

Priority Topics for Sustainability Research

Stakeholder workshops of August 28 and 30, 2019:
Summary of the results

Summary

In two workshops at the end of August 2019, around 100 experts from science and practice discussed for which key sustainability issues for Switzerland scientific contributions would be required. The results confirm clearly that sustainability issues are a complex system of interactions in which everything seems to be interrelated.

The following concerns were among the most strongly accentuated: How does an economic system function that serves sustainable development? What values could it be based on and how would a respective concept of well-being look like? How can such well-being be decoupled from resource consumption and how can decarbonisation be achieved? How can a sustainable food system be brought about? How do we create decisions that are aligned to sustainability and accepted by a majority, and how do we implement them without creating losers?

The collected sustainability priorities build the basis for developing a sustainability research agenda for Switzerland.

Zusammenfassung

Im Rahmen zweier Workshops Ende August 2019 diskutierten rund 100 Expertinnen und Experten aus Wissenschaft und Praxis, zu welchen für die Schweiz prioritären Nachhaltigkeitsthemen es Beiträge aus der Wissenschaft braucht. Die Resultate zeigen auf, wie stark es sich bei der nachhaltigen Entwicklung um ein komplexes Wirkungsgefüge handelt, in dem alles mit allem zusammen zu hängen scheint.

Am deutlichsten sind folgende Anliegen hervorgetreten: Wie kann ein Wirtschaftssystem aussehen, das im Dienste einer nachhaltigen Entwicklung steht? Welche Werte würden ihm zugrunde liegen und wie sähe eine entsprechende Konzeption von Wohlergehen aus? Wie lässt sich dieses vom Ressourcenverbrauch entkoppeln und wie ist die Dekarbonisierung zu schaffen? Wie kann ein nachhaltiges Ernährungssystem herbeigeführt werden? Wie erreichen wir mehrheitsfähige Entscheidungen im Sinne der Nachhaltigkeit, und wie setzen wir sie um ohne Verliererinnen und Verlierer zu kreieren?

Die zusammengestellten Nachhaltigkeitsthemen bilden die Basis für die Entwicklung einer Agenda für die Nachhaltigkeitsforschung in der Schweiz.

Résumé

Dans le cadre de deux ateliers organisés fin août 2019, environ 100 scientifiques et personnes issues de la pratique ont discuté quelles sont les questions de durabilité prioritaires pour la Suisse qui nécessitent une contribution scientifique. Les résultats montrent que le développement durable est un système complexe d'interactions dans lequel tout semble être lié.

De cette concertation ont résulté les questions prioritaires suivantes: Comment peut être conçu un système économique qui sert le développement durable? Sur quelles valeurs serait-il fondé et quel serait un concept adéquat de bien-être? Comment peut-on découpler le bien-être de la consommation des ressources et comment peut-on parvenir à la décarbonisation? Comment peut-on mettre en place un système alimentaire durable? Comment parvenir à des décisions majoritaires dans le sens de la durabilité et comment les mettre en œuvre sans créer de perdants?

Les thèmes de durabilité identifiés constituent la base pour élaborer un agenda de recherche en développement durable pour la Suisse.

Introduction

In 2015, the 2030 Agenda for Sustainable Development was adopted by member countries of the United Nations. This agenda sets out 17 Sustainable Development Goals (SDGs) aimed at ensuring a better and more sustainable future for everyone. It is expected that the academic community will play an important role in helping societies achieve these ambitious goals by 2030.

Against this background, the Swiss Academies of Arts and Sciences identified sustainable development as one of its strategic priorities. Under the leadership of the Swiss Academy of Sciences (SCNAT), the Sustainability Research Initiative (SRI) brings together key actors to develop priorities for future sustainability research in Switzerland.

To identify priority topics, SRI has consulted widely. A first workshop was held on June 21 in Baden, attended by members of the Swiss Academies. This was followed by two stakeholder workshops, in Lausanne (August 28, 2019) and Zurich (August 30, 2019) that were attended by around 100 prominent figures from politics, public administration, industry, NGOs and academia.

This document summarizes the results of the two stakeholder workshops. It is structured in a series of thematic clusters - which could just as well look completely different since the interrelated nature of the issues that were brought up leaves room for many possible groupings. Note that the clusters do not claim any completeness, are not systematic and represent the perspectives of participants only. Titles correspondingly only serve as handles.

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Economic system

Keywords: Consumer incentives, corporate responsibility, external effects, ecological footprint, regulation of private sector, accountability, financial investments, primacy of money, definition of wealth, dominance of economic arguments, decoupling, zero growth economy, circular economy, sufficiency etc.

Today's economic system incentives globally lead to shopping binge, severe social inequalities, depletion of natural resources and climate change. Overpopulation and ageing societies reinforce this trend. Sustainability is too strongly left to the customer. Fear of a loss of wealth and prosperity paralyzes decision-making processes.

How can the economy be put at the service of sustainable development (SD)? Which changes are needed at the levels of our values, ideals, economic mechanisms (including prices), regulation, as well as production and consumption patterns?

Aspects that were brought up (selection):

- The current economic system conflicts with the Agenda 2030. Economic growth is not compatible with the earth systems' resilience, our ecological footprint is too big, resources are overused.
- Wrong incentives: SD is not profitable for the private sector and investors. The need for competitiveness puts a lot of pressure on companies and nation states. Sustainability is left to the customer, there are too few legal obligations of the companies. Framework conditions do not exist or do not take effect. There is no internalisation of external effects: In accounting, taxes, regulation, trade.
- The activities of Swiss companies, including banks, have a negative impact on global sustainability. How can this impact become sustainable? What role does the financial system play? What impact do Swiss companies have on global social inequality? How to design sustainable value chains; what are fair steering instruments?

- Development is measured in monetary terms. Ecological and social services and resources are not valued or valued too low (at the level of the national economy). GDP needs to be replaced by a public welfare economy. The «Genuine Progress Indicator» (GPI) could serve as a role model.
- Fear of a loss of prosperity prevents or paralyses decision-making processes. We need a holistic approach to wealth and prosperity. We need to change our values and our current vision of a good life. How can we collectively redefine wealth, quality of life and well-being? How to achieve a decoupling of quality of life and sustainability impacts?
- Can economic growth be sustainable? What (social and ecological) benefits could alternative economic systems bring? How does a zero growth economy work? Is the model promising? How can a “wellbeing economy” (an economy that is aligned with the wellbeing of man and nature) become mainstream?
- How can ideas of alternative economic models be discussed with a broad group of actors outside the political left? How can ethics and values be framed so that common underlying concerns with the political right can be explored? How can citizens be taken along politically and economically in the transformation? How can problems with unsustainable economic practices be described so that people feel affected and can thus be reached?
- Population development is a major challenge for SD.
- How can the economy be put at the service of SD? How do social movements, production incentives and consumer behaviour interact? How can we realize a consistent Circular Economy?
- Do we need more "global empathy"?
- Consumption in Switzerland is not sustainable (food, housing, mobility; 73% of the footprint abroad); the dominance, internationally of neo-colonialism and exploitation as well as culturally of competition and individualism is a problem.
- Is voluntary renunciation and sufficiency promising or even indispensable? How is it connected to what we perceive to be a high quality of life? What prevents us from implementing our personal ideals in daily consumer behaviour?
- How can science create perspectives (not just facts) and reduce uncertainty? How does science help to anticipate more and react less?

Decarbonisation

Keywords: CO2 emissions, climate change, decarbonisation, energy provision and consumption, alternative energy sources, regulation and incentive systems, behaviour, agricultural food production, ecosystems, biodiversity, tipping points, migration, inequalities, etc.

Past and current emission of climate gases have led to an alarming trend of rising temperatures globally. Climate change severely threatens key life supporting systems. We need to transition to net-zero CO2 emissions by mid-century to meet the goals of the Paris Agreement. This requires decarbonising electricity production, transport and heating, among other things.

How can (more) climate friendly life styles go mainstream? Do we need to limit mobility? Which technologies do we need to accept? How to adapt energy prizes?

Aspects that were brought up (selection):

- We are dependent on fossil energy, and we demand a transformation to net zero CO2 emissions by 2050. The topic is complex - on a technical, economic, ecological, and social level, as well as in terms of our behaviour. Demands are high and controversial; one issue is the role and power or competence of the state.

- The topic is transversal (economy, welfare, transport, agriculture, leisure industry etc.). It is urgent (knowledge vs. action).
- The topic is of huge relevance. Climate change is a driver of migration. It is strongly related to agricultural food production and the development of ecosystems. And it is linked with digitization and circular economy.
- The climate change challenge conflicts with our life style ideals. This includes mobility and is thus connected to tourism, urban sprawl, places of living and working and commuting. There are certain conflicting objectives regarding our understanding of prosperity and the underlying social norms and values.
- Energy is too cheap, too heavily subsidized. Fuels should be ten times more expensive. How can energy prices be made socially acceptable and fair?
- Energy demand will increase with climate change (cooling systems). Especially in urban areas, innovations are needed in this area. Heating and cooling systems must be thought together. However, cooling requires twice as much energy as heating. Which other systems can be combined, i.e. integrated?
- What are the priorities with respect to energy saving? Where is the greatest need for action? How big is society's willingness to become aware of how to use energy? What does the answer mean in the context of growing digitalization? How do technological changes influence our behaviour? What levers do individuals have?
- We already know many solutions, but often do not consider the consequences sufficiently. How can we make the transformation socially acceptable (knowing that the ecological damage also has socially unacceptable consequences)?

Circular economy

Keywords: Natural resource depletion, resource overuse, recycling, natural systems degradation and agriculture, pollution & pesticides, sustainable production and consumption, spillover effects and social inequalities, human rights, global economic activities, commodity trade, mining for raw materials, corporate responsibility, etc.

Today we globally deplete our natural resources. Humans use as much ecological resources as if we lived on 1.75 Earths. The Swiss footprint corresponds to 3.5 Earths.

How can the global footprint be reduced to one Earth in a globally equitable way? How can we realize a sustainable circular economy? What roles do consumption, mining industry or synthetic materials play?

Aspects that were brought up (selection):

- Conservation of biodiversity (also in agriculture) and of natural resources in general (biodiversity, water, land, climate) as well as food security are of fundamental importance. Overexploitation damages the natural systems massively - biodiversity, climate, soil fertility, drinking water quality and human rights suffer. The methods of extraction and use disregard human rights. We risk going beyond the points of no return or tipping points, respectively.
- The activities of Swiss companies, including banks, have a negative impact on global sustainability. This is important because there is great potential for action (leverage). In addition, too little has been done here in the past. There are conflicts of interest between the Swiss economy and global sustainability.
- Pricing and financial incentives: How do we deal with our commons on all levels, from global to local? Which goods, which today have no price, must be given one? Which/how can such prices be set? How can external effects be taken into account? How can the production side influence prices? How did today's unsustainable models, e.g. subsidy mechanisms, come about?

- How can we contribute to the conservation of natural systems through a consistent recycling economy? Can we replace synthetic materials with recycled products? How can we better recycle and finish using resources and, where possible, integrate them into cycles?
- What role does agriculture play, and how can a sustainable agriculture be implemented in Switzerland and internationally?
- What are the biotic alternatives to pesticides? What is the impact of Switzerland's use of resources abroad?

Food systems

Keywords: Nutrition, agriculture, health, consumption patterns, resource depletion, energy, industrial food production, degree of self-sufficiency, food imports and exports, land use in Switzerland

Food is indispensable and affects everyone. The food system is not developing sustainably. The consumption of food in Switzerland is problematic in terms of health, ecology and climate impacts. It involves negative impacts globally. The way we eat and produce food affects all of us, including the environment, consumers and producers. The current system is in conflict with all SDGs.

Aspects that were brought up (selection):

- What do sustainable food production systems look like and how can we install and implement them?
- What would be the positive effects of this, e.g. positive effects on soils, biodiversity, health, etc.?
- How can we provide models and numbers?
- What is Switzerland's ideal level of self-sufficiency and what does this mean for the design of food imports and exports?
- What is an ideal or shared future vision of land use in Switzerland? What is the desired and needed quality of sustainable cultivated land, and in which regions does it conflict with other interests (e.g. nature conservation, tourism, etc.)?
- What levers are there to bring about a sustainable change in eating habits (political, economic, socio-cultural)?
- Prices may be a lever. At the same time, many people cannot afford higher prices, their acceptance is not given. The incentives of the entire industry lead to the cheapest possible production. In order to achieve greater sustainability, the system as a whole and in its multinational context would have to be questioned. The food production system must also be attractive to producers.
- How can we resolve conflicts of interest in relation to food self-sufficiency; in relation to the Swiss agricultural system or model (culture/breeding) and Swiss agricultural policy; and in relation to cultural and liberal culture?
- What are sustainable and viable agricultural models for Switzerland?

Decision making

Keywords: Implementation, transformation processes, gap between knowledge and action, governance, policy coherence, role of communication, science, public debate on SD, behaviour and decision making on all levels and by all actors (including the private sector), role of youth

Making political and individual decisions and implementing those in harmony with sustainable development is challenging. Social transformation takes place in a complex structure in which science, politics, business, civil society and the media play a role.

How can the necessary transformation be boosted effectively and fast enough without leaving anyone behind, i.e. in a grassroots democracy?

Aspects that were brought up (selection):

- Making political and individual decisions in harmony with sustainable development is challenging. The issue is complex and each decision has implications for several aspects. It is also challenging to take existing knowledge into account in decisions. But knowledge or fact-based decisions would be important. There is a tension between precision and simplification.
- Social transformation takes place in a complex structure in which science, politics, business, civil society and the media play a role.
- How can majority decisions be brought about?
- Which interactions, collaborations, instruments, tools and methodologies are efficient and effective to achieve a certain transformation goal?
- Which incentives, organisational arrangements, systemic changes, policies and other concepts of action are promising in Switzerland?
- What role can media/journalists and education play? Role of youth: Youth can provide important input on how social processes could be shaped.
- Open questions: What are the most effective communication methods? How should we use the existing facts -> what are the tools to identify the published results on a given topic? Global information on the (different) types of impact on ecological systems is needed. How can we interact with the media? How can social media be put at the service of science? What role do emotions play in decision-making processes? What is the role of bloggers?
- How can we identify the conflicts of objectives and interests among the various departments of politics and administration; get the most out of synergies; and at the same time take international, national and cantonal objectives into account when implementing the SDGs at national, cantonal and communal level?

Social values

Keywords: visions of the future, individual and social values, culture, behaviour, limitations versus freedom, global empathy, lifestyles, populism, social movements, inequalities, disintegration, education

Individual responsibility is dwindling. We have to find a new basis for organising work, living places, travel, food, consumer behaviour, real estate market, neighbourhood organisation, living together, delegating competences to society; compatibility(s) must be adapted to SD.

We must think about our visions of the future, the economic system, individual freedom, lifestyles and underlying social values.

Aspects that were brought up (selection):

- The issue is about what people think is the right thing to do, and the right way to behave and live together in a sustainable world. Today's social value system leads to us driving the world into the ground. A (radical) change in our value system could have a positive impact on most SDGs.
- Populism/ moralism, facts versus values; particular solutions versus integrative systemic solutions; analysis (small) versus synthesis (holistic)

- Our values system influences phenomena like social disintegration, inequalities and environmental degradation. What effects would specific value changes have on sustainable development (e.g. in relation to food consumption or mobility)?
- What are our visions of the future that are in line with sustainable development and global responsibility? What would such a "system Switzerland" look like, how would it be organised?
- How can we define common values that serve as a guideline?
- What are alternative models for the organisation of living spaces, leisure and work?
- How, for example, can we limit mobility needs, both leisure and work (linked to spatial planning and family and labour law)?
- Why do people behave the way they do? What are the mechanisms of change in relation to this? What role do social movements play? What role can media/journalists and education play? What role do emotions play in decision-making processes? Discourses via social media; role of bloggers?
- It is also about educating the public about bias and fake news. It needs synthesis skills, synthesis abilities and competences.
- Behavioural changes are needed both individually and collectively: in relation to energy consumption, excessive consumption, unsustainable lifestyles. The issue is important because behavioural changes (due to habits, ideologies, interests) are difficult and because it is not easy to identify relevant levers.
- References to other sustainability goals: Effects on health; rethinking education, the role of schools
- How can personal consternation and commitment be strengthened?

Summary of plenary discussions

The plenary discussions produced a number of additional considerations which are worthwhile bearing in mind for further developing the project.

Participants acknowledged that many important issues were listed, and that many of them are oriented towards transformation. They also stressed repeatedly that also the academic system - both research and education - needs to change to effectively take part in tackling sustainability problems. Science is asked to create perspectives, to work more strongly in anticipatory instead of reacting ways, and to work increasingly in experimental real world settings.

Procedural issues (e.g. create research-practice collaboration processes to adequately support transformation) were stated to be as important as structural ones (e.g. how to structure sustainable economic systems). Also, it was pointed out that taking a systems perspective is required to work on unresolved questions, connecting e.g. food, energy and water issues.

Last but not least participants pointed out that it was difficult for them to list open questions and research needs, since they didn't feel competent to do so. They stressed the importance to consult with specific experts for elaborating the topics.