the choices of direction and in seeking to achieve it. The social sustainability assessment process not only emphasises inclusiveness, etc. of where society is trying to go, but also the incorporation of an inclusive approach in assessing and implementing the actual projects and strategies.

A sustainable society is more than one with just economic or environmental sustainability, it is also about having equality and justice for all social groups and members of the community. The opportunity for each member to reach their individual potential should be present. Access to work, leisure and recreation, health care, education, as well as to the basic needs of life, adequate shelter, safe/secure water and food, are needed to avoid strife and conflict that can damage communities. The scale of communities goes from the local level up to global communities.

A sustainable society allows for and promotes diversity while at the same time commits itself to inclusion of all groups of society to share in the benefits of the community. An equitable distribution of social, economic and environmental opportunities, costs and benefits, is vital and inequality is inherently unstable and ultimately unsustainable.

To make a society sustainable, a community must balance the priorities of the current generation with the needs and welfare of not just the next generation but multiple future generations.

Social sustainability is primarily implemented and measured at the local community level as this is the interface at which individuals and groups experience society. Large scale legislation and government policy that move society to a more sustainable path often occurs at the Member State or supra-national levels, although local implementation is crucial.

The source of unsustainable development is not always the result of greed, ignorance or irrational choices as it is often portrayed in the media and social rhetoric. Rather, it is commonly the unintentional accumulation of rational, well-intended decisions made by people who are operating within societies whose political and economic systems make it difficult to act in ways that are responsible to all those affected in the present and in the future.

2. European Union Policy Background

The Lisbon Strategy

The 2000 Lisbon Strategy had the objective of making the European Union the most competitive economy in the world while at the same time attaining full employment by 2010. The Strategy was further developed in 2001 in Gothenburg and re-launched in 2005. It was also followed-up with major policy initiatives including the Sustainable Development Strategy, European Employment Strategy, Social Agenda 2005-2010 and the Employment, Social Policy, Health and Consumer Affairs Council (EPSCO).

The Lisbon Strategy rests on three pillars:

- An economic pillar preparing the ground for the transition to a competitive, dynamic, knowledge-based economy. Emphasis is placed on the need to adapt constantly to changes in the information society and to boost research and development.
- A social pillar designed to modernise the European social model by investing in human resources and combating social exclusion. The Member States are expected to invest in education and training, and to conduct an active policy for employment, making it easier to move to a knowledge economy.

- An environmental pillar, added at the Gothenburg European Council meeting, which draws attention to the fact that economic growth must be decoupled from the use of natural resources.

Gothenburg Strategy

At the Gothenburg European Union Summit in 2001 a common strategy for sustainable development was agreed upon.¹ Political guidelines were established to promote a strategy for sustainable development with regard to employment, economic reform and social cohesion.

The European Union strategy for sustainable development that emerged from Gothenburg emphasised issues relating to economic policies to ensure growth and to promote structural reforms. It was based on the principle that the economic, social and ecological effects are to be assessed and considered in the decision-making process. It was seen as necessary to shape the economic, social and environmental policy in such a way that they reinforce each other. If developments that threaten future quality of life cannot be reversed, the cost for society will increase drastically and development could become irreversible. Particular issues included: poverty and exclusion, public health, demographical perspective and ageing, climate change and clean energies, depletion of natural resources, mobility and the utilisation of space.

European Union Sustainable Development Strategy 2006

The Lisbon Strategy was reviewed in 2005² and this formed a foundation for the European Union's Sustainable Development Strategy (SDS) in 2006.³ The SDS plays a key role in setting the contexts for SIA's. It states that: "Sustainable development means that the needs of the present generation should be met without compromising the ability of future generations to meet their own needs."

¹ http://ec.europa.eu/sustainable/sds2001/index_en.htm

² http://ec.europa.eu/sustainable/sds2001/review2005_en.htm

³ COM(2005) 658 'On the review of the Sustainable Development Strategy - A platform for action' December 2005 <http://register.consilium.europa.eu/pdf/en/06/st10/st10917.en06.pdf>

The strategy uses a baseline of statistics for the year 2000 against which to measure progress and Eurostat produces monitoring reports.⁴

The SDS sets overall objectives and concrete actions for seven key priority challenges for the period until 2010, many of which are predominantly environmental:

- Climate change and clean energy
- Sustainable transport
- Sustainable consumption & production
- Conservation and management of natural resources
- Public Health
- Social inclusion, demography and migration
- Global poverty and sustainable development challenges

The European Commission adopted, on 22 October 2007⁵, the first progress report on the Sustainable Development Strategy and Paragraph 56 reads:

"Sustainable development is a fundamental objective of the European Union. The European Council welcomes the Commission's first progress report on the renewed EU Sustainable Development Strategy (SDS). It agrees that the objectives and priorities under the seven key challenges contained in that strategy remain fully valid and that the main focus should therefore be on effective implementation at all levels. The renewed EU Strategy and national strategies for sustainable development also need to be linked up more closely. The governance structure and tools of the SDS, in particular in relation to monitoring of progress and best practice sharing, must be fully used and strengthened. The EU's integrated climate and energy policy and an integrated approach to the sustainable management of natural resources, the protection of biodiversity and ecosystem services and sustainable production and

⁴ Eurostat (2007) "Measuring progress towards a more sustainable Europe 2007 monitoring report of the EU sustainable development strategy"

http://ec.europa.eu/sustainable/docs/estat_2007_sds_en.pdf

⁵ http://ec.europa.eu/sustainable/docs/com_2007_642_en.pdf

consumption are among the drivers for achieving objectives under both the SDS and the Lisbon strategy. The EU must continue to work to move towards more sustainable transport and environmentally-friendly transport modes. The Commission is invited to present a roadmap together with its next Progress Report in June 2009 on the SDS setting out the remaining actions to be implemented with highest priority."

Guiding principles for sustainable development were set out in 2005 (see below).⁶

Social Agenda 2005-2010

The European Union's goals include sustained economic growth, more and better jobs and greater social cohesion.⁷ The second phase (2005-10) of the Social Agenda arose following the review of the Lisbon Strategy and has the motto "A social Europe in the global economy: jobs and opportunities for all".⁸ The agenda focuses on providing jobs and equal opportunities for all and ensuring that the benefits of the European Unions' growth and jobs drive reach everyone in society. By modernising labour markets and social protection systems, it will help people seize the opportunities created by international competition, technological advances and changing population patterns while protecting the most vulnerable in society.

The Social Agenda has two key priorities, (i) employment and (ii) fighting poverty and promoting equal opportunities. These key priorities support two of the Commission's strategic goals; prosperity and solidarity. The Agenda calls for partnerships between public authorities at local, regional and national level, employer and worker representatives and NGOs.

⁶ Pp 28-30. http://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/ec/85349.pdf

⁷ The Social Inclusion Process is an important part of this:

http://ec.europa.eu/employment_social/spsi/poverty_social_exclusion_en.htm

⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52005DC0033:EN:NOT>

Under employment, the Agenda focuses on:

- Creating a European labour market, through enabling workers to take pension and social security entitlements with them when they work in a different Member States and by establishing an optional framework for collective bargaining across frontiers; the Commission will also examine transition periods for workers from new Member States;
- Getting more people into better jobs, particularly through the European Youth Initiative and supporting women in (re-)entering the labour market;
- Updating labour law to address needs created by new forms of work, i.e. particular short term contracts; a new health and safety strategy;
- Managing the process of restructuring through the social dialogue.

Under poverty and equal opportunities, the Agenda focuses on:

- Analysing the impact of ageing populations and the future of relations between the different generations;
- Supporting the Member States in reforming pensions and health care and tackling poverty;
- Tackling discrimination and inequality; the Commission will examine minimum income schemes in the Member States and set out a policy approach for tackling discrimination, particularly against ethnic minorities such as the Roma;
- Fostering equal opportunities between women and men, for example by setting up a gender institute;
- Clarifying the role and characteristics of social services of general interest.

European Employment Strategy and the Luxembourg Process

The European Employment Strategy (EES) was first launched by the European Council in 1997.⁹ The focus has shifted over time from reducing unemployment to regaining the conditions for full employment and in the 2005 Lisbon review to “growth and jobs”.¹⁰ The EES emphasises that the social dimension (including social cohesion) is an essential component of any employment strategy and of growth. As part of the EES each Member States produces and updates a National Action Plan.

An important principle of monitoring policies is the “open method of co-ordination” of the Luxembourg Process which was adopted in Lisbon 2000 as a model for policy fields such as employment and social inclusion. This involves multi-lateral surveillance, based on annual reporting and comparable monitoring indicators. So the best performers in the EU can be identified and learned from improved exchanges of information between Member States (at national, regional and local levels). An important part is also a peer review process, which is set up to evaluate the transferability of good practices. This allows more in-depth evaluations and learning between Member States and interested parties. In summary the Luxembourg Process in general should encourage the dissemination and debate about the range good practice among the partners in any initiative (or perhaps more widely in any general area of interest) and support improved evaluation. This helps set the context for SIA’s of open, transparent exchange and learning.

Council of the EU

Two Councils that may be of particular interest are the Employment, Social Policy, Health and Consumer Affairs Council and the Environment Council

⁹ http://ec.europa.eu/employment_social/employment_strategy/index_en.htm

¹⁰ http://ec.europa.eu/employment_social/emplweb/publications/publication_en.cfm?id=112

(although other Councils also have some relevance). Each meet about four times a year.

Employment, Social Policy, Health and Consumer Affairs (EPSCO)

The Employment, Social Policy, Health and Consumer Affairs Council (EPSCO) is composed of employment, social protection, consumer protection, health and equal opportunities ministers¹¹.

In this area the task of the European Community is to foster a rise in the standard of living and quality of life of its citizens, notably through high-quality jobs and high levels of social protection, health protection and protection of consumers' interests, while at the same time guaranteeing equal opportunities for all its citizens.

To achieve this, it adopts European rules to harmonise or coordinate national laws, in particular on working conditions (workers' health and safety, social security, employee participation in the running of companies), strengthening of national policies to prevent illness and combat the major health scourges and protection of consumers' rights.

Since employment and social protection policies remain the responsibility of the Member States, the Community's contribution is confined to setting common objectives for all the Member States, analysing measures taken at national level and adopting recommendations to the Member States.

Within the Council, and in particular in the framework of the Employment Committee and the Social Protection Committee, Member States can exchange ideas and information or share the results of their own experiences.

¹¹ http://consilium.europa.eu/cms3_fo/showPage.asp?id=411&lang=en&mode=g

The Environment Council

The Environment Council is composed of environment ministers of each Member State. It decides by qualified majority in co-decision with the European Parliament.¹²

In this area the task of the European Community is to foster the harmonious, balanced and sustainable development of economic activities which respects the need, in particular, to ensure a high level of environmental quality.

To achieve this, it aims to preserve the quality of the environment, human health, the prudent and rational utilisation of natural resources, and to promote measures at an international level to deal with regional or worldwide environmental problems.

While taking into account the diversity of situations in the various regions of the Community, Community policy on the environment is based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay.

3. Overview of Social Impact Model

There are many definitions of social sustainability and there is no generally accepted one. The simplest is that a society is sustainable if it persists and thrives. This definition is limited required as even thriving cultures and societies have proven to be non-sustainable over long time scales. It is important that society tries not to diminish or harm the integrity and productivity of the natural systems and resources upon which they depend. Sustainability means achieving satisfying lives for all within the means of nature - now and in the future.

¹² http://consilium.europa.eu/cms3_fo/showPage.asp?id=415&lang=en&mode=g

One more comprehensive definition of sustainable social development is:

“Development (and/or growth) that is compatible with harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population.”

Polese and Stren (2000, 15-16)

The European and international (excluding-America) approach to impact assessment for sustainability uses a paradigm with three sub-areas of study: environment, economy and society. The following concepts and issues form part of the principles of social impact assessment as presented by the International Association for Impact Assessment¹³

Precautionary Principle: In order to protect the environment, a concept which includes peoples' ways of life and the integrity of their communities, the precautionary approach shall be applied. Where there are threats or potential threats of serious social impact, lack of full certainty about those threats should not be used as a reason for approving the planned intervention or not requiring the implementation of mitigation measures and stringent monitoring.

Uncertainty Principle: It must be recognised that our knowledge of the social work and of social process is incomplete and that social knowledge can never be fully complete because the social environment and the process affecting it are changing constantly, and vary from place to place and over time.

Intergenerational Equity: The benefits from the range of planned interventions should address the needs of all, and the social impacts should not fall

¹³ IAIA, 2003. International Association for Impact Assessment. *Social Impact Assessment International Principles*. May 2003. Available online at; <http://www.iaia.org/modx/assets/files/SP2.pdf>

disproportionately on certain groups, in particular children and women, the disabled and the socially excluded, certain generations or certain regions.

Intergenerational Equity: Development activities or planned interventions should be managed so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs.

Recognition and Preservation of Diversity: Communities and societies are not homogenous. They are demographically structured (age and gender), and they comprise different groups with various value systems and different skills. Special attention is needed to appreciate the existence of the social diversity that exists with communities and to understand what the unique requirements of the special groups may be. Care must be taken to ensure that planned interventions do not lead to a loss of social diversity in a community or a diminishing of social cohesion.

Internalisation of Costs: The full social and ecological costs of planned intervention should be internalised through the use of economic and other instruments, that is, these costs should be considered as part of the intervention, and no intervention should be approved or regarded as cost-effective if it achieves this by the creation of hidden costs to current or future generations or the environment.

The Polluter Pays Principle: the full cost of avoiding or compensating for social impacts should be borne by the proponent of the planned intervention.

The Prevention Principle: It is generally preferable and cheaper in the long run to prevent negative social impacts and ecological damage from happening than having to restore or rectify after the event.

The Protection and Promotion of Health and Safety: Health and safety are paramount. All planned interventions should be assessed for their health impacts and their accident risks, especially in terms of assessing and managing the risks from hazardous substances, technologies or processes, so that their harmful effects are minimized, including not bringing them into use or phasing them out as soon as possible. Health impacts cover the physical, mental and social wellbeing and safety of all people, paying particular attention to those groups of the population who are more vulnerable and more likely to be harmed, such as the economically deprived, indigenous groups, children and women, the elderly, the disabled, as well as to the population most exposed to risks arising from the planned intervention.

The Principle of Multisectoral Integration: Social development requirements and the need to consider issues should be properly integrated into all projects, policies, infrastructure programs and other planning activities.

The Principle of Subsidiarity: Decision making power should be decentralised, with accountable decisions being made as close to an individual citizen as possible. In the context of SIA, this means about the approval of planned interventions, or conditions under which they might operate, should be taken as close to the affected people as possible, with local people having an input into the approval and management process.

4. Impact Categories/Issues

The following categories are intended to provide themes by which the “socio-pillar” of sustainable development assessment can be examined. Many of the categories and sub-categories cross over with the economic pillar when quantified using economic values.

Employment

1. The level of employment within a community.

There are three types of employment that need to be considered when assessing a policy.

- The direct employment generated by the change in land use.
- The indirect employment in businesses that sell to and purchase output from the commercial enterprises using the land.
- The induced employment that is supported by an increase in household expenditure among the people who have gained employment through both the direct and indirect employment effects.

The later type of employment is the most difficult to quantify as it entails the use of regional economics models and estimating a 'multiplier' for the impact of changed wages/spending in the region. In addition the characteristics of the employment (e.g. how many hours per week, seasonal, length of job or permanency, pay, conditions etc.) need to be considered, as does the distribution of employment across different groups (e.g. by locality, ethnic group, education and skill levels, age etc.).

Employment changes from activities such as recreation and tourism need to be considered along with secondary commercial use of the land. In forestry lands employment that results from the harvesting and marketing of non-timber forest products needs to be considered.

It is important to distinguish between the gross impact and net impacts on employment from a land use change. The gross impact is simply the total change in employment. The net impact takes into account alternative land uses, and can be measured in terms of its 'displacement effect' when compared with these alternatives.

The effect on communities is an important consideration when assessing employment changes. Local communities are enhanced and become more viable if new employment opportunities are given to local people. The reverse is also true, when land use changes lead to decreased employment opportunities communities are made less viable.

2. Wages and salaries, including how these vary.

3. Occupational safety and health

4. Education and training

(Provision of in-service and training of workers that supports continuous re-skilling.)

5. Quality of employment

This sub-category is the most difficult to assess by its qualitative nature. It may be considered the weighted summation of the previous sub-categories. This may include issues concerning the types of contract (seasonal or year-round; permanent – temporary etc.)

Additional factors that contribute to quality employment are flexible working patterns that allow people to balance work and home life. Employer support for workers with families, e.g. through the provision of facilities such as crèches. The maintenance of good dialogue between employers and workers is also a consideration.

Possible data and information to assess policy:

- Number of persons employed by type of employment, gender, age, class and education.
- Wages and salaries by gross and average, gender and type of employment.

- Frequency of occupational accidents and occupational diseases.
- Education and training time and expenditure per employee by job type and gender.
- Level of skills.
- Equality of treatment.
- Staff turnover rate.
- Level of employment satisfaction.
- Staff turnover rate.

Questions that can be asked to help understand the impact of a proposed policy initiative?

Does the policy:

- facilitate creation of jobs or the loss of jobs?
- impact a specific class of workers?
- affect the demand for labour?
- impact on the functioning of the labour market?
- impact on the type and quality of jobs?
- impact on the health, safety and dignity of workers?

Governance

Governance includes public participation, social inclusion, and public attitudes about the land and how it is used. Public involvement with government on land use policy is regarded as a fundamental element of social sustainability. Interaction is considered a necessity for the delivery of policies that deliver sustainable development.¹⁴ Three main reasons are put forward for the importance of community participation in land use policy to create social sustainability. The first reason is the democratic right of the public to be involved in the process. This is an essential part of equitable societies. The second reason for participation is that it allows for communities to voice their needs and

¹⁴ Colantonio, 2007

desires, so that they may be considered throughout the process of policy creation, delivery and ex-post evaluation. This leads to the third reason, policy effectiveness is increased if it incorporates and represents the values and preferences of society and general and the communities that are directly affected.¹⁵

The benefits of public participation to sustainable land use management can be significant. Increased public awareness of forestry and land use can improve the trust between the different actors and agents involved. The total benefits of the land can be maximised by opening up new possibilities to improve market-oriented delivery of goods and services derived from the land. Costs and benefits can be shared in a fair and equitable way when opportunities are created to allow for expression of opinions and assertion of rights and interests. The social acceptance of sustainable land and forest management is increased when the public is better informed about the probable outcome of such management practices. Participation by individuals and communities can motivate and enable the creation of increased human and social capital.

An additional perspective within this theme is public attitudes towards, and understanding of, forests and forestry. Like participation, an informed and supportive public is seen to support SFM, but also, like participation, it could be seen as an end in itself. We have listed 'public awareness' under governance, but 'public understanding' is seen to belong under 'education and learning'. However, the understanding of managers regarding SCVs is seen to belong under governance (and in turn is linked to the training sub-theme under 'employment').

Social inclusion is an important aspect of participation and relates directly to governance. Participation of under-represented groups such as ethnic minority groups, the young, the old, and disabled groups who do not have access to the

¹⁵ Colantonio, 2007

benefits of forests or public lands due to a range of physical, economic, social and cultural barriers can be a significant factor in creating consensus about land use changes.

Possible data and information to assess policy:

Participation rates (both percentage and absolute) for population involved in, or consulted about, land use plans.

Participation rates (both percentage and absolute) for excluded groups involved in, or consulted about, land use plans.

Percentage and absolute rates of managers who are aware of social and cultural values of local stakeholders.

Percentage and absolute rates of visitation and use of land or forests by excluded groups.

Public attitudes towards land and forests about relative importance of different functions, services and values.

Possible data and information to assess policy:

- percentage of population involved in or consulted
- percentage of population involved in or consulted from excluded groups
- public satisfaction with governance process

Questions that can be asked to help understand the impact of a proposed policy initiative?

Does the policy:

- impact on the involvement of groups and stakeholders to participate in governance?
- impact on social institutions or public institutions and administrations in their ability and responsibilities to governance?
- impact on a group or the individual's access to the legal justice system?
- impact on the public being informed about issues within their community?
- impact on the privacy of individuals and households?

Community Development

Community development is concerned with the local social benefits that are derived from active community participation in commercial activities and policy making for land use and forestry. Evaluation of the “Forestry for People” program in Scotland has identified several social benefits that are created or improved from community engagement in forest activities and policy decisions.¹⁶ When communities are part of the process in determining land use a sense of belonging and ownership is created within the community. The capacity for political and community activism is built up with the experience gained during the engagement process. Both community and individual confidence in the end results is increased by the process. Individual skills and training can be improved with development of commercial and non-commercial forestry activities. Self esteem and community pride is affected by how the forest is perceived and used. Communities become empowered when their values and desires for the forest are incorporated into how the forest will be managed and developed. The forest and its use can act as anchor point for community connectedness and facilitate social cohesion. The community can benefit from greater stability from the forest.

These social benefits are allocated to both the individual and to the community. At the community level these benefits can be classified or described as social capital. Social capital can be seen as the connectedness and networking between and within communities which also include norms of trust and reciprocity which improve the efficiency of coordinating actions within society.¹⁷

Possible data and information to assess policy:

- Community satisfaction survey
- Changes in social capital – social networks, level of activism and participation

¹⁶ Hislop and Elliott 2005: 12

¹⁷ Putnam 1993

Questions that can be asked to help understand the impact of a proposed policy initiative?

Does the policy:

- impact on the level of social capital and activism by non-governmental groups or individuals?
- impact on social inclusion and distribution of equity and benefits within society?
- impact on the liveability and sense of community wellbeing?

Health and Well-being

Sustainable development and health are intricately tied together. Human health and well-being is an important component of any process to create sustainable development. In 1992 the United Nations programme on sustainable development, Agenda 21, specifically included health as one of focal points for action, along with the environment, economic, and socio-demographic factors.¹⁸ The Treaty on European Union also makes mention of “a high level of employment and social protection, the raising of the standard of living and quality of life” as some of the tasks that the Community shall pursue. There can be no *high* quality of life if health is poor for an individual or a community.

One complimentary definition for sustainable development is: the improving the quality of life while living within the carrying capacity of supporting ecosystems.¹⁹

The World Health Organisation defines health as:

¹⁸ Agenda 21, UN Department of Economic and Social Affairs, Commission on Sustainable Development, <http://www.un.org/esa/sustdev/documents/agenda21/index.htm>

¹⁹ Caring for the Earth – a strategy for sustainable living World Conservation Union, UN Environmental Programme, and World Wide Fund for Nature, 1991

“...a state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity. The enjoyment of the highest attainable level of health is one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social condition”.

There are both positive and negative synergies between health and development. The quality of the environment and the type of economic development can have significant impact on health, while the health of a population can have a significant impact on development.²⁰ For example, if economic development leads to pollutants or toxins in the environment, health will likely deteriorate; higher income levels within a community that result from development can lead to improved nutrition and access to health care services, both of which will likely improve health. Improving health can lead to greater economic productivity and be one means of increasing the economic growth rate.

Decisions by individuals and households are responsible for a large portion of health quality. However, there are substantial income and educational constraints which limit opportunities and potential outcomes. The dominant risk factors for most diseases are related to individual characteristics such as genetics or individual susceptibility and to behavioural or lifestyle factors such as tobacco and alcohol use and nutrition. Employment and work satisfaction are also determinants of people's health.

Individuals and households are responsible for the decisions that determine a large portion of health quality. However, there are substantial income and educational constraints within a community which limit the opportunities and potential health outcomes that households may select.

²⁰ Sustainable development and health: Concepts, principles and framework for action for European cities and towns, European Sustainable Development and Health Series: Book 1

The dominant risk factors for most diseases are related to individual characteristics such as genetics or individual susceptibility to disease or illness and to behavioural or lifestyle factors such as tobacco and alcohol use and nutrition. Employment and work satisfaction are also determinants of people's health.

The overall state of people's health is determined by a complex interaction of local environmental quality, the availability and quality of health and social services, socioeconomic conditions and lifestyles. Health can be changed, improved or harmed, by developments that impact on living and working environments, adequacy of housing, safety of food and water supplies, communal facilities and transport. Damage to the local environment including local air, water and soil pollution can have negative impacts on health.

Health should not be interpreted as the absence of illness, infections or morbidity.

The assessment of health is not straightforward. While there are commonly used indices like mortality and morbidity that convey important information, there are no commonly accepted indices to compare physical and psychological wellbeing.

Links can be demonstrated between health and the social system. The relations that exist in a social system have significant influence on the health and mental well-being of individuals and groups within a community. The relationships determine many aspects of life such as work and employment opportunities, crime and a sense of personal or family safety, culture, and diet and nutrition. Some of these issues are discussed in the chapter on governance and community development.

Increased social stress can lead to diminished health and well-being for a community, as the recent experience of Central and East European transition

economies has demonstrated where several countries experience a decrease in the life expectancy of males by several years in the 1990s.

Types of indices that can be used to measure health:

- Mortality
- Morbidity
- Biological contamination
- Surveys of habits and perceptions
 - Alcohol, tobacco and drug use
 - Diet and exercise
 - Life satisfaction, etc.
- Accessibility and provision of medical and social services
- Occupational health

Questions that can be considered when assessing the health impacts from development and direct mitigation planning:

- What impact will development have on the quality of soil, surface water, and ground water? The quality and sufficiency of drinking water is of special importance. What are the health gains or risks that may occur?
- What are the occupational health risks that may occur with the development?
- What impact will development or change of land use have on recreational uses in the area and the effects on the local community as well as non-local visitation to the area?
- What impact will development have on local infrastructure such as hospitals, schools, waste disposal, sanitation, and emergency response capability? Will there be sufficient capacity?
- Is there equitable distribution of the health risks, disadvantages and benefits from development? What is the desirable distribution of the gains and losses?

Recreation and tourism

Recreation and tourism is easier than most impact categories to examine and quantify for sustainability. Public recreational use of land can be monitored and the use values can be estimated.²¹ Activities range from organized events such as hunting, orienteering, and car rallies to informal uses like walking, nature watching, cycling and horse riding. The benefits from recreation can be segregated into three categories; leisure, health and lifestyle benefits.²² Access to forests and landscapes to participate in recreation is vital to the creation of this benefit. The Ministerial Conference on the Protection of Forest in Europe uses access to forests as a proxy for the amount of recreational benefits being derived from forest lands.

Attention does need to be given to the difference between physical access and social access, since owners or managers of landscapes may not encourage visitation even if the right public use does exist. A better indicator may be the level of investment in recreation facilities like paths and buildings although this will not capture many forms of informal activities.²³

Example One of many examples is the Royal Society for the UK's Protection of Birds Evaluation models and manuals considering new forest or wildlife developments,²⁴

Possible data and information to assess policy:

- Access to forests and lands for recreation
- Investment in recreational facilities and paths
- Distance from settlements to accessible lands
- Level of use by population and use by social groups

²¹ Christie, et al. 2006

[http://www.forestry.gov.uk/pdf/fcphase1report.pdf/\\$FILE/fcphase1report.pdf](http://www.forestry.gov.uk/pdf/fcphase1report.pdf/$FILE/fcphase1report.pdf)

²² Willis 2003

²³ Edwards 2006

²⁴ <http://www.ukbap.org.uk/ebg/library/ModelAssumptions.pdf>

Questions that can be asked to help understand the impact of a proposed policy initiative?

Does the policy:

- impact on the level of recreational activities and the participation?

Education and learning

The natural environment, landscapes and forests, provide opportunities for formal education about nature and the environment, and can act as a reference area for observing environmental change.^{25 26} Significant informal lifelong learning opportunities also exist for both the young and old through regular use and interaction with the landscape. Some evidence has shown that disadvantaged youths who participate in wilderness programmes demonstrate reduced criminal behaviour, lower substance abuse, and enhanced employability.²⁷ It is clear that social benefits are created from these learning experiences but it is difficult to assess and value the impact from interacting with forests and the landscape.

The United Kingdom Forestry Commission has established the Forest Education Initiative which aims to increase the understanding of environmental, social, and economic potential of trees, woodlands and forests. The goal is to create an appreciation of the role wood products play by being a sustainable source of building materials and other products while providing rural jobs and a cleaner environment.²⁸

Possible data and information to assess policy:

- Numbers of participants in organised education events

²⁵ de Groot et al. 2002

²⁶ Edwards SERG 2006

²⁷ Russel et al. 1998

²⁸ http://www.foresteducation.org/about_fei.php?page=1

- Testing public understanding of forests and forestry by asking questions with factual answers

Questions that can be asked to help understand the impact of a proposed policy initiative?

Does the policy:

Culture and heritage

Culture and heritage are intertwined when conducting an assessment of impacts that may arise from a potential policy change or proposed project. Heritage can be explained as all the things, places and ideas passed on from the past which are of special cultural significance to the life of a community, including both natural and human-built elements²⁹.

Cultural and heritage issues can be classified and cross-classified in many ways. Generally several matrices are used to define an issue and to establish the importance of a potential impact and why it needs consideration.

The first level of distinction to be used to classify the potential issue in to:

- Sites and features
- Activities, practices, skills and events
- Meanings, identities, and representations

Another level of analysis can be used when considering these three distinctions. Consider the attachment to the landscapes or forests involved. Culture and heritage sites and features may happen to be located in landscapes that are not directly related to the social value placed on them. While other sites and features are inseparable from the landscape in which they are located. The Eiffel Tower and the Sydney Opera House are icons for the cities they are present in. Such sites and features of importance may exist at a smaller scale when considering state, region or a local community as well.

²⁹ Johnston, C. 'What is Social Value?', Australian Government Publishing Service, Canberra, 1992

The sense of attachment that a community feels needs to be considered when considering the impacts that may come with land use change. Often times the strength of attachment to a site, activity or even the development of life skills is not understood by a community until a threat of change motivates individuals and community to examine their values. The emotional context of such impacts can disproportionate to the actual issues when seen by outsiders, but some of the great opposition to proposed projects and policies may come from the threat to social cultural and heritage values.

Additional classifications that can be used when examining these issues are:

The scale of community being considered can range from:

- local level
- state
- national
- even trans-national

Qualitative terms may be used descriptions such as;

- early
- distinctive
- rare
- essential

Four broad categories can be used when defining the place within a communities culture and heritage issues:

- social
- historical
- aesthetic
- scientific
- indigenous peoples.

Possible data and information to assess policy:

- Expenditure to protect or enhance cultural benefits

- Number of cultural sites and features
- Number of visitors to cultural sites and features
- Number of cultural events and number of participants
- Meanings associated with the cultural and heritage issues
- Proportion of public who are skilled or have knowledge of culture and heritage

Questions that can be asked to help understand the impact of a proposed policy initiative?

Does the policy:

- impact on cultural or heritage issues in a community
- impact on sites and features
- impact on activities, practices, skills and events
- impact on meanings, identities, and representations

5. Stakeholder Involvement

Identifying who to get involved.

Identifying stakeholders

In order to balance the environmental, economic and social pillars organisations need to pay more attention to their various stakeholders who are important to its objectives and operation. Rather than using purely monetary performance measures this requires a more balanced set of impact and performance measures of policies and actions.

Stakeholders can be defined as any group or individual who can affect, or be affected by, the performance of an organisation. Some definitions for an organisation carrying out an SIA:

Freeman (1984) *defines stakeholders* as any group or individual who can affect, or is affected by, the performance of the organisation. Bryson (1995, p.27)

provides the definition of: “any person, group, or organisation that can place a claim on an organisation’s attention, resources, or output, or is affected by that output”.

Someone working within the SIA field must be aware of the different pull and expectations of the stakeholders. Sometimes these expectations may be clear, and stated, but this is not always the case.

The list may of key stakeholders may include: managers, other employees, trade unions, directors, national regional and local government politicians and officials, management boards, clients or groups representing them, pressure groups, customers, suppliers, competitors, shareholders, others organisations etc. as well as the local community and their representatives. Note that some are inside the organisation (staff or those directing the organisation) and others are outside the organisation (the community, clients, suppliers etc.).

Different stakeholders see different issues as being important to them and their constituencies and perceive their benefits in different ways. Hence for each major issue facing the organisation there could be a different set of key stakeholders. For example, when developing a new project the government may wish to see the greatest overall impact and efficiency, while local activists may wish to concentrate on impacts in their local area or on their interest group, while firms may wish for access to raw materials or markets and a positive impact on their profitability. Different strategic decisions will affect various stakeholders in different ways.

Commonly five groups of stakeholders are considered:

- those who finance the organisation (e.g. the government or local government)
- regulators (environmental, but also e.g. employment regulators)
- the managers who manage it
- the employees

- clients or customers
- the wider economy (including the competitors and suppliers)
- the wider local community
- environmental and other pressure groups

Problems with identifying include identifying:

- stakeholders who are outside of the formal structure of the organisation, i.e. 'informal' stakeholders;
- multiple stakeholders, i.e. those belonging to several groups (such as a director of the project board who is also an elected official of the local municipality, or who owns a local business);
- new stakeholder groups which arise in response to specific situations (e.g. a protest group opposing the development of developments in a scenic area);
- different perspectives within single stakeholder groups (e.g. there are often differing views within the local chamber of commerce, e.g. some local firms want to harvest a forest but others may want to retain the landscape to assist their tourist business);
- alliances between stakeholder groups (e.g. the local authority joining with a local community group to influence a project).

Identifying key stakeholders

Now we need to move from having lists of stakeholders to classifying them in some way so that we can more effectively deal with their needs (or objections!) and also to identify those that are most important to our strategy.

Here are some simple techniques for taking account of stakeholder interests and influence. As you are probably aware there are always knock on effects with development projects. The exercise is designed to put the ideas of stakeholder mapping into operation. The value may be in:

- identifying in advance those who are or may be key stakeholders;
- informing them or managing their expectations.

Basically, this is a communications exercise and forewarned is forearmed! *It identifies both those that are important and influential to the progress of the project, but also, crucially, identifies those who are affected greatly by the project but have little influence – these are likely to be among the disadvantaged groups whose views should be included to improve social sustainability.*

There are ways of systematically trying to analyse stakeholders and so decide on how to involve them more effectively. Two ways are Power dynamism mapping and Interest mapping.

POWER DYNAMISM MAPPING

This matrix is useful in deciding on those stakeholders where considerable efforts should be placed during the development of the strategy, to ensure that the most important stakeholders will support it. The matrix has two axes: stakeholder power (to affect the project and support or block its strategy) and the predictability of the stakeholders 'stance' or expectations and actions.

Power/Predictability Matrix:

PREDICTABILITY:	LOW	HIGH
POWER:		

LOW	I	II
HIGH	III	IV

(based upon Johnson and Scholes, 2002)

The most difficult group of stakeholders to deal with is likely to be in Group III (high power but low predictability as to how they are likely to respond to the issue being considered), and usually most attention needs to be placed on these. This group will need to be carried along with any new strategies, so any significant strategy decision needs to be tested out with them in advance.

Group IV (high power but high predictability) will also be very important but it is likely that managers will be able to determine and address their expectations, without necessarily 'testing out' new ideas. The other two groups may still be important, although they do have low levels of power, and they may in turn influence the more powerful stakeholders. For example, an apparently 'weak' community group may well be able to influence a more powerful actor such as the local politician or local municipality administrators. Also a public body may well wish to take account of weaker stakeholder's views.

B) POWER/INTEREST MAPPING

Another way of mapping stakeholders is to categorise them in relation to the power they hold and the level of interest they are likely to show in the strategy of the organisation. The matrix has two axes: stakeholder power and the interest of the stakeholders. This matrix indicates the likely type of relationship which the organisation will need to establish with each stakeholder group.

Try again to identify one of your own stakeholders for each quadrant.

Power/Interest matrix

LEVEL OF INTEREST /POWER	LOW	HIGH
LOW	I	II
HIGH	III	IV

(based upon Johnson and Scholes, 2002)

Group IV (high interest and high power) will be the key players with whom the future strategies need to be acceptable. Group III (low interest but high power) stakeholders may be difficult as they may still respond to specific events. For example, if a factory closes down in an area, a previously interested stakeholder may

demand rapid and comprehensive action from the project. Also if the likely interest shown by stakeholders is underestimated then Group III may move rapidly into Group IV.

The notion of a stake holding society (e.g. Ametai Etzioni). This is where: a) all have a common interest in the economy and economic benefits are widely distributed and opportunity is available to all; and b) the welfare system is based upon the concept of social inclusion and social cohesion (Hutton, 1995). However, some argue that the concept of stakeholding implies that firms are social organisations with rights and moral obligations to communities and localities and so decisions cannot be made purely on profit and loss and there will need to be some form of coercion of firms beyond a 'strategy of gentle encouragement' (Imrie and Wilks-Heeg, 1996).

6. Assessment Tools

Numerous methodologies have been developed for the assessment of social sustainability by the policy makers, academics, practitioners and the private sector.³⁰ A 2006 European Commission study identified 27 assessment methodologies and techniques from that were applicable to social sustainability.³¹ The variations between these methodologies entailed different purposes, spatial and temporal parameters, and stakeholders. There were differences in the level of technicality and levels of participation by stakeholders.

Many sustainability assessments take a 'triple bottom line'³² methodological approach. Triple bottom line refers to the expanding of environmental assessments which have been conducted for several decades to also assess impacts on economic activities and society/communities. The three pillar model of sustainable development is closely related to this type of methodology where each of the three pillars, environment, economic and society, is explicitly

³⁰ Colantonio, 2006, 2007

³¹ LUDA, 2006

³² Elkington, 1994

examined with regards to impacts from a proposed policy. One difficulty with this approach has the practice of perceiving the three bottom lines as independent from each other and that the gains or losses from each are to be exchanged to achieve the optimal policy. This process falls short of the holistic approach that lies at the foundation of multi-dimensional policy assessment.

It has been put forward that linkages and interdependencies between the three pillars be examined³³ that potential synergies be identified and policies reoriented so total gains are amplified, not simply offset by losses.

A major obstacle yet to be overcome in the use of multi-dimensional sustainability assessment is the ability to create measurements that are easily compared or transferable between the three areas. No capacity exists to deliver collective or aggregate values which include all three dimensions. It is not currently possible to substantiate a composite index which includes economic, environmental and social indicators. This leads advocates of the reductionist approach to conclude that at this time diverse methodologies and measures are more appropriate than a single sustainability index.³⁴ They argue all three dimensions are complex systems that warrant their individual and distinct perspectives.

Indicators are the basic tools to measure sustainability, or more appropriately stated measure the movement toward or away from sustainability. The first significant use of sustainability indicators was initiated by Agenda 21 as part of the Earth Summit in Rio de Janeiro in 1992. A first set of 132 indicators that covered economics, environment, institutions and society were developed by 2000. Subsequent modifications resulted in a final set of 50 core indicators supported by 48 additional indicators.³⁵

³³ George, 2001

³⁴ Gaspartatos et al, 2007

³⁵ UN Division on Sustainable Development, 2007
<http://www.un.org/esa/sustdev/natlinfo/indicators/guidelines.pdf>

Since Agenda 21 was proposed hundreds programmes worldwide have come into existence to research, develop or implement the use of sustainability indicators. Two features, environment issues and small-scale discrete issues that can be measured by specific methodologies are proposed, appear to characterise the large volume of work on sustainability indicators.³⁶ Indicators of environmental issues constitute the greatest portion of the indicators. This may be due to historical precedent as environmental sustainability has been of global concern and research decades longer than the other two pillars of sustainability and the scientific tools to measure/quantify the environment are more explicit than that of economics and society. The second feature of the work on indicators for small scale discrete issues may reflect the argument previously stated that methodologies have yet to be developed for creating comparable measurements which are as explicit as the environmental pillar.

There has been an evolution of the set of indicators used in major social sustainability indices which have been developed over the past 15 years. Early indices like the Human Development Index and the Indicators for Sustainable Development that were developed for the United Nations in the 1990's put greater emphasis on basic human needs like the poverty, health, education, and demographics. These indices were designed to measure developments at the national and international level. Later indices developed in the 2000's tended to use smaller social scales like national, regional and city/metropolitan level indicators, Governance, representation and institutional factors are given greater weight in measuring social sustainability.

³⁶ Colantonio, 2006

The HDI combines three basic dimensions:

Life Expectancy at birth, as an indicator of general population health and longevity

Knowledge and Education, measured by the national gross enrollment ratio (primary, secondary and tertiary levels combined) and the adult literacy rate.

Standard of Living, measured by (gross domestic product) GDP per capita adjusted for purchasing power parity.

Source: Human Development Report, UNPD, <http://hdr.undp.org/en/statistics/data/>

Commission on Sustainable Development Theme Indicator Framework – Social

Core Indicators - Social

1. Percent of Population Living Below Poverty Line
2. Gini Index of Income Inequality
3. Unemployment Rate
4. Ratio of Average Female Wage to Male Wage
5. Nutritional Status of Children
6. Mortality Rate Under 5 Years Old
7. Life Expectancy at Birth
8. Percent of Population with Adequate Sewage Disposal Facilities
9. Population with Access to Safe Drinking Water
10. Percent of Population with Access to Primary Health Care Facilities
11. Immunization against Infectious Childhood Diseases
12. Contraceptive Prevalence Rate
13. Children Reaching Grade 5 of Primary Education
14. Adult Secondary Education Achievement Level
15. Adult Literacy Rate
16. Floor Area Per Person
17. Number of Recorded Crimes per 100,000 Population
18. Population Growth Rate
19. Population of Urban Formal and Informal Settlements

Source: INDICATORS OF SUSTAINABLE DEVELOPMENT: GUIDELINES AND METHODOLOGIES, <http://www.un.org/esa/sustdev/publications/indisd-mg2001.pdf>

Delivering an integrated approach was also important to the earlier indices with other dimensions, non-social indicators of sustainable development being included in the indices. Later indices do not attempt to weight together the different indicators or components but rather leave it to the uses of the

information to determine the importance or value of each indicator. Emphasis is more likely placed on the trend and direction of the indicator not on the actual values of any current measurement period.

There has been a shift to smaller spatial scales as the operational level to measure social sustainability. Indices developed in the 2000's are more likely to measure many attributes of social sustainability at the neighbourhood level or city level rather than at the national level. The Egan Report³⁷ states that different spatial levels are required to measure various aspects of sustainability with open space and safety more relevant at the neighbourhood level while economic indicators are more informative at regional or sub-regional scales.

The growing belief that social sustainability is best developed, and measured, at the community level can be seen in the European Union's 2005 Bristol Accord.

Later indices that have been developed have also shifted away from only using information based on objective quantitative statistics to have a mixture which includes subjective qualitative information. Egan suggests that qualitative information is essential because it reflects people's perception of their communities. The collection of qualitative information requires increased inclusion and representation of individuals at the local community level. It also allows for the identification of place specific knowledge and local subjective values which can be included in the policy-making process. One significant difficulty may arise from this emphasis on the community level spatial scale for measurement of indicators. The ability to compare between communities can be hampered if there is non-uniformity in data collection and aggregation of data to measure sustainability at larger spatial level may not be possible.

Social Sustainability Indicators being used or considered in Scotland

³⁷ Egan, 2004

Health Inequality

- Life Expectancy (by area) for men and women
- Infant mortality by socio-economic group

Well-being

- Percentage of 16-19 year olds who are not in education, training or employment
- People of working age in employment

Community

- Neighbourhood satisfaction
- Percentage of people taking part in voluntary activities
- Crime - Total number of recorded crimes for:
 - Vehicles
 - Domestic housebreaking
 - Violence
 - Anti-social behaviour
- Community regeneration
- Households
 - Population living in workless households by working age and children
 - Childhood poverty
 - Homeless households
 - Children in low income households
 - Pensioner poverty
 - Total number of households living in fuel poverty

Finally, Colantonio (2007) sets out a useful list of social, Socio-Institutional, Socio-economic, and Socio-environmental indicators:

Social

1. Access to resources
2. Community needs (e.g. are communities able to articulate their needs?)
3. Conflicts mitigation
4. Cultural promotion
5. Education
6. Elderly and aging
7. Enabling knowledge management (including access to E-knowledge)

8. Freedom
9. Gender equity
10. Happiness
11. Health
12. Identity of the community/civic pride
13. Image transformation and neighbourhood perceptions
14. Integration of newcomers (especially foreign in-migrants) and residents
15. Leadership
16. Justice and equality
17. Leisure and sport facilities
18. Less able people
19. Population change
20. Poverty eradication
21. Quality of Life
22. Security and Crime
23. Skills development
24. Social diversity and multiculturalism
25. Well being

Socio-Institutional

26. Capacity Building
27. Participation and empowerment
28. Trust, voluntary organisations and local networks (also know as Social Capital)

Socio-economic

29. Economic security
30. Employment
31. Informal activities/economy
32. Partnership and collaboration

Socio-environmental

33. Inclusive design

34. Infrastructures

35. Environmental Health

36. Housing (quality and tenure mix)

37. Transport

38. Spatial/environmental inequalities

Source: Colantonio (2007)

Such sets of issues can be useful in identifying questions that need to be asked in Social Sustainability Assessments, in order to provide information, encourage participation, identify potential impacts and contributions of different groups etc. . However:

- it is difficult to measure indicators;
- the time horizons need to be carefully considered for different issues and indicators;
- it can be difficult to determine the counterfactual – will it make a difference?;
- are the combined effects greater than the sum of the parts?;
- the context is important as there are many different cultural interpretations of what should be included as social issues and projects and policies are carried out in different contexts.

But it is easy to criticise and hard to present something better!

Sustainability Impact Assessment Tools (SAIT)

There are four programs currently developing sustainability impact assessment tools that related to land use impact assessment. None of the programs are operational at this time.

SENSOR

The EU-FP6 Integrated Project SENSOR will develop science based ex-ante Sustainability Impact Assessment Tools (SIAT) to support decision making on policies related to multifunctional land use in European regions. These assessment tools will allow for the assessment of land use policy effects on sustainable development at regional scale for Europe.

EFORWOOD

The objective of EFORWOOD is to develop a quantitative decision support tool for Sustainability Impact Assessment of the European Forestry-Wood Chain (FWC) and subsets thereof (e.g. regional), covering forestry, industrial manufacturing, consumption and recycling.

PLUREL

The PLUREL project will develop new strategies and planning and forecasting tools that are essential for developing sustainable rural-urban land use relationships. These strategies and tools, generic in nature, will support the analysis of urbanisation trends in the EU so that ways can be identified of both supporting this process and mitigating its negative impacts. In this way the PLUREL tools will help improve the quality of life of the population living in cities as well as in the peri-urban and rural surroundings. PLUREL will evaluate costs for the implementation of these strategies, and help stakeholders to better understand, plan and forecast the interactions between urban, peri-urban and rural areas.

SEAMLESS

In short, SEAMLESS-IF will facilitate translation of policy questions into alternative scenarios that can be assessed through a set of indicators that capture the key economic, environmental, social and institutional issues of the questions at stake. The indicators in turn are assessed using an intelligent linkage of quantitative models. These models have been designed to simulate

aspects of agricultural systems at specific scales, i.e. point or field scale, farm, region, EU and world. Application of the models requires pan-European databases for environmental, economic and social issues. Some indicators, particularly social and institutional ones, will be assessed directly from data or via a post-model analysis.

6. Modelling Social Impacts

Identify the social impacts of a policy, who is affected and the timescale

The first step is to identify those impacts that may occur from a change in policy or the implementing of a land use change project. Impacts will be in two categories: intentional and unintentional. The intentional impacts are generally the object of the policy change at level. The unintentional impacts are either the result of intentional impacts or from some disruption in the community that reorients how the social system is operating. Unintentional impacts can be good, bad or ambiguous in their effect on a community.

Example: Intentional Impacts versus Unintentional Impacts

A timber operation is permitted to expand operations and harvest an increased amount of timber (policy change). Employment expands as the operation needs more people to work (intentional impact). Wages increase or unemployment decreases or both (intentional impact). More people move into the area to work which causes an increase in the local property values for both rents and ownership (unintentional impact). Homeowners realise greater property values and increase level of improvements and maintenance of properties, which results in improved housing stock (unintentional impact). People at the lowest economic levels are displaced from housing as rents increase (unintentional impact). There is an ambiguous impact on community healthcare system as increased population may cause strains and shortages of services or the improved housing stock and income levels may lead to a decrease in demand for healthcare (unintentional impact).

When an impact has been identified the linkage between the cause, policy change or proposed project, and the impact needs to be established. It is important to clearly state how the policy change contributes to the intentional impacts and objects. In addition, all persons and groups that are impacted should be systematically identified and the time scale that such impacts will occur. Some impacts can be wide-spread and permanent, i.e. improved road transport into a rural area. Other impacts can be local and temporary, i.e. increased employment while the road is being constructed.

The identification of all groups within the community is vital to conducting a social impact analysis. Policies and projects that may benefit the community as a whole may be inappropriate in implementation because the positive and negative impacts are unevenly distributed. There are two types of distributional impacts to consider:

- Impacts on that differ by social and economic group. Identifying those group which gain or lose from a policy initiative can lead to improved design of the policy. It can also identify groups that will lend support to the policy and potential mitigation measures for groups that may oppose the policy otherwise.
- Impacts on groups that already experience inequities. Comparing impacts on gender or ethnic groups and regional disparities to see if the policy will maintain, diminish or aggravate the imbalance of social equity. This is a difficult issue to consider in application, ie. as a policy that is apparently neutral in its impact on income means that the existing disparity continues unchanged.

Building a Causal Model

A bottom-up approach to identifying all the potential impacts from a proposed policy starts by identifying those impacts that are intentional and the desired object of the policy. These impacts form a core from which additional unintentional impacts can be identified in increasing levels and complexity of interactions. A map or diagram of impacts can be drawn that sketches out the cause and effects linkages between each of the policy options.

The level of unintentional impacts, primary, secondary and tertiary, is only determined by the proportionate analysis needed for the policy under consideration. The scale of the policy, EU, national or local community level, as well as the importance of the policy to society will determine the proportionate analysis required.

Several important element of the casual model must be met for the process to be useful:

- Primary policy and alternatives that are to be considered.
- Agreement about the core impacts that are the goal of the policy.
- The direction of cause to effect as the unintentional impacts are identified.

- Clearly defined assumptions as to the linkage from one impact to another, including the strength of linkage.
- Possible feedback loop that may increase impacts or decrease impacts.

Below is a causal model diagram (Diagram 1) using the information previously given in the example of intentional impacts versus unintentional impacts.

If the causal relationship between impacts is not self-evident, than intermediate impacts should be included or the linkage explicitly explained.

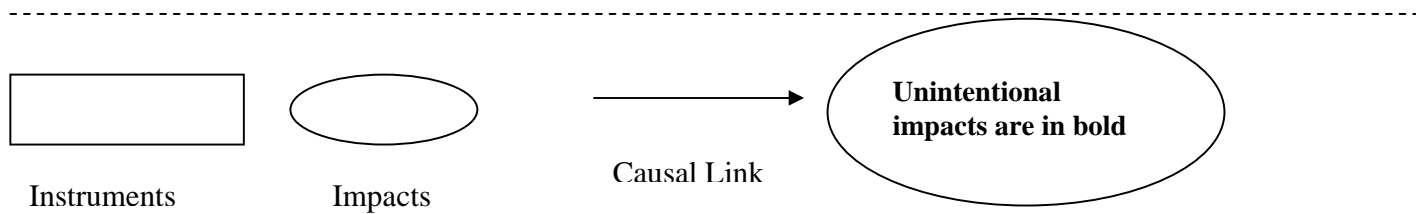
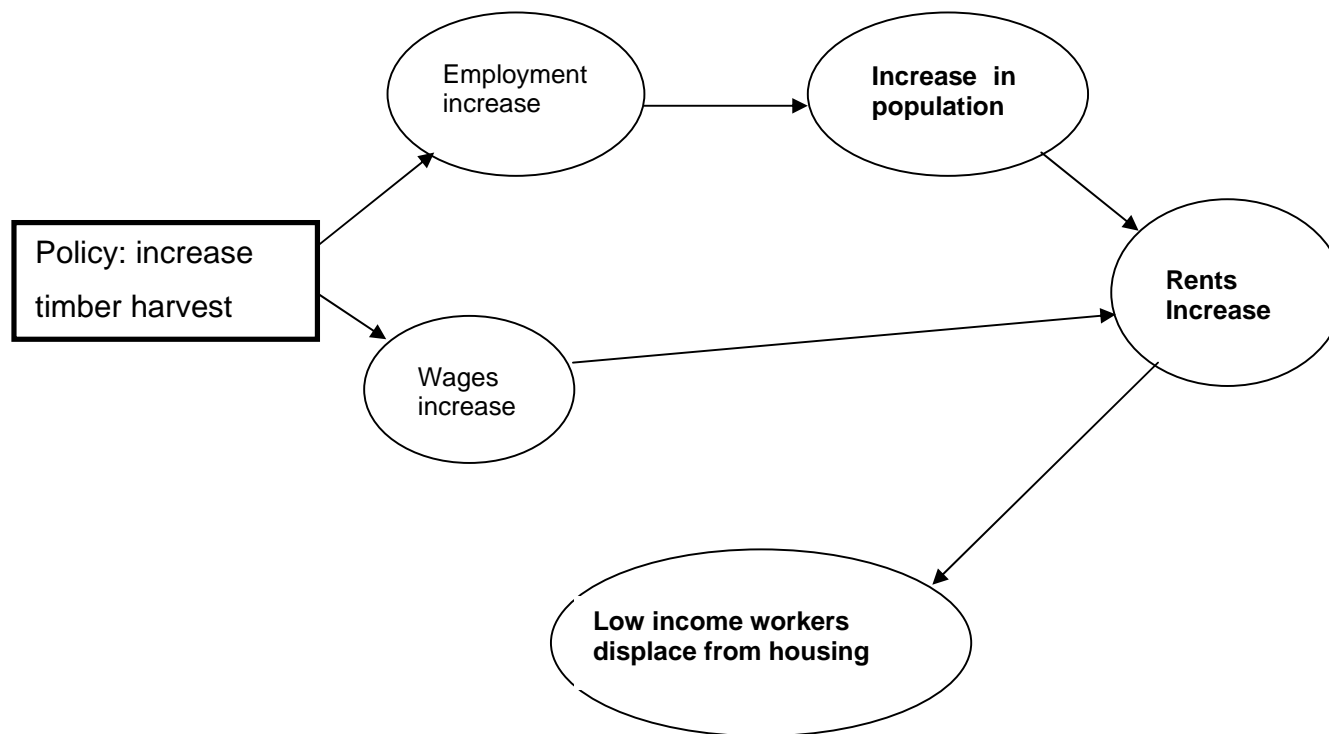
This approach will assist in identifying a wide range of possible impacts , beyond the intentional objects of the proposed policy change. The end result will be a comprehensive overview if the process is followed through and do thoughtfulness given to identification of all possible impacts.

To reiterate the process in brief. Identify:

- the policy and alternative policies options.
- the intentional impacts, which are the objective of the policy
- consider two questions to identify additional impacts (both beneficial and negative)
 - who will be affected by the policy
 - over what timescale
- identify the distributional impacts that take into account all impacts
- clearly identify those impacts which may present an obstacle to implementation or create additional support for the policy

It is important to carry out an analysis for the each of the possible policy alternatives that could be implemented. In particular, it is important to acknowledge difference in both negative and beneficial impacts that occur under each alternative.

Diagram 1: Causal model of impacts – increased timber harvesting



Identify the critical impacts for further analysis

The most important impacts will require further analysis. The breadth and depth of analysis will depend on the significance of the policy and the impacts that have been identified. The principle of proportionate analysis should always be kept in mind when deciding what further analysis should be requested. Consultation with stakeholders can be useful in determining the impacts that need detailed analysis, especially if the significance or import of the impact is controversial or disputed.

There are several methods to identify the critical impacts in addition to the casual model described above. Two other methods that may be used are performing a qualitative assessment and building an impact matrix.

To conduct a qualitative assessment each impact is assigned a likelihood that it will occur if negative or the risk that it will not occur if it is a beneficial impact. The likelihood/risk assignments can be done by setting out the factors that are outside the control of the policy decision makers or the community which is involved. These factors can be compared with the factors that are within control of the policymakers or community to establish the likelihood/risk levels. The levels assigned may be broadly applied, i.e. high, medium, low, or more precisely calculated with formal risk analysis.

After assigning the likelihood/risk level to the impact the next step is to assess the scale of the potential impact. A crucial question to be asked at this time is rather the impact is irreversible once it has occurred. The scale can be considered on three levels, the greater community, i.e. the EU , a State or region, the local community or the individual. Some impacts at the national level have little direct impact the individual, while others are dramatically life changing for the individual but of no notice beyond the community in which the individual lives.

The final step in conducting a qualitative assessment is to match the likelihood/risk of an impact with the scale of the impact to determine its importance or ranking among all the impacts that have been considered at this stage. Impacts with very large and significant affects may become even more significant if the likelihood/risk of them occurring is high, or they may become less important, even trivial, if the likelihood/risk of occurrence is low. The analysis can become mired in too much detail if impacts that are critically important to some stakeholders are noted for further detailed analysis, even if the likelihood/risk is very low. Again, the analysis should always be aware of and guided by the principle of proportionate analysis.

The final method of identifying impacts that should be considered important and a more detailed analysis conducted is the impact matrix. This method is especially effective when there are multiple policy instruments that may be used to meet the intentional impacts or objectives.

There are five tasks involved with creating an impact matrix:

1. Break the policy options in to their main actions. These will be the rows of the matrix.
2. Identify the main categories of impacts, organised by the timescale or endurance. These will be the columns of the matrix.
3. Indicate the likelihood/risk of the impact occurring in each cell. These likelihood/risk designations are the same as performed in the qualitative assessment described above.
4. Indicate in each cell if the impact is perceived as positive, negative or ambiguous/uncertain. Stakeholder consultation is useful in determining the perceived nature of an impact if it is not clearly determined by prior policy or legislative mandate. Refer to the introductory policy section of this chapter for EU policies on social sustainability.
5. Indicate the stakeholders, groups, affected populations in each cell and the timescale in which the impacts are expected to occur.

6. Other information may also be included within each cell, such as reversibility and causal pathways.

Given the complexity of the task to identify potential impacts and then determine which impacts will require a more detailed analysis any of these methods will assist in providing a structured and explicit way to present the findings and communicate them in a transparent and open manner to interested groups, communities and stakeholders.

There are other common difficulties and complexities that arise when identifying impacts. It is often times easier to identify the immediate or short-term impacts from a proposed policy than it is to identify the impacts that may come 10, 15 or 50 years from the time of implementation. While the more immediate impacts are frequently more important politically, the long term impacts can be more significant to determining if a policy is successful in creating and maintaining a sustainable society. Assessments become more complex and more subjective to the stakeholders when potential impacts cannot be quantified in numeric terms or monetarily. The temptation exists to not include these types of impacts, but they can be some of the most important issues in creating equitable and fair societies. Impacts, rather intentional or unintentional, will be influenced by future policies and changes in society as time progresses. The impacts may become more or less important to stakeholders as other issues and concerns arise. Always keep the goal of policy impact assessment is to attain social sustainability.

Combined Qualitative Assessment and Impact Matrix Analysis

Policy/Project	Employment/Wages	Population	Rent
	<p>Employment increases (large) *</p> <p>Local population employed - 50 jobs *Non-local population employed - 15 jobs (skilled or experienced to manage expansion) Likelihood - 60% <i>All unemployed workers with appropriate skills set are likely to gain full time employment</i></p>	<p>Population increase (large) Likelihood - 50%</p>	<p>Rent increase (large) Likelihood - 60%</p>
	<p>Employment increases (small) *</p> <p>Local population employed - 25 jobs *Non-local population employed - 5 jobs (skilled or experienced to manage expansion) Likelihood - 40% <i>Some unemployed workers with appropriate skills set are likely to gain full time employment</i></p>	<p>Population increase (small) Likelihood - 40%</p>	<p>Rent increase (small) Likelihood - 30%</p>
	<p>Wages increase (large)</p> <p>*15% average wage increase Likelihood - 50% *Upward wage pressure through out timber sector *Substantial improvement for unemployed as wages are greater than minimum level</p>	<p>Population decrease (small) Likelihood - 10%</p>	<p>Rent stable -no change Likelihood - 10%</p>
	<p>Wages increase (small)</p> <p>*15% average wage increase Likelihood - 50% *Upward wage pressure through out timber sector *Substantial improvement for unemployed as wages are greater than minimum level</p>		

7. Literature

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