

Position Paper

Management and Use of Water Resources

A summary of Sida's
Experiences and Priorities

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FOREWORD

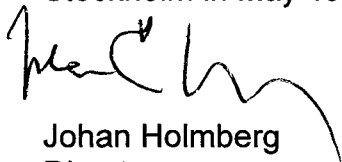
This is one of four similar papers written within the Department for Natural Resources and the Environment (DNRE) during 1997 - 1999 as inputs into a process intended to result in a policy document for Sida's work in natural resources management. The other three papers deal with sustainable agriculture, forestry and rural development methodology respectively.

Inevitably, there is some overlap between the papers. In particular, the present paper should be read together with the paper on rural development methodology written by Karin Isaksson. However, in so far as any such overlap reflects the commonality of approach that one would expect within Sida it is not considered to be of material importance.

The entire freshwater sector has only in recent years become an area of priority for Sida whose attention in earlier years had been mainly focused on water and sanitation in rural areas. Through the present paper Sida affirms that it subscribes to the prevailing international consensus on the need for an integrated approach to water resources management.

The text has been edited by Katarina Perrolf, Programme Officer at the DNRE, on the basis of a draft written by the consultant Cliff Wang. Bengt Johansson and Jakob Granit, both from Sida, have also participated actively in the preparation of the document.

Stockholm in May 1999



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EXECUTIVE SUMMARY

The Sida Policy for the Management and Use of Water Resources

Point of Departure

Water is necessary to sustain life in all its forms. The amount of fresh water on earth is finite and the demand is increasing due to a growing population, industrialisation, improved standard of living and urbanisation. Pollution of water contributes to a decreasing amount of water available for use. The increased demand has led to water scarcity in many parts of the world, especially in regions and countries with an arid hydroclimate. One fifth of the people in the world does not have access to safe drinking water, and more than one-half lacks adequate sanitation. In most countries three quarters of the available fresh water resources is used for agricultural production. The amount of water available and its quality are important factors for socio-economic development and are directly linked to such activities as forestry, farming, fishery, urban and industrial development as well as life styles and consumption pattern. Water has to be managed in a sustainable manner to preserve an adequate amount and quality for human consumption and needs and to maintain the life sustaining ecosystems.

A global consensus on how to manage water resources holistically and sustainably has developed. Pertinent events during that process are the Dublin Conference on Water and Environment in early 1992, the UN Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992 (Sweden ratified the Rio Declaration, Agenda 21, where chapter 18 is entirely dedicated towards management of fresh water resources) and the establishment of the Global Water Partnership (GWP) and the World Water Council in 1996.

The Dublin Principles emphasise an integrated approach to water resources management, what is commonly known as Integrated Water Resources Management (IWRM). IWRM relates available water resources to present and future needs of water within ecosystems, including wetlands, as well as within all sectors of society, i.e. for agriculture (rainfed and irrigated), domestic purposes, fisheries, aquaculture, industries and services (including hydropower, recreation/tourism and transportation). The rationale of IWRM is to provide means whereby equitable decisions can be taken based on a participatory approach to ensure the sustainable and multifunctional use of freshwater resources. Water should be seen as an integral part of the ecosystem, a transboundary natural resource and a social and economic good, whose quantity and quality determine the nature of its utilisation.

Objective

The overall objective of Sida's support to IWRM is to promote a sustainable management and equitable use of water resources to benefit people, especially resource poor women, men and children, while safeguarding the environment.

Approach

Sida support to IWRM shall comply with Sweden's development goals that stress economic growth, economic/social equality, equality between women and men, economic/political independence, democratic development of society and environmental sustainability.

Sida fully endorses the application of the Dublin Principles, partly through its active support to GWP.

Sida believes water development projects on a national level qualifying for assistance must inherently be guided by sound national IWRM policies in partner countries. In countries and regions where the national policy is weak or under preparation then awareness-creation activities leading to establishment of policies and holistic strategies should be given high priority.

Programmes and projects on national as well as international levels that affect the water resource must undergo an Environmental Impact Assessment (EIA) which shall also cover socio-economic factors including stakeholder and gender analyses, cost-benefit related to loss of in-situ income generating activities, scenario developments and mitigation measures.

Sida considers the following to be fundamental elements of IWRM which should guide Sida support to water related sectors:

- Planning, development, management and protection of water resources being carried out as close to the actual users as possible, using a catchment level approach taking into account possible downstream impacts in neighbouring countries.
- Local ownership of development interventions being achieved through participatory processes.
- Where relevant, a transparent supervision and monitoring programme being put in place that involve representatives of stakeholders on a national and international level.
- Sufficient quality and quantity of water being provided to ensure better health and a secure livelihood of project area populations with focus on poor households.
- Sufficient quality and quantity of water being maintained in existing watercourses to sustain life-supporting ecosystems and to avoid downstream environmental deterioration.
- The different roles, needs, priorities and access and control over resources of women and men being recognised, and in particular, the central roles of women in IWRM being promoted and supported.
- Water being treated as a social and economic good, with all costs associated with its development, use and protection of water being properly identified and fully met. (Costs of water include investment, operation, maintenance and rehabilitation costs, as well as environmental costs associated with its development and use.)

Priorities

In the position paper of this Sida Policy a number of lessons learned and development trends are presented. Based on those a number of high priority sectors have been identified. In the position paper there is also a list of criteria, which could be used to prioritise sectors. Below follows examples of sectors that typically might have higher/lower priority for Sida support. Note that the priorities are not listed in order of importance.

Higher priority interventions

- Promote increased participation and improved IWRM planning and management through institutional strengthening and appropriate awareness-creation and capacity-building interventions and research
- Promote national and international IWRM policy and legislation
- Cooperation on shared water resources to prevent conflicts and promote security internationally, regionally and locally between different water use sectors
- Application of demand management principles including economic and legal aspects to promote efficient allocation, use, saving and recycling of water
- Measures to prevent and control pollution of water resources
- Rural and urban water supply integrated with health perspectives and environmental sanitation to meet basic human needs
- Ecological sanitation in rural and peri-urban areas based on zero pollution, water conservation and recycling, e.g. compost latrines
- Measures to conserve water in agriculture
- Conservation and sustainable use of wetlands and coastal environments threatened by high population growth, development pressure and accumulations of pollutants from inland activities

Lower priority interventions

- Large-scale irrigation projects
- Large-scale dam projects
- Large-scale water transfer schemes

As for Sida's support to water resources management within the Programme for Central and Eastern Europe, priorities and actions are guided by the HELCOM Baltic Sea Joint Comprehensive Action Programme, signed and ratified by all the countries in the region, and by Baltic 21, an Agenda 21 for sustainable development in the Baltic Sea Region.

Target groups

Target groups for Sida-supported interventions span from the public at large, non-governmental organisations, government organisations, to policy-makers and politicians but with a particular emphasis on the needs of poor water users in rural and urban areas.

Relation to other actors in the area of IWRM

Sida should work closely with GWP, government institutions, universities, non-governmental organisations and the private sector in order to promote IWRM in all development cooperation projects and programmes in which Sweden is involved, as well as to coordinate its activities with other donors and seek to reduce duplication of effort.

Division of Responsibilities within Sida

The responsibility for implementing the policy rests with each department at Sida involved in co-operation related to water resources management. The Department for Natural Resources and the Environment (NATUR) has the obligation to follow-up the policy and to revise it.

1. INTRODUCTION

The scarcity and vulnerability of water and potential impending water crises in many areas of the world demands that water resources be viewed more holistically in the future than has been done in the past. Past development and utilisation of water resources has too often been fragmented, with the economic value of water being undervalued or ignored.

The concept of integrated water resources management (IWRM) is based on holistic consideration of available water resources, present and future needs of water within ecosystems, including wetlands, and all sectors of society -- including agriculture, domestic use, fisheries, aquaculture, industries and services such as hydropower, recreation, tourism and transportation. Under the IWRM concept, water is seen as being an integral part of the ecosystem, a natural resource, and a social and economic good whose quantity and quality determine its utilisation. Behind sound IWRM practices are participatory approaches to ensure sustainable and multi-functional use of freshwater resources. It is also acknowledged that water resources often are a shared resource between several countries.

As a tool to guide future Swedish support to IWRM and water resources development projects, Sida has developed a policy statement, to be distributed separately, that presents points of departure for Swedish aid, the overall IWRM objective, an approach, priorities, target groups, and implementation arrangements.

The policy statement will be widely distributed to people involved and potentially involved in future Swedish-supported IWRM and water resources projects. This paper provides the background for that policy statement. It and other supplementary documents, such as guidelines for the rural water supply and sanitation sector, will be developed for reader groups with special or detailed interests as needs arise.

Intended readers for this position paper include Sida programme and project officers, partner agency officials, technical advisers and consultants.

2. POINTS OF DEPARTURE

2.1 Holistic View

“The widespread scarcity, gradual destruction and aggravated pollution of freshwater resources in many world regions, along with the progressive encroachment of incompatible activities, demand integrated water resources planning and management. Such integration must cover all types of interrelated freshwater bodies, including both surface water and groundwater, and duly consider water quantity and quality aspects. The multi-sectoral nature of water resources development in the context of socio-economic development must be recognised, as well as the multi-interest utilisation of water resources for water supply and sanitation, agriculture, industry, urban development, hydropower generation, inland fisheries, transportation, recreation, low and flat lands management and other activities.”

-- Excerpt from Chapter 18, the freshwater chapter, of Agenda 21, UN Conference on Environment and Development, Rio de Janeiro, 1992

Water sustains life in all its forms. The amount of fresh water on earth is finite and demands for it steadily increase as populations grow, industrialisation increases, standards of living improve, urbanisation occurs and existing water bodies are polluted. Demand increases for water have led to scarcity in some parts of the world, especially in countries with arid hydroclimates.

The amount and quality of water available are important factors for socio-economic development, both affecting and being affected by people's life styles and consumption patterns. Water directly affects human activities such as forestry, farming, utilisation of wetlands, fisheries, urban and industrial development. Yet one-fifth of the world's population does not have access to safe drinking water, and more than one-half lacks adequate sanitation.

Water must be used sustainably in the future to preserve adequate quantity and quality for human consumption and basic needs, and to maintain life-supporting ecosystems that regulate water resources, provide habitats, sustain biological diversity and harbour many rich economic resources beneficial to man. Holistic long-term management of ecosystems based on participatory approaches involving women and men at user level as well as planners and policy-makers at all levels, always represent more viable alternatives than short-term water uses that might be disruptive or degrading with time. Because IWRM reflects the full, multi-dimensional, multi-use character of water resources in a national and international context, its responsible management and protection must occur at political, policy, enforcement and end-user levels.

The figures included on the following pages illustrate a number of important aspects about global water resources. These aspects represent important background concerns that Sida's policy statement takes into account for future IWRM and water resources projects.

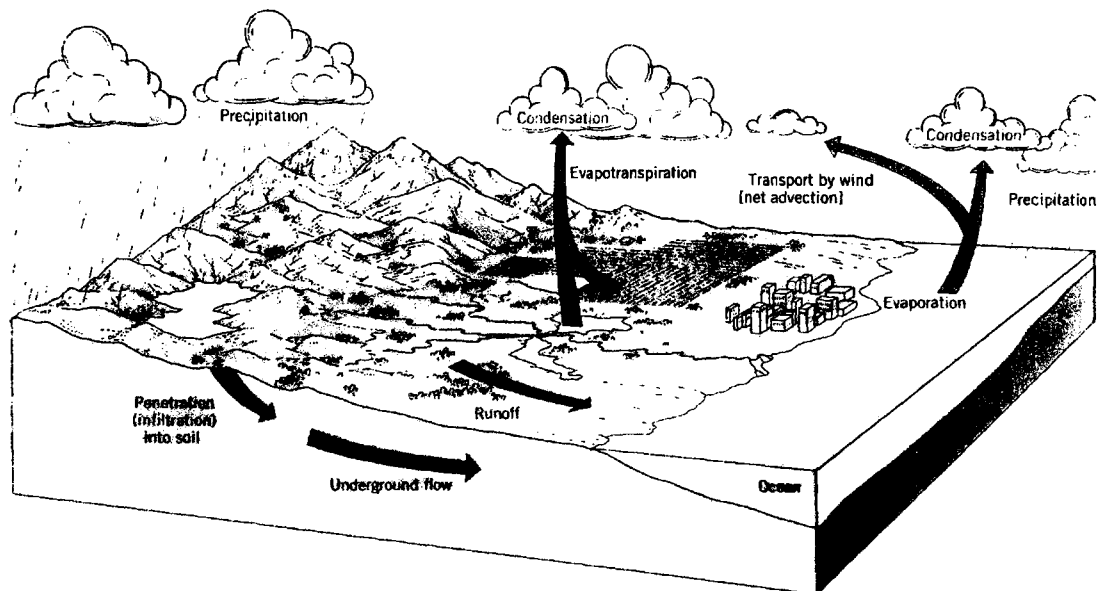


Figure 1: A schematic presentation of the hydrological cycle, the bloodstream of the biosphere, both affecting and being affected by human development. Source: de Blij and Muller, *Physical Geography*, 1996.

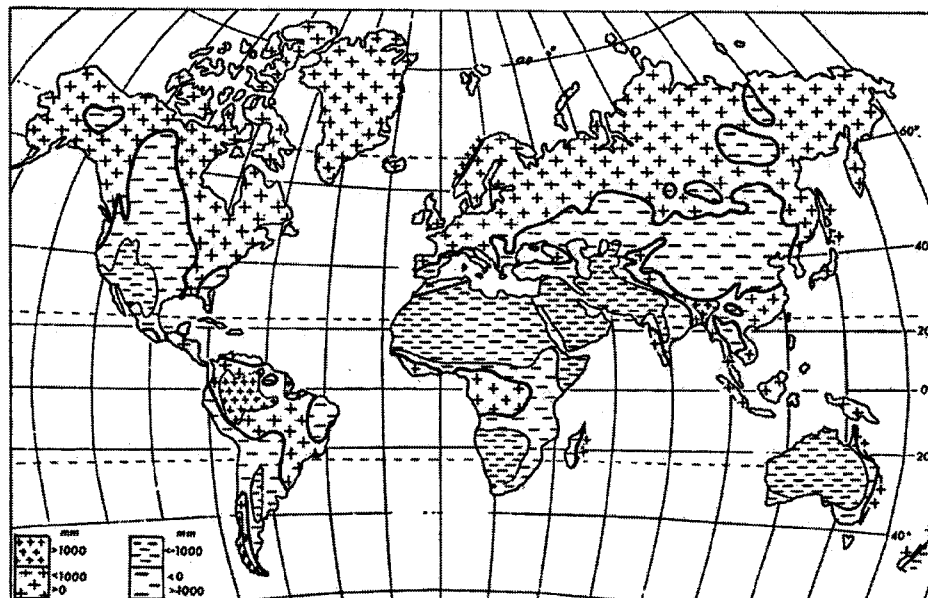


Figure 2: The global geographical pattern of freshwater availability (Falkenmark and Lindh, 1975). Water is a finite and unequally distributed natural resource. Many less- and least developed countries are situated in water scarce regions, which constitutes a constraint to development. Water scarce regions are marked with minus signs.

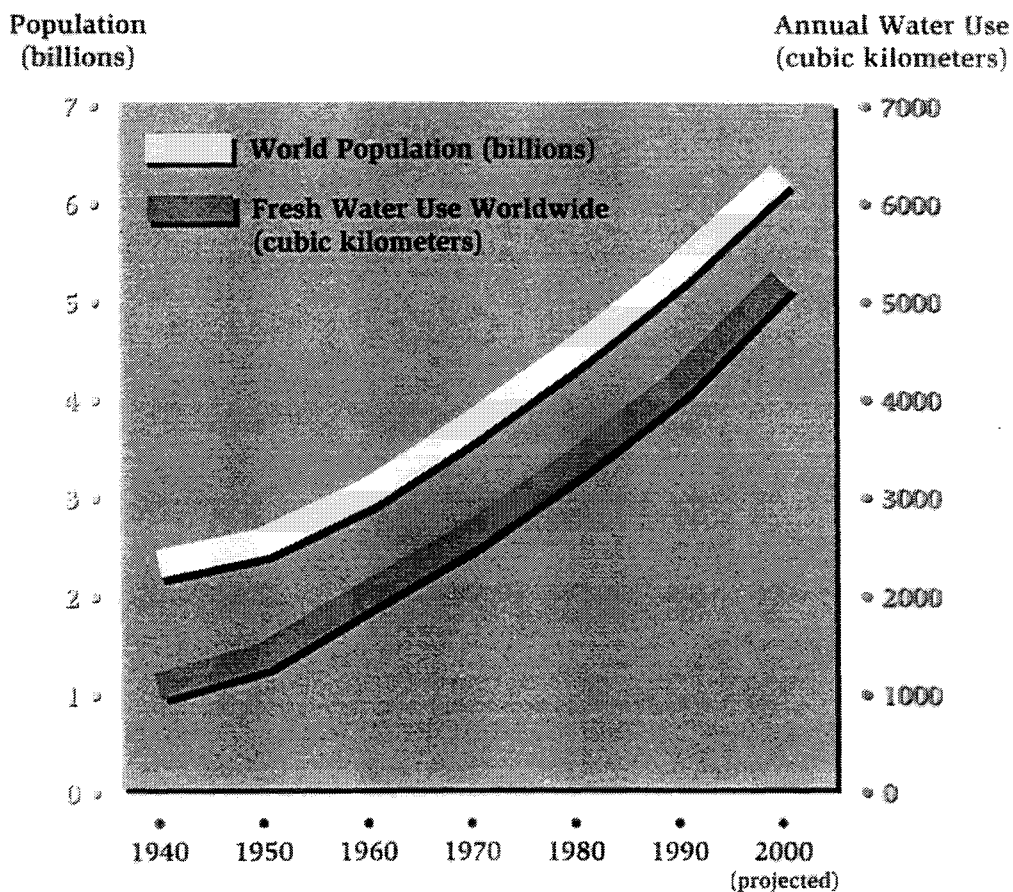


Figure 3: Since 1940, the amount of fresh water used by humanity has roughly quadrupled as world population has doubled. Some water experts estimate the practical upper limit of usable renewable fresh water lies between 9,000 and 14,000 cubic kilometres yearly. That suggests a second quadrupling of world water use is unlikely. Source: Peter H. Gleick, Pacific Institute for Studies in Development, Environment and Security.

2.2 Global Consensus

Over the past decade, a strong global consensus on the importance of managing water resources holistically and sustainably has developed. This consensus has grown and been strengthened through a series of international meetings and conferences that include:

- The Informal Consultation on Integrated Water Resources Development and Management Copenhagen 1991
- The International Conference on Water and the Environment Dublin 1992
- The UN Conference on Environment and Development (UNCED), at which Agenda 21 was launched Rio de Janeiro 1992
- The Ministerial Conference on Drinking Water and Environmental Sanitation Noordwijk 1994

- Earth Summit +5, an overall review and appraisal of im- New York 1997
plementation of Agenda 21
- The CSD VI Meeting on Strategic Approaches for New York 1998
Freshwater Management

Significant milestones in the process of global consensus include the 1992 UNCED Rio Conference itself, establishment of the Global Water Partnership and the World Water Council in 1996, the UN Convention on the Law of Non-Navigational Uses of International Watercourses in 1997, the UN Comprehensive Assessment of Freshwater Resources of the World in 1997, and annual sessions of the UN Commission on Sustainable Development following up Agenda 21.

Certain key principles have emerged as integral elements of the global consensus. The Dublin Principles and the "3 Environmental P's", relating to Rio Declaration principles 14, 15 and 16, are considered particularly important.

From the perspective of Sweden and the neighbouring countries around the Baltic Sea, a regional consensus of water resources management has developed within the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea (HELCOM), since 1974. As one result the HELCOM Baltic Sea Joint Comprehensive Environmental Action Programme, was adopted in 1992.

Dublin Principles:

1. Fresh water is a finite and vulnerable resource essential to sustain life, development and the environment.
2. Water development and management should be based on a participatory approach involving users, planners and policy-makers at all levels.
3. Women play a central part in provision, management and safeguarding of water.
4. Water has an economic value in all its competing uses and should be recognised as an economic good.

3 Environmental P's from Rio Declaration:

1. Prevention (Principle No. 14)
2. Precaution (Principle No. 15)
3. Polluter pays (Principle No. 16)

2.3 Lessons Learned and Development Trends

Sweden has played an active role in water resources development for over 30 years. Swedish assistance has been given to multilateral and bilateral projects in developing countries, as well as used to support development of important concepts, solutions, global policies and various coordination mechanisms. Sweden has also contributed to policy development within the water sector of UNDP-WB, UNICEF, European Union and the Nordic donors.

Rural water supply and sanitation has traditionally been a priority area for Sida. As the importance of integrating related and essential development activities have been increasingly understood, support to other areas of water resources management has also expanded over the years. At the same time Sida has little experience with certain types of water resources projects (e.g. large-scale irrigation). Sida also has been generally hesitant to support large projects where it is difficult at the outset to accurately assess potential negative environmental and social impacts (e.g. large-scale dams and large-scale water transfer schemes).

Based on long involvement and partnership in development cooperation, Sida and its partner countries have learned many valuable lessons to be reflected in a support policy for IWRM. It should be acknowledged that IWRM is complex and difficult since there will most probably be stakeholders involved with conflicting interest. There will also be a need to identify new roles, responsibilities and forms of ownership for institutions involved in different subsectors of IWRM.

Box 1: Humanitarian assistance within the water sector, Department for Cooperation with Non-Governmental Organisations and Humanitarian Assistance

Swedish humanitarian assistance shall alleviate the consequences of armed conflicts and natural disasters. The assistance shall be given with a development approach facilitating recovery through support to local capacity and institutions to contribute to the organisation and implementation of relief interventions. An example of Swedish humanitarian assistance was the support to the city of Dhaka, Bangladesh, suffering in 1998 from the worst floods in 100 years. The existing city water treatment plant collapsed and no potable drinking water was available. Sida, through the Swedish Rescue Services Agency, provided a mobile water treatment plant that purified and stored water for 8 000 families. The assistance was performed in cooperation with Dhaka's Water Supply and Sewage Authority (WASA). The equipment was later donated to the local authority and ten staff members of WASA were trained for future use and maintenance. The mission was completed within five weeks from the day the request from Bangladesh was received.

Significant lessons learned include:

Sustainability

Installed facilities must function over the long-term. As development is more than just physical hardware, recipient ownership and sustainability must be part and parcel of the development process. In present and future projects women and men in user groups and communities must be actively and meaningfully involved in their own development from the start. This means that they will have to be sustainable in the social, economic and environmental sense. The social dimension means essentially recipient ownership. The economic aspect means that installed facilities must be technically viable and economically sound. Lastly, EIA must evidence no detrimental environmental effects.

Holistic approaches and integration of related issues

Focus on "single-issue" interventions can often be too narrow and short-sighted. Rather it is often appropriate to integrate related aspects into projects. In the case of water supply, for instance, it is not enough to think only of clean, sufficient water. Equally important are

improved sanitation facilities and better hygiene practices. Without these significant improvement in health will be impossible.

The scarcity and vulnerability of water resources in many regions also requires investment in awareness and information campaigns and perhaps a more aggressive promotion of holistic, integrated approaches. In the future, related water management aspects of land use and food production, up- and downstream uses, environmental impact and life-supporting ecosystems must be carefully considered as well. In this respect the vital importance of wetlands in maintaining ecosystem functions and biodiversity as well as in contributing to food security for poorer population segments needs to be recognised.

Transboundary issues

It is acknowledged that both groundwater and surface water resources recognise no political boundaries. Projects in a national context that have a bearing on downstream countries should be assessed also taking possible impacts of the project in those countries into account. During project implementation it is crucial also to inform the neighbouring countries of progress and possible additional impacts. Cooperation and information sharing between countries is an important means to prevent conflicts and promote security. This should preferably take place in a special forum created for the purpose, such as a river basin commission. The UN Convention on non-navigational use of international watercourses should always be adhered to during project preparation and implementation.

Gender and gender awareness

Women and men have different needs and different access and control over resources and decision making bodies. A gender analysis of the sector shall clarify their different priorities. The active participation of women and men, on equal terms, in the planning, decision making, implementation, operation and maintenance of water resources management projects are a prerequisite for the sustainable use of the water resources at local level.

Wherever necessary, proactive gender policies and actions must be prioritised to ensure gender equality. Present development policies and practices that perpetuate or worsen existing patterns of gender inequality must be corrected or changed.

Poverty approach

Being poor means limited resources to invest in technology related to water and the environment. Access to clean and safe water requires resources in the form of labour and capital. For an extremely poor household these resources do not exist and when they do they compete with meeting other urgent needs.

An often neglected possibility to provide poor households with improved water and sanitation is based on simple systems that save water. The water-devouring sanitary systems that have been developed and are in use in the north are inappropriate in a southern environment characterised by poverty and scarce water resources. In the developing world, in rural as well as in urban settings, sanitary

systems need to be based on watersaving or non water-borne systems. Sweden is one of few donor countries that have prioritised the development of appropriate, dry sanitation systems for poor households. Experts active in Swedish projects have developed socially and culturally acceptable solutions that to a growing extent are being used in countries such as Zimbabwe, Kenya, Ethiopia, Central America and China.

Demand-driven development

“Demand-driven” development is a fundamental concept. So too are the concepts of community-based management, cost-recovery, and village-level operation and maintenance. There are many examples of failed facilities and inappropriate solutions imposed on communities by central authorities that cannot support on-going operation, maintenance and rehabilitation costs. Development based on bottom-up demand for services by consumers who are aware of feasible choices and their associated costs is believed far more appropriate in the future.

Appropriate technology

Likewise, there are numerous examples of failed projects based on technologies not well-suited to local socio-economic conditions or cultural traditions. Selection of technology has many potential consequences on the sustainability of a project, particularly in the ongoing operation, maintenance and replacement phases. Thus careful consideration of appropriateness and affordability during the process of technology selection is of key importance.

Long-term commitments

There are no quick-fix solutions to development. Real and effective change requires long-term commitments from both donor and partner governments. Over the long-term, the process of development is equally important as the products of development. A process-oriented approach focusing on human resources development, capacity building and institution strengthening requires time, a fact that should be accepted from the start.

Donor collaboration

The need for donor coordination and collaboration to facilitate cost-effective development in recipient countries is clear. Approaches should be similar wherever possible. Better coordination and collaboration will help reduce duplication of effort and ensure better use of limited human, material and financial resources.

Besides lessons learned, there are a number of development trends-- e.g. urbanisation, changes in life styles, structural changes, competition for limited resources, and accountability – that must also be accounted for when planning and implementing new IWRM projects. Some of the more significant trends Sida believes need to be addressed in future projects are listed below.

Box 2: Stormwater and Sewerage Project in Northern Gaza, Department for Infrastructure and Economic Cooperation

Through its various divisions, Department for Infrastructure and Economic Cooperation has over the years been involved in and is currently involved in a large number of water related projects and programmes. Different cooperation instruments are applied depending on the complexity of the particular project and how far in the development cycle it has advanced.

One illustrative example of a complex project with a number of involved actors and interests, is the Stormwater and Sewerage Project in Northern Gaza. The project originated as a response to repeated floods in northern Gaza, where very heavy rains combined with poor drainage arrangements put large areas of densely populated refugee areas under water with severe health problems as a result. Not only were populated areas put under water, but the sewage treatment systems were also flooded and made non-functional. Due to the almost non-existent institutional structure at the time, the proposed project had to include not only plain engineering but also institutional development components such as operation and maintenance and tariff studies. Due to the prevailing situation in Gaza, with shortage of water, declining groundwater levels, influx of saline water, pollution, increasing demand for irrigation water, conflicting land utilisation requirements etc., the project has to take into consideration the interests of many spheres of the society. On top of that, the weak economy and stale peace process have had to be dealt with as ever present restricting factors.

Due to all these factors, and several others, the project has had a slow start. However, all pieces are now quickly falling in place. The project will, when it is completed after some years, not only offer a satisfactory environmental health situation to the people of northern Gaza, but also have strengthened the capacity and capability of local governments, helped slow down and perhaps eliminate the degradation of groundwater resources as well as provided irrigation facilities to farmers in the area.

Significant development trends include

<i>Urbanisation</i>	Rapid growth of cities and urban populations, caused by natural population increases plus heavy in-migration of persons from rural areas seeking employment and better opportunities in cities.
<i>Changes in life styles</i>	Increasing demand for water for domestic, agricultural, industrial and recreational purposes due to higher standards of living, higher density living and other demographic trends. Correspondingly, more pressing needs to protect existing resources, to control pollution and to recycle water.

<i>Competition for available regional resources, and issues of security</i>	Need for greater cooperation at regional level whenever there is potential conflict between riparian neighbours, an issue highlighted at the OECD DAC meeting on water resources management in May 1994: <i>“Demographic pressures, over-exploitation of groundwater and pollution increase stress on the quantity and quality of water. These pressures add to the risk that acute water scarcity, water-borne diseases and conflicts between riparian neighbours over finite water resources will come to represent major security threats.”</i>
<i>Structural changes, privatisation and recipient ownership</i>	Structural changes currently underway in many countries that will have significant implications on how projects are implemented and financed in the future. Trends include: 1) comprehensive system reforms to promote stronger national economies and improved cost-efficiencies of public service, 2) Government shifts in role, to being promoters/facilitators rather than providers of water services, 3) decentralisation of public services and devolution of responsibilities, 3) increased use of private sector resources, 4) recipient ownership, 5) community management, and 6) water treated as an economic commodity rather than free good.
<i>Globalisation and liberalisation of trade</i>	New ways of communicating and sharing information arising from rapid technological developments (e.g. from Internet, international mobile telephone systems, satellite television, and other new forms of communication). Also changes in consumption patterns in developing countries due to liberalisation of trade and globalisation of markets that will affect water demand and water pollution.
<i>Climatic change</i>	Changes in climatic conditions, e.g. El Niño events, global warming, periodic flooding or droughts, that greatly and adversely affect rainfall, water availability, growing cycles, crop success, etc.
<i>Competition for donor funds</i>	Greater competition for limited donor funds as new geographic areas to be supported open up (e.g. eastern Europe and Palestine) and new emergency situations created by war or natural disaster arise, while overall flows of aid funds are stagnating or declining.
<i>Accountability of donor funds</i>	Demand by donor country parliaments and citizens for better evidence of impact, effective expenditure and accountability of funds spent on development.

Box 3: Swedish Initiative for Support to Sustainable Management of Water Resources in Southern Africa, Department for Natural Resources and the Environment

The initiative started in 1996 with the overall objective to assist in the improvement of integrated water resources management (IWRM) in southern Africa. Regional cooperation on shared river basins is emphasised in all activities supported through the programme. Examples of ongoing projects are support to the establishment of river basin commissions for basins shared by several countries (Zambezi, Pungue, Okavango), an environmental information programme and an environmental monitoring programme for the Zambezi Basin, a regional study on water demand management practices, the establishment of a regional information network for environmental education and research, a regional committee under the framework of Global Water Partnership, the development of a water quality monitoring system appropriate for developing countries and a regional fund for water research. Sida's experience from support to IWRM on a regional level is that it is a time consuming process to establish true regional ownership, it requires high level political commitment and should include a strong component for capacity building and awareness creation.

3. OBJECTIVE

The overall aim of Swedish development cooperation is "to improve living standards for the poorest groups of people". To meet this aim, Swedish assistance is specifically directed towards six development goal areas, i.e. 1) economic growth, 2) economic and social equality, 3) economic and political independence, 4) democratic development of society, 5) environmental quality, and 6) equality between women and men.

Specifically for IWRM, the objective for Sida support can be considered to be:

"To promote sustainable management and equitable use of water and water related natural resources to benefit people, especially resource poor women, men and children, while safeguarding the environment"

where "IWRM" broadly encompasses planning, development, management, monitoring, protection and control of water and water related natural resources, including quantity and quality of surface water and groundwater. With this broad interpretation of IWRM, land management practices could be considered as well if and where they significantly impact water quality and use.

4. APPROACH

Sida has fully endorsed and supports the application of the Dublin Principles, partly through its active support to Global Water Partnership.

Sida believes water development projects qualifying for assistance must inherently be guided by sound national policies in partner countries. If such national policies do not exist, then awareness-creation activities leading to establishment of policies and holistic

strategies should be given high priority. Besides actual development and management of water resources, Sida gives high priority to relevant capacity-building, institution-strengthening and coordination activities.

Projects qualifying for Sida assistance must not only be carefully considered in terms of technical feasibility, but also in terms of environmental impact, socio-economic-cultural impact, potential to increase equality between women and men, and positive/negative impacts on further growth, development and migration. In assessing projects for support, Sida will expect the project preparation phase to include analyses of environmental impact, cost-benefit, stakeholder interest, and gender not forgetting the transboundary nature of water resources when relevant.

Appendix A contains a listing and brief general information on various Sida guidelines considered relevant to IWRM.

Based on lessons learned in the past and from Sida's perspective as a donor, "good" IWRM projects in the future will be characterised by:

1. Planning, development, management and protection of water resources being carried out as close to the actual users as possible, using a catchment level approach taking into account possible downstream impacts in neighbouring countries.
2. Local ownership of development interventions being achieved through participatory processes.
3. Where relevant, a transparent supervision and monitoring programme being put in place that involve representatives of stakeholders on a national and international level.
4. Sufficient quality and quantity of water being provided to ensure better health and a secure livelihood of project area populations with focus on poor households.
5. Sufficient quality and quantity of water being maintained in existing watercourses to sustain life-supporting ecosystems and avoid downstream environmental deterioration.
6. The different roles, needs, priorities and access and control over resources of women and men being recognised, and in particular, the central roles of women in IWRM being promoted and supported.
7. Water being treated as a social and an economic good, with all costs associated with its development, use and protection being properly identified and fully met. (Costs of water include investment, operation, maintenance and rehabilitation costs, as well as environmental costs associated with its development and use.)

Box 4: The Dryland Research Programme, Department for Research Cooperation
Sida's Research Division, also known as SAREC, is in the process of building up a dryland research programme that consists of three components – dryland agriculture, dryland forestry and water as a productive resource in small scale agriculture. In the water programme research centres on ways and means to make better use of rainfall. Research on technologies for rainwater harvesting and agronomic methods for control of soil moisture are the main activities. An important aspect is how the ecology of a watershed area is affected when the partitioning between rainwater run-off, evaporation and infiltration is manipulated. Much of the research is carried out in cooperation between institutions in developing countries and networking is a prominent feature of the program.

5. PRIORITIES

Sida support should be focused towards quality and quantity management of water resources, with particular emphasis given to development of sound IWRM policies and implementation of projects conforming to sustainable IWRM approaches.

Certain types of IWRM interventions should be given high priority, while other types will have lower priority. Because conditions and situations vary, it is not possible to categorically state that certain sectors and interventions will automatically fall into certain priority groupings. Yet it must be clear that Sida is more likely to support IWRM projects:

- In countries where Sida already has a presence, or alternatively, through multilateral organisations that Sida has cooperated with before.
- Where Sida and Sweden have relative advantages in terms of prior involvement, IWRM experience and special IWRM-related technical competence.
- Where there is a close match between project objectives, Swedish development cooperation goals and policies, and Sida's IWRM objective (as stated in 3).
- Where initial strategic start-up or seed investments have potential to stimulate further IWRM development and investment later on.
- Where there are few or no possibilities of obtaining financing from other sources e.g. grants, loans or co-financing.
- Where participation, self-improvement and development benefits target economically- and socially-disadvantaged women and men not normally prioritised when limited in-country resources for IWRM measures are allocated.
- Where the water sector principle "some for all, not all for some" applies, i.e. the "have-nots" of society or society-in-general clearly benefit from the project, not (just) those who already are relatively advantaged and well-off.
- Where "IWRM diversity" can be maintained, i.e. Sida is less inclined to support a single large IWRM project that "consumes" the major part of allocated funds, but rather prefers to spread out support to several/many smaller, more varied IWRM projects.

Applying the above criteria, sectors that typically might have higher initial priority for Sida support might include:

Higher Priority Interventions:

- + Promote increased participation and improved IWRM planning and management through institution strengthening and appropriate awareness-creation, capacity-building and research
- + Promote national and international IWRM policy and legislation development
- + Cooperation on shared water resources to prevent conflicts and promote security internationally, regionally and locally between different water use sectors
- + Application of demand management principles including economic and legal aspects to promote efficient allocation, use, saving and recycling of water
- + Measures to prevent and control pollution of water resources
- + Rural and urban water supply integrated with health perspectives and environmental sanitation to meet basic human needs
- + Ecological sanitation in rural and peri-urban areas based on zero pollution, water conservation and recycling, e.g. compost latrines
- + Measures to conserve water in agriculture
- + Conservation and sustainable use of wetlands and coastal environments threatened by high population growth, development pressures and accumulations of pollutants from inland activities

Again, applying the above criteria, sectors/projects that might typically have lower initial priority for Sida support might include:

Lower Priority Interventions:

- Large-scale irrigation projects
- Large-scale dams
- Large-scale water transfer schemes

As for Sida's support to water resources management within the Programme for Central and Eastern Europe, priorities and actions are guided by the HELCOM Baltic Sea Joint Comprehensive Action Programme, signed and ratified by all the countries in the region, and by Baltic 21, an agenda 21 for sustainable development in the Baltic Sea Region.

Box 5: Support to Water Resources Management within the Programme for Central and Eastern Europe, Department for Central and Eastern Europe

Swedish support for development cooperation with Central and Eastern Europe focuses chiefly on the transfer of knowledge, creating contacts and networks between countries, institutions and people. There are four principal development goals: to promote common security, to deepen the culture of democracy, to support a socially sustainable economic development and to support environmentally sustainable development. Contributing towards EU membership for candidate countries and to the further integration of former Soviet Union into broader cooperation are prioritised tasks. As relations between countries rapidly evolve into normal neighbourly relations, it is foreseen that development cooperation will be reduced in the coming decade. For this cooperation, the Swedish Government gives priority to Estonia, Latvia, Lithuania, Poland, Russia and Ukraine. The Baltic Sea is a link that unites these countries. More than 80 million people live within the drainage basin. The major threats to the Baltic Sea are transboundary pollution and the heavy influx of nutrients.

There is a strong consensus on water management in the Baltic Sea region, confirmed in several international agreements. The European Union makes tough demands on candidate countries' respect for the environmental laws and regulations. All countries around the Baltic Sea are signatories of HELCOM, the Convention on the Protection of the Marine Environment of the Baltic Sea area.

In the early 1990s the Swedish Government assigned Sida the task of implementing Swedish support to the HELCOM Baltic Sea Joint Comprehensive Environmental Action Programme (JCP). Until now, Sweden has allocated approximately 600 million SEK to JCP-related work. The JCP includes measures intended to be implemented over the next decades. Harmonisation of policy, legislation and regulatory systems are key issues, together with institutional development of public authorities and other organisations. Discharge-reducing investments and protection of coastal lagoons and wetlands are other prioritised areas. Within the framework of the JCP, Sida supports a large number of projects. Efforts concern improvements in water supply and wastewater treatment and solid waste management, sustainable agriculture practices and knowledge transfer. Another important aim is to support capacity building of the environmental authorities around the Baltic Sea. Investment support is mainly targeted to water supply and waste water treatment in places where polluting discharges are particularly severe; i.e. "hot-spots" as defined in the JCP.

Examples of hot-spots where Sida is involved include Haapsalu in Estonia, Liepaja, Riga and Daugavpils in Latvia, Siauliai, Klaipeda and Kaunas in Lithuania, Kaliningrad and St Petersburg in Russia, and L'viv in Ukraine. The projects combine investments in environmental technology with comprehensive programmes for institutional strengthening and reform. The projects are financed with grants from Sweden and other Nordic countries, local funding covered by the municipalities and the national governments and loans from international financing institutions. Financial support from Sida is used to engage Swedish consulting firms, manufacturers, suppliers, and water utilities, who provide their knowledge and technology to the projects. Apart from support to environmental improvements it is equally important to support a socially sustainable economic transition process. This includes introducing water and wastewater charges from those who use the resources and making water utilities improve their efficiency.

6. TARGET GROUPS

Target groups for high-priority interventions cover a wide range -- from end-users to the public-at-large to non-government organisations (NGOs) to government organisations to policy-makers and politicians but with a particular emphasis on the needs of poor water users in rural and urban areas.

In providing assistance to IWRM and water resources projects, Sida will consider supporting various partners selected according to criteria that can include need, authority, capacity to implement, capacity-building requirements, professional expertise and sustainability. Partners can include:

- * Government institutions
- * District administrations
- * Education and research institutions
- * Private sector entrepreneurs
- * Swedish public institutions, e.g. government agencies, education and research institutions, etc.
- * NGOs
- * Global/regional coordination bodies
- * Multilateral agencies
- * International/regional development banks
- * European Union

7. RELATION TO OTHER ACTORS

Sida's support to IWRM will be carried out in cooperation with the Swedish Ministry of Foreign Affairs, other Government of Sweden departments and the Swedish resource base comprising universities, research institutions, independent organisations, NGOs and the private sector. By working in partnership, Sweden's own abilities to promote and further assist future international and partner country efforts in IWRM should be strengthened.

Sida will also continue to promote Global Water Partnership as the major institutional initiative on IWRM.

Forms for Sida assistance will fall under the general categories of multilateral and bilateral assistance, comprising grants, loans, concessionary credits, institutional cooperation, industrial and commercial cooperation, and technical assistance.

In supporting IWRM efforts at country, regional and global level, Sida will cooperate with international and non-governmental organisations and external support agencies (ESAs) wherever possible to ensure coordination of activities, most effective use of resources, and reduction in duplication of efforts.

Box 6: Lessons learned from 30 years of development cooperation in water supply and sanitation, Department for Democracy and Social Development and Department for Natural Resources and the Environment

The goal of Sida's development cooperation in domestic water supplies and sanitation is to improve the standard of health and to promote people-centred sustainable development. The main approach to achieve this goal is to strengthen the capacity of the partner countries to solve problems related to inadequate water supplies, in terms of both quality and quantity, and associated problems of health/hygiene and sanitation. The reduction of the physical burden of fetching water, a task that particularly affects women and girls, is also a major objective. To achieve sustainable improvements there is a need to integrate water supply, sanitation and hygiene education. Sustainable development must also be based on a process of social change involving changes in attitudes, knowledge and practices as well as on local ownership, local participation of women and men and use of local resources. Within the sector Sida has cooperation with Botswana, Ethiopia, Kenya, Tanzania, Uganda, Zimbabwe, Bolivia, India and Laos and supports regional programmes in eastern and southern Africa and Central America.

8. ISSUES IN IWRM IMPLEMENTATION

The Sida experience has shown that sustainable development is dependent on long-term commitment and building of trust between stakeholders which is achieved through full participation of all stakeholders in planning, implementation and monitoring processes. This, in itself, is an extremely complex and time consuming process. At the same time many development trends will increase the demand for application of IWRM, such as rapidly increasing water demand, competition for water as a scarce resource, organisational changes and changes in forms of ownership.

As set out above, IWRM means participation of a wide range of different stakeholders. In practice, this may mean that stakeholders straddle international borders or national administrative boundaries. It may mean making trade-offs between rural and urban areas, between agriculture and industry or between development and recreational interests. Indeed, within an agency such as Sida experience has shown that IWRM may mean conflicting interests between different departments involved in a particular programme.

In governments there is rarely a single agency responsible for IWRM, although there may be such agencies established to cater for particular watersheds. Promotion of IWRM will therefore have to face the trade-offs suggested above. This will only be successful if there is a sound set of policies, backed by the requisite legislation, in the countries concerned. This is the main rationale for the strong emphasis given to such policies in section 4 of the preceding text.

9. DIVISION OF RESPONSIBILITIES WITHIN Sida

Responsibility for implementing the new IWRM support policy rests with each department within Sida that supports programmes and projects dealing with water resources development. For general agency coordination purposes, the Department for Natural Resources and the Environment (NATUR) will follow-up the policy and initiate its

revision if and when appropriate. In addition to overall responsibility for awareness raising and policy development in IWRM, NATUR is responsible for Sida support in the area of rural water supply and sanitation as well as for water for agriculture.

The Department for Research Cooperation (SAREC) has responsibility for research relating to water resources development. The Department for Infrastructure and Economic Cooperation (INEC) is responsible for urban water supplies and also for loan finance of water resources development. The Department for Cooperation with Non-Governmental Organisations and Humanitarian Assistance (SEKA) provides grants to Swedish NGOs for water resources development as well as support to humanitarian projects involving water. The Department for Democracy and Social Development (DESO) is concerned with the health aspects of IWRM as well as with educational aspects of water. The Department for Central and Eastern Europe (Sida-Öst) is responsible for water resources development within that region.

10. REFERENCES

A list of reference documents containing principles and main ideas reflected in this position paper is included as **Appendix B**.

APPENDIX A

Overview of Swedish Development Assistance and Sida Guidelines with Particular Relevance to IWRM

Swedish Development Assistance

The overall aim of Swedish development cooperation is "improved living standards for the poorest groups of people". To meet this aim, Swedish assistance is specifically directed towards achievement of six development goals -- (1) economic growth, (2) economic and social equality, (3) economic and political independence, (4) democratic development of society, (5) environmental quality, and (6) equality between women and men -- mandated by the Parliament of Sweden.

IWRM projects receiving Sida support must comply with the above overall aim and six development goals, and contribute to positive benefits of health improvement, social development, economic development, security, gender equality and environmental preservation of the environment.

Selected Sida Guidelines Relevant to IWRM

In addition to compatibility with overall Swedish development cooperation priorities, qualifying IWRM projects must comply with the various Sida guidelines, as identified in the table and then briefly described below.

Guideline	Described in:
1. <i>General Development Co-operation</i>	A. "Sida's Poverty Programme. Action Programme to Promote Sustainable Livelihood for the Poor and to Combat Poverty", December 1996 B. "Sida's Programme for Peace, Democracy and Human Rights", May 1997
2. <i>Action Programme for Sustainable Development</i>	"Sida's Policy on Sustainable Development", January 1996 "Sidas handlingsprogram för hållbar utveckling", January 1996 "Development of Dryland Areas. Sida's Response to the Convention to Combat Desertification", September 1997 "Sida and the Convention on Biological Diversity", March 1998 "Sida and the Climate Convention", March 1998
3. <i>Use/Protection of Marine and Coastal Resources</i>	"Marine and Coastal Initiative", position paper, Sida, September 1997

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| 4. <i>Environmental Impact Assessment</i> | “Guidelines for Environmental Impact Assessment in Development Cooperation”, forthcoming English version |
| 5. <i>Gender Equality and Water Resources Management</i> | <p>A. “Sida’s Action Programme for Promoting Equality Between Women and Men in Partner Countries”, April 1997</p> <p>B. “Action Plan for Gender Equality in Development Cooperation”, Dept for Natural Resources and the Environment, 1997</p> <p>C. “Handbook for Mainstreaming. A Gender Perspective in the Water Resources Management Sector”, 1997</p> |

Information on selected guidelines mentioned in the above list is included below.

➤ **Sida Position Paper for a Marine and Coastal Initiative**

Sida gives priority to capacity building and sustainable use of natural resources in marine and coastal areas of countries that should be able to sustain large populations through development and better management of coastal and marine resources. Three regions have been identified for special attention – Central America/the Caribbean, East Africa, and South-East Asia/the South China Sea.

Under Sida’s Marine and Coastal Initiative, certain priority areas and guidelines are highlighted. These include management and sustainable utilisation of marine living resources, promotion of coastal area management and planning, marine and coastal environmental protection, creation of improved institutional capacity and competence leading to intersectoral co-ordination, interventions to ensure involvement of local communities for sustainable natural resources management, alternative employment opportunity programmes, sustainable utilisation studies with integrated social and natural sciences, and promotion of co-ordinated multidisciplinary research and development project efforts.

As the overall goal for development assistance is to contribute to countries themselves being able to manage issues dealing with the environment and management of natural resources, the Marine and Coastal Initiative focuses on the following main intervention areas: 1) Increased understanding and awareness spreading, 2) Legal and incentive frameworks, 3) Institutional frameworks and capacities, and 4) Information and communication.

- Awareness-creation
- Development of public and private institutional capacity
- Harmonisation and coordination of laws, regulations and enforcement at regional and bilateral levels
- Human resources development
- Research, monitoring and data collection

➤ **Sida Action Programme for Sustainable Development**

Sweden's fifth goal for development reflects a clear desire to achieve sustainable use of natural resources and protection of the environment. The starting point for Sida is that sustainable development and protection of the environment are so closely linked that for practical purposes they are commonly merged. The main principles for Sida support to sustainable development include helping partner countries 1) protect and preserve their natural resources and environment, 2) direct efforts towards long-term development, and 3) focus on preventive measures. In applying these principles, Sida intends to integrate environmental concerns into the spectrum of its support activities, focusing on the following priority areas:

- Water resources, especially in the southern African region
- Agriculture and forestry
- Marine and coastal environments
- Urban development and the environment
- Energy consumption and production

A series of actions is currently being taken internally to help ensure effective integration of environment and development issues into Sida development cooperation support, including 1) requiring environmental assessments in connection with country strategies as well as project appraisals, 2) updating guidelines for environmental impact assessments, and 3) developing monitoring and follow-up systems.

➤ **Sida Guidelines for Environmental Impact Assessment**

All Sida-supported projects of development cooperation are in principle required to carry out environmental impact assessments. Assessments are made step-by-step, beginning with an initial preliminary assessment, progressing if necessary to a comprehensive environmental impact analysis.

The present set of environmental assessment guidelines includes a series of critical questions for 13 different sectors, including several that can include development, management and protection of water resources. The present guidelines were developed in 1991, but are considered somewhat outdated at this point. They are currently being updated.

APPENDIX B

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