



TOWARDS A SAFE FUTURE



POUR DEMAIN
— Today for Tomorrow —

TOWARDS A SAFE FUTURE

Pandemics, climate change, emerging technologies:
we address the central challenges of our time today - to **ensure a safe future for our children, grandchildren and their descendants.**

Pour Demain is a Swiss non-profit organisation which promotes **evidence-based policies on a national level**: with a clear positive effect for current and future generations, in Switzerland and around the globe. **Pour Demain: Today for tomorrow!**

Our Approach:

IMPACTFUL

We focus on topics that reach beyond the borders of Switzerland and the usual policy timelines.

NEGLECTED

Our issues are frequently overlooked in political dialogue because they are often technical (e.g. biosecurity) or have no constituency (e.g. future generations).

SPECIFIC

We develop specific and actionable policy proposals for direct impact, rather than only trying to shift the general discourse.

NON-PARTISAN

Our proposals do not fit into the left-wing-right-wing political pattern, which allows us to find non-partisan solutions.

We are committed to maintaining Switzerland's innovative strength as a country that proactively pioneers solutions to critical challenges in conjunction with local research institutions and industry.



RECOMMENDATIONS

BIOSECURITY

1. Switzerland strategically expands its capacities for the **research and development of new vaccines**.
2. **Surveillance of pandemic pathogens** in hospitals and wastewater is continued and expanded beyond Covid.
3. Additional staff, funded by Switzerland, **strengthen the Biological Weapons Convention** in Geneva.
4. The **risks of research in BSL-3 and -4 labs are minimised further**, analogous to the flight safety culture (the key means being unannounced inspections at least every two years, transparent reporting of incidents and personal safety checks for lab personnel).

ARTIFICIAL INTELLIGENCE

1. Switzerland **launches an incident database** for the purpose of recording specific harmful events caused by AI systems.
2. The federal government strengthens the existing activities of its departments with further expertise and complements them with **a monitoring and early detection programme** to track developments in AI.
3. Research programme: In accordance with the federal government's AI guidelines, Switzerland strengthens its research capabilities in the areas of **trustworthy and explainable AI**.

CLIMATE CHANGE

1. A new **Swiss Green Climate Bank** promotes the expansion of non-fossil energy locally and abroad with targeted loans.
2. Swiss research and innovation funding accelerates the development and uptake of **new energy and negative emissions technologies**.
3. Swiss academics increase their research on how climate change can lead to **cascading effects that disrupt other systems** (e.g. financial system, food security).

PARTICIPATION OF FUTURE GENERATIONS

1. The federal government **implements existing foresightful practices more consistently**, including specifically:
 - a. The generational impact assessment for new legislation
 - b. The mandatory situation and context analysis every four years
2. The **Task Force Science of the Federal Council is developed into a permanent committee**. One of its tasks is to consider the effects of federal decisions on future generations.
3. New formats for a discussion of the concerns of future generations are evaluated (e.g. a **subcommission on future** as part of the political institutions committee in parliament).

RISK MANAGEMENT

1. There is **more emphasis on extreme risks** in public and confidential national risk assessments produced by the different Swiss entities working on this topic.
2. The **federal agencies develop strong cooperation in risk management**, and the Federal Office for Civil Protection coordinates the work on analysing extreme risks.



BIOSECURITY

The experience of the Covid 19 pandemic has shown that pandemics are a real danger. As a prime location for international organisations, research and pharmaceutical companies, **Switzerland should aim to be a leading light when it comes to pandemic prevention, safe biological research and the fight against bioterrorism.**

1.

Switzerland strategically expands its capacities for the research and development of new vaccines.

The federal funding programme for Covid-19 drugs, currently at CHF 50 million, is increased to CHF 100 million and expanded to include other high-risk pathogens and new vaccines (mRNA, ...). This will enable Switzerland to expand its capacities for the research and development of vaccines and to **quickly identify the necessary vaccines, to be prepared for future pandemics.**

2.

Surveillance of pandemic pathogens in hospitals and wastewater is continued and expanded beyond Covid.

The monitoring of the SARS-CoV-2 virus in hospitals and in wastewater, introduced during the Covid pandemic, will be continued and extended to other possible pandemic pathogens.



The goal of this advancement is to analyse genetic material of all kinds with pathogen-agnostic technologies such as metagenomic sequencing, and to extend surveillance beyond hospitals and sewage to places such as airports where new pathogens might first emerge. This will provide an **effective early warning system for the next pandemic.**

3.

Additional staff, funded by Switzerland, strengthen the Biological Weapons Convention in Geneva.

The Implementation Support Unit (ISU) of the **Biological Weapons Convention in Geneva is severely understaffed** with an annual budget of approximately CHF 1.5 million (by comparison, the Chemical Weapons Convention has an annual budget of approximately CHF 70 million).

Like the EU, Switzerland provides the ISU with **two additional, voluntarily funded positions** to strengthen its capacities, for example in the context of promoting the accession of all countries and global compliance with the Convention, capacity building for the implementation of the Convention and awareness raising. These additional positions could also cover topics that are not yet receiving much attention, such as the risks associated with the publication of information on biological research (information hazards).

4.

The risks of research in BSL-3 and -4 labs are minimised further, analogous to the flight safety culture.

- Replacing the current regiment of often random and sometimes long intervals, **unannounced inspections** at least every two years ensure the functionality of BSL-3 and -4 labs for the protection of the surrounding environment, local residents, and the general population.
- Employees in BSL-3 and -4 labs who work with dangerous pathogens are to **complete a compulsory safety course**, as is established practice in the radiation protection and chemical sectors, and undergo a **personal security check**, as is already done for prospective soldiers in Switzerland and in the biosecurity context in other European countries.

5.

More transparency in biological research.

Following the example of other countries, **incidents and near misses in high-security laboratories are recorded in a public register**. This transparent communication allows for the identification of possible weaknesses and the continuous improvement of safety measures. This approach is already used successfully to improve flight safety culture and should be used to foster an even better culture of safety and security among bio-researchers.





ARTIFICIAL INTELLIGENCE

Switzerland can play a pioneering role in research and innovation for artificial intelligence. This is achieved through a balanced combination of activities by the federal administration, the private sector and the universities.

1.

Switzerland launches an incident database for the purpose of recording specific harmful events caused by AI systems.

As is currently the case for cyber, flight safety and nuclear incidents, **Switzerland should also implement a database for AI incidents.** Specific cases of damage should be recorded in order to keep political decision-makers up to date on current and future impacts of AI. The database should be readily accessible for the federal administration, the research community and the wider public. Beyond an appealing and easy interface, the database should feature options such as data downloads for experts.

2.

The federal government strengthens the existing activities of its departments with further expertise and complements them with a monitoring and early detection programme to track developments in AI.

The federal government has already launched promising initiatives such as the Data Science Competence Center at the Federal Statistics Office or the ICT-steering mandate of the Federal Chancellery. These are to be complemented by pilot projects in the area of **monitoring and early detection.** Amongst other things, these pilot projects aim to **strengthen Switzerland as a business location through the development and deployment of robust and secure AI systems.**

3.

Research programme: In accordance with the federal government's AI guidelines, Switzerland strengthens its research capabilities in the areas of trustworthy and explainable AI.

In accordance with the federal government's current AI Guidelines, Switzerland is required to realise its potential of becoming a leading location for AI research and deployment. This means that **research into the trustworthiness and explainability of AI systems** is supported through the establishment of a **National Research Programme** with a CHF 30 million budget.



CLIMATE CHANGE

Climate change is already happening, the time to act is now. Switzerland should lead the way by **promoting and supporting local and international clean energy projects** and by **driving forward innovations in energy- and negative emissions technology**.

1.

A new Swiss Green Climate Bank promotes the expansion of non-fossil energy locally and abroad with targeted loans.

A large part of future Swiss CO₂ emissions will be generated abroad. **A newly created Green Climate Bank will provide loans for non-fossil energy projects.** Two thirds of the total volume of loans should be used to enable projects outside of Switzerland. Since solar-, hydro- and wind power operate competitively nowadays, the loans flow back to the federal government. The government can provide equity for this bank, but it should be run externally from the government.

2.

Swiss research and innovation funding accelerates the development and uptake of new energy and negative emissions technologies.

Even under optimistic climate scenarios, substantial capacities for **energy innovation as well as negative emission technologies** will be required to remove CO₂ from the atmosphere. The development of these technologies is to be supported with 50 million Swiss francs, over a **national research programme** (NFP) of the Swiss National Science Foundation (SNF). Beyond the technologies themselves, the programme should explicitly fund research in the social, political and economic sciences on how to distribute those technologies, to ensure that they are put to use as quickly as possible.

3.

Swiss academics increase their research on how climate change can lead to cascading effects that disrupt other systems (e.g. financial system, food security).

The effects of climate change already have tangible consequences for Switzerland. To better adapt social and economic structures to this reality, it is essential to **examine effects of climate change which could cascade into other domains, disrupting, for instance, health or financial systems.** The research on these cascade effects should be supported with 20 million Swiss francs through an NFP by the SNF.



FUTURE GENERATIONS

Future generations are significantly affected by today's policies, but are difficult to represent. **Switzerland strengthens its existing activities in this area and develops further instruments to involve our descendants.** Since far-reaching and comprehensive proposals have encountered skepticism in parliament, transitional solutions may be necessary.

1.

The federal government implements existing foresightful practices more consistently. Specifically:

The Federal Government **implements existing foresightful practices more consistently**, including specifically: the intergenerational compatibility analysis for new pieces of legislation (Art. 141 g of the Federal Act of Federal Assembly) and the mandatory situation and context analysis by the Federal Council. Both mechanisms have a strong legal basis but neither is implemented adequately.



- The vast majority of new laws is debated in parliament without the obligatory **intergenerational compatibility analysis** (according to the Foundation Future Council [Stiftung Zukunftsrat] the compatibility analysis is only performed for 6% of new laws). One means for the Federal Council to raise this percentage is by providing other departments with examples and/or templates for an optimal implementation of this analysis.

- The **situation and context analysis** could be methodologically strengthened, scientifically accompanied and increasingly address findings of other foresight reports (e.g. FIS, FOCP, TA Swiss, ETH CSS). Additionally, the timeframe of 10 to 15 years is too narrow to appropriately address the factors which will impact future generations in the mid- to long-term.

2.

New formats for a discussion of the concerns of future generations are evaluated

- Particularly promising is the formation of **a new subcommittee dedicated to “Future Matters” in the Political Institutions Committees in parliament**. This would allow for the discussion of future matters within the established parliamentary channels of communication.
- Another interesting format is the introduction of an **annual “Future Day” in parliament**, during which all parliamentary commissions discuss questions and challenges regarding the long-term future and then subsequently release their discussions.

3.

The Task Force Science of the Federal Council is developed into a permanent committee, whose remit is, among other things, to consider the effects of their decisions on future generations.

As the COVID-19 pandemic demonstrated to dramatic effect, scientific insights are essential for managing crises, both in the moment and in anticipation. To emphasise the element of foresight, **one member of the Task Force should explicitly be tasked with representing future generations**.





RISK MANAGEMENT

Switzerland should seize the opportunity to strengthen its existing risk management structures when it comes to extreme risks. This will allow the Federal Government to take the lead in ensuring global resilience to all extreme risks in the aftermath of the Covid 19 pandemic.

1.

There is more emphasis on extreme risks in public and confidential national risk assessments produced by the different Swiss entities working on this topic.

These risks are to be **taken into account more consistently** by the federal agencies. There is an active political discussion on these national risk assessments.

2.

The federal agencies develop strong cooperation in risk management, and the Federal Office for Civil Protection (FOCP) coordinates the work on analysing extreme risks.

Additionally, the Chief Risk Officer in the FOCP receives the mandate to **implement risk management across the federal administration**, and the FOCP performs independent auditing and advisory functions for extreme risks.



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