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**Sustainable development in Switzerland:  
Methodological foundations**

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### **The methodological approach adopted by Switzerland for the implementation of sustainable development**

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Switzerland has expressed its commitment to sustainable development at the highest political level: in 1999, a new article on sustainability was included in the Federal Constitution. This states that Switzerland seeks «a balanced relationship over time between nature and its ability to renew itself, on the one hand, and the demands placed on it by the human race, on the other». The federal and cantonal authorities are called on to lend active support to this type of development. The federal government subsequently made various efforts to flesh out the concept of sustainable development, including in particular:

- the Federal Council's «Sustainable Development Strategy 2002», issued in that year;
- the indicator-based «Monitoring sustainable development» project, which has been run by the Swiss Federal Statistical Office (SFSO), the Swiss Agency for the Environment, Forests and Landscape (SAEFL) and the Federal Office for Spatial Development (ARE) since 2003; and
- the project «Sustainability assessment: Conceptual framework and basic methodology», developed by the Federal Office for Spatial Development (ARE) in 2004.

The present contribution summarizes the fundamental methodological approach that underlies these strategies and concepts. This approach, which is based on the World Bank's so-called capital stock model, was adapted to the Swiss situation in an expert's report commissioned by the Interdepartmental Rio Committee (IDARio).<sup>1</sup> It is thus possible for structures and political measures to be described and evaluated in terms of sustainable development.

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### **Two pillars: equity and equal status of the three dimensions**

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The basis for all of Switzerland's activities in this area is provided by the concept of sustainability laid down by the Brundtland Commission and in the 1992 United Nations «Rio Declaration on Environment and Development».<sup>2</sup> The concept defined in the Rio Declaration rests on two pillars: firstly, equity both between and within generations and, secondly, the equal status of social, economic and environmental goals. This means that it must be possible for the needs of all people to be met both now and in the future. At the same time, the Earth is to be conserved in such a way that life in conditions of dignity and security is possible for all people over the long term. This second pillar is also known as the «three-dimensional» model, as it classifies existing resources into social, economic and environmental dimensions. The combination of these two pillars is illustrated in Figure 1.

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<sup>1</sup> Interdepartementaler Ausschuss Rio 2001

<sup>2</sup> UNCED 1992

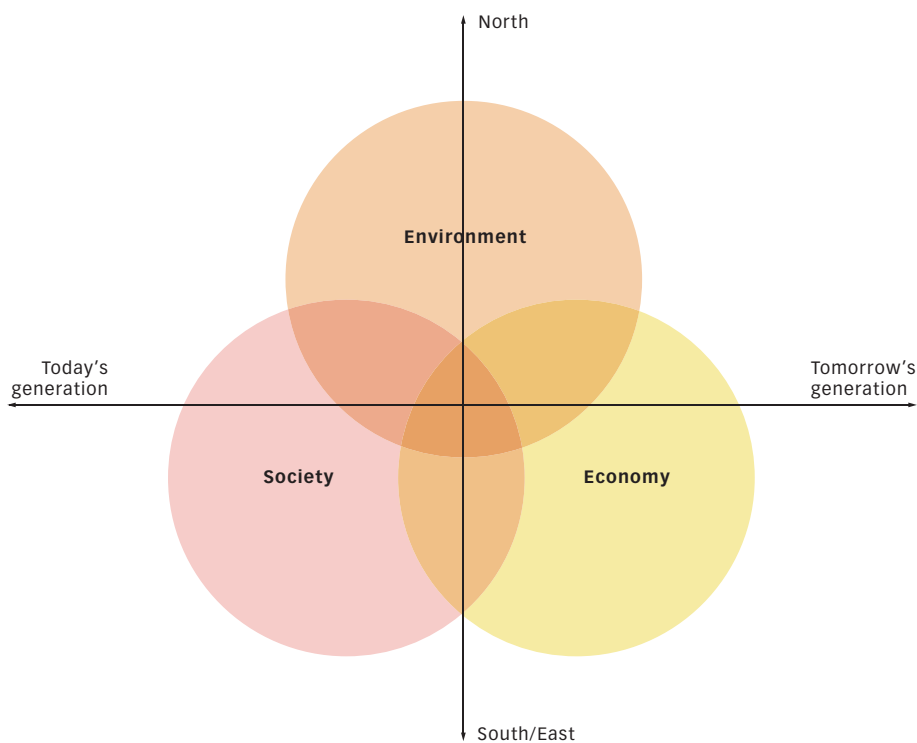


Figure 1

### The capital stock model

Complementing the three-dimensional model, another fundamental principle of Swiss sustainability policy is the capital stock model. Reference to this model is made, for example, by the Federal Council in the «Sustainable Development Strategy 2002».

The capital stock model was developed at the World Bank as early as 1994.<sup>3</sup> It is based on the idea that there are three sustainability dimensions or types of capital stock, namely environmental, economic and social.

According to this view, the Earth's «capital» should not simply be consumed but needs to be constantly renewed. Sustainability is achieved when it is possible to live off the interest rather than on the capital.

Sustainability capital consists of the sum of the three capital stocks:

$$K_{sd} = K_{env} + K_{econ} + K_{soc}$$

With the aid of this «formula», states, developments or political projects can be assessed in terms of sustainable development. In the assessment, consideration is to be given not only to the absolute level of the various types of capital but also to changes in and interactions between the individual stocks.

A more concrete conception of sustainability can be gained by further refining the capital stock model: the question of how far environmental, economic and social capital can be substituted for each other is addressed by the concepts of «strong» and «weak» sustainability. Strong sustainability requires that none of the three individual types of capital should be diminished in the long term, while weak sustainability imposes this condi-

<sup>3</sup> Serageldin/Steer 1994

tion only for the aggregate capital stock. Thus, in the latter case, the consumption of environmental capital, for example, would be permitted as long as it was «compensated for» by an increase in economic or social capital.

### **Strong or weak sustainability: Switzerland opts for a middle way**

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In the «Sustainable Development Strategy 2002», the Federal Council advocates an intermediate position between strong and weak sustainability. In the literature, this is also termed «sensible sustainability»<sup>4</sup> or «weak sustainability plus».

This approach acknowledges that individual assets can be replaced, and that the various types of capital may be mutually complementary. Limited substitution is therefore permissible provided that the fundamental principles of sustainable development are not violated.

According to the Brundtland Commission and Agenda 21, these fundamental principles include the following:

- The exploitation of natural resources must not lead to irreversible losses that restrict future generations' opportunities in an unacceptable manner. This applies in particular to the loss of biodiversity, whose value to future generations cannot be determined from today's perspective.
- As a precaution, sparing use is to be made of scarce, non-renewable resources since future generations could suffer as a result of high levels of consumption today. When such resources – e.g. fossil fuels or metals – are extracted, the rule to be observed is that they can only be depleted to the extent that equivalent substitutes are developed and made available in good time.<sup>5</sup> The same principle applies to the development and use of technologies in cases where the long-term effects are uncertain (e.g. biotechnology) or there is a potential for major damage (e.g. nuclear power).

- Account is to be taken of the different sets of problems confronting the three capital stocks. While sustainability principles are already being seriously violated or are at risk of being violated in one area, other areas may exhibit stability or good quality. In cases where critical problems exist or trends suggest that problems are imminent, further deterioration of the situation can scarcely be accepted. Based on this evaluation, a decline in an already scarce capital stock may be more important than an increase in a specific asset that is available in abundance.

### **Critical limits**

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In relation to the capital stock model, one of the implications of these principles is that for each type of capital there are critical limits below which the stock must not fall. Nor can the rundown of one stock below the critical limits be offset by an increase in capital in another area. Critical limits – such as environmental standards relevant to health (air pollutant levels), sociopolitical standards (equal opportunities, minimum income, decent living conditions, etc.), or guaranteed human rights – represent non-negotiable minimum requirements or threshold values.

### **From concept to practical implementation**

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In 2004, on the basis of the above considerations and in fulfillment of a mandate specified in the «Sustainable Development Strategy 2002», the Federal Office for Spatial Development developed a conceptual framework for assessing the sustainability of political projects. The effects of measures on the three capital stocks are initially determined with the aid of a standard set of criteria. Secondly, these effects are evaluated according to specific principles. These principles reflect the intermediate position adopted by Switzerland between weak and strong sustainability, which only permits trade-offs between capital stocks under specific conditions. Accordingly, under Switzerland's sustainability policy, a project (or development) is deemed to be non- or insufficiently sustainable if:

- minimum social, economic or environmental requirements are contravened,

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<sup>4</sup> Serageldin/Steer 1994

<sup>5</sup> Cf. e.g. Pearce 1993

- the project has adverse effects that are difficult to reverse or completely irreversible,
- the adverse impacts of the project will have to be borne not by present, but by future generations,
- the impact of the project is subject to uncertainty or involves risks, so that serious adverse effects cannot be completely ruled out;
- the adverse impact affects areas in which sustainability problems are already acute or could worsen in view of current trends.

In the coming years, the basic methodology currently in place for sustainability assessments is to be tested in case studies and further developed. With the existing evaluation instrument, Switzerland can work towards enhancing the sustainability of political projects and thus contribute to sustainable development in accordance with the Federal Constitution and international agreements.

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## Further information available online

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