

Sector Programmes

– Guidelines for the Dialogue on Strategic Environmental Assessment (SEA)

May 2002



Sida

SWEDISH INTERNATIONAL DEVELOPMENT
COOPERATION AGENCY

Department for Natural Resources
and the Environment

Sector Programmes

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These guidelines have been produced in cooperation between Sida's Environment Policy Division, the Swedish EIA Centre at the Swedish University of Agricultural Sciences in Uppsala, SCC-Natura and Stockholm Environment Institute. The development of Strategic Environmental Assessments in Sector Programmes is a work in progress and therefore this publication will be a living document.

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1. Introduction

These guidelines describe the practical application of Sida's rule on Environmental Impact Assessment¹ for Sector Programmes, based on the form of support referred to in Sida's *Policy for Sector Programme Support*.

The methodology for EA has initially been developed for assessment at project level. EA should, however, also be made of support at an overall level – policies, plans and programmes. EA at this level is usually referred to as Strategic Environmental Assessment (SEA) and it needs a somewhat different approach, in which the focus is on policies and strategic issues instead of detailed activities.

Another important difference is that the establishment of a Sector Programme is made in a process in which the objectives and strategies for the sector gradually take shape. Shortcomings within the sector can therefore be remedied as part of the programme instead of constituting a condition for Sida's decision to participate in the process.

These guidelines should serve as guidance to Sida in the dialogue with the partner in cooperation on support to Sector Programmes. The document is divided into a generic part that applies to all sectors, and separate Sector specific guidance including information and checklists for different sectors². The environmental aspects have different dimensions in each sector.

What is Strategic Environmental Assessment?

SEA at sector level opens up new and greater possibilities for sustainable development, since the decisions made at the strategic level can influence development for many years. These decisions will also have influence on forthcoming decisions on the localisation and design of projects within the sector. The SEA will not focus solely on the significance of impacts, but will help understand whether the environmental dimensions of the sector have been sufficiently addressed in the preparation of the programme.

The overall objective of the SEA is to provide better and more sustainable sector programmes. This will be achieved by ensuring that environmental issues are addressed at all stages in the programme development and implementation process. The SEA should focus on both optimising positive contributions to environmentally sustainable development and on minimising negative environmental impacts of planned activities in the sector.

¹ Sida regulations – Environmental Impact Assessment in International Development Cooperation, decision GD 54/01.

² For the present time only for agriculture, education, and health, further sector specific information and checklists will be elaborated later.

SEA makes environmentally sound development possible in a number of ways, for example by:

- clarifying possible environmental impacts and facilitating the consideration of environmental aspects in the decision-making process.
- stimulating the pursuit of environmentally sound development in the sector.
- taking environmental aspects into account at an early stage, which can have positive effects on subsequent activities and decisions made within the sector.
- identifying environmental linkages within the sector (of different objectives, strategies or activities) and with other sectors and crosscutting issues, as well as indirect and cumulative effects, i.e. when the combination of effects result in a larger impact in size and/or over time.
- facilitating the analysis of needs for institutional development and capacity building activities, as well as various activities with positive environmental impact.

2. Roles and responsibilities

The roles and responsibilities of the different stakeholders involved in the SEA process could be as follows:

The partner in cooperation, for example a Ministry in the partner country

The SEA, as well as the development of the Sector Programme itself, is the responsibility of the partner in cooperation in the partner country. The SEA should be an integral component in the formulation and implementation of the Sector Programme. The SEA should be made in a dialogue with the external financiers and other stakeholders involved in or affected by the programme. The partner in cooperation is responsible for ensuring a good participatory process and for coordinating actions with all relevant stakeholders. The partner in cooperation is responsible, for example, for pursuing a public disclosure policy for the SEA, making the SEA exercise, including its findings and key documents, accessible to the public at large. Technical and/or financial support from external financiers may be needed.

Other stakeholders, for example NGOs and the public

Public and stakeholder participation is a key element throughout the SEA process. The stakeholders affected, the public and NGOs should be invited to participate in the review of the SEA, and therefore given sufficient time to analyse the SEA and provide comments.

Sida and other financiers

Sida's role is, in principle, to review the quality of the SEA and monitor the development of the sector/sector programme, on the basis of environmental indicators, jointly with other financiers. If the SEA is not proposed by the partner in cooperation, the other financiers or any of the other parties involved, Sida should initiate a dialogue on the responsibility for and modality of the SEA process.

Coordination with the partner in cooperation and other financiers/external funding agencies is a fundamental part of the process of establishing a Sector Programme. Sida should therefore harmonise its rules, routines and conditions, establish a common framework for the review, follow-up and evaluation of the impacts, and coordinate its actions with the partner in cooperation and other financiers, for example in order to identify needs for financial and technical support. Actions and division of responsibilities must be agreed upon at an early stage of the formulation of the programme.

3. Good practices

In the environmental assessment of a Sector Programme, the focus should be on objectives and strategic issues rather than on detailed activities in a project. The assessment can, for example, be based on national development policies, for example National Strategies for Sustainable Development (NSSDs) or Poverty Reduction Strategy Papers (PRSPs), or more specific environmental plans, such as National Environmental Action Plans (NEAPs), and other relevant policy papers.

The SEA should be developed in a dialogue between all relevant national stakeholders and financiers.

The SEA should be integrated into the process for the development of the Sector Programme. The table below describe the SEA process and the possible different steps and actions and their relation to the steps in the process. The steps are based on Sida's project cycle. However, it should be noted that this project cycle does not necessarily mirror the process in the country. It is also possible that Sida enters into an on-going process, and some of the SEA stages might take place in parallel or might have been undertaken earlier.

Stage/actions	SEA Stage/Documents
Identification • Dialogue • Analyses • Broad proposals	1) Sector Environmental Study • The Sector Environmental Study (SES) aims at integrating key environmental information into the sector analysis, before proceeding to the preparatory stage of the process. • The SES should provide a situation analysis of major environmental issues relating to the sector, national policies and legislation, the institutional capacity to manage the programme and its environmental aspects, and linkages to other sectors. • The SES should, as far as possible, be integrated with the sector analysis, providing an environmental perspective to the analysis.
Preparation • Dialogue • In-depth analyses • Specific proposals	2) The SEA document – “Environmental Impact Statement” • The SEA document, also called “Environmental Impact Statement”, can be integrated into the preparation of the programme proposal or drawn up in parallel to this. • The EIS focuses on the assessment of strategic environmental consequences (positive and negative) of the suggested programme activities and should also include an analysis of alternative strategies for the sector. • A central aspect is the prediction of the broader types of environmental consequences, including indirect impacts, cross-sector impacts and transboundary impacts. • This can provide the basis for enhancement and mitigation strategies to be considered in the programme. It can also set the preconditions for approval of sector programme support, in terms of environmental aspects on the one hand, and measures to improve these on the other hand. • The EIS should provide recommendations on possible indicators for monitoring the implementation of the programme. • Impacts that are commonly associated with the sector and proposed activities in the programme are presented in the Sector specific guidance including information and checklists, Annex 1-3.
	3) Environmental Management Plan • As part of the SEA process a plan for the follow-up of environmental impacts and on how to achieve positive environmental impacts should be developed. The plan is usually called Environmental Management Plan (EMP). The EMP process and document should be linked to other (sector) analyses, for example economic, poverty, health, gender analyses. • This activity should be integrated with the preparation of the programme proposal. The EMP can include: • Proposals for positive contributions of the Sector Programme towards environmentally sustainable development and mitigation of negative environmental impacts of activities within the Sector Programme; • measures for monitoring and reviewing environmental performance in the sector, including a set of indicators against which the implementation of the programme can be measured; • more general sector-wide indicators pertaining to environmentally sustainable development; • measures for institutional development and capacity building; • requirements for project-level EIA during the implementation of the programme.
Appraisal and approval	The EMP should form part of the Sector Programme Document, and approval of the Sector Programme Document should be subject to the approval of the EMP

Implementation and monitoring • Implementation • Monitoring of sector development process, outputs and impact • Reviews and adjustments	4) Implementation of the EMP – Monitoring • The implementation of the EMP should, as far as possible, be integrated with the implementation of the overall programme plan. • Review and monitoring activities on behalf of Sida should be coordinated with other financiers, for instance in the form of joint technical review mission teams with representatives of the partner in cooperation, the financiers and other important stakeholders involved.
Evaluation • Assessment of lessons learnt • Possible ex-post evaluation	5) Evaluation of the environmental impacts, based on environmental indicators • Possible ex-post impact assessments • Evaluation based on environmental indicators

4. Generic guidance

The aim of the checklist below is to provide support in the SEA process. It can serve as a starting point for the dialogue and a tool in the review of the SEA process. The items mentioned in the checklist below should, when relevant, be included in the SEA process and documented in reports. The checklist is not exhaustive and more questions may be needed (please see also sector checklists for agriculture, health and education). If the answer is “No” to any of the questions below, a discussion with the partner in cooperation may be necessary.

CHECKLIST – GENERAL QUESTIONS (all sectors)	YES/ Sufficient	NO	More info needed
SEA process and participation • Was there broad-based participation in the SEA? Have representatives of different stakeholder organisations (such as NGOs, research institutions, Govt. agencies, private sector etc.) affected by the programme received sufficient information and been given the possibility to participate in and exert an influence on the process? • Have any special points of view been presented and if so, have these been addressed?			
The SEA process should include:			
1. Sector environmental study • an account of the most important environmental aspects related to the sector and their anticipated development • an account of the policies and legislation at national level, as they relate to environmental aspects of the sector • consideration and characterization of the institutions in place and capacity, at different levels, to deal with environmental aspects of the sector • an assessment of cross-sector linkages between institutions and policies, in particular between environmental institutions and policies and the sector in question			
2. Environmental impacts of the Sector Programme • consideration of likely long-term positive and negative environmental consequences of the sector strategy (scope and significance) towards issues such as: - Poverty, people's livelihoods			

- People's health and well-being - Land management, access and distribution - Water quality and access/distribution - Air quality - Global warming and ozone-layer depletion - Solid waste and waste-water - Biological diversity/resources • consideration of potential indirect and transboundary impacts			
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CHECKLIST – GENERAL QUESTIONS (all sectors)	YES/ Sufficient	NO	More info needed
3. Environmental management plan (EMP) • proposals for positive contributions of the Sector Programme towards environmentally sustainable development • proposals for policy instruments to cost-effectively mitigate negative environmental impacts of activities in the Sector Programme, based on market-based (fees, taxes, subsidies), rules, regulation and standards (for pollution, depletion), technological improvements, information and/or public disclosure • systems for monitoring and reviewing progress in relation to the environmental aspects, including a set of indicators for performance • measures and activities for institutional development and capacity building activities in relation to the programme, e.g. – capacity to analyse, monitor and review positive and negative environmental impacts within the sector – awareness of national environmental policies, programmes and plans and their relation to the sector. In particular, an assessment of the quality, relevance and process of implementation of the policies and plans – cross-sector linkages and dialogue with other sectors and Ministries – trans-boundary linkages of the sector (with impacts in other countries, ecosystems, etc.) – capacity and legal framework for carrying out EIAs at project level within the sector – environmental education and training of staff working in the sector as well as politicians and local people – explicit commitments regarding public disclosure policies and procedures for the SEA process, its findings and its conclusions			

5. Sector specific guidance

Guidance and checklists for agriculture, education, and health are presented below. Further sector specific checklists will be drawn up later. For additional sector specific checklists, the reader is referred to Sida's EIA handbook, "Sustainable Development? – Guidelines for EIA Review in Development Cooperation", Sida 2002. Relevant information for sector programmes, both on questions to be asked and on indicators, is also available in "Country Strategies – guidelines for strategic environmental and sustainability analysis", Sida 2002.

5.1 SEA of Sector Programme Support to the agricultural sector

Relevance of environmental issues in agricultural sector programming

It is estimated that the world population will increase from 6 billion today to 7.7 billion 2020. It is also projected that the proportion of people living in developing countries will increase from 79% today to about 84% in twenty years' time.

The question of whether food will be produced in sufficient quantities for these additional consumers has been raised. In this respect the major factors are:

- the rapid rate of urbanisation which will affect dietary and food demand patterns;
- the short supply of good quality cropland in many parts of the world;
- the serious and increasing environmental degradation to which much land is subjected;
- unequal land distribution.

Agriculture dominates the economy of most developing countries. Generally, the poorer a country is, the greater the relative importance of its agricultural sector becomes in relation to GDP, employment and export. The greatest economic challenge to all for these countries is therefore to stimulate growth and increase productivity in agriculture as a necessary, but insufficient, engine for growth and development in other sectors of the economy. In this respect it is essential that possibilities are created to improve the living conditions and income, primarily of poor groups in the rural population. This can be realised through sustainable and productive use of renewable natural resources, with due consideration given to the long-term functioning of the ecosystems, democratisation, secure property rights, land distribution, etc.

The term "sustainable agriculture" means different things to different people. For some people it means long-term food sufficiency, while for others it means low-input agriculture and an approach that emphasises biodiversity, conservation tillage and recycling of nutrients. Agricultural productivity can never be sustainable if it has serious negative effects on the environment, undermining the productive potential of land and people. Therefore, sustainable agriculture should always include environmental and social considerations as well as economic considerations.

One of the biggest environmental threats today is the increasing rate of soil degradation in the world. This has serious negative effects on agricultural productivity and conservation of natural resources, including biodiversity. Overgrazing, deforestation, natural disasters and inappropriate agricultural practices are all linked to the increasing rate of soil degradation. When drawing up the SEA, it is important to consider how these problems and their underlying causes can be remedied. Common issues usually discussed in agricultural sector programmes include: property rights, market-oriented price policies, increased participation, capacity building, mechanisms for access to credits and markets, appropriate technologies etc. These issues can have both positive and negative environmental impacts.

It is also important to adapt the checklist for agriculture to the reality and the livelihood systems of the farmers. Line ministries are divided into sectors for agriculture (meaning crop production), livestock, forestry, fisheries, water resources, etc. The main target group of Sida's agricultural programmes, poor small-scale farmers with few resources, do not divide and manage their enterprises in sectors. Instead, the small-scale farmers operate in a holistic and integrated way. Since this implies linkages with all other sectors in the natural resources field, as well as with other sectors such as health and education, it is appropriate to address the SEA in the same way.

Typical impacts and possible mitigation measures for agricultural sector development

To be able to actively participate in the dialogue with the partner in cooperation, other financiers and stakeholders, it is important to have some knowledge of possible impacts related to the agricultural sector in broad terms and possible mitigation measures in order to avoid negative, or stimulate positive impacts. The table below presents some important potential impacts and possible mitigation measures. It is far from conclusive.

Dimension³	Typical Impacts	Possible Mitigation and promotion measures
Insecure Property Rights	Land mining, decreasing productivity, resource degradation, downstream effects, uncontrolled settlements, natural disasters	Cadastral surveys, legal provisions to maintain rights, facilitate strengthening of local communities
Unequal land distribution and social and economic breakdown in rural communities	Excessive exploitation of natural resources, conflicts, reduced productivity, loss of knowledge, increased environmental and economic vulnerability	Awareness creation and education, local initiatives, participation, formation of community organisations, development options for rural areas, culturally adapted development and local knowledge

³ The distinction between dimensions and impacts is not clear-cut; an issue that constitutes a dimension can also be understood as an impact.

Commodity-oriented production, e.g. monocultures over large areas	Loss of genetic diversity, increased use of pesticides, increased vulnerability to climatic and economic fluctuation, impacts on food security	Integrated land and resource management planning, market incentives, adapted techniques and technologies, gene banks, in situ (on farm) conservation ⁴ , integrated pest management ⁵
Lack of investment in rural areas, including lack of access to local markets	Emigration, inadequate labour force, unsustainable farming practices, wastelands, squatters, environmental problems in cities	- Incentives for investment in rural areas; - People-centred development, emphasising local leadership and locally owned development strategies; - Decentralisation
Failure to adapt techniques to agro-ecological and socio-economic circumstances	Increased vulnerability, disasters, land degradation, depletion of water resources, poverty	- Link higher education, research, extension, training to farmers needs and priorities; - Research and dissemination of resource conserving techniques

Checklist of possible environmentally sustainable development issues in agricultural sector programmes

This checklist could serve as a tool for Sida programme officers/Swedish officials in the dialogue with the partner in cooperation, external financiers and other stakeholders involved in the development of sector programmes in the agricultural sector, in order to promote an environmentally sustainable development in the sector. If the answer is “No” to any of the questions below, the question of whether this is acceptable should be raised or whether the Sector Programme should be returned to the partner in cooperation for additional information.

Checklist of key issues in agricultural sector support	YES	NO
OVERALL POLICIES		
1. Is Sustainable Agriculture included as a priority issue in national-level policies and strategies for Natural Resources?		
If No , does the Sector Programme contribute to the development of sustainable agriculture in national policies and strategies?		
2. Is there national legislation and regulations that require Environmental Impact Assessment of agricultural projects?		
3. Does the Sector Programme ensure the future availability of resources through granting the farmers appropriate property rights?		
4. Does the Sector Programme include measures for monitoring and for the development of suitable indicators to this end, e.g. natural resources accounting, water quality and consumption, use of pesticides, agro-biodiversity depletion etc.?		
5. Does the sector programme involve dialogue and coordination with other Ministries for cross-sector interventions, for example those responsible for infrastructure, environment, education, health or water?		
If no , how can the sector programme promote dialogue and coordination to address cross-sector problems and strategies?		

⁴ In situ (on farm) conservation is the maintenance of species populations in their natural habitats, either as uncultivated plant communities or in farmers' fields as a part of existing agro-ecosystems.

⁵ Integrated pest management consists of a combination of control methods including biological control, host plant resistance, cultural control and selective chemical control.

6. Does the Sector Programme include raising environmental awareness in respect of agriculture among consumers and the public?		
TECHNIQUES AND THEIR APPLICATION		
7. Are the techniques promoted adapted to agro-ecological and socio-economic circumstances, e.g. water-conservation in dry areas, using local knowledge, etc?		
8. Is there any policy for the conservation of local genetic resources in gene-banks or in situ (on farm) conservation?		
9. Is there any form of transitional support to farmers wishing to change to more environmentally sustainable methods or to combine traditional methods with more recent agro-ecological research?		
10. Are there appropriate standards and regulations for the use and handling of pesticides?		
11. Is there a national strategy for Integrated Pest Management (IPM)?		
12. Does the sector programme include any forms of support to technologies that conserve resources?		
13. Is there any policy that stimulates the integrated use of resources at local level in order to meet productivity and sustainability goals?		
14. Is there a functional link between higher education, research, extension, other information dissemination and training? That is to say, do agriculture research, extension and training programmes give adequate support to technologies and approaches directed to the needs of small-scale farmers?		
15. Is there a "polluters pay principle" that is applicable to farmers?		
Checklist of key issues in agricultural sector support	YES	NO
PARTICIPATION AND COMMUNITY ORGANISATION		
16. Is there any formal adoption of participatory methods and processes? Is it applied in practice?		
17. Are communities involved in decision-making processes?		
18. Is any capacity created in planning for conflict resolution and mediation?		
19. Does the sector programme support the formation of and existing community organisations, for example indigenous people's organisations and farmers' management groups, credit management groups, consumer groups, etc.?		
RURAL DEVELOPMENT IN GENERAL		
20. Does the policy counteract the breakdown of structure in rural communities? Is local access to markets stimulated? Are rural-urban contacts stimulated?		
21. Does the sector programme support incentives for on-farm employment and investments in rural areas in general?		

5.2 SEA of Sector Programme Support to the education sector

Relevance of environmental issues in education sector programming

Environmental issues related to Sector Programme Support to the education sector are mainly of a positive nature, e.g. through integrating environmental education into the formal education system. The possible negative impacts from the education sector are mainly related to the construction of education facilities and the handling of solid and liquid waste from these facilities. At the strategic level, these impacts can be taken care of through ensuring that there is legislation requiring EIA of the construction of education facilities and in relation to the handling of solid and liquid waste from such facilities.

Integrating environmental issues in the education sector – at all levels – is one of the fundamental prerequisites for long-term sustainable development in a country. It is crucial to integrate environmental education within the formal education system in order to promote sustainable development and to improve people’s capacity to become aware of and find solutions to environmental and developmental problems. It is also one of the objectives of Sida’s policy for support to the education sector.

Typical impacts and possible mitigation measures of education sector development

To be able to actively participate in the dialogue with the partner in cooperation, other financiers and stakeholders, it is important to have some knowledge of possible impacts relating to the education sector and possible mitigation measures in order to avoid negative impacts. The table below presents some of the most important potential – positive and negative – impacts related to the education sector and some suggestions for mitigation measures for negative impacts and possible measures to promote a positive impact.

Dimension⁶	Typical impacts	Possible mitigation and promotion measures
Awareness of local, regional, global environmental issues	Protection and more efficient use of natural resources, which promotes poverty reduction and sustainable development	Promote integration of environmental education in national curricula, teacher education, education materials and in practice at classroom level (see also checklist)
Construction/rehabilitation of education centres	Loss or degradation of vegetation, degradation of soil cover, erosion, use of hazardous or unhealthy chemicals in construction materials	Use existing legislation and regulations for EIA in the construction/rehabilitation of centres and/or develop such legislation/regulations ⁷
Handling and disposal of waste-water and other waste (incl. sewage, chemicals etc.) from centres	Public and environmental health risks	Use existing legislation and regulations for handling and disposal of waste water and other waste and/or develop such legislation/regulations ²

Checklist of possible environmental sustainable development issues in education sector programmes

This checklist could serve as a tool for Sida programme officers/Swedish officials in the dialogue with the partner in cooperation, external financiers and other stakeholders involved in the development of sector programmes in the education sector, in order to promote environmentally sustainable development in the sector. If the answer is “No” to any of the questions below, the question of whether this is acceptable should be raised or whether the Sector Programme should be returned to the partner in cooperation for additional information.

⁶ The distinction between dimensions and impacts is not clear-cut; an issue that constitutes a dimension can also be understood as an impact.

⁷ See also Sida’s EIA Handbook and checklists

Checklist for key issues in education sector support	YES	NO
1) Is environmental education included in: - national curricula; - teacher education; - education materials; and - in practice, at classroom level?		
If yes , does the environmental education need to be further developed?		
If no , does the sector programme contribute to the development and integration of environmental education in these areas?		
2) Are environmental issues included in the national examination system?		
If no , does the sector programme contribute to the development and integration of environmental issues in national/local examination systems?		
3) Is there a committee (or equivalent) at the Ministry of Education or Ministry of Environment for the integration of environmental education into the formal education system?		
If yes , does the sector programme promote the work of the committee, e.g. through capacity development?		
If no , does the sector programme contribute to the establishment of a committee of this type?		
4) Does the sector programme involve dialogue and coordination between ministries for cross-sector interventions, e.g. between the Ministry of Education and the Ministry of Environment?		
If no , how can the sector programme promote dialogue and coordination to address cross-sector problems and strategies?		
5) Is there national legislation and regulations that require Environmental Impact Assessment of construction/rehabilitation of education facilities?		
If yes , how can the sector programme support the use of the existing legislation/regulations in practice?		
If no , does the sector programme include capacity development or promote coordination between ministries, in order to develop such legislation and regulations?		
6) Does the sector programme promote the integration of environmental issues and environmental concerns in vocational training?		
If no , how can the sector programme support the integration of environmental issues in vocational training?		

For further information see Sida's "Environmental Education Handbook".

5.3 SEA of Sector Programme Support to the health sector

Relevance of environmental issues in health sector programming

In general, between 25% and 33% of the global burden of disease can be attributed to environmental factors. This proportion is even larger in conditions of poverty. People who live in poverty are those exposed to the worst environmental and health risks; more environmental hazards are present in the living and working environment, and people have less capacity to protect themselves against exposure and effects. The causal relationships between environment, health and poverty are very strong. Local environmental conditions contribute directly to good or ill health through exposure to infectious or other dangerous and unhealthy substances. Critical diseases such as

diarrhoeal infections, respiratory diseases, tuberculosis, malaria and other vector-borne diseases and cancers are all environment-related to a significant extent⁸.

Environmental interventions account for a large part of the potential for health improvement in many parts of the world. The most effective points of intervention can differ from place to place. They might include environmental or hazard management, infrastructure, education and raising awareness, as well as treatment and rehabilitation to mitigate and minimize exposure to hazards. *The SEA should ensure that an assessment of this potential is part of the sector programme preparation process, to provide information in early stages and throughout the process of the policy dialogue and strategy formulation in the health sector programmes.*

The health sector has linkages with virtually all other sectors, not only the social sectors. There are significant environmental health linkages in development schemes in, for instance, water, agriculture and energy sectors. Changing the physical environment can influence health issues by increasing the transmission of disease. Degradation of the environment and natural resources such as biodiversity can also have effects on people's health through increases in malnutrition. The assessment should take explicit account of the opportunities for coordinating or integrating programming with other sectors, although the exact delimitation will vary from country to country.

Typical impacts and possible mitigation measures of health sector development

Environmental impacts from health sector development schemes include both the impact on people's health and well-being from exposure to the environment (also referred to as the environmental burden of disease) and, vice versa, the impact of health-related activities on the environment.

Both kinds of impact should be considered in the project-level EIA procedures for the sector. Analysis of the environmental burden of disease and likely environmental impacts of proposed activities also need to be included in health sector programmes. The need for mitigation, raising awareness, training and further development of environmental legislation/regulation/guidelines should also be included. The SEA should ensure that measures for this exist or otherwise promote their development. The table below shows possible negative direct and indirect impacts related to health sector programmes.

⁸ From a strict medical point of view, environmental causes of disease would be all those that are not genetic (Smith et al., 1999)

Dimension⁹	Typical negative impacts	Possible mitigation and promotion measures
Environmental burden of disease and loss of well-being¹⁰		
Insufficient clean water, sanitation and hygiene	Spread of water-borne diseases (e.g. dysentery, cholera, worm infestations, enteric fever, hepatitis), spread of e.g. trachoma with lice.	Increased water treatment and sanitation; raising awareness and training; health care; participatory local development with particular focus on gender issues.
Malnutrition (caused by insufficient food intake or food intake with low diversity and low nutritional value)	High incidence of diseases; inducing a vicious circle of malnutrition and infections.	Diversification of food production (e.g. through wild and cultivated crops); locally and culturally adapted development to increase food security (see also checklist for agricultural sector).
Occupational health hazards	Loss of health and well-being from e.g. air pollution, chemical exposure, noise, stress, etc.	Legislative development and enforcement; restrictions; pollution taxes and/or quotas; awareness raising and training
Exposure to chemicals and heavy metals	Loss of health; reproductive disorders.	See "Occupational health hazards" above.
Ambient and indoor air pollution	Loss of health; premature deaths.	Participatory local development with particular focus on gender issues. See also "Occupational health hazards" above.
Climate change	Possible increase in cardio-vascular diseases, respiratory diseases, various infectious diseases, loss of food security, malnutrition, disability to work.	Participation in global work on climate change; restrictions on emissions from industries and motor traffic; diversification of food production; locally and culturally adapted development to increase food security.
Dimension²	Typical negative impacts	Possible mitigation and promotion measures
Environmental effects of health-related activities:		
Construction and rehabilitation of health facilities and infrastructure	Occupational and public health risks and impacts; Loss or degradation of vegetation, degradation of soil cover, erosion, use of hazardous or unhealthy chemicals in construction materials	Use existing legislation and regulations for EIA for construction/rehabilitation and/or develop such legislation/regulations ¹¹ . Development of shared agendas between ministries.
Handling and disposal of liquid and solid waste, (incl. sewage), chemicals, expired drugs etc. from health facilities	Occupational and public health risks and impacts	
Vector control; biological, mechanical or chemical.	Occupational and public health risks and impacts	

⁹ The distinction between dimensions and impacts is not clear-cut; an issue that constitutes a dimension can also be understood as an impact.

¹⁰ The burden of disease and loss of well-being caused by environmental factors.

¹¹ See also Sida's EIA Handbook and checklists

For further information on the links between environmental issues and human health, see Sida's Issue Paper "Health and Environment", 2001. The subject is also being discussed in, for example, the World Health Organisation (WHO) and the "Report on Methodology for assessment of environmental burden of disease" (WHO/SDE/WSH/00.7, August 2000). The methodology proposed by WHO involves, for each environmental pressure, the identification of drivers, pressure, state, exposure, impacts and proposed actions.

Checklist of possible environmental sustainable development issues in health sector programmes

This checklist can serve as a tool for Sida programme officers/Swedish officials in the dialogue with the partner in cooperation, external financiers and other stakeholders involved in the development of sector programmes in the health sector, in order to promote environmentally sustainable development in the sector. If the answer is "No" to any of the questions below, the question of whether this is acceptable should be raised or whether the Sector Programme should be returned to the partner in cooperation for additional information.

Checklist for key issues in health sector support	YES	NO
1) Is environmental health ¹² included as a priority issue in national-level policies and strategies for health?		
If no , does the sector programme contribute to the development and integration of these issues in national policies and strategies?		
Checklist for key issues in health sector support	YES	NO
2) Does the sector programme consider environmental health related strategies in national/local health programmes? For example:		
• measures to increase the awareness and capacity of people to protect themselves from harmful or unpleasant substances		
• measures for improved access to clean water, sanitation facilities and hygiene measures at the household level and neighbourhood level		
• measures for solid waste management and removal in residential areas		
• measures for environmentally safe controls of vectors		
• measures against environment-related occupational disease and injury		
• measures against ambient air and water pollution		
• measures against crowding at household level		
• measures against indoor air pollution exposure		
3) Is capacity available at the Ministry of Health to deal with the integration of the above issues into the national health strategy?		
If no , does the sector programme contribute to developing such capacity and an institutional basis?		
4) Are there national regulations and legislation that require Environmental Impact Assessment of construction/rehabilitation of health facilities?		
If yes , does the sector programme support the use of the existing legislation/regulations in practice?		

¹² Including both the environmental burden of disease and health-related impacts on the environment.

If no , does the sector programme include capacity development or promote coordination between ministries, in order to develop such legislation and regulations?		
5) Does the sector programme promote education in and raising awareness of environmentally related health issues?		
If no , how can environmentally related health issues be included in the sector programme?		
6) Does the sector programme promote environmental management as part of the health sector strategy or elsewhere?		
7) Does the sector programme involve dialogue and coordination with other Ministries for cross-sector interventions, for example those responsible for infrastructure, environment, education, or water?		
If no , how can the sector programme promote the dialogue and coordination to address cross-sector problems and strategies?		

6. Contacts and links

Sida's helpdesks etc.

Sida's EIA helpdesk (Swedish EIA Centre, Swedish University of Agricultural Sciences in Uppsala): sida-mkbhelp@slu.se,

Swedish EIA Centre: <http://www-mkb.slu.se> (go to "länkar" on the Swedish page)

Sida's helpdesk on strategic environmental analysis at country strategy level (Environmental Economics Unit at Gothenburg University):
anders.ekbom@economics.gu.se

Sida's homepage: <http://www.sida.se>

International links

World Bank: <http://www.worldbank.org>

United Nation Environmental Programme: <http://www.unep.org>

European Union: <http://europa.eu.int/comm/environment/cia/home.htm>

Department for International Development (Great Britain): <http://www.dfid.gov.uk/>

International Association for Impact Assessment: <http://www.iaia.org>

Basics on SEA

CSIR, South Africa (SEA Primer):
<http://fred.csir.co.za/www/sea/primer/primerf.htm>

Introduction to SEA: <http://www.nssd.net/References/KeyDocs/IIED02.pdf>

Analytical Strategic Environmental Assessment (ANSEA):
<http://www.taugroup.com/ansea>



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ISBN 91-586-8757-2