

ENVIRONMENTAL PERFORMANCE REVIEW OF SWEDEN

EXECUTIVE SUMMARY

In a context marked by low population growth and moderate economic growth, as well as regional economic and environmental interdependencies...

Environmental issues and sustainable development have remained high on Sweden's agenda, in a context of low population and moderate economic growth. Environmental issues in Sweden also have a strong international aspect because of regional economic and environmental interdependencies (e.g. regarding Baltic Sea pollution, transboundary air pollution and Nordic co-operation), because of Sweden's 1995 entry into the European Union and because of its strong commitment on global environmental issues such as climate change, persistent organic pollutants (POPs) and environmental aid.

Environmental progress in Sweden continued over the review period, benefiting from solid institutional and regulatory frameworks, extensive use of economic instruments and significant planning and legislative reform (e.g. the Environmental Code). The influence of EU environmental legislation has increased. Today, priority environmental issues are identified in 15 ambitious, long-term, strategic environmental quality objectives (EQOs): reduced climate impact, clean air, natural acidity only, a non-toxic environment, a protective ozone layer, a safe radiation environment, zero eutrophication, flourishing lakes and streams, good-quality groundwater, a balanced marine environment, thriving wetlands, sustainable forests, a varied agricultural landscape, a magnificent mountain landscape and a good built environment. A 16th EQO, on biodiversity, is under preparation. A number of these objectives have both domestic and international dimensions.

To meet the challenges represented by the EQOs, Sweden will need to i) implement more efficient environmental policies, ii) further integrate environmental concerns in economic and other policies (e.g. health, energy, transport, forestry, agriculture) and iii) further strengthen its international environmental co-operation. This report evaluates Sweden's performance in meeting its domestic objectives and international commitments concerning environmental management, especially since the 1996 OECD Environmental Performance Review. It also reviews the country's progress with respect to objectives of the OECD Environmental Strategy for the First Decade of the 21st Century*. Forty-four recommendations** are made with the aim of helping further strengthen Sweden's environmental performance in the context of sustainable development.

... environmental management has progressed further...

Building on already very effective and innovative environmental policies, Sweden has achieved a range of environmental results over the review period in line with many of its domestic objectives and international commitments. The country has further strengthened its environmental legislative and planning frameworks and extended the use of economic instruments. This progress builds on the priority given to environmental protection by the government, the parliament, civil society, enterprises and the public. Objective setting is driven primarily by welfare concerns, environmental expertise and ultimately legislative processes, with economic analysis given a role at the implementation stage. In 1999, Sweden reformed its environmental legislation with the adoption of the Environmental Code. This comprehensive framework law not only consolidates previously fragmented legislation but also introduces environmental courts, environmental sanctions and ambient quality standards, clarifies the role of environmental impact assessment (EIA) and transposes the EU water framework directive and integrated pollution prevention and control (IPPC) directive, among others. EU environmental legislation has an important influence on Swedish legislation. The Environmental Code also spells out several principles relating to environmental policies. The 15 EQOs adopted by the parliament in 1999 provide long-term strategic orientation while their interim targets serve as environmental medium-term planning tools, accompanying decentralised implementation of environmental policies. Sweden has strengthened its position as a front-runner in the use of economic instruments, introducing new ones and increasing the rates of several taxes and charges. An ambitious tax shift has been initiated, involving higher rates of environmental taxes and charges, offset by

* Objectives of the 2001 OECD Environmental Strategy covered in these Conclusions and Recommendations include maintaining the integrity of ecosystems (Section 1), decoupling environmental pressures from economic growth (Sections 2.1 and 2.3), the social and environmental interface (Section 2.2) and global environmental interdependence (Section 3).

** See Annex.

reductions in labour taxation; the shift is expected to amount to SEK 30 billion over 2001-10. Overall there is little use of subsidies to protect the environment, as Sweden adheres strictly to the polluter pays and user pays principles. In particular, municipalities charge households the full cost of environmental services. Swedish business plays a proactive role in developing environmental management systems, eco-labelling and certification, environmental reporting and other voluntary actions.

... still requiring more effective and efficient implementation of environmental policies.

However, because Sweden's "administrative pluralism" means the regional and local levels play key roles in the decentralised implementation of environmental policies, results will follow legislative and planning changes only if environmental governance at these levels receives sufficient guidance and resources, and the regional and local authorities strengthen their own environmental efforts. Uneven implementation could compromise the achievement of environmental objectives. Long permit processing periods mean high transaction costs and may hinder investment that would be beneficial for both economic development and environmental protection. Highly decentralised enforcement and inspection entails a risk of development interests too often overriding environmental considerations. Follow-up and evaluation of the effectiveness of inspection and enforcement are insufficient; while the new environmental sanctions and prosecutors could potentially strengthen enforcement, so far they have been used mostly for minor infractions. Co-ordination between the Environmental Code and other legislation should be enhanced (e.g. to clarify and streamline licensing and to co-ordinate EIA and planning procedures). Efficiency in using market-based instruments could also be enhanced: although such instruments are used extensively in Sweden, the levels of several environmental charges and taxes are still insufficient to induce changes in behaviour, and numerous exemptions to environment-related taxes are made; in the international context (both regional and global) what is required is a mix of credible national actions and an effort to capture the benefits stemming from differences in marginal abatement costs between Sweden and other countries as regards such issues as the Baltic, acid precipitation and climate change. The efficiency of mixes of policy instruments still needs more attention. Though Sweden's overall record in transposing EU environment directives is among the best, implementation of some directives (e.g. on water, nitrates, dioxins, habitats and IPPC) deserves particular attention.

Further to real progress towards sustainable development...

Sweden gives high priority to sustainable development nationally, in Europe and globally. It adopted a national sustainable development strategy in 2002, with a secretariat in the prime minister's office. The environmental component of sustainable development is well developed in the EQOs and practical interim targets, which help all levels of government move from aspiration to implementation. Sweden's overall progress in decoupling environmental pressures from economic growth was remarkable over the review period, with significant improvements in emission intensity, energy intensity and material intensity. This progress reflects, in part, institution-based and market-based integration efforts. Sweden makes impressive use of market-based instruments in a wide range of areas, including the integration of environmental concerns in energy, transport and agriculture. The ongoing green tax reform is a logical extension of earlier use of economic instruments. Real efforts are being made to promote sustainable consumption and production, not only through economic instruments but also through policies favouring integrated product policy and green procurement. Overall pollution abatement and control expenditure has remained around 1.1% of GDP and broader environmental expenditure around 1.5%.

... Sweden should integrate better environmental concerns into economic decisions (e.g. in transport, energy, agriculture, forestry decisions)

Sweden's decoupling progress has been less than satisfactory when it comes to municipal waste generation (whose growth was higher than that of GDP) and traffic volumes. While the decision to try a road congestion charge in Stockholm is significant and positive, growth in transport may still have a bigger future environmental impact than any other sector. Incomplete internalisation of externalities translates into transport subsidies. Moreover, road users are not subject to charges that fully reflect the (long-term marginal social) cost of the capital they use. Regarding the target of reducing greenhouse gas (GHG) emissions by 4% by 2008-12 from 1990 levels, no allowance is made for the use of flexible mechanisms, though it is clear that this omission will not rule out working with other EU countries in the EU emission trading programme or in clean development mechanism and joint implementation projects; the government is considering establishing an objective that includes flexible mechanisms. While a shift to renewable energy sources is highly desirable, all energy production involves external costs (which should be internalised), so promotion of energy conservation should be prioritised over subsidisation of even the most environment-friendly types of energy use. In seeking to promote renewables, analysis of policies' comparative cost-effectiveness and distributive impacts needs to be better assured.

Building on an impressive environmental international co-operation record, Sweden...

Sweden has continued to play a very active role in international co-operation for environmental protection at both the global and European levels. It is one of the few OECD member countries that are on track to meet their commitments under the Kyoto Protocol to limit GHG emissions: while Sweden's commitment is to limit growth in national emissions to 4% between 1990 and 2008-12, it has stabilised its emissions since 1990. Furthermore, in 2001 it set two national GHG emission reduction objectives that go much farther than its Kyoto commitment. Its level of CO₂ emissions per unit of GDP is among the lowest in OECD countries. It has met its commitments under the protocols of the Convention on Long-range Transboundary Air Pollution, achieving significant reductions of emissions of SO_x, NO_x, heavy metals and organic pollutants, and came close to meeting its Sofia Declaration target. Recognising that seagoing ships represent a significant source of acidifying emissions, Sweden has experimented effectively with economic instruments to encourage the use of low-sulphur fuel and installation of NO_x abatement equipment on ships. In addition, through improvements to municipal and industrial waste water treatment capacity, Swedish discharges of a range of heavy metals were reduced between 60% and 90% in time to meet the 1995 HELCOM target, although further action is still necessary. Sweden has taken strong measures to protect marine ecosystems and reduce fishing pressure in its national waters. Despite large government budget cuts in the late 1990s, it has held its level of official development assistance (ODA) at more than 0.7% of gross national income, thus meeting the UN target, and environmental aid is estimated to represent at least 10% of its total ODA. Sweden's performance in implementing international agreements relating to transboundary shipments of hazardous waste and the phasing out of ozone-depleting substances is very good overall.

... should further progress in implementing marine commitments and some trade related controls.

There is room for Sweden to improve its implementation of international commitments and international co-operation. Although it has successfully used a range of economic instruments to implement its climate policy, Sweden does not systematically use economic analysis to identify the most cost-effective options. As its GHG abatement costs are quite high in some areas, the use of economic analysis to identify the most cost-effective options could help reap savings. Like other Baltic Sea countries, Sweden missed the original 1995 HELCOM targets for reducing nutrient inputs to the Baltic Sea and appears unlikely to meet the 2005 target for nitrogen unless additional measures are launched quickly; funding remains an issue. Although Sweden generally meets the annual target of inspecting 25% of foreign ships calling in its ports (under the Paris Memorandum of Understanding on Port State Control), a recent study suggested that steps should be taken to enhance the environmental aspect of inspection. Like other Baltic Sea fleets, Swedish fishing fleets continue to exploit several key stocks at what are considered unsustainable levels. Unless ways to enhance regional co-operation for responsible and sustainable management of shared fish stocks can be identified, Sweden is unlikely to reach its national target of ensuring that commercial fish catches do not exceed recruitment by 2008. Levels of certain POPs in Arctic and Baltic ecosystems are high, and are beginning to degrade the value of some natural resources (e.g. the northern Baltic herring fishery). While Swedish legislation on ozone-depleting substances does not allow exports of used products or equipment (e.g. refrigerators or freezers) whose operation relies on the supply of CFCs, halons or other ODS, some exporters are still not complying with the legislation. Sanctions on illegal trade in species protected by CITES remain low compared with the possible gains from trafficking.

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Annex: 44 Recommendations*

Implementing environmental policies	<ul style="list-style-type: none"> • assure <u>implementation of the Environmental Code</u> across the country, strengthening guidance from the central government to regional and local authorities; • evaluate the environmental effectiveness and economic efficiency of different policy instruments and <u>mixes of policy instruments</u> nationally and internationally, and adjust policies accordingly; • review, and revise as needed, state, regional and local <u>inspection and enforcement</u> roles, improving the monitoring and evaluation of environmental inspections, focusing enforcement on the areas with the greatest compliance problems and strengthening administrative and judicial sanctions; • give greater importance to <u>environmental concerns in spatial planning</u> by harmonising the provisions of the Environmental Code and the Planning and Building Act and by improving municipalities' implementation capacity; • further encourage the use of standardised <u>environmental management systems</u> by companies.
Water	<ul style="list-style-type: none"> • approve and implement the action strategy for management of <u>land, water and the built environment</u>; • pay particular attention to the needs of <u>aquatic habitat</u> and river basin management in implementation of the Water Framework Directive; • consider the need for further <u>nitrogen removal</u> in sewage treatment in inland and coastal areas and <u>phosphorus removal</u> in individual rural treatment systems; • take further measures to reduce the impact of <u>agriculture and forestry</u> (e.g. nitrates, pesticides) on water systems and better protect streams and riverbanks in land use practices related to agriculture and forestry; • deal with combined <u>sewer overflows</u> and urban storm water run-off; • ensure that <u>groundwater reservoirs</u> used for drinking water extraction are adequately protected, including through more assertive municipal actions.
Nature and biodiversity	<ul style="list-style-type: none"> • further improve the <u>knowledge base</u> for nature conservation and biodiversity management (e.g. inventory of key habitats, indicators, economic analysis), especially regarding aquatic and marine ecosystems; • further increase the extent of <u>protected areas</u> and their representativeness (e.g. non-mountain forests, marine and freshwater ecosystems); • further develop <u>sustainable forest management</u> and monitor voluntary protection of forests; • finalise and implement a programme for <u>integrated coastal zone management</u> and strengthen local planning authorities' capacity in coastal zone protection; • strengthen the management and restoration of <u>streams, wetlands and meadow lands</u> within a broader landscape policy; • further increase access to nature for all inhabitants and awareness of the <u>related health and well-being</u> benefits; encourage ecotourism.
Environmental-economic interface	<ul style="list-style-type: none"> • in deciding on any further <u>green tax reform</u>, give more consideration to using the lowest-cost opportunities to abate GHGs, while also taking into account long-term perspectives; • reinforce efforts to remove remaining <u>environmentally harmful subsidies</u>; • review and revise transport prices to reflect all externalities, including damage associated with particulates, ozone and noise; implement <u>road congestion charges</u> in Stockholm and extend them to other major urban areas; • pursue efforts towards enhanced <u>energy efficiency</u> (in a range of sectors, including energy-intensive industry and the existing building stock); review in particular flexible mechanisms to maximise off-site life cycle energy saving opportunities; • strengthen institution-based <u>integration among ministries and agencies</u>, with particular attention to the integration of environmental concerns in industry, energy, transport, forestry and agriculture policies; • introduce cost-effective <u>demand management measures</u> to decouple growth in municipal waste generation and road traffic from economic growth, in line with Objective 2 of the OECD Environmental Strategy.
Environmental-social interface	<ul style="list-style-type: none"> • continue active <u>environmental employment</u> policy, making it longer term and focusing on specific economic sectors; • develop <u>economic information</u> and analysis to support environmental management; streamline the system of environmental indicators; • ratify the <u>Aarhus Convention</u> and make the country's environmental information access, public participation and access to justice practices consistent with the convention's requirements; • further develop <u>public participation</u> and encourage citizen initiatives at regional and local levels (e.g. in EIA and Local Agenda 21 processes); • reinforce environmental sustainability aspects of current and future <u>regional and rural development programmes</u>; • enhance co-operation on <u>economic, social and environmental dimensions</u> of sustainable development within and between local, regional and national levels; • strengthen research on and analysis of <u>social disparities</u> in access to nature and in pollution exposure.

* These Recommendations were formally approved by the OECD Working Party on Environmental Performance.

T H E O E C D E N V I R O N M E N T P R O G R A M M E

Health and environment

- step up measures to meet environmental and public health objectives, with appropriate attention to cost-effectiveness and the precautionary principle;
- continue efforts to reduce health risks associated with indoor air quality;
- reduce ambient air concentrations of fine particles and tropospheric ozone, with due attention to cost-effectiveness;
- continue efforts to limit health risks associated with exposure to chemicals (e.g. chemicals in products, including construction materials) in the most cost-effective way possible;
- designate and protect more green spaces in or near urban areas, prioritising areas that can offer recreational services while protecting nature;
- develop environmental health indicators for monitoring progress towards national objectives and informing policy decisions; further improve communication with the public regarding health risks stemming from environmental exposure;
- take steps to more systematically incorporate national-level environmental health priorities into local-level planning and action.

International co-operation

- adopt and implement a national marine strategy; in particular, take further measures to reduce nitrogen loading to the Baltic Sea so as to meet the HELCOM target for 2005, as well as related national targets; step up preventive actions and sanctions concerning oil spills; take measures to strengthen regional co-operation for fishery management, working through the International Baltic Sea Fishery Commission and the EU; develop a ship scrapping plan;
- build on the recent International Maritime Organization designation of the Baltic as a “particularly sensitive sea area” and continue to promote regional action to decrease emissions to air of SO_x, VOCs and NO_x from ships in the Baltic, with an emphasis on economic instruments;
- within the national climate protection programme, give priority to the most cost-effective instruments to promote energy conservation and the use of renewable energy sources, and review exemptions (e.g. energy-intensive industry, peat use);
- strengthen customs control of international shipments so as to prevent the exportation of equipment containing (or outfitted to use) CFCs, halons or other ozone-depleting substances;
- continue to integrate environmental concerns systematically into development assistance while maintaining or increasing overall levels of ODA;
- increase environmental assistance and technology transfer to countries bordering the east of Baltic proper, so as to promote the achievement of shared environmental objectives (e.g. regarding nutrient loads, acid precipitation, flexible mechanisms on climate change); step up inspection and enforcement against violations of CITES in control points, and raise applicable fines to enhance their deterrent function.