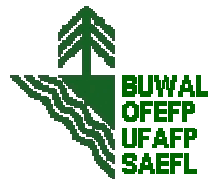


Sustainable Development

Action Plan Environment and Health

This Action Plan was formulated by



Swiss Agency for the Environment
Forests and Landscape

Contents	
A Introduction	3
B Environmental Health Action Plan for Europe	4
1. WHO Framework Proposals	4
2. Situation in Switzerland	5
C Evolution of the Action Plan and its Position Relative to Other Activities in Switzerland	7
D Point of Departure, Targets and Interventions	8
Overview	8
Nature and Wellbeing	9
<i>Ideal Situation</i>	10
<i>Point of Departure</i>	10
<i>Global Target</i>	11
<i>Partial Targets</i>	11
<i>Areas of Intervention</i>	11
Mobility and Wellbeing	12
<i>Ideal Situation</i>	12
<i>Point of Departure</i>	12
<i>Global Target</i>	13
<i>Partial Targets</i>	13
<i>Areas of Intervention</i>	13
Living and Wellbeing	14
<i>Ideal Situation</i>	14
<i>Point of Departure</i>	14
<i>Global Target</i>	14
<i>Partial Targets</i>	14
<i>Areas of Intervention</i>	15
E Evaluation	16
Annex	17
Introduction	17
Nature and Wellbeing	17
Mobility and Wellbeing	20
Living and Wellbeing	23
Acronyms	26

A Introduction

Agenda 21 is the global programme for sustainable development¹ approved in Rio de Janeiro in 1992 by the United Nations Conference on the Environment and Development (UNCED). Its participants undertook to elaborate national action plans for the implementation of sustainable development. On 28 February 1996, the Federal Council acknowledged the report, "Sustainable Development in Switzerland", submitted by IDA Rio, the interdepartmental committee charged with follow-up on Rio. It presents an overview of the current situation concerning the implementation of sustainable development within the framework of sectoral policies and coordination mechanisms in Switzerland. At the same time, the Federal Council instructed IDA Rio to establish an **Action Plan for Sustainable Development in Switzerland**. On 9 April 1997, the Federal Council approved this Action Plan, a strategy paper containing eleven interventions for the promotion of sustainable development in Switzerland. Together with a report on the state of implementation of sustainable development in Switzerland, the Action Plan was submitted to the United Nations General Assembly Special Session on the further implementation of Agenda 21 (UNGASS) from 23 to 27 June 1997.

The "**Environmental Health Action Plan**" is a sectoral plan issuing from Chapter 6 of Agenda 21, "Protecting and Promoting Human Health". This chapter notes that human health² depends on a healthy environment, clean air, a safe water supply, adequate waste disposal, safe food and proper nutrition. It further states that both human and environmental health must be promoted equally. It identifies specific problem areas and targets, calling for programmes in every country to identify and reduce environmental health hazards.

At Rio in 1992, the World Health Organization (WHO) was named "leading agency" for the implementation of Chapter 6 of Agenda 21. By 1997, all member states of the WHO Regional Committee for Europe were required to establish their own national action plans based upon the "Environmental Health Action Plan for Europe" approved by the Ministerial Conference on Environment and Health (Helsinki, 20 to 22 June 1994). This European Action Plan presents current problems concerning environmental health in Europe, as well as interventions which must be put into effect both nationally and internationally if environmental health hazards are to be reduced. This plan is based upon the WHO strategy, "Health For All By the Year 2000", as well as the European Charter on Environment and Health. The Swiss "Environmental Health Action Plan" is intended to complement the Federal strategy paper on sustainable development.

In 1999, the Third Ministerial Conference on Environment and Health will take place in London where individual countries will report on the results from interventions issuing from their national action plans on environmental health.

To implement individual interventions issuing from this Action Plan, cooperation is required at all levels, e.g., national, cantonal and communal, as well as by the NGOs.

¹ Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (Our Common Future, World Commission on Environment and Development, "Brundtland Report", 1987)

² Health is a state of perfect physical, emotional and social wellbeing and not just the absence of disease and frailty. (WHO 1946)

B Environmental Health Action Plan for Europe

1. WHO Framework Proposals

Chapter 1 of the Environmental Health Action Plan for Europe, approved in Helsinki in 1994, establishes a framework for health-related environmental interventions in Europe, classifying them in three groups:

Group 1 actions concern the basic requirements for environmental health. They aim at preventing or mitigating conditions whose environmental causes are well established and can give rise to widespread and often acute health effects. The main objectives of actions in this group are to prevent the clearly attributable health effects of environmental factors, to prevent accidents, and to limit disaster damage.

Effective measures for attaining these objectives include:

- provision of easy access to an assured supply of safe water for every home;
- control of microbial contamination of food and water supplies;
- regular collection and safe disposal of community waste;
- control of air pollution in highly polluted, critical areas;
- prevention of accidents in the home, at work and on the road;
- land-use planning and control;
- development of plans for the prevention of and response to natural disasters and major industrial and nuclear accidents.

Group 2 actions concern the prevention and control of medium and long-term environmental health hazards. Causal relationships may be more difficult to establish at existing environmental concentrations, but the potential for adverse effects on health is recognized.

The following actions have been mentioned in Group 2:

- monitoring ambient and indoor air pollution;
- improvements in municipal and industrial wastewater treatment;
- water management to achieve better drinking-water quality;
- improvements in occupational health and safety;
- improvement of degraded urban environments;
- measures to ensure safe use of agricultural chemicals;
- control of chemical and radiation hazards with potential long-term effects;
- building partnerships between the environmental health and economic sectors, and improving public participation, to achieve changes in production processes and consumption patterns.

Group 3 actions concern the promotion of human wellbeing. A perception of the environment as unpleasant imposes stress on the affected population. However, different groups of people may perceive different factors as unpleasant.

Tasks would include the control of or protection from environmental nuisances such as:

- noise;
- odours;
- deterioration of landscapes and of nearby recreational areas and green spaces in residential areas.

The Plan is not prescriptive about the order in which strategies should be implemented. Since they cannot be implemented simultaneously, it is essential for each country to determine its own priorities.

2. Situation in Switzerland³

Switzerland started long before 1994 to take action to improve the environment. As regards the three groups of interventions proposed by WHO Europe, they are the following:

Group 1

Switzerland has become active with regard to all interventions in this group:

- every individual has a sufficient supply of good quality drinking-water, although nitrate levels are elevated in a few locations (FOF);
- the supply of safe food is assured;
- every community has a functioning waste disposal system, although the potential for waste reduction has not yet been fully exploited (EPL, TOTW);
- occupational safety is very high, but further improvements are being implemented;
- the impact thresholds of the Swiss Ordinance on Air Pollution Control and Clean Air Policy are clearly defined targets, with time-scales which, however, have not been kept (EPL, OAPC);
- road accidents have decreased although improvements are still possible;
- Switzerland has a modern Law on Land-use Planning (LLP);
- necessary legal action has been taken with regard to natural disasters and industrial and nuclear accidents (EPL, OMA, LRP, ORP).

Group 2

In Switzerland, numerous efforts have also been made with regard to the interventions in Group 2:

- ambient air is being monitored by over 100 stationary and mobile monitoring units. The findings of National Research Programme (NRP) 26A, "Man, Health, Environment", have clearly shown that the concentrations of nitrogen dioxide and respirable airborne particulates measured in Swiss cities and agglomerations cause an increase in respiratory disorders and diseases, a higher susceptibility to infections and allergic reactions, impaired lung function, and even premature death. High ozone levels can cause irritations of the mucous membranes of the eye and nose. They also have a negative impact on vegetation, leading to reduced crop yields. While the Swiss clean air policy has been successful, further efforts are being made to reduce such immissions (EPL, OAPC);
- in the home, the use of various chemicals in building materials and interior furnishings as well as for cleaning and do-it-yourself can cause human exposure to numerous pollutants. This problem has been exacerbated over the past years because less air is being exchanged for reasons of energy conservation and noise pollution. Apart from potentially toxic and allergenic substances, indoor air also contains micro-organisms and toxins of biological origin. Radon, a naturally present inert gas, is also of significance since it may cause lung cancer. The new Law on Chemical Substances will enable the Swiss government to monitor indoor air (EPL, OS, ORP);
- the homes of 94% of the population are connected to a water purification plant (LPW, GOWP);
- occupational health and safety are being given the required consideration;
- large, degraded housing estates are to be improved for better quality of housing and life;
- since 1993, both integrated pest management (IPM) and organic production (OP) have been encouraged by means of direct ecological subsidies, thus significantly reducing the use of agricultural chemicals;
- Switzerland has functioning monitoring systems for chemical and radiation hazards (EPL, OMA, LRP, ORP);
- partnerships between environment and health and economic sectors, as well as public participation still need to be improved.

³ For further details, cf "The Environment in Switzerland 1997. Facts, Figures, Perspectives", edited by the Swiss Federal Statistical Office (SFSO) and the Swiss Agency for the Environment, Forests and Landscape (SAEFL), EDMZ, 1997.

Group 3

With regard to the interventions proposed at Helsinki to improve wellbeing, increased efforts need to be made in Switzerland:

- for example, just under 30% of the population are exposed to levels of traffic noise that must be considered critical. In over one quarter of the population, day-time traffic causes noise emissions beyond the limit for residential areas of 60 dB[A] as stipulated by the Noise Abatement Ordinance (EPL, NAO);
- with the exception of locally very restricted areas, the problem of odours has been solved in Switzerland;
- the protection and conservation of green areas and urban recreational areas requires close attention; neither should efforts of landscape conservation be reduced (LPNL).

The 1993 report, "Health in Switzerland" (*Gesundheit in der Schweiz*), by the SFOPH shows that while the population of Switzerland has a high life expectancy, there is nevertheless a high incidence of chronic diseases such as cardiovascular diseases, rheumatism or bronchitis. Moreover, the wellbeing of a large number of people is impaired by other factors. Apart from noise, the restricted availability of space, especially for children and adolescents, is one of them.

C Evolution of the Action Plan and its Position Relative to Other Activities in Switzerland

A working group was established by the Directors of the Swiss Federal Office of Public Health (SFOPH) and of the Swiss Agency for the Environment, Forests and Landscape (SAEFL) to formulate the Swiss "Environmental Health Action Plan". This working group also consisted of representatives from other Federal Offices (of Police Matters, Land-use Planning, Agriculture, Housing, Energy Supply), as well as from the cantons, local communities, and various interest groups from the private, science and environmental health sectors, who made the following initial statements:

1. Health and wellbeing depend on such factors as behaviour (life style) and living conditions (socioeconomical, psychological and social factors) as well as the environment; likewise, human behaviour and conditions affect the environment and its interaction with humans.
2. Among other things, lack of exercise, a poorly balanced diet and excessive consumption adversely affect the health of our population.
3. Pleasant surroundings, satisfactory housing and living conditions, and an intact environment promote wellbeing.
4. Interventions to minimize direct adverse effects aim to prevent health impairment; interventions to promote an environment hospitable to life contribute to wellbeing and help to preserve the natural bases of life for future generations. Both are essential to sustainable development.

The formulation of the present Action Plan was based upon these insights.

While the "Environmental Health Action Plan" is intended to be effective in itself, it is also embedded in the context of other policies and actions. It is concerned with the subject of Environmental Health, complementing the Action Plan for Sustainable Development. However, at the same time it is part of a series of programmes which have already been initiated or are in preparation, and whose specific foci are also intended to contribute to an improvement of the environment or of health. Among others, such programmes are Energy 2000 (*Energie 2000*), the Swiss Agrarian Reform, the Swiss Landscape Concept, the Swiss Nitrogen Budget (*Stickstoffhaushalt Schweiz*), prevention of drug abuse, the Tobacco Intervention Package (*Massnahmenpaket Tabak*), the Nutrition Intervention Package (*Massnahmenpaket Ernährung*), and promotion of health through exercise and sport.

This Action Plan is not intended to duplicate these corrective and protective environmental health actions; rather it is intended to complement and coordinate them in a meaningful way. However, it must not result in benefiting only certain population groups, nor in the further widening of the gap between segments of society.

Therefore, the motto of this "Environmental Health Action Plan" is:

Promotion of health and wellbeing of the entire population in a healthy environment.

It is impossible for this Action Plan to deal simultaneously with all the issues mentioned above. In order to produce the greatest possible synergies with other ongoing projects, its objectives for the next ten years are therefore restricted to the following three areas:

- I Nature and Wellbeing**
- II Mobility and Wellbeing**
- III Living and Wellbeing**

The following targets and interventions have been chosen in such a way that they will have an impact both on health and on the environment. While not all of them have the same degree of impact on both health **and** the environment, their effects are complementary so that they form a coherent package.

Some of the interventions proposed in this Action Plan for agriculture, transportation and energy are already part of the paper approved by the Federal Council, "Sustainable Development in Switzerland: Strategy". In the present paper, they are being presented under the aspect of health and the environment.

The "Environmental Health Action Plan" is an instrument to promote networking and animation, which is why intersectoral cooperation needs to be intensified:

- Issues of environmental health increasingly need to be integrated into other areas of policy, such as transportation, energy, agriculture, land-use planning, etc.;
- Cooperation at all political levels (Confederation, cantons, communities) needs to be promoted more intensely;
- The private sector, interest groups, and specialist as well as international organizations need to be motivated to cooperate.

Sustainability is a concern which will be relevant for generations. Therefore, education at all levels (elementary and secondary school, vocational training and education as well as continuing education) is of great importance. Knowledge about the interactions between the environment and health must not be locked away in documents but needs to become part of everyday life. It will therefore be necessary to create modern educational tools for health and environmental education, for which the relevant authorities and private associations will need to cooperate closely, also paying adequate attention to the development of personal responsibility.⁴

Neither must research into the interactions between environment and health be neglected, but must also be adequately included in future research programmes.

⁴ The ability to deal with problems, make one's own choices, and display autonomous behaviour in a group.

D Point of Departure, Targets and Interventions

Overview

Table 1 is a simplified representation of the interactions between the three areas and the interventions proposed in the paragraphs following below.

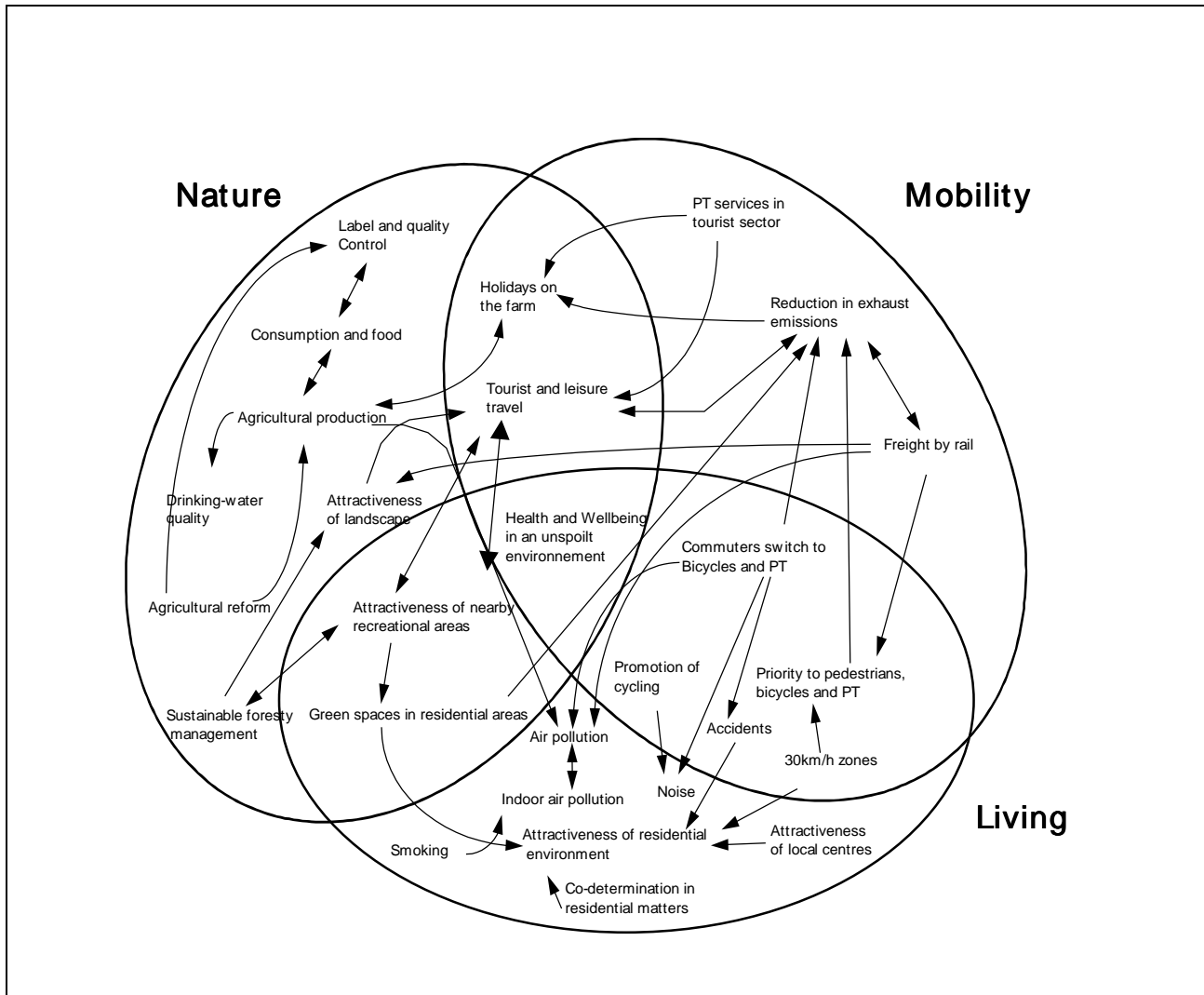


Table 1: *Interactions between interventions in nature, mobility and living*

Nature and Wellbeing

Ideal Situation

Nature and landscape are conserved and used in such a way that there is a harmonious balance between human wellbeing and the conservation of natural resources.

Point of Departure

"Human health is dependent on a healthy environment, including the provision of a safe water supply and sanitation and the promotion of a safe food supply and proper nutrition" (Agenda 21, Chapter 6). The use of natural resources (food and wood production) has a direct impact on landscape and the environment. On the other hand, an intact environment and attractive landscapes are part of the prerequisites for tourism and leisure activities, and therefore affect mobility.

Forests and forest margins are natural recreation areas meeting many of the population's needs, e.g., of recreation and relaxation (sport, nature observation, gathering berries and mushrooms, etc.).

The population's consumption and eating patterns are key factors in the area of Nature and Wellbeing. Through their choice of eating and shopping patterns, consumers have a direct influence, both on their own health and on agriculture and its environmental impact. They have a decisive influence on the proportion of organically produced food and meat from species-appropriate and livestock-friendly production. The WHO (1990) set medium and long-term targets to ensure stable supplies of nutritionally adequate food in European countries. The Food Reports published by the SFOPH (the third one was published in 1991) clearly show that the Swiss population generally eats too much fat and sugar and too little food fibers, leading to an increased calorie intake and its negative health impacts (mainly cardio-vascular diseases). A reduced consumption of animal fats is beneficial to our health, which is likely to affect intensive livestock production. Owing to changing requirements regarding meat quality and changing consumption patterns, the feeding of livestock needs to be adapted to slower weight gain. Ultimately, this will reduce intensive livestock production, indirectly easing the burden on the environment because smaller quantities of ammonia and nitric oxide will be emitted into the air and less nitrate into the groundwater, and eventually phosphate levels in lakes and rivers will be reduced. Another consequence will be the less intensive use of the soils in these areas.

There are several advantages to the increased consumption of food produced in neighbouring regions (which may also be situated in neighbouring countries): there is no need for long-distance transport, which means reduced energy use and fewer emissions of exhaust gases. Also, it is easier for consumers to know how foodstuffs were produced. This again increases consumer confidence in food safety, which has suffered owing to recent developments (BSE—Bovine spongiforme encephalitis; genetic engineering, etc.).

Global Target

By the year 2007, three quarters of the Swiss population will be in a position to consume healthy, balanced and enjoyable food, thus contributing to sustainable agriculture.

Partial Targets

- By 2002, 80% of the population will know how to eat healthily and in harmony with the seasons. They will know that their consumption patterns influence agricultural production and the landscape.
- By 2007, nearly 100% of agricultural soils will be used according to the principles of integrated pest management (IPM) or organic production (OP). The proportion of organic production will be greater than 30%.
- By 2007, 70% of the available meat will be from species-appropriate and livestock-friendly production.
- By 2007, the nitrate content of 99% of all the drinking water in Switzerland will be below 40 mg/l.
- By 2007, 90% of all agricultural and related businesses will have standardized quality control systems; positive declaration with reproducible production pathways will be the rule.

Areas of Intervention

(for more detailed descriptions, see Annex, pages 16 - 18)

1. Information and education/training of all parts of the population concerning environmentally adequate and healthy food (e.g., campaigns, schools at all levels).
2. Intensification of contacts between consumers and producers/farmers (e.g., direct marketing, farm holidays, students' field trips to farms).
3. Implementation of agricultural reform.
4. Establishment of labeling and quality control systems for agricultural products and the production of such, in order to enhance truth-in-packaging for consumers.

Mobility and Wellbeing

Ideal Situation

Mobility is applied in such a way that it enhances our wellbeing while our environment is conserved.

Point of Departure

Mobility influences both human health and the environment. However, depending on its quality, adverse impacts can vary greatly.

Motorized traffic negatively affects human health by polluting the air, emitting noise, causing accidents and sectorally restricting freedom of movement.

Among the adverse impacts of air pollution on human health are premature mortality, respiratory diseases and complaints, increased susceptibility to infections and allergic reactions, as well as irritations of the mucous membranes of the eyes, nose and throat. Motorized traffic moreover contributes to almost one third of the Swiss greenhouse gas balance and thus to anthropogenic (man-made) climate warming.

Among the important adverse impacts of noise pollution are sleep disorders, disorders of the central and vegetative nervous systems, as well as psychological consequences manifesting themselves as disrupted communication, disturbed concentration and relaxation. Noise-related increased consumption of medication may lead to drug-dependency.

Road accidents affect the weaker participants more: the percentage of fatalities is almost twice as high among pedestrians as among the total of traffic fatalities, with children and the elderly particularly at risk. Motorized traffic greatly restricts children's freedom of movement, often impeding play near their homes. Such children tend to manifest slower social and motor development.

The adverse impact on the environment (e.g., degradation of natural ecosystems, such as forests, by air pollution) is just as serious.

In contrast with motorized traffic, **non-motorized mobility** (on foot, by bicycle) has a positive impact on health and the environment. It reduces the risk of cardio-vascular diseases, diabetes of old age, certain cancers, as well as that of osteoporosis.

The promotion of short-distance slow traffic, of public transport and non-motorized mobility is intended to replace unnecessary motorized traffic.

While leisure activities and tourism are important contributing factors to mobility, they depend on an intact environment and attractive landscapes. For Switzerland as a tourist country, it is therefore of eminent significance to have environmentally sustainable leisure and tourist traffic. Nearby recreational areas also have to be taken care of. If people's need for relaxation and recreation can be satisfied near their homes, the need for leisure mobility will decrease.

If the adverse impact of mobility can be reduced, the quality of living/housing will also improve in many locations.

Global Target

By 2007, current adverse impacts of motorized mobility will be reduced by means of a significant reduction in emissions adversely affecting human health and the environment, and by an increase in the proportion of non-motorized mobility.

Partial Targets

- By 2002, 80% of the population will know about the interactions of motorized traffic, emissions and adverse impacts on human health.
- Emissions of motorized traffic will be reduced to such an extent that the impact threshold levels of the Ordinance on Air Pollution Control (OAPC) can be respected.
- By 2007, the proportion of journeys by bicycle will have doubled for commuting (1995: 7%), shopping (1995: 5%) and leisure (1995: 7%).

Areas of Intervention

(for more detailed descriptions, see Annex, pages 19.-21)

5. Promotion of greater public awareness of mobility-related issues of safety and health (e.g., schools, campaigns).
6. Reassignment of roads, and improvement of road traffic flow to promote bicycle and pedestrian traffic (e.g., improvement of safety, improvement of road traffic flow, increased involvement in planning of participants in non-motorized mobility).
7. Creation of incentives to transfer commuter, shopping and leisure traffic to public transport and bicycle (e.g., safe parking, safe access to public transport (PT), possibility of transporting bicycles in PT).
8. Protection of the Alpine region by reducing motorized traffic (e.g., Alp Initiative, tourism by PT).
9. Reduction of emissions from motorized traffic (e.g., legal interventions).

Housing and Wellbeing

Ideal Situation

The quality of settlements are improved in such a way that it promotes our wellbeing and leaves room for creative ideas of the individual

Point of Departure

Motorized road traffic predominantly has an adverse impact on the attractiveness and comfort of residential areas and cities. Such impacts are air pollution and noise, as well as physical risks to both children and older people. Streets with heavy traffic are unsuitable for human encounters, be that for leisure or shopping. Recent research results have shown that their immediate surroundings are of great importance to children's cognitive and social development.

The quality of life of an individual depends on their physical and emotional condition as well as their social network. The creation of such a network is notably influenced by the living and housing situation (residential environment, layout of city and neighbourhood). Neighbourhoods which enable human encounters and whose near-natural design is attractive increase the quality of the residential environment and help reduce leisure traffic.

In today's way of life, people spend 90% of their time indoors, be that in their workplace or in their home. Indoors climate therefore has a crucial influence on human health and wellbeing. Apart from such "external factors" as noise and air quality, individual behaviour (e.g., smoking, airing, use of detergents, paints, varnishes, indoor fuels [e.g., gas cookers, room heating with gas, kerosene or woodstoves]), as well as building materials also contribute to the quality of indoor air.

Global Target

By the year 2007, healthy and environmentally adequate housing will be assured in 90% of all residential areas in Switzerland.

Partial Targets

- By 2002, 80% of the Swiss population will be well-informed about indoor air pollution and able to take adequate measures.
- By 2002, a speed limit of 30km/h will have been introduced in 70% of urban and peri-urban residential areas.
- By 2000, no-one will be submitted to involuntary passive smoking in the workplace, in public buildings or means of PT.
- By 2007, all residential areas will have structures to encourage active involvement in neighbourhood life. Planning interventions will have created conditions allowing the adequate and controlled presence of small manufacturers, jobs (especially in the supply sector), leisure and recreational activities, as well as services.

Areas of Intervention

(for a more complete description, see Annex, pages 22-24)

10. Promotion of greater public awareness (e.g., schools, campaigns).
11. Promotion of 30km/h speed limit (e.g., streamlining of legal procedures, information).
12. Prevention of nuisances by passive smoking (e.g., by expanding smoke-free zones).
13. Enhancing attractiveness of the living environment (e.g., meeting spaces).
14. Upgrading of nearby recreational and green areas within urban residential areas (e.g., green areas, garden design).

E Evaluation

This Action Plan will be evaluated by an independent institution in order to enable the political and funding authorities, as well as further decision makers, to assess aspects of cost and benefit as well as obtain a basis for future decisions. Suitable indicators will be used to evaluate and assess target achievement, progress, and the impact of these activities on other areas.

Moreover, a simultaneous "just-in-time" evaluation according to the principles of quality management will also be effected. If required, a non-government team of experts will accompany the major projects. This type of evaluation not only promotes competence but will also directly benefit the participating authorities and projects.

Comparability will be enhanced by a targeted exchange of information and experience, and will directly benefit the participating authorities (in particular the cantons and communities).

Both types of evaluation will be promoted and funded by the Swiss government. Preparations for the evaluation of this Action Plan should be made before its implementation, and its impact will need to be evaluated after ten years. Intermediary evaluations will be carried out in 1998 (initial stage) and in 2003 (half-way stage). Just-in-time evaluation will be effected throughout the course of the project.

Annex

Introduction

If the targets of this Action Plan are to be achieved, a change of attitudes and behaviour is required. For its successful implementation, government will need to become active at all levels (federal, cantonal and communal), and so will private institutions and organizations.

Numerous interventions are already being carried out in the context of other federal action plans and programmes. They are listed below in order to further support them and to show where cooperation already exists. If synergies are to be exploited, linking with existing activities and programmes (cf. Chapter C) is essential. In the following draft for an implementation concept, the fields of intervention listed in Chapter D are not only linked with current or projected action plans and concepts; it also indicates whether and how the priorities of those action plans should be complemented and whether, from the point of view of the "Environmental Health Action Plan", any additional funding will be required. The Swiss Federal Offices will support projects as far as their budgetary competence allows. The Public Health Unit of the SFOPH is in charge of coordination.

At this time, it is too early to designate directorships for the individual fields of intervention. This will be done once the Action Plan has been approved.

Not all interventions refer to all of Switzerland. For example, as regards those concerning residential areas, the Action Plan is focused upon agglomerations and cities, whereas interventions concerning indoor air pollution, nutrition, consumer behaviour, etc. are addressed to the entire population.

Nature and Wellbeing

Field of Intervention No. 1:

Information and education of the entire population concerning sensible and healthy nutrition

Among others, the draft of the SFOPH intervention package to improve nutritional behaviour mentions the strategies "Informing the population" and "Nutritional education". Some of the interventions recommended in this package are in accordance with the objectives of the "Environmental Health Action Plan". From its point of view, special priority is to be given to those actions which underline the importance of healthy, balanced and seasonally appropriate nutrition, and which show the interaction between nutrition and consumption patterns on the one hand and agriculture and the environment on the other. Also, the consumer should be empowered to analyse and question their own consumption patterns.

Apart from adequate information of the entire population, the transfer of knowledge at the relevant academic institutions is to be given due priority.

Since January 1997, the global programme, "Schools and Health", launched by the SFOPH in conjunction with the Swiss Conference of Cantonal Directors of Education (CDE), has supported those cantons who wish to launch projects for the promotion of health in schools. The objectives of the Action Plan are directly supported by projects from the fields of Healthy Nutrition and Development of a Healthy Environment.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Continue or expand current campaigns and actions (<i>Nutrinfo</i> by Swiss Nutrition Association [SNA], cantonal, nutrition-related prevention, prevention of osteoporosis, Food Day (<i>Tag der Ernährung</i>), etc.)	Confederation, cantons, SNA, suppliers, consumer organizations	Confederation, NGOs, cantons, communities	none
Raise teachers' awareness for nutritional and nutrition-related environmental issues, implement these insights in everyday life.	SFOPH CDE, cantons	Confederation, cantons	none

*Field of Intervention No. 2:**Improving contacts between consumers and farmers.*

Information exchange between the urban and rural populations as well as improved mutual knowledge and understanding are important prerequisites to achieving the targets in the field of *Nature and Wellbeing*. Promotion of activities on farms, direct marketing (e.g., at weekly markets or from the farms themselves), etc. can encourage and promote such contacts. Past experience with similar projects has shown that farms require support.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Expand availability of farm holidays School on the farm	e.g., Association Swiss Holiday Farms, Swiss Farmers' Union, Tourist Associations, REKA	cantons, private parties	perhaps within the framework of a comprehensive regional pilot project for the Action Plan
Establish and expand local weekly markets and direct sales from farms	local (farmers' and consumers') organisations		
Establish and expand availability of foodstuffs from "local production - for local consumption"	hotels/catering		

*Field of Intervention No. 3:**Implementation of Agricultural Reform⁵*

The agricultural reform that is now underway will lead to reduced emissions, e.g., reduced nitrate and phosphate levels in rivers and lakes. This will have both direct and indirect positive impacts on human health.

The first stage of this reform (since 1993) has introduced direct subsidies, thus permitting the compensation of ecological efforts in agriculture. On the basis of the Ordinance on Ecological Subsidies (OES), based upon Art. 31b LoA, subsidies are paid, for integrated pest management (IPM) and organic production (OP), etc., and to whoever meets the requirements of the relevant guidelines. In order to achieve the environmental objectives of the agricultural reform, strict monitoring of the requirements for ecological direct payments as well as of the relevant environmental regulations is important.

Following the approval of the new Article 31^{octies} of the Constitution, the Federal Council submitted a bill to Parliament concerning the second stage of the agricultural reform. According to this bill, after a transition period of 5 years general direct subsidies from the Confederation will be subject to a demonstration of best environmental/ecological practices (BEP), encompassing a good balance of nutrients (fertilisers), an adequate proportion of ecological compensation areas, suitable crop rotation, adequate soil protection, as well as selective and targeted use of low-risk pesticides (according to Art. 67 of the new LoA [Draft]). Additional eco-subsidies will only be paid for specially motivated ecological special efforts that go beyond the demonstration of BEP.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Compensate communal and ecological agricultural efforts (contributions to IPM and OP, as well as for ecological compensation areas)	FOA cantons	Confederation	none

⁵ See also "Sustainable Development in Switzerland: Strategy", Intervention no. 10

Field of Intervention No. 4⁶:

Establish a labeling and quality control system for agricultural foodstuffs and their production to improve truth-in-packaging for consumers.

If information is to lead to changes in consumer behavior (cf. Field of Intervention No. 1), consumers must be empowered to know the origin of their food and how it was processed.

Therefore, a simple, unified and clear declaration of foodstuffs with the aim of protecting the consumers should be envisaged. Since 1 January 1998, the Federal Ordinance on Foodstuffs (FOF) allows a more precise regulation of the declaration of countries of production and manufacture in order to exclude the risk of misleading information on the actual origin of a foodstuff or its most important ingredients. Ordinances on the new Law on Agriculture contain legally binding definitions of certain terms and concepts. Only when such terms as "OP" or "Bio" (for organically produced foodstuffs), "Free range", "Mountain" or "Alpine Region", etc. have been legally defined, can consumers rely on these product declarations and adapt their consumption patterns accordingly. Any consumer needs that go beyond the legal requirements may be met by voluntary agreements (labeling) among the participating suppliers (e.g., wholesalers, suppliers' associations, etc.).

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Implementation of the relevant articles of the LoA (Draft), BPL, LoF and LCI	Suppliers, farmers, consumers	Suppliers	none

⁶ See also "Sustainable Development in Switzerland: Strategy", Intervention no. 6

Mobility and Wellbeing

Field of Intervention No. 5:

Promotion of greater public awareness concerning mobility-related safety and health issues.

Cyclists run almost twice the risk of being injured as drivers of motor-vehicles. Almost half of all the cycling accidents are due to disregard of right-of-way and to inattention. Cyclists are especially at risk at road forks and crossings.

The Fund for Road Traffic Safety supports various campaigns. Of particular relevance to the "Environmental Health Action Plan" are information campaigns by CAP and road traffic associations. Under the Law on Contributions to the Prevention of Road Accidents (LCPRA) this fund is to continue supporting promotions for the safety of the weaker road users.

Apart from the generally known accident-related health risks, traffic noise and exhaust fumes also have a negative impact on human health. The available knowledge on these subjects needs to be imparted in such a way that people can integrate it into their everyday lives.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Information campaigns on road-traffic safety Promotion of greater awareness among teaching staff (also of driving schools)	CAP, road traffic associations	Fund for Road Traffic Safety	none

Field of Intervention No. 6:

Reassignment of road traffic areas and improvement of traffic guidance to promote bicycle and pedestrian traffic..

In sum, the key problems to bicycle traffic are: lacking road safety, displacement by motorized traffic, and a lack of bicycle-friendly infrastructures.

In order to encourage walking in nearby areas, safe and attractive networks of pedestrian routes are required.

The report, "Fundamentals of Land-Use in Switzerland" (*Grundzüge der Raumordnung Schweiz*), identifies strategies of desirable spatial development as a basis for Swiss land-use policy, e.g., enhanced harmony among traffic systems: "Efficient points of transfer are required to ensure transfer from one traffic system to another". Public transport as well as motorized and unmotorized individual transport need to be (more) sensibly harmonised and connected.

The thrust of these efforts needs to favour unmotorized traffic, which deserves high priority.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Safe, attractive pedestrian routes Accessibility of neighbourhoods to bicycles Improvement of notorious hot spots (e.g., crossings) Increased involvement of cyclists and pedestrians in all areas of planning. Future federal investment programmes must contain a part towards implementing this type of transformations.	Cantons, communities Confederation	-	Support of pilot projects perhaps in the context of a comprehensive regional pilot project on the Action Plan

Field of Intervention No. 7:

Creating incentives for transfer to PT and bicycle for commuting and shopping.

Using PT and the bicycle rather than motorized individual transport (MIT) for commuting and shopping leads to a reduction in noise and air pollution. Possibilities to combine the two means of transportation must be increasingly promoted. In 1996, IG Velo—with the support of "Energy 2000" and others—launched a two-year campaign to promote bicycle use for commuting. This campaign consists of brochures and campaign days, etc. Similar actions will also promote bicycle use for shopping.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Support of the IG Velo campaign "Bicycles in Everyday Traffic" (<i>Velo im Alltagsverkehr</i>) Safe and adequate bicycle parking facilities near PT stops/stations Possibility to transport bicycles in PT Support of PT and bicycle-friendly parking space management	FOESU, IG Velo PT agencies	FOESU (Energy 2000), SSSM, GS DETEC	Yes perhaps in the context of a comprehensive regional pilot project on the Action Plan

Field of Intervention No. 8:

Protection of the Alpine region by reducing motorized transport

The proportion of leisure and holiday traffic in the total traffic volume is increasing. Interventions can be made to reduce this traffic by transferring to other means of transportation, or by designing and improving urban and peri-urban recreational areas, as well as by minimizing the negative impact of road traffic. In its Action Plan on Swiss tourism, the Report on Swiss Federal Tourist Policy (*Bericht über die Tourismuspolitik des Bundes*), dated May 1996, mentions the necessity of an environmentally sustainable transport policy, while for the Alpine region the report, "Fundamentals of Land-Use in Switzerland" (*Grundzüge der Raumordnung Schweiz*), demands a reduction in traffic-related pollution by transferring freight to rail and private tourist traffic to public transport, as well as the promotion of car-free and reduced-traffic holiday resorts.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Transfer of transalpine freight traffic to rail by implementing the Alp Initiative	FTO	-	-
Promotion of PT to access Swiss holiday resorts	Travel agencies, tourist resorts, road traffic and tourist associations; perhaps SBB, POST	-	perhaps in the context of a comprehensive regional pilot project on the Action Plan

*Field of Intervention No. 9⁷:**Reduction in emissions due to motorized transport*

Our health and environment are adversely affected by traffic and its various emissions, such as noise and pollutants, and the direct risk of accidents.

The Clean Air Policy of the Federal Government, dated 10 September 1986, has a minimal target of reducing emissions of nitric oxides and volatile organic compounds to the level of 1960. In the near future, these emissions will remain significantly higher than the minimal targets. This is worrying, especially because ozone is formed in the summer months from nitric oxides and volatile organic compounds. Other pollutants also to be monitored are respirable airborne particulates and carcinogenic substances. Apart from interventions to reduce air pollution already realized (exhaust emission limits, limits for stationary combustion installations), the Federal Council has decided in principle on a number of interventions which, however, have not yet been implemented. Among these are the CO₂ law with a CO₂ tax, the distance and weight-dependent charge on heavy goods vehicles, and the tightening of exhaust emission standards for motorized vehicles in line with the Euro 3 standards, as well as exhaust emission standards for construction machinery and agricultural vehicles. These interventions are in accordance with the objectives of the "Environmental Health Action Plan" and are therefore to be implemented in a legally binding way as soon as possible.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Distance and weight-dependent charge on heavy goods vehicles	DETEC	-	none
CO ₂ law with CO ₂ tax	DHA	-	none
Tightened exhaust emission standards for motorized vehicles, as well as agricultural and construction vehicles and machinery	DJP	-	none

⁷ See also "Sustainable Development in Switzerland: Strategy", Interventions nos. 2 and 9

Housing and Wellbeing

Field of Intervention No. 10:

Promotion of greater public awareness:

Indoor air can be polluted if building and interior furnishing materials emit certain substances. Moreover, in some areas of Switzerland, the inert gas radon is emitted from the ground into buildings in excessive concentrations. It is important that home-owners, architects and builders, as well as tenants know about problematic materials to act accordingly in their everyday lives, be that by proper airing, choice of adequate materials for interior furnishings, or when undertaking renovations.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Extensive information on composition and problematic building and interior furnishing materials	Suppliers specialists	none	none

Field of Intervention No. 11:

Promotion of 30 km/h zones

The report, "Grundzüge der Raumordnung Schweiz" (*Fundamentals of Land-Use in Switzerland*), calls for the strategy of reducing the risks and adverse impacts of road traffic.

This strategy can be implemented by introducing extensive 30 km/h zones in residential areas, as well as other pilot projects for mixed traffic, with pedestrian right-of-way and speed reductions.

In residential areas, the needs of those who live there as well as of the pedestrians are to be given priority over those of motorized individual traffic. This will increase the safety and general viability of road and street areas.

Jurisdiction to introduce 30 km/h zones lies with the cantons, which can delegate it to communities. It is often a complicated procedure involving extensive remodelling of streets, which causes costs to soar and ultimately often acts as a deterrent to the creation of 30 km/h zones. Their realisation needs to be made as easy as possible.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Jurisdiction to introduce 30 km/h zones in residential areas should be delegated to communities, with extensive co-determination by those involved. Street remodelling is to be kept as simple as possible.	Communities, cantons	-	none
Information of the population about the positive impacts of speed reductions on their quality of life as residents.	Health organisations, RTAs, neighbourhood associations	-	none

*Field of Intervention No. 12:**Reduction of nuisances by passive smoking*

In public buildings and public means of transport, some parts of the population are exposed to involuntary passive smoking. The aim is to expand smoke-free zones to protect non-smokers. Among other interventions are smoke-free public buildings (with clearly defined smoking zones), an increase of non-smoking compartments in public means of transport (e.g., train compositions with non-smoking carriages and a single smoking carriage).

There are legal instruments to reduce passive smoking in the workplace (according to Art. 19 of Ordinance No. 3 to the Labour Law, employees have a right to a smoke-free workplace, as far as this can be arranged). Employees must be supported in their claims to exercising this right.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Concerted information campaign by FOEDL, SFOPH, SAI, trade unions and employer organisations.	SFOPH FOEDL, SAI, trade unions, employers	SFOPH FOEDL, SAI	none
Existing smoke-free zones in public buildings are expanded step by step.	SFOPH Confederation, cantons, communities		none
SBB and private railway companies significantly increase the proportion of non-smoking seats (to approx. 90%).	SFOPH SBB, LTC		none

*Field of Intervention No. 13:**Increase attractiveness of residential environment*

By the year 2007, healthy living is to be guaranteed in 90% of all residential areas of Switzerland. The needs of children and of the older generation as well as of the disabled have priority. Healthy living encompasses the following aspects: protection from excessive emissions (noise, air pollution), safe and functional residential environment, slow traffic and structures allowing active neighbourhood life. Children's play shall become possible even in residential areas without any green spaces. Apart from safety, clean air and quiet, physical activity, play and social contacts are essential to healthy children and youngsters.

Residents who are not allowed to become involved in the design and use of their immediate surroundings have an increased tendency to use their car to get away.

Good quality outdoor spaces help reduce the extent of leisure mobility. The report "Fundamentals of Land-Use in Switzerland" ("*Grundzüge der Raumordnung Schweiz*"), calls for strategies of desirable spatial development as a key element of Swiss land-use policy, e.g., the promotion of mixed housing, the creation of attractive local centres, and the design of outdoor spaces to upgrade neighbourhoods. For these goals to be attained, a coordinated transport and housing policy is essential.

Pilot projects are intended to support the implementation of these strategies.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Promotion of mixed housing, creation of attractive local centres, and design of outdoor spaces to upgrad neighbourhoods (involving residents in the design of their immediate surroundings; prioritizing the needs of children and older people).	Communities planning specialists		Support of pilot projects
Release of community-owned, unused land (e.g., slopes) for planting by residents.	Communities		none
Making communal spaces and facilities accessible to private individuals when not in use (e.g., classrooms, school yards, etc.)	Communities		none
Enhance communication between authorities and population.	Cantons, communities	-	none

Field of Intervention No. 14:

Upgrading of nearby recreational areas and green spaces in residential areas

In the draft to the Swiss Landscape Concept, interventions in the fields of nature, landscape and heritage conservation have been identified to improve the near-natural environment of residential areas. This is guided by agricultural principles such as extensification and unused land linked by ecological passages, which extend the habitat of endangered plants and animals. Interventions which reduce leisure mobility by upgrading or introducing urban and peri-urban recreational areas are especially important. Pilot projects are to support such endeavours.

Interventions	Actors	Funding, existing/ projected	Additional Funding by AP
Pilot projects in residential areas concerning near-natural environments, experiencing nature on the doorstep, extensification, ecological passages.	SAEFL cantons, communities, individuals		Support of pilot projects

Acronyms

AP	Action Plan
BEP	best environmental/ecological practices
BPL	Brand Protection Law
BSE	Bovine spongiforme encephalitis
CAP	Swiss Council for Accident Prevention
CDE	Swiss Conference of Cantonal Directors of Education
DHA	Federal Department of Home Affairs
DJP	Federal Department of Justice and Police
EPL	Environmental Protection Law
FOA	Federal Office of Agriculture
FOEDL	Federal Office of Economic Development and Labour
FOESU	Federal Office of Energy Supply
FOF	Federal Ordinance on Foodstuffs
FTO	Federal Transport Office
GOWP	General Ordinance on Water Protection
GS DETEC	General Secretariat of the Federal Department of Environment, Transport, Energy and Communication
IDA Rio	Interdepartmental Committee charged with follow-up on Rio 1992
IG Velo	Cyclists' Interest Group
IPM	Integrated pest management
LCI	Law on Consumer Information
LCPRA	Law on Contributions to the Prevention of Road Accidents
LLP	Law on Land-use Planning
LoA	Law on Agriculture
LoF	Law on Foodstuffs
LPNL	Law on the Preservation of Nature and the Landscape
LPW	Law on the Protection of Waters
LRP	Law on Radiological Protection
LTC	Licensed Transport Companies
MIT	Motorized individual transport
NAO	Noise Abatement Ordinance
NGO	Non-governmental Organisation
NRP	National Research Programme
OAPC	Ordinance on Air Pollution Control
OMA	Ordinance on Major Accidents
OP	Organic Production
ORP	Ordinance on Radiological Protection
OS	Ordinance on Substances
POST	Swiss Postal Services
PT	Public transport
REKA	Swiss Travel Saving Fund
SAEFL	Swiss Agency for the Environment, Forests and Landscape
SAI	Swiss Accident Insurance
SBB	Swiss Federal Railways
SFOPH	Swiss Federal Office of Public Health
SFSO	Swiss Federal Statistical Office
SNA	Swiss Nutrition Association
SSSM	Swiss Sports School Magglingen
TOTW	Technical Ordinance on the Treatment of Waste
UNCED	United Nations Conference on Environment and Development
UNGASS	UN General Assembly Special Session on the further implementation of Agenda 21
WHO	World Health Organization