

NATIONAL REPORTING TO CSD-18

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PART I: NATIONAL REPORTING FOR CSD-18/19 THEMATIC AREAS

CHEMICALS

The main legislative instrument for the management of chemicals is the **Austrian Chemicals Act on the Protection of Man and the Environment from Chemicals**. Its first version was adopted in 1987¹. The Chemicals Act obliged producers of new chemicals to register new substances and to provide the authorities with a basic data set on the chemicals' properties. Additionally it enabled the Minister of Environment to issue bans and restrictions on the production, use and export of dangerous substances. In this framework many ordinances on bans and restrictions of certain chemicals were issued during the beginning of the 1990s.

Since Austria's accession to the European Union the relevant EU legal acts are either directly applicable in Austria or have to be implemented in the Austrian chemicals legislation. The recent publication of the REACH legislation of the EU (explained further down) set another mile stone in the development of the chemicals legislation.

The Chemicals Act of 1996² took into account these needs and based the chemicals legislation also firmly on the precautionary principle. Its main aim is stated in the first paragraph:

“§ 1. (1) The objective of the Federal Act is the precautionary protection of the life and health of man and the environment from direct or indirect harmful effects which may be caused by the manufacture and marketing, acquisition, use or waste treatment of substances, preparations or finished products.”

Together with the **Chemicals Ordinance** 1999³ it implemented the Council Directives 67/548/EEC (classification, packaging and labelling of hazardous substances), 1999/45/EC (classification, packaging and labelling of hazardous preparations) and 76/769/EEC (restrictions on the marketing and use of certain hazardous substances and preparations). Dir. 76/769/EEC was since then transposed primarily by ordinances of the Federal Minister for the Environment in accordance with § 17 of the Chemicals Act 1996 (formerly: § 14). It has to be noted here that the “placing on the market” also includes import. To the extent that the placing on the market is restricted or prohibited under the Chemicals Act, an Ordinance based on the Chemicals Act or another Federal legal regulation, also export shall be prohibited, unless otherwise agreed.

Chemicals (substances, mixtures/preparations) and articles (finished products) are subject to the Chemicals Act. Hazardous chemicals are classified according to 15 different hazardous properties. Labels of chemicals have to include information on hazards and safety recommendations. Additionally, safety data sheets with more detailed information have to be available and transmitted to consumers, and hazardous chemicals have to be packaged safely.

¹ Federal Act of 25 June 1987 on the Protection of Man and the Environment from Chemicals (Federal Law Gazette No 326/1987)

² Federal Act on the Protection of Man and the Environment from Chemicals (Chemicals Act 1996, Federal Law Gazette No 53/1997)

³ Federal Law Gazette No 81/2000

According to § 2 para 14 of the 1996 Chemicals Act pesticides are defined as: plant protection products for the purpose of the 1997 Plant Protection Act⁴, biocidal products for the purpose of the Biocidal Products Act⁵, and medicinal products for the purpose of the Medicinal Products Act⁶, which are destined for the disinfection or treatment of diseases potentially caused by insects or parasites. The Act on the Ban of Certain Plant Protection Products bans the use of nearly all POP pesticides⁷.

As mentioned above, the Chemicals Act allows for bans or restrictions of hazardous chemicals, or chemicals and articles posing certain risks. Studies and tests, if necessary, have to be done according to the Principles of Good Laboratory Practice.

Additionally, the Chemicals Act regulates use and safe handling of poisons (Licenses for the purchase of poisons are issued by the districts' authorities) and the import and export of hazardous chemicals (implementation of the Rotterdam Convention and additional provisions needed for the enforcement of the EC's Import/Export Regulation⁸). It also contains provisions on detergents, ozone depleting substances and POPs.

I. ASSESSMENT OF CHEMICAL RISKS, INCLUDING:

I.1 Mechanisms for systematic evaluation, classification, and labeling of chemicals, including initiatives towards a harmonized system of classification and labeling of chemicals

a) Regulation on Classification, Labelling and Packaging (EC) No. 1272/2008

The Globally Harmonised System of Classification and Labelling of Chemicals (GHS) provides a harmonized basis for globally uniform physical, environmental and health and safety information on hazardous chemical substances and mixtures as well as a harmonized scheme for a safety data sheet. In its Plan of Implementation, adopted in Johannesburg on 4 September 2002, the World Summit on Sustainable Development encouraged countries to implement the harmonized system as soon as possible, with a view to reach a full operational state by 2008. The European Commission and the EU Member States endorsed the UN recommendation to implement the GHS in domestic law. The recommendation was also supported by stakeholders from industry and non-governmental organizations. In its Regulation on CLP which was published on 31 December 2008 the EU implemented the GHS for the use in the European Union. The new Regulation is directly applicable in Austria. Transition periods have been defined during which both the old system and the new system will be in place. The relevant transition period for substances ends on 1 December 2010, for mixtures on 1 June 2015.

Main Features

The aim of the Regulation is to enable the classification of a substance or mixture (preparation) with respect to hazardous properties and to provide a hazardous chemical with pertinent hazard labelling and information on safety measures.

⁴ Federal Law Gazette I No 60/1997, as amended by Federal Law Gazette I No 55/2007

⁵ Federal Law Gazette I No 105/2000

⁶ Federal Law Gazette No 185/1983

⁷ Ordinance of the Federal Minister for Environment, Youth and Family on the Ban of Certain Hazardous Substances in Plant Protection Products; Federal Law Gazette No 97/1992

⁸ Regulation (EC) No 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals; OJ L 204/1, 31 July 2008

The regulation

- Applies the general principles of the UN GHS,
- Uses the “building block approach” of the UN GHS and a few other options to adapt the system to the EU’s needs,
- Stays as close as possible to the UN GHS format and terminology, e.g. “mixture” instead of “preparation”, or “hazardous” instead of “dangerous”,
- Avoids changing the scope of REACH and other Community legislation,

As with the old legislation, the new CLP Regulation is intended to be primarily a **self-classification system for enterprises**, which ask for correct classification and labelling as pre-marketing requisite. It entered into force – also in Austria - on 20 January 2009 and stipulates that the classification and labelling of substances must be consistent with CLP at the latest by 1 December 2010 and for mixtures on 1 June 2015. The Directives on classification, packaging and labelling, i.e. Council Directive 67/548/EEC and Directive 1999/45/EC, will be repealed on 1 June 2015.

How does CLP work?

The CLP regulation sets the rules for classification and labelling of chemicals according to the UN GHS. It aims to determine whether a substance or mixture displays properties that lead to a classification as hazardous.

Once such properties are identified and the substance or mixture is classified accordingly, manufacturers, importers, downstream users and distributors of substances or mixtures, as well as producers and importers of certain specific articles (explosive articles which are subject to classification according to Part 2 of Annex I to CLP), should communicate the identified hazards of these substances or mixtures to other actors in the supply chain, including to consumers.

The hazard of a substance or mixture is the potential for that substance or mixture to cause harm. It depends on the intrinsic properties of the substance or mixture. In this connection hazard evaluation is the process by which information about the intrinsic properties of a substance or mixture is assessed to determine their potential to cause harm. In cases where the nature and severity of an identified hazard meets the classification criteria, hazard classification is the assignment of a standardized description of this hazard of a substance or a mixture causing harm to human health or the environment.

Hazard labelling allows for the communication of hazard classification to the user of a substance or mixture, to alert the user to the presence of a hazard and the need to avoid exposures and the resulting risks.

CLP sets general packaging standards, in order to ensure the safe supply of hazardous substances and mixtures.

Lessons learned

The new GHS system ensures that the same hazards will be described and labelled in the same way all around the world. By using internationally agreed classification criteria and labelling elements, it is expected to facilitate trade and to contribute towards global efforts to protect humans and the environment from hazardous effects of chemicals. Also, people of any ages, from children to elderly, using many different languages and alphabets, belonging to

various social conditions, including illiterates, are daily confronted with dangerous products (chemicals, pesticides, etc.). The use of pictograms should allow for easy conveying of information of the product concerned.

Recent trends and emerging issues

Implementation of the GHS has only recently started within the European Union including Austria. The Austrian provisions on chemicals are currently being adapted to GHS/CLP characteristics.

II. SOUND MANAGEMENT OF TOXIC CHEMICALS

a) REACH

The Regulation of the European Commission for the **Registration, Evaluation and Authorisation of Chemicals (REACH)** entered into force on 1 June 2007 and brings with it a fundamental reform of the European chemicals legislation. In the eleven years to come, the chemical industry is expected to register up to 30,000 chemicals. 15% of these shall be evaluated - on the basis of examinations and other available information to be submitted by the companies - by the competent authorities with regard to their environmental and human risks. Dangerous substances will have to be withdrawn from the market at the end of this process.

The key elements of the REACH strategy are the following:

- A transfer of the responsibility for the gathering and assessment of data and of risks linked to the application of chemicals from authorities to industry (shifting the burden of proof);
- Extending the responsibility for product safety and making available information on application and exposure for all downstream users (up to now available only for manufacturers and importers);
- Application-specific authorisation procedures for chemicals giving rise for concern;
- Obligation to share test data and examination costs, in particular to avoid unnecessary animal tests (data sharing is already obligatory in Austria), and the promotion of testing methods without animals.

REACH Modus operandi

1. Registration of all chemicals imported or manufactured in the EU with total amounts exceeding one tonne per year (existing and new substances) in a central database. 30,000 notifications are expected.

2.a. Evaluation of the chemicals by the competent authorities based on test results and other available information to be submitted by the companies depending on the amounts of chemicals placed on the market (up to 15% of the registered chemicals); and simultaneously

2.b. an authorisation procedure for chemicals giving rise for concern due to the following properties (about 5% of the registered chemicals):

- carcinogenic, mutagenic or toxic to reproduction (CMR), category 1 or 2
- persistent, bio-accumulative and toxic (PBTs) or very persistent and very bio-accumulative (vPvBs)
- other dangerous properties that give rise for considerable concern such as endocrine properties (influencing the hormone balance).

Lessons learned

REACH provides for a uniform legal system for all chemicals and replaces the previous system which distinguished between chemicals existent before 1981 and those placed on the market after. Within the old system, only sketchy information was available on properties of existing substances. Risk assessment procedures for existing substances proved burdensome and required up to five years for being completed. Therefore, REACH builds on the lesson that a uniform system will enable a comprehensive and common risk assessment procedure and information exchange for all chemicals and therefore will better serve human health and environment.

Recent trends and emerging issues

With the authorisation procedure, the REACH regulation contains a new instrument which aims at the **substitution** of substances of very high concern by less problematic substances. Austria is among the Member States of the EU who have submitted substance dossiers for the identification of substances of very high concern to the European Chemicals Agency ECHA. Following the decision making procedure under REACH, ECHA has proposed recently the first seven substances for the authorisation regime, of which two substances (two phthalates used as softeners in the polymer industry) are based on the Austrian input.

In view of the fact that there are hundreds of potential substances of very high concern, it is generally acknowledged that increasing efforts should be made by Member States and ECHA in order to extend the substance list significantly. In support of this process, Austria has developed, together with a number of other volunteering Member States, a priority list for candidate substances of very high concern. This initiative is expected to lead to a considerable increase of the list of substances of very high concern.

Major constraints and challenges

The preparation and discussion of substance dossiers represents a considerable challenge to the personnel capacities of Member States. However, experience has shown that high quality of the prepared dossier is decisive for the success in the REACH procedures. A key element of the Austrian dossier is the presentation of environmental monitoring data which provide good and plausible information on the actual exposure of chemicals in environmental compartments.

b) Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

Austria is also a Contracting Party to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (ratification date 27 August 2002). This Convention is covered by the Export/Import Regulation (EC) No. 689/2008

The objectives of the Convention are:

- to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm;
- to contribute to the environmentally sound use of those hazardous chemicals, by facilitating information exchange about their characteristics, by providing for a

national decision-making process on their import and export and by disseminating these decisions to Parties.

The Convention creates legally binding obligations for the implementation of the Prior Informed Consent (PIC) procedure. It built on the voluntary PIC procedure, initiated by UNEP and FAO in 1989 and ceased on 24 February 2006.

Lessons learned

The Rotterdam Convention was created in response to increasing international trade and the need for assessing the risks associated with certain products in trade, in this case chemicals and pesticides. The first years of the working PIC procedure also showed that more training for the designated national authorities was needed as the PIC procedure in itself is rather complex. Day to day work with the procedure and some problems with enforcement also showed that an increased cooperation with customs authorities was needed to implement the procedure more efficiently. This was included into the new EU Regulation 689/2008. The Cooperation with the Austria customs authority proved very fruitfully.

Recent trends and emerging issues

In an international context, it is important to further expand the effectiveness and efficiency of the Rotterdam Convention, also by including new substances to be subject to the prior informed consent procedures. It is important that hazardous substances that are still traded and widely in use are included in the PIC procedure.

Major constraints and challenges

The information exchange and the cooperation between countries have still to be improved. Illegal trade with chemicals seems still to be a problem globally. Therefore the cooperation with customs authorities has to be improved.

c) MONARPOP

Persistent organic pollutants (POPs) are widely known for the fact that they are transported via the atmosphere to the colder regions, especially the Arctic regions. A lot of studies and analyses exist for these geographic areas. But some preliminary studies in Austria showed that POPs are found in elevated concentrations also in the alpine regions. An extensive transboundary project, initiated by Austria, confirmed these findings.

A team of 13 institutions from Austria, Germany, Italy, Slovenia and Switzerland examined in the project MONARPOP (Monitoring Network in the Alpine Region for POPs) which was partly funded by the EU, for the first time the distribution of POPs loads in the whole alpine region. Samples from plants and soil as well as air and deposition sampling were parts of the project.

Air sampling at high alpine sites (Sonnblick- A, Weißfluhjoch –CH, Zugspitze -(D) allowed for the first time a continuous examination of pollutants at summits. Results showed that POPs can be found in increased concentrations depending from the altitude of the sampling sites (the higher the site, the higher the concentrations). Even pesticides that were banned in the EU for decades could be found at these sites. Increased concentrations at lower altitudes were found where local pollution can be assumed (e.g. dioxins from burning processes).

For further information see <http://www.monarpop.at>

Lessons learned

The results show the international dimension of the POPs problem. The transboundary pollution through POPs can only be dealt with on an international basis.

Recent trends and emerging issues

MONARPOP showed also some results for the “new POPs” (i.e. those POPs that were included in the Stockholm Convention at the fourth Conference of the Parties in May 2009). As these POPs are partly still used a lot of work is still to be done to reduce the uses and to eliminate them from waste streams.

Major constraints and challenges

As much earlier studies were done in Arctic regions the scientific methods for sampling had to be adapted and in some cases “reinvented”.

d) Monitoring – water quality

In Austria, up to 90 different chemical/physical substances are examined at approximately 2,000 ground-water and 250 flowing-water gauging points. Each gauging point was selected carefully and is documented in a respective gauging-point master file. The examinations are conducted by top-level laboratories.

Austria’s water-body monitoring system is deemed to be among the best in the whole European region. Approximately 30 Mio € were already invested in the programme, providing Austria with exact data on the quality of domestic waters. Soon, also lakes will be integrated into this examination program, the special asset of which is its ability to provide comparable results for all of Austria according to uniform standards. The data on the water quality are compiled in annual reports and, following the idea of active information policy, will be easily retrievable via the Internet.

The aim is to preserve this high level of water-quality monitoring, since monitoring is a central task in the implementation of the EU Water Framework Directive, and to be able to point out possible hazards in due time and to launch adequate measures. Additionally, accompanying research is needed in order to be able to identify harmful and active substances as well as to bring EU policy concerning chemical substances more in line with the precautionary principle.

Lessons learned

The monitoring system showed where interventions and improvements are needed. It pinpoints problems and leads to a general improvement in water quality and in the use of water and chemicals.

II.1 Progress within the larger framework of Strategic Approach to International Chemicals Management (SAICM)

The Austrian Development Co-operation supports the Cleaner Production Programme (CP) of the United Nations Industrial Development Organization (UNIDO) since 1994 and has co-financed 13 of UNIDO’s National Cleaner Production Centres (NCPCs) out of the 38 NCPCs

established in 37 countries. The total support to the CP amounted to roughly 9.7 Million €. Austria and Switzerland are the two main donors to the programme.

In 2008 Austrian Multilateral Development Co-operation supported NCPC-projects in Lebanon and Egypt with 400.000 €.

The CP involvement in the field of SAICM implementation mainly addresses capacity building and information dissemination among relevant Cleaner Production stakeholders, implementation in industries (especially SMEs), involving both end-users and suppliers, and advice on environmentally friendly technology transfer. Furthermore, the Cleaner Production Programme has been active in fostering *life cycle and zero waste approaches* and working with governmental institutions on policy development and regulatory framework improvement. The strong involvement of the Cleaner Production Programme in the area of Chemicals Management has been reflected in the new strategy for the implementation of the Programme for the Cleaner and Resource Efficient Production in developing and transition countries, jointly developed with UNEP.

II.2 Policy measures to phase out chemicals that pose unreasonable and unmanageable risk to human health and human environment, such as, for example, ozone-depleting substances

a) Vienna Convention for the Protection of the Ozone Layer and its Montreal Protocol on Substances that Deplete the Ozone Layer

Austria is a Contracting Party to the Vienna Convention for the Protection of the Ozone Layer (ratification date 19 August 1987) and the Montreal Protocol on Substances that Deplete the Ozone Layer (ratification date 19 May 1989; subsequent ratification of all amendments to the Protocol).

The implementation of these multilateral environmental agreements proved successful in phasing-out ozone depleting substances in Austria. The consumption of this group of substances has been reduced by more than 99 % as compared to the consumption in the early 1990s.

In Austria, the use of CFCs was gradually phased out in the first half of the 1990s. Now the use of CFCs is prohibited with the sole exemption of analytical uses as standards for laboratories. Even in medical applications, in particular metered dose inhalers, CFCs have been replaced by alternatives.

The use of halons for new installations was prohibited in 1991. Since 1 January 2000 the refilling of fire extinguishers and extinguishing systems has also been prohibited. Exceptions exist only for “critical applications” in accordance with Regulation (EC) No. 2037/2000 where no equivalent state-of-the-art substitutes or no alternative fire extinguishing processes are available (for use in civil aviation and some military applications). All non-critical halon uses had to be decommissioned by the end of 2003. In order to store halons from recovered non-critical uses and to supply critical halon users, the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management has established a halon bank. In Austria a total amount of 58 tonnes of halons has been recovered from dismantled fire protection systems.

The use of hydrochlorofluorocarbons (HCFCs) has been phased out in accordance with the time schedule of Regulation (EC) No. 2037/2000, with earlier phase-out dates for some applications. A general ban on methyl bromide came into force in 1998 with exceptions for registered pesticides.

Recent trends and emerging issues

While the agreements proved successful in phasing out ozone-depleting substances, they also led to the increase of the use of alternative substances that bear greenhouse effect characteristics. They are currently under consultation within the Montreal Protocol and Austria engages actively within these consultations to find a solution to those.

b) Stockholm Convention on Persistent Organic Pollutants

Furthermore, Austria is a Contracting Party to the Stockholm Convention on Persistent Organic Pollutants (ratification date 27 August 2002). EC Regulation No. 850/2004 covers both the Stockholm Convention and the POPs Protocol to the UNECE Convention on Long-Range Transboundary Air Pollution, through which Austria implements its requirements under both instruments.

Those chemicals that are banned under the Stockholm Convention are already prohibited in Austria. In accordance with the Convention, Austria also published a National Implementation Plan in combination with its National Action Plan focussing on the long-term and sustainable implementation of the ban requirements of POPs; the long-term and sustainable elimination of unintentionally produced by-products (dioxins/furans, PCBs and HCB) in August 2008.

Regarding POPs listed in Annex B to the Stockholm Convention, DDT was not used anymore in Austria since the 1970s. It was legally banned through national regulations in 1987 and 1992. The EC POPs Regulation 850/2004 also banned production and use of DDT for the European Union. Its export was banned by the Export/Import Regulation (EC) No 689/2008.

Austria's National Implementation Plan is available for further reference on the website of the Stockholm Convention:

<http://chm.pops.int/Countries/NationalImplementation/tabid/253/language/en-US/Default.aspx>

Lessons learned

While chemicals contribute for instance to economic development, some pose a major threat to human health and the environment. This was recognized in particular for persistent organic pollutants, which are highly toxic, persistent, can travel long distances through the air and water and accumulate in fatty tissue. For these reasons, international joint action was required and the Stockholm Convention was created.

II.3 Policies aimed at reducing the risks posed by lead, mercury and cadmium and other harmful heavy metals, including through a review of relevant studies, such as, for example, the United Nations Environment Programme global assessment of mercury and its compounds

a) Lead, Mercury and Cadmium material flow analysis for Austria:

In this study the heavy metals lead, cadmium and mercury have been selected and their sources, flows, stocks and sinks investigated. Flows in Austria were balanced over one year. The following processes and their stocks as well as the relevant input and output flows were examined:

- Mining, agriculture and forestry
- Industry, business and services
- Private household
- Waste management
- Waste water management

- Soil and sealed surfaces.

In addition input and output flows to the litho- and hydrosphere as one process, and to the atmosphere as another were accounted for. Both processes are outside system boundaries.

Conclusions of the analysis

Nearly 200 kt of lead are stored in anthropogenic stocks. Besides landfilled lead, the stocks are mainly made up by car batteries, ammunition and water and waste pipes.

The anthropogenic cadmium stock amounts to approximately 1,200 t, of which 50% can be found in landfills. Stocks in use mainly consist of nickel-cadmium batteries and old plastics that still contain cadmium. Most of the anthropogenic mercury stock is stored in landfills (app. 100 t). Dental amalgam in the human body is largely responsible for the stocks in private households.

Cadmium and mercury should be removed from anthropogenic cycles and transferred to appropriate sinks instead of recycling. One of the major responsibilities of waste management authorities is to provide such sinks. Decreasing anthropogenic stocks (private households) are a first sign of the effectiveness of measures taken in the past to control cadmium and mercury. The declining cadmium and mercury stocks in soils also suggest that the existing environmental policy measures are effective. Today's atmospheric deposition and/or inputs of these heavy metals from agriculture to soil appear to be smaller than they were in the past. A similar picture would be seen with lead in soil. However, the continuing use of lead in hunting, sport shooting and fishing leads to increasing lead stocks in soils.

II.4 Initiatives to reduce overdependence on the use of agricultural chemicals

a) Organic Farming

Due to its small-scale farm structure, Austria places great emphasis on an integrated approach to agricultural and environmental policy. This also includes the reduction or ban of agricultural chemicals. Every 10th farmer in Austria practices organic farming and produces organic products without the use of any agricultural chemicals. Financing provided through the Austrian Agri-environmental Programme (ÖPUL) is a major precondition that this development had taken place. The programme further provides for various measures to improve or safeguard biodiversity, foster low-input farming and environmentally sound farming methods. Farmers submitting to this programme are considered to render non-marketable services to society which qualifies for public remuneration, thus following the principle of payments for ecosystem services.

MINING

I. POLICY AND REGULATIONS

The Federal Ministry of Economy, Family and Youth is the general decision making body for mining related issues in Austria. Other ministries and institutions are also involved in the decision making progress where necessary and appropriate. For example, there is a good cooperation with scientific institutions. As a general principle in Austria also regarding mining issues, decisions are taken at the appropriate level (local, regional or national). For national matters as written above, the Federal Ministry of Economy, Family and Youth is the appropriate authority.

The legal federal framework for mining in Austria is the Minerals Act (*Mineralrohstoffgesetz*), which applies for all mineral resources and the Deposit Act 1947 (*Lagerstättengesetz*). These acts are generally considered a sound basis with currently no need of modification - they cover for example:

- Guidelines for every mining project (area affected has to be as small as possible, certain mining methods are required, environmental impacts must be considered, old mining sites should be used instead of creating new ones).
- Authorisation procedure for new mining activities including all phases of mining (assessment of environmental impacts, risk assessment including environmental and social issues, monitoring). In this procedure the public concerned (*inter alia*, landowners and neighbours) have a legal standing. In certain cases, the municipality and/or the province concerned has a legal standing too. For an appropriate consideration of public interests (e.g. nature conservation, protection of waters and forests) other authorities have to be consulted before the decision is made; as far as IPPC-installations are concerned the public is heard, and stakeholders can acquire a legal standing.
- Obligations of the mining companies (They have to provide an extraction operations plan (*Gewinnungsbetriebsplan*) on a regular basis, emergency response plans, mine closure plans that include measures for renaturation and the mines-surrounding area). Companies must negotiate all those plans with the competent authorities and must comply with applicable authorities' notices.

Also on regional level, policies and regulations are enacted by the regional county authority (based on the federal Acts). One of these policies is, for example, given by the *Tyrolean Mineral Resources Regional Policy*, enacted by the Federal State Government of Tyrol. Mining, transport and processing of the Tyrolean mineral resources not only is of profound economic relevance, but has also a significant impact on the environment. Therefore, the development of mining projects following state-of-the-art guidelines with respect to a sustainable development is of utmost importance.

On July 13, 2004, the Federal State Government of Tyrol therefore has enacted the *Rock Mining Concept of Tyrol (Gesteinsabbaukonzept Tirol)* including sand and gravel. A basic component of this concept is to draw up a comprehensive review about the situation before the project is executed. To guarantee a long-term fulfilment of the demands, it is important to collect first data about active production, usage, consumption, stocks and available reserves.

Mining is location dependent and poses high demands on its evaluation for various reasons. Therefore, the concept contains guidelines that have to be considered when mineral resources are mined. These guidelines encompass on the one hand areas of resource protection and sustainability in mining. On the other hand relevant problems referring to environmental aspects or competing utilization of land are pointed out.

In summary, the present rock mining concept including its supplementary information (which also contains a checklist for extraction permits) is intended to supply professionally based information and support for entrepreneurs, authorities and experts in order to plan and to carry out appropriate proceedings.

I.1 Public governance and transparency in the mining sector

a) Environment Information Act

In accordance with the Environment Information Act, information relating to the mining sector and concerning the environment must be made available to the public.

Awareness-raising

In the field of awareness-raising folders and brochures are produced periodically for schools and former mines that are nowadays being used as show mines. These brochures have coverage of more than 1.2 million visitors and contain information about the use of mining products or information on concepts like urban mining.

Also the “Raw Materials Forum” (*Forum Rohstoffe*) of the Austrian Federal Economic Chamber organises events and presentations to inform the public about mining issues.

Lessons learned

These folders are good and important investments when distributed in schools and other institutions of education. Thereby information is not presented in a highly sophisticated but in a simple way so that basic knowledge can be a nucleus for further interests in mining issues.

I.2 Fiscal policies for investments and counteracting market fluctuations

a) Concrete actions planned for the future

Although the supply of mineral raw materials is the responsibility of companies, the economic importance results in a great public interest. Therefore it is the duty of the government to provide basic information related to mining issues and favourable basic conditions.

In this context it is planned to provide fiscal incentives in the field of research and development, more precisely for projects with the aim to locate deposits of mineral raw materials. This measure is regarded as necessary since the projects usually are very costly and the risk allocation is very high.

II. MINING BEST PRACTICES

a) Best practice example: The Austrian Mineral Resources Plan

Unlike other countries, Austria is facing great land losses due to sealing of land by e.g. transport infrastructure and settlements and through other land consuming processes like nature protection or agriculture. These losses (approximate 200.000 m² per day) are also decreasing potential mineral resources areas, in particular in case of sand and gravel. Since infrastructure projects require a great amount of mineral resources it is considered necessary to safeguard mineral resources areas at the regional level by means of spatial planning. Also the worldwide crisis in mineral supply and the environmental impacts of long-distance transportation have lead to the conclusion that focus should be put on the regional level, where possible. Therefore safeguarding the raw material deposits through land use planning constitute an important part of the Austrian mineral resources policy. Although it is not the states responsibility to provide mineral raw material, it is also a public interest to provide

basic information and a sound legal protection, secure areas where mineral raw materials occur, provide a base for future extraction permits and guarantee the demand of future generations.

Since mineral resources usually are not renewable, measures must be taken to safeguard mineral resources and to take into account the needs of future generations. For this purpose, the Austrian Mineral Resources plan was established. Its task is to map existing deposits of primary mineral resources including sand and gravel, to identify the needs on these resources for the next 50 years and to identify areas where mining is possible without conflicts so that the local authorities can use the reliable data for land use planning. The second goal is to reduce the routes of transport of sand and gravel from 30 km at maximum to 10 km. Focussing on the local level also contributes to the reduction of CO2 emissions.

The European Commission has highlighted the Austrian Mineral Resource Plan as a best practice example (reference to communication from the European Commission).

Lessons learned

In Austria problems of minerals safeguarding can only be solved as a broad dialog between federal authorities (responsible for mining policy) and provincial authorities (responsible for land use planning) without any legal pressure.

As in Austria there are nine different land use planning acts and consequently nine different approaches for mineral safeguarding tailor made solutions from province to province is of greatest importance.

Recent trends and emerging issues

The next step is the implementation of the Austrian Mineral Resources Plan in spatial planning on the regional and local level by responsible authorities.

Major constraints and challenges

In Austria there is a daily loss of more than 20 ha attributable for settlement areas and traffic routes. However both of them are one of the largest consumers of construction materials which lead to tensions in land use.

b) Planned concrete actions for the future: Urban mining

As the deposits of primary mineral raw materials are being reduced, the volume of products containing these substances is increasing. These products are very valuable if being recycled, because they contain a considerable level of the future secondary mineral raw materials. Especially cities are large deposits of these consumption-deposits and to retrieve these resources as secondary mineral raw materials is the concept of urban mining. Thereby the goal is to identify the resources before they become waste. Similar to the mapping of natural mineral deposits the urban deposits must be defined precisely in buildings or infrastructure. In this way urban mining possesses a high potential in contributing to the supply of mineral raw materials of the future.

The beneficial effect of urban mining is not only the supply of secondary mineral raw materials but also the protection of primary mineral raw materials for the future and future generations. Urban mining also has a share in reducing emissions by e.g. minimizing routes of transportation and energy because the production of secondary mineral raw materials is in general less energy consuming. For example the production of secondary iron saves 50 -75 % energy and 40 % water and only 5 % of the energy used for the production of primary aluminium is necessary to produce secondary aluminium.

To ensure, that the production of secondary mineral raw materials is emission- and energy-efficient, certain quality standards are necessary. These standards also guarantee top quality of the products so they can compete with primary mineral raw materials.

In Austria currently 70 % of all the material accumulated by dismantling of buildings or infrastructure, more precisely brickwork, concrete and asphalt, is being recycled in 341 processing plants.

II.1 Technological, institutional and social initiatives for protecting the health of mining workers

Regarding the health of mining workers the Federal Ministry for Economy, Family and Youth is responsible for the technical equipment for safety whereas for occupational safety and health the Federal Ministry for Labor, Social Affairs and Consumer Protection is the general decision making body. The Labour Regulations Inspection Agency is responsible for monitoring of compliance of health regulations. Of course all mining workers have public health insurance, as all people in Austria do.

II.2 Features of national mining codes or mineral industry code

II.3 Regulations and mechanisms for compliance and monitoring

II.4 Guidelines for artisanal, small and medium scale mining

II.5 Public/Stakeholder consultation and participation in decision-making related to mining

II.6 Environmental Impact Assessment (EIA) and monitoring of all phases of mining operation (exploration, project development, mine operation, and mine closure)

II.7 Emergency Response Plans and Preparedness at the local level

II.8 Risk assessment of mines and mining activities

II.9 Rehabilitation of affected communities and life-supporting ecosystems, including mine site decommissioning

II.10 Mine Closure Planning (Land use plans & site rehabilitation, site safety, decommissioning, waste dumps & tailings, site water management, off-site infrastructure, community socio-economic programs and employees)

All these aspects (para II.2 – II.10) are covered in the general Austrian mining framework (see paragraph 1 above).

TRANSPORT

I. POLICIES AND PROGRESS ON TRANSPORT ACCESS, INCLUDING THE RURAL POPULATION AND POOR

a) Austrian Transport Master Plan

The last decade and a half has been marked by major geopolitical changes, requiring a responsible Austrian transport policy – then as now – to find an appropriate response to the effects of those changes. The disappearance of the Iron Curtain, Austria's accession to the European Union (EU), and subsequent EU enlargement are all specific factors in this process of change which have impacted directly on Austria.

Additional factors are

- the globalisation of markets;
- the rise of business supply chains;
- the relentless change from a manufacturing-based society to one based on services;
- continuing deregulation and liberalisation, especially in public transport and the railways;
- the ceaseless advance of new information technologies;
- the increasing importance of leisure time;
- the threat of extreme population ageing and other demographic changes;
- numerous obvious and less obvious environmental problems, plus
- constant pressure on government budgets.

During the 1990s transit issues were essentially concerned with Tirol and the Brenner Pass route. Transport policy at that time reflected the objectives of environmental protection and a better quality of life, as embodied in the 1991 Transportation Concept (*Gesamtverkehrskonzept*). Since then, further important aspects have come to the fore.

For example:

- regional integration of Austria and her positioning within the transport networks of continental Europe;
- links with our new EU neighbors;
- cross-border securing and strengthening of the quality of our economic centers as business locations;
- construction of logistical infrastructure and services;
- use of transport telematics and
- not least, development of innovative funding methods consistent with the Maastricht criteria.

Austrian transport policy now: the Transport Master Plan

In 2001 - 2002, with a view to combining all transport modes under a single umbrella, a Transport Master Plan was drawn up, covering roads, railways and inland waterways. This encompasses the concrete plans of Austria's transport policy for infrastructure, the prime need being to cope with a growing demand for transport infrastructure and services. This Plan will also help to develop regional structures. At 2002 prices, the total capital spend under the Plan was set at 45.000 million Euro. About a third of this went to roads and about two thirds to the railways. This breakdown also reflects the relative amount of ground which each transport mode needed to make up.

Further development

Of special importance to railways in this context is the development of the Danube axis, including the Vienna-Bratislava route, the Pontebbana axis as a new *Südbahn* plus the Brenner transalpine route through the Brenner base tunnel. For road transport, top priority will be given to the motorways and expressways to the Czech Republic, Slovakia, Hungary and the "Regional Ring" around Vienna, plus – for reasons of road safety – construction of a second bore for the Tauern motorway tunnel. It goes virtually without saying that the utmost attention will be paid in all this to safeguarding the environment.

Implementation

The Plan is being funded, for motorways and expressways, by a sticker (vignette) for cars and tolls on certain sections, plus an electronic system of tolls for heavy goods vehicles using the primary road network, whilst responsibility for secondary federal roads has been transferred to the federal states. Costs are balanced out by means of a system of financial equalisation. Railway projects are financed by loans guaranteed by Federal Government.

Projects under the Transport Master Plan are implemented in accordance with the construction programme of ASFINAG (the Austrian toll motorway network operator) and the Framework Plan for the Railways (Rahmenplan Schienen). For development of the Danube link between Vienna and Hainburg a compromise was reached which reconciles inland waterway transport needs with considerations of environmental protection considerations. The cost will be met out of the budget.

Closely linked to the matter of infrastructure is the question of choices of transport mode. These choices are not made solely on the basis of what infrastructure is available: they are determined chiefly by two factors – infrastructure quality and transport efficiency, on the one hand, and price on the other hand. The deciding factor will thus be transport services provided as an integrated package, and these days transport parameters are determined primarily at EU level. In order to guarantee balanced market conditions for all modes of transport, Austrian transport policy has thus been in favour, right from the start, of the principle of internalising external costs. But this idea continues to be opposed by most Member States of the EU.

Thanks to a large number of supplementary measures at national level, such as measures to promote connecting railways and various forms of combined transport (particularly the "rolling road"), it has been possible, against the European trend, to keep the proportion of total freight carried by rail at the comparatively high level of about 35 percent – several times higher than the EU average.

Objectives

Transport policy objectives such as economic, environmental and social sustainability or improved safety are paramount, now as in the past. And they will remain a central focus of Austria's transport policy in the future too.

They range from the – already completed – transposition of the EU's Strategic Environmental Assessment (SEA) Directive as an instrument of infrastructure planning, to measures to promote combined transport (mentioned earlier), measures to reduce fine particulates, and the installation of noise barriers alongside railway track or motorways.

Austria has also set herself the ambitious target of halving traffic fatalities by the year 2010. Results to date give reason to hope that this target may be met.

In the context of new EU criteria for the transport market, Austrian Federal Railways (ÖBB) has been radically restructured. The company has been divided into separate parts, one responsible for infrastructure and the other for sales, under the umbrella of a holding

company, and this should halt the trend of ever-increasing government subsidies to the railway sector. Not only has this move paved the way for transparency and fair competition in railway transport, something which will give an overall boost to this environmentally friendly mode of transport; it is also a first step towards ongoing reform of local public transport. That reform, by creating improved quality, a more client-friendly service and a more efficient use of resources, will halt the trend of rising costs and falling passenger numbers, thus ensuring that local and regional public transport can continue to play its important regional and social role in the future as well.

Lesson learned

Austria's transport policy has successfully made up for many of the opportunities missed in the past and is actively confronting the challenges of the 21st century:

- road and rail networks are expanding and markedly improving in quality;
- Austria is a European leader in terms of modal split, that is to say its proportion of transport modes which are socially and environmentally friendly;
- traffic fatalities are steadily falling;
- innovative technologies will soon bring improvements in both public transport and the volume of private car traffic.

II. FUEL PRICES AND TAX REFORM

II.1 Removing subsidies on fuel

a) Taxes on mineral oil products (motor fuels and heating fuels) are taxed long time ago, even if it was not on ecological purpose. The taxation on mineral oil products were extended to other forms of fossil energy products (natural gas) and on electricity in 1996 driven by ecological considerations. Since then tax rates on fossil energy were increased in several steps in 2000, 2004 and 2007 and solid fossil fuels (coal, coke) were included in the taxation (2004). In 2008 the tax revenues on energy products amounts to 4.5 bn Euro, which is about 7% of total federal tax revenues.

The same tax rates are applied on consumptions of enterprises and private households. According to the harmonised energy tax system of the European Union energy intensive enterprises can apply for tax reductions on heating fuels and electricity (not on motor fuels) if they are classified as energy intensive a long with EU-rules.

Besides steadily increases in tax rates, differentiations were implemented to sharpen ecological effects. Tax differentiations according to the sulphur content of the fuel were introduced in 2004 (motor fuels) and 2008 (heating fuels) and differentiations to promote mixtures of fossil motor fuels with bio-fuels are applied since 2005 (diesel) and 2007 (petrol).

Lessons learned

Tax differentiations according to the quality of fuels, e.g. according to the sulphur content, are very efficient to enhance fuel-switch. Figures show that substitution takes place within a very short period of time.

Major constraints and challenges

In the case of setting the overall tax levels on energy, the room for manoeuvre is limited to the tax levels of other economies. Especially in the case tax levels to energy intensive industries excessive tax levels might lead to economically and ecologically undesirable effects if energy intensive industries might migrate to states in which lower environmental policy constraints.

Within the European Union due to the harmonisation of energy taxation these effects are prevented but are still important in a world-wide context.

b) Currently there is no plan to reduce the given reductions concerning excise duty rates for bio fuels in Austria.

Tax incentives have been introduced for fuels that are sulphur-free and contain bio fuels by means of a reduced rate of the excise duty on mineral oils:

Since 1 July 2007, the rates for diesel have been:

- 0,347 euro/litre for sulphur-free diesel with biogenous substances
- 0,375 euro/litre for conventional diesel

➔ Difference: 2.8 cent/litre

Since 1 Oct. 2007 on, the rates for unleaded petrol have been:

- 0,442 euro/litre for petrol containing biogenous substances
- 0,475 euro/litre for conventional petrol

➔ Difference: 3.3 cent/litre

The use of pure bio fuels is exempt from excise duty on mineral oils.

Lessons learned

The Austrian model using subsidies for increasing the use of bio fuels is very successful. With the given subsidies the amount of bio fuels could be raised to 4,85% in the year 2007. Since October 1st 2008 the percentage of fossil fuels which have to be substituted by bio fuels raised to 5,75%, two years earlier than the given target of the EU bio fuels directive.

This measure makes a significant contribution to the Kyoto target: In total, it reduces greenhouse gas emissions by around 1,4 million tonnes CO₂ equivalents per year.

Recent trends and emerging issues

The coming up actions concerning the use of renewable energy in the transport sector are the implementation of the Renewable Energy Directive and the Fuel Quality Directive, with the sectoral target of the use of at least 10% of renewable energy in the whole transport sector in the year 2020.

Major constraints and challenges

A challenging step within the whole process will be the implementation of the sustainability criteria for bio fuels as setting up a certification system for imported or in Austria produced biomass used for the production of bio fuel.

II.2 Encouraging energy efficiency

a) The klima:aktiv mobil is the Austrian Federal Action Program to promote energy efficient mobility and reduction of GHG emissions in transport:

The program was been launched in 2005 by the Austrian Federal Ministry of Agriculture and Forestry, Environment and Water Management, also supported by the Austrian Chamber of Commerce, the Austrian Association of Cities and Towns and the Austrian Association of Municipalities.

The program is designed to motivate & support actors to move towards climate friendly mobility and transport. *klima:aktiv mobil* target groups to reduce CO2-emissions in transport sector and improve energy efficiency include companies and public administrations; cities, municipalities and regions; leisure and tourism; real estate developers, investors in the building sector; schools and youth; press/media as opinion makers; citizens as road users/traffic participants and consumers. *For further details see also under section VI. a) of the transport chapter.*

The measures implemented include fleet changes to alternative vehicles focusing on renewables promotion of public transport, improving cycling and walking for company staff, cars-haring, improve transport efficiency by intelligent logistics; setting-up of regional mobility centers and on demand (“dial-a-ride”) bus and taxi systems; “soft mobility packages“ for tourism; climate friendly travelling and mobility on site eg. transport, cycling, walking; promoting alternative fuels and electric vehicles.

Implementing fuel-efficient driver training programs has resulted in substantial fuel saving for passenger cars, trucks and busses (eg. driver training of the postal bus services reduced fuel consumption by 2 million liters of diesel fuel). Therefore, the program will be extended to the agricultural sector, in particular training for tractor drivers and young farmers.

III. REGIONAL AND GLOBAL TRANSPORT SYSTEM INTEGRATION ENCOURAGING EFFICIENT MODES

a) Green footprint campaign

The green footprint campaign invites children in Austria (and all over Europe) to make their daily journeys independently and in an environmental-friendly way. By collecting so called Green Footprints, the children will show the "big ones", what the "small ones" do for the protection of the global climate!

The modules and materials produced within the campaign offer concrete ideas and activities for teachers, parents and children. Nursery and primary-school children, and their parents, will increase their awareness of eco-friendly mobility by getting involved with activities covering the topics sustainability, climate and transport in a playful way.

How? - During one or more activity weeks on sustainable mobility each journey absolved on foot, by bike, skater, bus, train etc. counts one "Green Footprint".

Lessons learned

To get many schools involved in a project, it has to be simple. Good edited material and easy access is very important for a successful school project.

Recent trends and emerging issues

The campaign was evaluated and showed that more children went to school without car in the action week(s). 300 schools and 30,000 pupils took part.

In Austria on the whole the ways to school by car have grown sharply in the last 20 years.

Major constraints and challenges

The campaign takes place at school for one to four weeks. In these weeks the campaign encourages children to go to school by environmental means of transport. After these weeks it needs further measures to make the action sustainable.

b) Mobility management for schools and youth

The project on behalf of the ministry of agriculture and environment is providing a basic package of information and teaching materials for 500 interested schools, youth leaders or teachers in Austria. Additionally 125 schools are benefiting from a more intensive programme. Over the course of a year, a mobility manager helps children, teachers and parents to find local solutions to enhance climate friendly means of transport. This may be achieved via road safety measures or via innovative approaches such as roundtables with children and community members, including transport company staff. These measures include better options for children making their way to school. There is less car traffic around the schools and more awareness of children's need for physical activity, clean air and more pleasant journeys to school. Youth can contact Climate Alliance Austria to get more information about mobility management and climate. They can book an information workshop or get advisories for grants.

Lessons learned

Many partners have to be involved into the project to get good results but it is not possible to get support from all partners.

Recent trends and emerging issues

The campaign was evaluated and showed that it is possible to reduce ways to school by car. The connection between environment and health enables to get new target groups.

Major constraints and challenges

In every school there are different conditions. The mobility manager has to be very flexible.

c) Projects for sustainable transport and tourism - Austrian and transalpine model projects for Soft Mobility:

Background

Between 50% - 75% of environmental impacts of tourism are caused by transport: air pollutants, noise, green house gas emissions, land take, damage of landscape and villages (MuSTT Study of EC). Tourism travels show high peaks and concentrations of transport and environmental impacts. Car and air travel are the major source of environmental pollutants and health risks and external costs. Car dominance in leisure trips, car and air transport dominance in intra-European tourism travel:

- Domestic travel: 78% car, 10% coach, 6% rail, 3% air, 3% ferry
- International travel: 47% car, 39% air, 8% coach, 5% rail, 1% ferry

(EU 25 plus N, CH, BG, RO; MuSTT Study of EC)

i) Austrian project “Holiday from Car” in Model Resort Werfenweng and in Neukirchen am Großvenediger

Major goal was to achieve synergies for tourism, transport, environment, tourists and locals. The measures include: new all-inclusive-packages like „Holiday from Car“ with soft mobility guarantee, promoting rail travel and public transport, the so called *Werfenweng* shuttle, a mobility centre called „mobilito“, pedestrian- and cyclist-friendly, redesigning of streets, as well as e-vehicles for car rental, car sharing, hotels and delivery, with a e-charging photo voltaic station for e-vehicles in *Werfenweng*.

The winners of this project are tourism, transport and environment:

- Increase of overnight stays (before/after model project): +30,9 % in winter season from 1997/98 - 2006/07, (+ 24,6 % Salzburg region average) and +20,7 % from 1998 - 2007 in summer season (+ 4,4% Salzburg region average);
- Increase of the use of the eco-package “holiday from car” from 1.707 (2000/01) up to 2.035 (2006/07) in winter season, increase of the use of the eco-package “holiday from car” from 498 (2000) up to 1.908 (2006) in summer season;
- Increase from 17 (2000) up to 41 (2007) hotels offering eco-package „holidays from car“ in total.
- Increase of train use for winter arrivals from 9 to 25 % lead to a reduction of car travel - 1, 2 Mio car km and a reduction of emissions - 375 tons CO2.

ii) Alps Mobility II – Alpine Pearls:

(Lead Partner: Austria, Ministry of Agriculture, Forestry, Environment and Water Management)

An innovative eco-tourism package “Alpine Pearls” was implemented: a model resorts for soft mobility combined with environmentally friendly transport means “The Pearl String”. Furthermore a network of tourist resorts called “Alpine Pearls” and eco-travel packages to beautiful landscapes and resorts in the Alps (“Alpine Pearls”) by rail and bus, taxi, ship, cable cars, zero emission vehicles, e-scooters, bicycle or hiking etc (“The Pearl String”) was established.

iii) Alpine Awareness:

(Lead Partner: Italy, Provincia Belluno)

Measures for transalpine awareness raising for sustainable mobility with a focus on young people, employees in transport and tourism and the general public were implemented.

iv) MOBILALP:

(Lead partner: France, Conseil General de Haute Savoie)

The aim was the establishment of Alpine mobility management: development of innovative sustainable mobility services at local and regional level

v) Valley Hiking Bus Network Lungau/Murau:

“Enjoy pure freedom of mountain holidays”: hiking from one valley to the other, crossing the Alpine range, returning home by valley bus. An awareness campaign financed by the Austrian Ministry of Environment lead to an increase in the number of passengers of the so called “Valley Hiking bus”.

vi) Environmentally Friendly Transport and Tourism in the Lake Neusiedl Region:

Five modules contributed to achieve this goal in the Lake Neusiedl/Fertö-Tó region. They comprised innovative solutions for public transport on municipality level like demand-oriented local busses in Purbach, Breitenbrunn and Moerbisch. All-inclusive packages are based on the concept of soft mobility for tourists are another key measure (All inclusive Neusiedl Card).

vii) klima:aktiv mobil “Mobility Management for Recreational and Tourist Transportation”

(For further details of the program klima:aktiv mobil see under point VI.a)

In the course of the last years, experience from tourism and transport projects showed that solutions for soft mobility allow not only for considerable reductions of transport-related CO2-emissions but also for substantial advantages in competition through improved offers and lower transport-related emissions and noise.

Therefore the Federal Ministry for Agriculture and Forestry, Environment, and Water Management has initiated the “*klima:aktiv mobil*” consulting and development program “Mobility Management for Recreational and Tourist Transportation.” This program offers services and support for holiday and excursion regions, for recreation and tourist businesses and for associations and organizers which take actions to reduce CO₂ emissions. For example, support is given to increase environmentally friendly transport for travelling to a destination (tourism resort, national park etc., to establish public transport offerings, to promote cycling and walking or to devise special tourist packages. The objective is to reduce the yearly CO₂-emission by 60.500 tons through implementing these actions.

IV. VEHICLE EFFICIENCY AND EMISSIONS POLICIES

a) **Implementation of the EU Directives and Regulations on pollutant emissions and CO₂ emissions from cars and light-duty vehicles and emissions from heavy-duty truck**

Austria implements the EU regulations to control emissions of motor vehicles:

- the EURO 5/6 emission standards for cars and light duty vehicles coming into force by September 2009 and 2014, respectively
- the EURO V/VI emission standards for heavy duty trucks being in force since October 2008 and from October 2014, respectively
- the EU Directive on public purchasing of clean and fuel-efficient vehicles

The EU framework prevents Austria from implementing tighter emission limits than those prescribed by the EU regulation.

However, tax incentives are possible for early introduction of vehicles that achieve future emission limits in order to combat local air pollution of fine particle and NO_x emissions.

b) **Tax incentives for clean and low carbon vehicle by changing the current tax bonus malus system when purchasing new cars**

Austria took a first step to promote investments in energy-efficient vehicles (passenger cars) via tax incentives already in the early 90thies when substituting luxury-VAT rate by car-registration tax (“*Normverbrachsabgabe*”) which is applied the time a (new) car is the first time registered in Austria. The tax base was the net price of the car (without any taxes) and a linear-progressive tax rate depending on the fuel-consumption was applied. A part from small technical adjustments and a slight increase of the maximum tax rate in 1997 the tax war almost unchanged until mid 2005. In mid 2005 in the case of diesel cars an instrument to promote cars with filters against sooty-particle was added by introducing a bonus-malus-system depending on the particle-emissions of the car. In mid 2008 the bonus-malus-system was further extended: Since then the car-registration tax consists of the basic element, introduced in the early 90thies, and of tax-reductions if the car emits less than 120 g CO₂/km, if it emits low NO_x or is driven by “alternative” engines or fuels (e.g. hybrid, electric, natural gas, etc.). In the case of high CO₂-emitting cars (180 g CO₂/km; beginning with 2010: 180 g CO₂/km) a linear-progressive surcharge is applied, depending on the exceeding emissions above the threshold of 180 respectively 160 g CO₂.

Lessons learned

The introduction of tax incentives can work, if they are well designed. In mid 2005, when starting with the incentives to promote diesel-cars with filters against sooty-particle, only 10% of all new diesel cars were equipped with particle-filter approximately. In mid 2008, when the advanced bonus-malus-system was introduced the share increased up to 80%. Actually more than 90% are equipped.

Recent trends and emerging issues

The further development in car-registration tax in mid 2008 indicates that the advanced bonus-malus-system works as well. The market-share of cars with “alternative” engines/fuels, starting from a low level of 0.5% doubled within 6 months to 1%. The market-shares of cars emitting less than 120 g CO₂/km tripled up to 15% actually within nine months.

Major constraints and challenges

In using positive tax incentives to promote environmental goals firstly a balance has to be found between modelling tax instruments to address environmental challenges on the one side and not to overload the complexity of the tax system on the other side. Secondly if tax incentives are to successful in environmental terms it might have negative influence on tax revenues, which would make it necessary to adapt the tax systems regularly.

c) The Dynamic Speed Limit, enacted by the Federal State Government of Tyrol

In Tyrol air pollutants like NO_x, SO₂, TSP or PM10 are permanently measured (immission determination). In the year of 2006, the allowed annual threshold value of 40 µg NO₂ (nitrogen dioxide) per cubic metre has been exceeded at 7 out of 13 measurement stations. Based on official air pollution inventories, 70% of the total nitrogen emissions in Tyrol result from traffic. The largest traffic volume and hence most NO_x emissions occur on highways crossing Tyrol. Therefore the most efficient measures for reducing nitrogen emissions should focus on highways.

With the implementation of a dynamic speed control system varying speed limit indications as a function of traffic volume and air quality on the Inn valley highway, Tyrol has implemented an innovative measure in the country. This new facility enables for the first time to control of traffic flow with a view to maximizing air quality benefits and minimizing impacts on the traffic flow.

The collected traffic data allow the calculation of the total emissions (air pollutants) from all vehicles (cars and trucks). These emissions correlate with the traffic volume. The actual concentration of nitrogen dioxide (NO₂) measured at the air quality monitoring stations depends both on the traffic emissions and on the actual meteorological situation. Depending on the dispersion conditions (wind speed, height of inversion layer, temperature and gradient etc.) emissions thus have a stronger or weaker impact on the measured immission values.

The measured values from traffic counters and from air quality measurement stations are permanently monitored and used for calculation of the immission contribution caused by cars. In addition, current weather conditions are recorded and analyzed. In case car pollution exceeds a certain threshold value, the traffic control system lowers the speed limit from 120 km/h to 100 km/h, which results in the reduction of the total emissions and consequently the immission levels.

V. DEVELOPMENT OF ANY TRANSPORT TECHNOLOGY RESEARCH AND DEVELOPMENT (PUBLIC SECTOR OR PRIVATE)

a) Strategy Programme on Mobility and Transport Technologies for Austria

IV2Splus – “Intelligent Transport Systems and Services plus” – operates as a continuation of the successful forerunner programme IV2S (2002 - 2006), but goes beyond IV2S in significant aspects and establishes new emphases and core areas of content. The programme focuses on expanding excellence in research and development through stronger international embedding of successfully established national R&D competences, with the goal of increased integration of these competences into international, industrial, value-creation chains. Austria should thereby also make a significant contribution to the development of future transport and mobility solutions at European level.

Lesson learned

Social, economic and technological developments are imposing increasingly complex demands on the transport system and its capacity. New technologies and innovations can make a key contribution towards designing sustainable, intelligent mobility and transport systems and are opening up new business opportunities for the transport engineering sector.

The economy profits not only from an efficient transport system, but also from the market launch and dissemination of new products and services. Transport technologies therefore make a vital contribution to improving economic competitiveness.

Recent trends and emerging issues

Given the strong growth in transport – forecasts for 2020 predict an increase in goods transport of 30 percent and in passenger transport of 20 percent – and given the particular transport policy and environmental policy challenges currently faced (for example: climate protection goals), in the Seventh Framework Programme of the European Community for Research and Technological Development (2007 - 2013), the area of transport was defined as a strategic focus for research, with a significantly enhanced research budget.

b) Further Impulse Research Programmes

The Austrian impulse programme **A3plus** is striving to make the transport of the future significantly more energy-efficient and more environmentally friendly by promoting research and development in the field of innovative propulsion technologies and alternative fuels. Ground-breaking key innovations should trigger technological leaps paving the way to entirely new propulsion concepts with previously unachievable levels of consumption and emissions for surface transport.

The programme line **ways2go** is focused on the movement of persons and is geared towards developing a knowledge base of future mobility and transport issues. This knowledge base will be used to expand and develop innovative transport solutions that will form an essential contribution to the development of sustainable, demand-oriented transportation systems and mobility solutions. The following sections describe a progressive, interdisciplinary and integrated research approach that will be used to successfully complete this ambitious program.

IMPULS is the Austrian action line to **promote basic research for innovations in transport**. The goal is to rapidly unlock scientific and technological findings and problem-solving approaches from the widest range of disciplines for use in the transport sector.

In transport technology, research and development using established methods and approaches often fails to achieve the desired effects. The complexity of the systems and the diversity of the requirements are increasingly harder to overcome. In this area, it has been proven in recent years that "borrowing" methods, findings and problem-solving approaches from other disciplines is leading to new sets of questions and thus to a re-evaluation of familiar project approaches. One of these new avenues is bionics, which combines the fields of knowledge from biology and engineering. A second path lies in linking the creative industries with transport technology. These two approaches form the starting-point for the IMPULS action line. In the years ahead, those subject areas are to be supplemented with further interdisciplinary linkages.

The artificial term "bionics" is understood as referring to an interdisciplinary field of knowledge at the interface between biology and engineering, the aim of which is to use principles derived from biological systems for technical applications and solutions strategies. Over recent years, bionics has increasingly established itself as an academic discipline in its own right, gaining in transparency and developing worldwide in the university and industrial environment into an innovative area of research. The approaches looming in Austria on widely differing thematic areas consist to date of relatively divergent individual initiatives. At many levels, there is still a prevailing ignorance over the "wealth of ideas in nature". A survey of the Austrian research landscape revealed on the one hand significant interest and great willingness to discuss the issue of bionics, whilst on the other hand there is an important need to clarify and inform. Generally, the potential for using research findings from bionics in Austria is estimated very high. There is a high level of need for knowledge transfer from bionics to the individual fields of engineering in the transport sector. Accordingly, there is a significant need for consolidation, dissemination and information.

VI. FURTHER CONCRETE ACTIONS TAKEN AND SPECIFIC PROGRESS MADE IN IMPLEMENTATION

a) "klima:aktiv mobil" – Austrian Initiative for Climate Protection in Transport launched by the Federal Ministry of Agriculture, Forestry, Environment and Water Management

klima:aktiv mobil is part of the Austrian Climate Strategy. The *klima:aktiv mobil* programme aims at supporting stakeholders and target groups in the transport sector regarding their contribution to climate protection. The entire strategic concept consists of four interconnecting modules such as consulting, funding, motivation and awarding of the partners.

Consulting – from the project idea to financial support and implementation

The *klima:aktiv mobil* action programmes for climate friendly mobility management inform and support companies, public authorities and administrations, cities, municipalities and regions, the leisure and tourism branch, developers in the building and real estate sector, investors, schools and youth organisations. Furthermore the programmes offer free financial funding advice.

Funding – financial support for your intended project

klima:aktiv mobil also offers financial support to companies, federal provinces, cities and municipalities when adopting fleets to alternative fuels and drives, when setting measures to encourage cycling and for climate friendly mobility management such as mobility centers, local busses and innovative ideas regarding public transport.

Motivation – participation in cycling and Eco-Driving campaigns

klima:aktiv mobil promotes cycling and -with Eco-Driving- encourages a fuel saving driving style.

Awards and certificates – commitment to climate protection

The concept of partnerships regarding climate protection in the traffic sector is of importance for *klima:aktiv mobil*. Projects that are realized within the *klima:aktiv mobil* programmes are rewarded by the environmental minister for their exemplary work regarding the reduction of CO₂ in the transport sector.

Lessons learned

The *klima:aktiv mobil* programme is stimulating environment and economy! It is enabling companies to save emissions as well as costs and play an important role in stimulating the economy as well as saving jobs. A subsidy of 10 million € may trigger investments of 100 million €, thus securing ~1.000 jobs.

Recent trends and emerging issues

After four years of operation the initiative has achieved successful results: More than 400 *klima:aktiv mobil* project partners (like companies & public administrations, cities, municipalities and regions, leisure and tourism institutions, schools and youth as well as real estate developers and investors in the building sector that have taken concrete actions to contribute to the climate protection in Austria) are already reducing more than 230.000 tons of CO₂ per year with their projects! The programme is right on track to achieve the 300.000 t CO₂/y reduction target determined in the Austrian (Kyoto) Climate Strategy in 2010.

b) The Austrian National Cycling Strategy

In 2006 the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (abbreviated the “Lebensministerium” – ministry of life) presented the Austrian National Cycling Strategy (“Masterplan Radfahren”) which aims at double the cycling share from 5% to 10% until 2015. Doubling the cycling share will reduce greenhouse gas part. The Austrian National Cycling Strategy contains 17 measures to promote daily cycling use in Austria. Main elements are:

- Investments in cycling infrastructure (Bike&Ride, cycling routes)
- free cycling consulting within the *klima:aktiv mobil* programme (see above) for stakeholders (mobility management in companies, public administrations, communities, schools, leisure and land use planning)
- Awareness campaign for stakeholder and the public in cooperation with the cycling industry and regional governments
- “bike2business” an award for cycling friendly companies (www.bike2business.at)
- “fahrRad” cyclist competition with an online kilometrage diary (www.fahrradpass.at)
- Installation of a national cycling coordination the Mobility Department in the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management (“Lebensministerium”) to coordinate the implementation of “Masterplan Radfahren”.

c) European Mobility Week and Car free Day

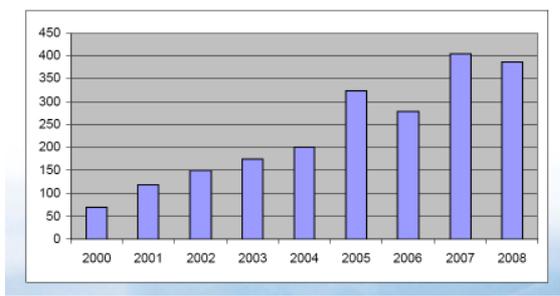
In the context of the *European Car free Day* (September, 22nd) and the European Mobility Week (16-22 September) Austria sensitizes and motivates its citizens for pollution free mobility since the year 2000 and offers sustainable solutions. Walking, cycling and the use of public transport take over the leading part, at least for one day. The population can experience the advantages of a car free environment. The European Car free Day is not to be understood as a single action, but shall bring a long-term change of behaviour. With a peak participation of 406 cities and municipalities altogether (cooperation with the Austrian Climate Alliance!) in 2007, the Car free Day was one of Austria's most successful public awareness campaigns regarding transport.

Lessons learned

With good preparation and attractive materials and support it is possible to motivate a great share (20%) of Austrian municipalities to participate in this event for promoting sustainable mobility. Also the majority of the Austrian federal provinces support the European Mobility Week.

Recent trends and emerging issues

participating cities & communities



The participation of Austrian municipalities rose steadily during the last ten years.

Major constraints and challenges

It is important to implement the European Mobility Week and the Car free Day not as a single event, but to integrate it in a year all campaign for sustainable mobility. This can be obtained with the *klima:aktiv mobil* campaign and consulting.

d) Mobility Management for the Ministry of Agriculture, Forestry, Environment and Water Management:

In 1997 the Ministry started the so called "Soft Mobility Partnership" as a pilot project with mobility management for five institutions in Austria, being one of them itself (with one of its sites).

Since then all employees on all 3 sites of the ministry have been included in the mobility management process with a broad variety in actions and measures for the 900plus employees.

The aim was clear: to raise awareness for sustainable commuting and business trips and to raise the share of environmentally friendly modes of transport (public, transport, cycling, alternative fuel vehicles) for both, commuting and business trips.

Motivations/reasons are manifold, but “acting as a role model” and “helping to fulfil climate protection targets” as main drivers.

Since the share of environmentally sound modes of transport was already high among employees, it could even be raised. Thus, the aim to set a best practice example could be achieved.

Per year about 45000 € (in this range starting 2005) are spent on MM measures for the ministry. About the same amount is spent on Eco Driving trainings, company bicycles, electric bicycles and scooters and the installation of bicycle racks.

It goes without saying that an “Environmental ministry” is bound to mind its own business to be credible and therefore anchors its own mobility plan in its strategy: The working programme for the Ministry’s Federal climate protection initiative in transport “*klima:aktiv mobil*” therefore includes “MM for the Ministry itself” with a dedicated budget and human resources.

Up to now the following measures have been implemented (excerpt):

- installation of a MM coordinator within the Ministry
- survey on mobility behaviour among all employees
- so called “ÖBB-Österreich-Cards“ (general ticket for Austrian railways) to borrow
- procurement of and awareness raising for company bicycles (including electric bikes and e-scooters) on all 3 sites
- reduces prices if employees are buying bicycles for private use
- especially reduced Car Sharing tariffs and offers
- additional attractive and safe bicycle racks at all three sites
- bicycle self-service stations
- Eco Driving trainings and –competitions for employees
- Climate friendly business trip regulations
- awareness raising measures such as
 - the yearly “mobility day“ (“MM day“)
 - awards for „Cyclist of the year“, Eco driver of the year“ and “Public transport passenger of the year“
 - roll-ups and billboards within the sites to highlight the measures and the “MM day”
 - a “mobility map“ with tips and information regarding „what I can do for more sustainable workplace travel” etc.

The general strategic approach is not only to appeal to employees “environmental” conscience, but to give answers to the question “What is in for me as an employee”?

For the single awareness measures please see above.

The project “MM within the Environmental Ministry” is aiming for a environmentally friendly modal split for commuting and business trips. This is tried to be achieved by different awareness raising measures, awards, boni etc.

Yearly “MM day” with participation of the Minister and presentation of all offers, initiates and measures plus Eco Driving competition, awards for “public transport guest of the year” and prizes like especially branded bicycles, public transport tickets etc. (all for/among employees).

The Ministry employees act quite environmentally aware regarding their commuter and business trips. More than 80% use public transport for their way to and from work. The share of regular cyclists has risen from 5% auf 11% (1999 up to now).

The share of regular car drivers is 5% (16% using a car from time to time or for a little share of their trip to work).

The Ministry of Agriculture, forestry, Environment and Water Management has been among the very first public administrations in Austria to start with a MM process for its own employees in 1997. since then the measures –step by step- have been developed, wider spread and more sophisticated. Elements that are not primarily been seen as “MM in a narrower sense” such as Eco Driving trainings, support for buying bicycles for private use etc. have been included.

This has the advantage, that not only commuter and business trips are influenced in a positive way but also private mobility behaviour.

WASTE MANAGEMENT

I. PREVENTION AND MINIMIZATION AND ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES

I.1 Policy measures for the prevention and minimization of hazardous wastes

The Austrian List of Waste Ordinance waste determines waste as hazardous waste in accordance with EU-waste legislation (Waste Framework Directive, Directive on Hazardous Waste, Waste Oil Directive, European List of Waste).

The Austrian Waste Management Act 2002 determines in §1 the objectives and principles for waste management. “The management of waste shall be organised in such a way that:

- (1) harmful or negative effects on humans, animals and plants, on their basis of existence and their natural environment shall be prevented and other effects that impair the general well-being of humans shall be kept as low as possible,
- (2) the emission of air pollutants or gases with an impact on the climate shall be kept as low as possible,
- (3) resources (raw materials, water, energy, landscape, surfaces, landfill volumes) shall be conserved,
- (4) waste undergoing recovery or the materials obtained from it shall not present any greater hazard potential than comparable primary raw materials or products from primary raw materials, and
- (5) only such materials, which can be deposited without endangering future generations, shall remain as waste.

The following principles shall apply:

- (1) Waste quantities and their pollutant contents shall be kept as low as possible (waste prevention).
- (2) Waste shall be recovered to the extent that this is ecologically reasonable and technically feasible, and that the additional costs of recovery are not disproportional by comparison with other methods of waste treatment and that there is a market or that a market can be created for the recovered materials (waste recovery).
- (3) Waste that cannot be recovered in accordance with the above principle shall be treated by means of biological, thermal, or physico-chemical methods, depending on its composition. Solid residues shall be deposited after sorting them into low-reaction and conditioned forms (waste disposal).”

Apart from the general treatment obligations in the Waste Management Act, transfers of hazardous waste shall be reported and transports of hazardous waste can only be carried with a movement document.

The Batteries Ordinance, the End of Life Vehicle Ordinance, the WEEE- Ordinance which are required under Community law, The Lubricants Ordinance and the Waste Treatment Obligations Ordinance are in particular actions taken for prevention and minimization of hazardous waste.

Furthermore According to §10 of the Waste Management Act 2002, a waste management concept is to be drafted for specific plants. According to §11 of the Waste Management Act 2002 businesses with more than 100 employees have to appoint a waste representative.

Additionally ordinances based on the “Chemical Act” and the “Plant Protection Products Act” contribute to qualitative waste prevention.

Since 1992 the Federal Waste Management Plan is implementing the principles and objectives of the Waste Management Act. Strategies for waste prevention are a part of the Waste Management Plan.

The major objectives of the waste prevention and recovery strategy are:

- Reducing emissions
- Reducing pollutants
- Conserving resources and resource efficiency (incl. energy efficiency)
- Minimising the dissipation of pollutants in the environment

by

- undertaking quantitative and qualitative waste prevention,
- establishing material cycles
- utilising the resource and energy value of waste and
- the transformation to more sustainable production and consumption models

Details see www.bundesabfallwirtschaftsplan.at (English version of the Waste Management Plan is available on the web-site).

I.2 Transfer of environmentally sound technologies and know-how on clean technologies and low-waste production

Austria’s environmental technologies sector is among the most innovative and fastest-growing in the world. Generated income and exports within this sector have increased by 12 percent a year within 2003 – 2007. The Federal Ministry of Agriculture, Forestry, Environment and Water Management in cooperation with the Austrian Chamber of Commerce has initiated the “Environmental Technologies Initiative” aiming at creating global co-operations between the public and private sectors in order to promote the use of environmental technologies. This initiative has been taken up very positively and is constantly expanding.

In the area of waste management, Austria’s expertise is focused on the

- development of new methods of thermal treatment and recycling of low-calorific waste, sewage sludge and residue from scrap recycling;
- planning and building large waste-to-energy incineration plants with combined power and heat generation together with year-round heat recovery in industrial sites;
- further development and use of methods ensuring efficient treatment of hazardous residues from thermal and metallurgical plants through a specific treatment using mineral additives;
- development and use of systems for environmentally-sound temporary storage of processed waste for thermal recovery.

I.3 Initiatives to treat, recycle, reuse and dispose of wastes at the source of generation and regulatory mechanisms (polluter-pays principle)

Source separation is an important requirement for further treatment of waste esp. for a high quality of products from recycled waste. Therefore Austria implemented an obligation for

source separation of different waste streams esp. for biowaste . Separation of construction and demolition waste has to be done at the source or before further treatment.

I.4 Procedures for environmental impact assessment, taking into account the cradle-to-grave approach

The EIA is an important step towards precautionary and integrative environmental protection. It serves project applicants as a planning instrument and as a basis for decision-making.

The objectives of the EIA is

- To prevent environmental damage before it happens, according to the precautionary principle;
To regard environmental effects from an integrative and comprehensive point of view, and not just section-wise;
- To achieve improved project planning and approval procedures;
- To integrate environmental concerns into the evaluation and decision-making procedure, giving them the same amount of attention as any other concerns;
- To make the project approval procedure more transparent and explicit by involving the public.

In the European Union, the EIA was integrated into the EIA Directive. In Austria the EIA is governed by the Environmental Impact Assessment Act (UVP-G 2000) and other legislation relating to the soil reform. In accordance with domestic and national legislation, the EIA is embedded into a concentrated approval procedure which involves the competent national or regional authorities, licensed experts and the public.

The cradle-to-grave approach is taken into account since the project applicant is required to submit an environmental impact declaration together with the project proposal describing the project, the most important alternative solutions that have been considered, the expected impacts on the environment and the measures to prevent or reduce these impacts.

I.5 Recovery, reuse and recycling of hazardous wastes and their transformation into useful material

In accordance with the “3step hierarchy” and in future with the “5step hierarchy” of the EC-Waste Framework Directive, waste has to be prevented before recovered (reused – recycled – recovered through energy recovery) before disposed. National waste legislation and policies have to take into account this principle also for hazardous waste.

I.6 Phase-out of toxic, persistent and bio-accumulative waste

Waste undergoing recovery or the materials obtained from it shall not present any greater hazard potential than comparable primary raw materials or products from primary raw materials to avoid distribution of pollutants.

Additionally to the EC-obligations due to the Waste Treatment Obligations Ordinance pollutants in waste electric or electronic equipment, batteries and PCB containing waste have to be eliminated.

I.7 Inventories of hazardous waste production, their treatment/disposal, and contaminated sites

a) **Register of Contaminated Sites**

With its Act on the Remediation of Contaminated Sites (ALSAG), which came into force on 1 July 1989, Austria takes a measure towards the targeted identification of suspected contaminated sites and the remediation of contaminated sites. Apart from defining the general framework, the Act primarily created a basis for funding grants for such projects and implementing them.

Identified contaminated sites are listed in the Register of contaminated sites (Ordinance of the Register of Contaminated Sites)

I.8 Dissemination of scientific and technical information dealing with various health and environmental aspects of hazardous wastes

If the waste holder is not authorized or able to treat the waste appropriately, he shall hand over the waste to a party authorised to collect or treat the waste.

I.9 Preventing illegal international traffic in hazardous wastes

The EC-Waste Shipment Regulation implemented the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal and covers provisions for control of transboundary waste shipments.

The competent authorities perform controls and check on the borders and in the facilities also together with the competent authorities of other Member States.

In 1992, under the patronage of the EU Commission, the informal “European Network for the Implementation and Enforcement of Environmental Law” (IMPEL) was created. At the same time, as part of this network, the IMPEL/TFS working group (Transfrontier Shipment of Waste) started working on cross-border waste shipments. With the enactment of the EC Waste Shipment Regulation, international cooperation between the competent authorities began to assume particular importance, especially with respect to the supervision and control of cross-border shipment of waste.

The most important objectives and tasks of the IMPEL/TFS working group may be summarised as follows:

- Developing or improving communications and cooperation of the authorities responsible for cross-border shipment of waste (TFS enforcement authorities, police, and customs) both within individual Member States and between them - Analysis of the national rules and regulations concerning waste disposal and the various implementations or applications in the Member States of the EC Waste Shipment Regulation.
- Creating manuals, guidelines and rules for enforcement practices,
- Uniform enforcement of the EC Waste Shipment Regulation within the EU Member States
- Europe-wide common waste inspections on roadways, railways, and waterways

II. ENVIRONMENTALLY SOUND MANAGEMENT OF SOLID (NON-HAZARDOUS) WASTES AND SEWAGE, IN THE CONTEXT OF INTEGRATED PLANNING AND MANAGEMENT OF LAND RESOURCES

II.1 Policies aimed at waste prevention and minimization, reuse and recycling

II.2 Development of environmentally sound disposal facilities, including technology to convert waste into energy, such as, for example, through utilization of landfill methane

II.3 Financial mechanisms for waste management service development in deprived areas

One of the main goals of the Austrian Waste Management Act and a number of additional measures and regulations is that the management of waste shall be organised in such a way the resources (raw materials, water, energy, landscape, surfaces, landfill volumes) shall be conserved.

Ordinance on separate Collection of Biowaste

The respective Ordinance sets forth to ruling which biodegradable waste products shall be collected separately provided they cannot be recovered at home or at the establishments (composted) with the purpose to recycle this waste.

Compost Ordinance

The Ordinance on the quality requirements from composts made from waste sets a nationwide standard of uniform requirements for compost from waste as products and therefore represents a derogatory End of Waste Ordinance. This Ordinance defines the conditions governing the conditions under which compost is turned into a product. Compost from waste can only be marketed if it complies with the stipulations set forth by the Ordinance.

Landfill Ordinance

The Landfill Ordinance defines the state of the art for landfills and includes a ban on landfilling organic waste (TOC ban)

At the local level there are also some regulations regarding waste management such as the provincial sewage sludge regulations, the Plastics Labelling Regulation and the PCP Regulation, for example, facilitates waste separation and collection for recycling purposes. Emissions from thermal waste-treatment plants are subject to the Clean Air Regulation for Boiler Plants.

III. RADIOACTIVE WASTES AND THEIR ENVIRONMENTALLY SOUND MANAGEMENT (SAFE STORAGE, TRANSPORTATION AND DISPOSAL OF RADIOACTIVE WASTE)

Radioactive waste in Austria is mainly generated through medical, research and industrial activities, since Austria abstains from energy production through nuclear power plants. Austria operates one central radioactive waste management and interim storage facility – Nuclear Engineering *Seibersdorf* GmbH for pre-disposal management including treatment, conditioning and interim storage of all arising low- and intermediate level radioactive waste. There is no final repository for disposal of radioactive waste currently in operation. Austria favours and supports an international co-operation towards common, shared repositories for

radioactive waste as the most reasonable solution for countries without or with small nuclear programmes.

The treatment of radioactive waste is regulated through the “Radiation Protection Act”. Provisions made for the disposal of radioactive waste are subject to regular examinations and inspections. In its radiation protection policy, Austria also firmly committed to reducing the amount of generated radioactive waste.

Austria supports the efforts made by the European Union and IAEA to harmonize standards governing the handling of radioactive wastes. By 2009 Austria has implemented the Council Directive 2006/117/EURATOM on the supervision and control of shipments of radioactive waste and spent fuel into his national legislation.

Concerning the spent fuel elements of the single Austrian research reactor, the supplier state has assumed a contractual obligation to take them back in compliance with all the relevant safety regulations.

THE TEN YEAR FRAMEWORK OF PROGRAMMES ON SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

I. GENERIC ISSUES RELATING TO THE INCLUSION OF SCP IN NATIONAL POLICIES:

I.1 Inclusion of SCP in development planning

Sustainable Consumption and Production (SCP) has a long tradition in Austria. Many different actions were set to strengthen eco-efficiency or eco-design from the production point of view and eco-labelling from the consumer point of view.

Strategy for Sustainable Development (SSD)

In 2002 the Austrian Government adopted the National Strategy for Sustainable Development (SSD). In 2009 a new Austrian sustainable development strategy, with particular focus on regional as well as national levels, is currently under development. Here the promotion of sustainable consumption and production patterns is defined as main objective besides limiting climate change, renewable energy, sustainable traffic, conservation of natural resources, health, social integration and meeting global challenges. The working programme for 2009 - 2010 defines initiatives under the heading “eco-efficiency and resource management by sustainable mobility, consumption- and production-patterns.”

Currently Austria is preparing an Action plan for Resource-Efficiency within the Austrian Economy. As part of the Strategy for Sustainable Development the action plan for resource-efficiency will be implemented and monitored through the SSD-process

Lessons learned

Sustainable development cannot be prescribed - it must be experienced by people themselves as something that stands for modernity, responsibility and a positive individual action.

Recent trends and emerging issues

Initiatives targeted towards sustainable consumption and production, however, mostly are information and motivation campaigns, pilot projects, voluntary agreements and funding of research and development as well as funding of efficient buildings and goods. There is also intensive work in green public purchasing.

Major constraints and challenges

Responsible consumption behaviour requires not only a sensitisation, but also reliable and complete information. With the labelling of products and other suitable information mechanisms, the consumption of resources and energy (both in the production of goods and in their use) should become the central criterion for purchase decisions. The credibility of marks of excellence is to be guaranteed by clearly defined quality marks. Better information about the environmental impacts in pre-production should allow an integrative assessment of the “ecological rucksacks” of consumer goods.

II. GREEN PUBLIC PROCUREMENT POLICIES, LAWS AND REGULATIONS

Public authorities are major consumers in Europe, spending some 16 % of the EU’s Gross Domestic Product. In Austria, public institutions spent about € 44 billions for their purchases

in 2006. By using their purchasing power to opt for goods and services that also respect the environment - and by and by social aspects as well - they can make an important contribution towards sustainable development.

Green/sustainable purchasing is also about setting an example and influencing the market-place. By promoting green/sustainable procurement, public authorities can provide industry with real incentives for developing green technologies. In some product, works and service sectors the impact can be particularly significant, as public purchasers command a large share of the market (in computers, energy efficient buildings, public transport, and so on.).

Austria can refer to long-term experiences in environmentally-friendly public procurement. Austria's efforts are confirmed in a recent study (2009) on behalf of the European Commission and conducted by Price Water House Coopers. In this study the level of GPP was monitored for 10 product groups in the so called "Green 7". Austria together with UK, GER, DK, S, NL, SF belong to these seven best performing Member States in the European Union.

(More information is available on http://ec.europa.eu/environment/gpp/study_en.htm)

Although Austria has gained a high level of GPP, further actions are planned to tap the full potential for GPP.

Therefore, in Austria public institutions (ministries, provinces and municipalities) and representatives of business are currently working together to develop a national action plan for sustainable public procurement under the guidance of the Federal Ministry of Environment until 1/2010. Based on the criteria sets of the EU-toolkit (10 product groups in a first step) and the experiences of the pilot phase on GPP from federal level a basic standard of GPP should be implemented in public organisations by 2013. A first monitoring of implementation should take place end of 2010. Supporting measures will be taken for procurers such as an internet portal (www.nachhaltigebeschaffung.at, the constitution of a network for procurers, a help desk for practical help, awareness raising campaigns, etc.) Further criteria sets are under preparation.

Political support is an important precondition for a successful implementation of GPP. Therefore it is essential that the Austrian federal government is endeavoured to organise public procurement in a sustainable way (source: current government programme).

The current Federal Public Procurement Act establishes the legal bases for sustainable procurement in Austria. It applies to federal and regional/local levels. Guidelines for GPP on federal level (1998, revised 2004) and various local websites with criteria for GPP (Vorarlberg, Vienna, Lower Austria, etc) are helpful tools for procurers.

Recent trends show that public authorities can use their market power not only to opt for environmentally-friendly goods and services but also to make social considerations (promotion of decent work, social inclusion, accessibility for all, fair and ethic trade) in public procurements. In that sense public authorities can make an important contribution towards sustainable development. But currently the lack of legal clarity, the lack of awareness, the question how to provide objective evidence on requested and appropriate social criteria in complex procurement procedures are major constraints and challenges for the future.

a) The Initiative "ÖkoKauf Wien" ("EcoBuy Vienna")

The project aims to advance the application of ecological criteria in procurement, i.e. the purchase of goods, products and services, in all fields of the City Administration. Every year the City of Vienna invests approx. five billion Euro in a wide variety of goods, products and services, ranging from textiles and detergents to office supplies and furniture, from building

materials and construction services to comprehensive cleaning service packages. As a bulk purchaser, the City of Vienna is also in a position to influence the quality and properties of the products. The City Administration aims to use its influential role in the market to promote the further development and wider availability of eco-friendly products.

Lists of environmental criteria are drawn up for the various goods, products and services needed by the Vienna City Administration and its affiliated organisations. These criteria provide practical decision-making support for all City of Vienna staff involved in public contracting – a convenient tool that helps them assess the environmental compatibility of their decisions without causing substantial extra work.

By decree of the Chief Executive Director of the Vienna City Administration, the results of the “ÖkoKauf Wien” project have been adopted as a mandatory basis for public procurement and contracting in Vienna. The environmental criteria defined by the Working Groups must be taken into account – in addition to financial prudence, quality requirements, employee safety and practical usability.

At the same time, the project is to raise staff awareness of eco-friendly alternatives that could be adopted in the individual employee’s own work routine. The “ÖkoKauf Wien” project further includes substantial PR work to publicise the methods and objectives of ÖkoKauf Wien within the City of Vienna, among the business community and the local population. The public at large is informed via media conferences, press releases and news articles. Films, brochures, info folders and posters are available on specific topics, and even working materials and games for kindergartens and schools have been produced. A key aim of the project consists in informing as many people as possible on the importance of “buying green”, both as a private customer and as a bulk purchaser for the City of Vienna, and on clear-cut criteria that every single person can apply to be more eco-friendly in daily life.

The accomplishments of ÖkoKauf Wien have come to receive international recognition: for example, the EU has commissioned a video on “ÖkoKauf Wien” as a best practice model for all EU members in the field of eco-friendly procurement.

III. INSTRUMENTS FOR SUSTAINABLE CONSUMPTION

III.1. Awareness-rising programs/campaigns on SCP, including water conservation, energy efficiency, waste minimization and recycling

With the resolution on the “Austrian strategy for sustainable development“ in 2002, the Austrian Government has made a decision for the path of sustainable development. By the development of a PR-concept “Sustainable Austria” (Initiator: Austrian Federal Ministry of Agriculture, Forestry and Environment, and Water Management, which also coordinates the implementation of the Austrian strategy of Sustainability) the topic “sustainable consumption“ is meant to be forced in the publicity.

a) The Initiative of the “Sustainable Weeks”

The “Sustainable Weeks” are an initiative by the Austrian Federal Ministry of Agriculture, Forestry, Environment, and Water Management, in cooperation with the Austrian Federal Ministry of Economics and Labour, the Austrian Federal Ministry of Foreign Affairs, the Austrian Federal Economic Chamber, individual Federal Provinces, and Austrian retailers. They take place all over Austria every year from September 15 to October 15. Under the motto “Sustainable Weeks,” the food trade, health, hygiene and beauty retailers, construction materials retailers (do-it-yourself markets) and electrical retailers for the first time agreed to

jointly pinpoint particularly healthy, environmentally friendly, as well as regionally-produced and fair-traded products in their self-advertisement.

The aim is to inform consumers and to raise awareness: Consumers who buy products declared free-traded assume global responsibility; consumers who buy food from organic farming protect ourselves and our environment; consumers who put regional domestic quality into their shopping baskets help reduce the traffic and transport load, and secure jobs as well as sound economic development in the rural regions. For further information see under www.nachhaltigewochen.at

Lessons learned

It is ultimately the consumer who makes the decision, which is why it is important to raise awareness of sustainability and to support products that set positive trends. People who purchase fair trade goods take on global responsibility and help to reduce poverty, while consumers buying products from organic farms benefit their health and protect our environment and global climate. At the same time, those opting for regional products help to reduce the accumulation of traffic, to secure jobs and to boost economic power in rural regions.

Recent trends and emerging issues

The increase in sales of organic and fair trade products in Austria shows that there has been a shift in values of private consumption patterns.

Major constraints and challenges

The aim is to further improve the range of sustainable products and services in cooperation with the economic sector.

III.2 Policies and/or infrastructure to support citizens' choices for responsible consumption of products and services, including consumer information tools

As an example for regional policies, instruments and projects referring to the given subject, a particular project within the context of cow keeping in the Federal State of Tyrol can be mentioned: the so called „*Jahrling - grown and refined in Tyrol*“ (Agrarmarketing Tyrol).

Changes of the agro-political framework, falling milk prices and increasing work load on farms lead to an increasing boom of alternative cultivation forms such as mother cow keeping, which can in particular be observed in Tyrolean highlands. As an alternative to conventional milk production, the project “Jahrling” (one-year-olds) offers the possibility to producers to yield a comparable income derived from high quality beef. Cooperation partners coming from the sectors consulting, product organization, marketing, and trade offer agricultural companies a system with guaranteed sales volume and base price, continuous quality control and professional advertising.

The aim of this project is to establish an alternative production mode for agricultural companies, resulting in guaranteed sales and planning reliability for the producer. In addition the producer benefits from a warranted regional overhead charge orientated on average Austrian product prices. Furthermore, a product offer is created for consumers favouring regional high quality beef.

**PART II: UPDATED INFORMATION ON NATIONAL FOCAL POINT FOR
SUSTAINABLE DEVELOPMENT**

Name(s) of National Focal Point for sustainable development:

- 1) Elfriede Anna More**
- 2)**

Title(s): Director

Ministry/Office(s): Federal Ministry of Agriculture, Forestry, Environment and Water Management

Key functions in relation to national reporting:

Coordination of input into national reporting across the government and in consultation with stakeholders

Coordination of the Austrian policy in relation to the Commission in Sustainable Development

Chair of the Austrian coordination body on international sustainable development issues (“Austrian Council on Sustainable Development”)

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PART III: ANNEXED DRAFT PROFILE ON NATIONAL SUSTAINABLE DEVELOPMENT STRATEGIES; INDICATORS FOR SUSTAINABLE DEVELOPMENT

Introduction

We have compiled the information regarding your country's national sustainable development strategy (NSDS), or its equivalent, and indicators related to sustainable development on the basis of past completed surveys and additional official information received over the last few years. We request you to kindly update the information contained or fill in the blanks of the attached DRAFT NSDS/INDICATORS PROFILE, taking into account the explanatory notes given below. The updated information will replace the NSDS/indicators information currently available on the national information website (please access your country page from the drop-down menu at: <http://www.un.org/esa/sustdev/natinfo/natinfo.htm>).

* * *

< EXPLANATORY NOTE FOR THE ANNEX >

Information on National Sustainable Development Strategy (NSDS) or equivalent

WSSD JPOI in paragraph 162(b) specifies that national strategies for sustainable development could, where applicable, be formulated as poverty reduction strategies that integrate economic, social and environmental aspects of sustainable development, and that these should be pursued in accordance with each country's national priorities. A country's national strategy will therefore be considered an "NSDS or equivalent" if it integrates economic, social and environmental aspects of sustainable development.

Strategy Title:

The Austrian Strategy for Sustainable Development – An Initiative of the Federal Government

Strategy website:

<http://www.nachhaltigkeit.at>

Coordinating Body:

Committee for a Sustainable Austria

Coordinating Body website:

n/a

Strategy Status: The category here corresponds to the status of NSDS implementation reflected in the NSDS Global Map available at:

<http://www.un.org/esa/sustdev/natinfo/nsds/nsdsMap.htm>.

Please indicate whether your country's NSDS is: i) being implemented;

Date of Adoption: 30 April 2002 (a new version of the Sustainable Development Strategy is currently under development)

Strategy contact:

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Additional Information:

The national Strategy for Sustainable Development was adopted by the Austrian Government on April 30, 2002. The Minister for Agriculture, Forestry, Environment and Water Management, who was mandated to coordinate the implementation policies at federal level, commissioned a “Committee for a Sustainable Austria”. This Committee, which consists of high-level representatives of all Ministries, experts from the “Social Partners” and several members from the provincial governments (“Länder”) is preparing annual work programs, which are to be submitted to the Council of Ministers. As regards the interfaces between the federal and the provincial level, a standing committee of “provincial sustainability coordinators” meets with representatives from the provincial level at regular intervals, and reports to the Conference of the Environmental Ministers of the “Länder”. To advise the Austrian Government and to review the activities set by the Committee, an expert panel was established - the “Forum for sustainable Austria”. This forum consists of 30 members from the scientific community and key representatives from NGOs representing the environmental, social, and developmental focus.

Meantime the [2nd Progress Report](#) on the implementation of the Austrian Strategy for Sustainable Development was submitted to the Council of Ministers. This report is based on the Work Programme 2004 and shows the measures and initiatives set during the past two years. It also provides information on relevant trends and on the development with respect to the key objectives as stated in the Strategy by means of a separate [Indicator Report](#).

More information you can find: <http://www.nachhaltigkeit.at/strategie>

Information on indicators for sustainable development

Name of indicator set: *Please provide the official name of the indicator set your country is using to monitor overall progress towards sustainable development or to monitor your country’s national sustainable development strategy.*

Indicators of Sustainable Development

Indicators website: *Please provide us with a website address where you post information related to your indicators of sustainable development.*

<http://www.umweltnet.at/article/articleview/40671/1/7384/>
http://www.umweltnet.at/article/articleview/43294/1/7384

Date of last update: 2006

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Additional Information: *Please provide any additional information you wish to share regarding your country's indicators of sustainable development. Please indicate whether you wish to also make this information publicly available on our website.*
