

SWP Youth Strategy



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Foreword: why it matters?

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First, we have to acknowledge the facts that 40% of the people on earth are below 25 and more than 55% are younger than 35. These figures alone imply to engage these young people in society issues such as sustainable development, especially transversal impacting issues such as water.

Second, we face a moral dilemma: these young people will severely be affected by water scarcity, water pollution and water conflicts and will bear the consequences of current unsustainable water usages. It is our duty ethically to do our best to change the situation and to engage young people now in finding solutions for their future.

Last but not least, young people nowadays are deeply concerned with the environment and the negative or positive impact they can have on other human beings and on earth. They are proactive; they are disruptive; they have innovative ideas and want to test them in practice; they want to be heard and they want to transform society. We benefit from them as agents of change: we would be fool not to take advantage of their dedication and energy for leveraged impact.

For all these reasons, the SWP is determined to support youth engagement in the water sector: enhancing them to choose the water sector for their professional careers and removing obstacles especially at the beginning when they enter the sector. The network is also committed to allow more young voices in decision arena such as the SWP steering board.

This strategy is the first step to support this long-standing commitment and the SWP board will carefully monitor its results.

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Introduction

The SWP is a multi-stakeholder platform launched in 2012, bringing together over 70 Swiss organisations from the academic, civil society, public and private sector to develop, share, and promote innovative solutions for water challenges in developing and transition countries. Driven by its values of solidarity and integrity, the SWP as a partnership strives to become a globally well-recognised brand of high quality solutions for water security and the platform for water in Switzerland.

In 2016, the SWP developed its 9-years long term strategy with the aim that the network becomes gradually a cross-sector innovation carrier, a knowledge setter and a knowledge hub. Under this last category, the SWP is willing to target and integrate youth and young professionals. To implement this strategy under the youth lenses, the first step has been to establish the Swiss Junior Water Prize (first edition was launched in 2017), embedded in the Swiss in Science Contest and in collaboration with SIWI for the international contest. In 2018 it was time for the SWP to think more broadly about needs and challenges of Swiss youth and young professionals and propose concrete actions to support them.

The aim of the present SWP youth strategy has been defined by the SWP Steering Board and is the following:

- Make the water sector more attractive to young people so that innovative and bright persons choose to pursue a career in the water sector;
- Get young professionals of the water sector more connected and facilitate their first job experiences in Cooperation.

1. Engaging Swiss youth

1.1. Defining youth & young water professionals

The UN definition of youth comprises “young people between 15 and 24”; SWP endorses this definition and in addition decides that young professionals will be targeted as long as they are below 30.

For a mid-term perspective, the SWP will focus on Swiss-based youth while supporting youth in developing countries or accompanying exchanges between youth in the South and youth in Switzerland may be added in the long-term in collaboration with SWP members already active in this aspect.

1.2. Defining the academic cursus

The SWP focuses on youth, gymnasium level (general studies) and tertiary level (Bachelor/Master/PhD). The professional pathways are not included because they are strongly supported and well connected to the professional world (with SWP members like SVGW, VSA and corporates like Geberit and Georg Fischer).

For the tertiary level, the focus will be on specific pathways (mainly scientific ones e.g. environment) but will take into account as well a few others that may be associated to water due to its transversal and crosscutting nature (sociological pathways or development studies). The strategy will also target youth ending their studies and entering the professional work. The focus is on water with a broad sense but with emphasis on cooperation opportunities.

1.3. Young men & women

Special attention will be given to the participation of young women or to challenges young women might face while choosing to study water-related topics or to enter the water sector.

2. Swiss statistics and challenges

2.1. Swiss statistics on chosen curricula and diploma obtained

In total nowadays, more than 100'000 youth chose the general pathway for their studies. Within this group around two third chose the gymnasium while the remaining students orientate towards professional maturity, general knowledge, teaching or foreign studies.

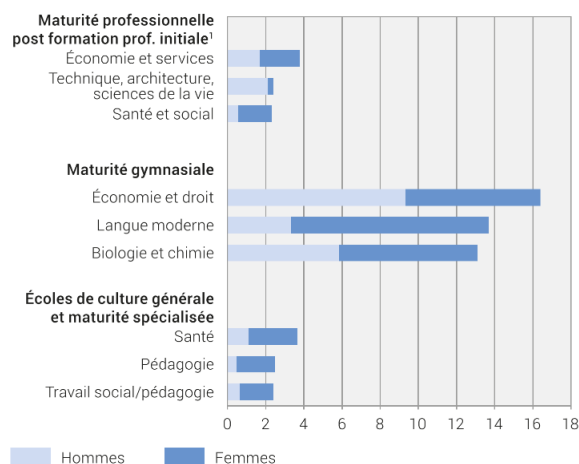
	2000/01	2005/06	2010/11	2015/16	2016/17
Total	86 200	87 407	95 430	106 358	107 635
“maturité gymnasiale”	66 888	68 040	71 314	70 510	71 027
Female (%)	55,0	56,4	56,1	57,0	56,9
Foreigners (%)	10,9	12,0	12,2	13,6	13,7

OFS, March 2018

Regarding youth engaged in general studies (gymnasium level), the three options that were most often chosen were in 2016-17: *economy and law*, *modern language* and *biology & chemistry* (see graph below). The option *physics and applied maths* was the option gathering more male whereas the option *visual arts* comprises mainly female.

Élèves des formations générales selon les trois orientations les plus souvent choisies et le sexe, 2016/17

En milliers



¹ Orientations selon OMPr (Ordonnance sur la maturité professionnelle fédérale) 2009

Source: OFS – Statistique des élèves et étudiants (SDL)

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At tertiary level, around 55'000 youth chose to pursue its education, with nowadays more than half of them choosing to study at “Ecoles Supérieures”, see graph below. This number has increased a lot between 2000/01 and 2016/17 (+239%), with the share of women increasing from 27% to 47%, while the share of foreigners remained the same (between 10 and 12%).

Students of Tertiary Education, evolution from 2000/01

	2000/01	2005/06	2010/11	2015/16	2016/17
Total	38 674	38 151	51 280	56 660	56 658
Female (%)	43,1	43,6	44,4	43,5	44,1
Foreigners (%)	9,4	10,2	14,4	11,8	11,3
Écoles supérieures	9 213	10 173	21 867	29 786	31 242
Préparation aux examens professionnels ¹	9 037	11 829	16 418	18 896	17 795
Préparation aux examens supérieurs ¹	5 427	4 355	4 274	3 615	3 384

For 2016/17, the major share of the students (16%) has chosen *Management and Administration*; it was followed by *Nursing and Midwife* (14%) and *Construction and Civil Engineering* (8%), see graph below.

**Étudiants de la formation professionnelle supérieure
selon les domaines de formation les plus représentés,
2016/17**

En milliers



Remarque: les autres domaines de formation représentent 15% des étudiants.

Source: OFS – Statistique des élèves et étudiants (SDL)

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Figures from the Environment Section at ENAC-EPFL:

- ✚ Since 2000 the section number is stable, around 45 students (somehow half of students in the Section Civil Engineering¹ and one third of the Section Architecture- the 3 sections of ENAC);
- ✚ Half of the students are Swiss (with few of them Swiss-based foreigners), half come from abroad;

¹ The Section Civil Engineering tackles a variety of themes and topics (fluid mechanics and hydraulics being one of them).

✚ Half of the students are male, half female.

Figures from the Civil, Environmental and Geomatic Engineering (D-BAUG ETHZ):

- ✚ Overall: Over the last 5 years, the entry of new students (BSc and MSc) is slightly decreasing (in 2018: 6% below the average for BSc and 22% below the average of MSc) and the number of master students has decreased in 2018.
- ✚ The percentage of foreign students as well as the and the number of mobility students remains constant.
- ✚ While the percentage of female vs. male BSc students is increasing, the numbers remain rather stable among MSc students. The majority is male, with 62% vs. 38% female in the BSc while the repartition is more balanced in the MSc with 57% male and 43% female students. Among MSc students, the female students are slightly increasing while the male percentage is slightly decreasing.

Figures from the Environmental Systems Sciences (D-USYS ETHZ):

- ✚ The number of the students is increasing (142 bachelor's degree students enrolled in environmental sciences, and 68 in agricultural sciences in Autumn 2018).
- ✚ The majority of new students in agricultural sciences (61.5%) and environmental sciences (54.8%) is female. This is above the overall ETH average with 36% female students.
- ✚ The D-USYS has a rather low rate of external Master students (meaning Swiss or foreign students with a Bachelor's degree from a university other than ETH) compared to the total number of new graduate students.

2.2. Challenges faces by youth and young professionals

Below are some challenges that youth might face to choose a water-related curriculum:

- The impacts you can make as professional are not clear enough (if you compared to other sectors, e.g. medicine), young people want to have a positive impact;
- Water is not seen as a vector of sustainable development in contrary to energy (linked to climate change) or health;
- Water is a science-based training, the job opportunities are not clear for the youth.

Experience from EPFL²: main reasons to choose the Environment Section at EPFL (1st-year students):

- ✚ Have a concrete impact on earth (sustainable development)- youth feel responsible;
- ✚ Work in cooperation to help others.

Young people have no idea of the professions they can do afterwards (especially environment is a broad theme); it goes more and more concrete along the curriculum with practical projects and courses and students orientate themselves. With regards to cooperation, they have neither idea of the challenges nor the benefits of it."

Once graduated, the youth might also face practical challenges to enter the water sector:

- The curriculum is not practical enough;
- As water is a transversal issue, curricula need to make interlinkages between sectors and it is often not done enough: therefore, young graduated lack transversal competences.
- It is difficult to find a job without experience, even though they have done a 6 months internship before graduating: they often need to make an additional internship, and few are available;
- In Cooperation, they lack both work experience and practical experiences of South countries and they compete with local people more experienced and less costly.

Experience from EPFL/ Environment Section:

- ✚ The section is not as attractive as other sections, e.g. Civil Engineering, where firms come to the campus to hire young graduated;
- ✚ Salaries are also lower than the average of EPFL;

² The experience of the EPFL/ENAC/Environment section is based on EPFL public statistics and on the personal feedback from the deputy Director of the Section, Chantal Seignez.



SWISS WATER PARTNERSHIP

- ✚ There is a difference in terms of salaries between men and women but no difference or very little difference between private and public sector (unlike other sections where the difference is meaningful);
- ✚ Average time to find the first job is 12 weeks;
- ✚ After 10-15 years, very few women are at key managing positions.

Experience from [ETHZ Geomatik und Umweltingenieur Verein](#)

- ✚ Main reason to choose this study: 1) do something good for the earth's future and society, 2) work in the sustainability field, 3) the interdisciplinary nature of this study, 4) it is very concrete "we know what we build and do not only make calculations".
- ✚ Among the 4 specializations (water, traffic, soil and energy), water ("Wasserbau") is very popular.
- ✚ Job opportunities: Most of the students usually profit from the prestigious ETH label and thus find it not difficult to find a job. Usually, most get a job after their first job application. Attractive jobs to those specializing in water are in engineering companies, insurance companies (risk assessment), waste incineration plant, water utilities.
- ✚ It is difficult to do internships during the BSc due to the absence of long breaks. Most do a 1-year internship between BSs and MSc. However, it is also considered feasible to work 20% besides the studies. Offers are published on the association's website or through internal newsletter.
- ✚ Highlights: At the yearly event they organize a technical lecture and invite speakers; 1x a year they have a job fair mainly focused on civil engineering, but the number of participating environmental engineering firms is increasing.
- ✚ Particular challenges: Not knowing what to do with the interdisciplinary study; decide which job could be suitable; gaining work experiences during the BSc is difficult, thus many need to do a gap year between BSc and MSc due to the heavy workload during the studies.

Experience from [Vereinigung der Chemiestudierenden an der ETH](#) (Chemical Engineering / Chemistry)

- ✚ Main reason to choose this study: 1) Seeking the challenge; 2) It covers a broad interest depending on the specializations: 1) analytical chemistry (quality control), 2) organic chemistry (medical research), 3) physical chemistry (material science).
- ✚ Problem with the field of water: it is very specific (e.g. drinking water quality)! Students don't see water as an opportunity, they don't know about it and where they could work within the water sector.
- ✚ Job opportunities: They are usually posted on the website. It is usually not so difficult to find a job. The job field is broad and ranges from consulting, material science, medical field and patent attorney.
- ✚ Highlights: "Chem-Together", yearly job fair event in November, mainly with the participation of chemical industry firms (Sulzer, BSAF, Roche, Metrom, Sika).
- ✚ Particular challenges: students don't see water as an opportunity and this field is considered as too specific. The students' focus lies more on industry/industry relations through the fair. Despite the low demand in entering the water sector, a possibility could be to provide research topics in water or show possibilities of working in the water sector during a small event organized through the association. Website and newsletters can be used to spread information among the students. Particular difficulty is also the high fragmentation of the chemistry studies.

3. SWP long-term strategy to involve youth

In 2016, SWP has developed its long-term strategy and youth involvement was already stressed strongly within the three strategic pillars (Dynamic Learning, Swiss Voices and Political Dialogue). There are two aspects to it: i) what SWP will do to trigger students interest in water-related studies and support young professionals in their career and ii) the added value the network will take out of youth participation. The paragraphs below aim at responding to these two sides although it still has to be defined how SWP will benefit from the youth perspectives (i.e. how can youth shape SWP members programs? How can they test in practice their ideas or solutions? Etc.). It will get more and more concrete within the next three years.

3.1. Youth & Dynamic Learning

In its long-term strategy, the SWP aims at becoming a **knowledge hub** facilitating exchange of knowhow and experience between the members including their partners abroad, contributing to training the new generation of water specialists (*SWP Academy*). The SWP also strives to become a **knowledge setter**, a *Think Tank*, a platform facilitating brainstorming (not only among the members but also with external actors) targeted towards the development of innovative cross-sector solutions

Both aims target youth as beneficiaries of an enabling environment to grow and develop their competences. However, the SWP is also willing to benefit from the youth disruptive ideas and new ways of functioning and communicating.

3.2. Youth & Swiss Voices

In its strategy, the SWP is developing as a **cross-sector innovation carrier**, creating the ground to access international projects, bringing the knowhow where it is needed (e.g. collaboration with partners abroad), promoting Swiss expertise at international events, and contributing to global policy processes

During their curricula, youth get some opportunities through their minor to explore transversal issues and do transdisciplinary work. To work in the water sector, it is essential to broaden one's view and get different perspectives. The SWP is a great fertile ground to allow these cross-sector thinking and partnerships. In addition, young people are prone to innovation and entrepreneurial process as long as they get the support to it. With SWP, they will access an inspiring enabling environment that allows space for learning & exchanges and a great platform to support the promotion of new solutions at international levels.

3.3. Youth & Political Dialogue

Mobilising Swiss water actors for global water issues is one of the key value propositions of the SWP. The partnership aims at supporting Swiss water actors to participate in policy processes such as the development of the monitoring of the SDG 6.

Taking into account youth perspectives and solutions to solve water challenges and influence policies is essential as they are catalysers of change. The SWP will involve youth in its policy activities and will liaise with other partners that are committed to strengthen youth voices (e.g. SDC and its partner the International Secretariat for Water).

3.4. Youth & Network Development

The SWP enhances the participation of the youth in decision-making: this will happen through the participation of two youth representatives at the steering board. In addition, the SWP will open its membership to relevant youth association free of charge and allow reduced fees to student and young professionals for SWP events.

4. Synergies with SWP members and close partners

4.1. SDC

By establishing new and supporting existing networks of young water professionals and enhancing their skills, SDC Global Program Water attracts young talent to the water sector and contributes to building a stimulating environment in which they can flourish, kept in the sector and become future agents of change.

Concretely, the GPW will:

- Help develop an influential network (International Secretariat for Water) and enhance the capacity and skills of young and future leaders by establishing and supporting a community of practice for young professionals.



- Support youth-led initiatives and continued education on water issues worldwide, incl. young/female social entrepreneurs and young people in schools.

The SWP will facilitate the connexion between Swiss youth and the youth water movement initiated by the ISW in order that youth voices are more heard, and that action taken by young people are promoted. In addition, the SWP is an ideal platform to showcase youth-led initiatives and solutions developed by social young entrepreneurs in Switzerland and abroad at key international events.

4.2. Academia

Academia is by essence dedicated to youth education.

The SWP will tighten its link with academia such as EPFL, ETHZ, HAFL, CHYN, Supsi in order to highlight the opportunities of the water sector and the impacts one can make to trigger the interest of the students. It will also make the link with SWP members offering training courses and/or looking for young professionals and enhance members to be pro-youth or pro-young professionals.

4.3. Non-profit organizations and companies

GIWEH's vision is the cooperation across borders, sharing knowledge and technology transfer with colleagues and partners around the world; it encourages a creative mind set in its organizational culture and fosters innovative ideas. Others building blocks are integrity, professionalism and diplomacy. GIWEH has developed several capacity trainings to students of undergraduate, graduate or postgraduate levels in environmental, political, social and/or economic disciplines and provides them with an opportunity to deepen their knowledge of water and environmental issues. GIWEH also offers internships and summer schools.

Nestlé has set up a young graduate program including mentoring activities.

Other members may have developed youth strategies or specific youth program to target either youth at education level or young professionals. Once the SWP youth strategy is shared with the members, most probably opportunities this will trigger reaction and opportunities for collaboration.

4.4. The Sanitation and Water Entrepreneurship Pact

Five organizations (4 SWP members) have decided to join hands to develop an enabling environment for water entrepreneurs and achieve more impact: Antenna Foundation, cewas, Swiss Bluetec Bridge, Toilet Board Coalition and Waterpreneurs. They target social entrepreneurs with special attention to young entrepreneurs from the South (for instance: cewas start-up program) and from Switzerland.

The SWP will collaborate with this initiative whenever appropriate and raise attention of young professionals on the opportunities linked with this platform.

4.5. Professional Associations

The umbrella association for water utilities (SVGW/SSIGE) organizes yearly a video contest targeting two age groups (i) secondary education from 12 to 15 years old and ii) post-mandatory education from 15 to 20 years-old). The theme is rather broad as the video should show the significant role of water in life development. It aims at raising awareness of youth on water issues. In addition, the association has developed smart marketing tools for drinking water that can be used/rented for events targeting youth.

The Swiss association of professionals working in the area of water resources protection (VSA) has developed recently a youth strategy (to be developed by Soraya). VSA has already collaborated with the SWP by launching a call for sponsoring the SJWP within their network.

Case by case, the SWP will liaise with these two associations to find synergies and opportunities of collaboration.

4.6. Close partners

Within its strategy 2018-2023, the Rural Water Supply Network is placing an emphasis on engaging with young people in the rural water sector with a specific focus on young professionals. Concretely, the RWSN will either liaise with existing organizations that are currently implementing mentorship scheme for young professionals or develop its own mentorship scheme. In addition, the RWSN will enhance the participation of young professionals to its training and capacities building opportunities and support them to participate to RWSN's activities involvement in RWSN themes or RWSN events).

The SWP will enhance Swiss young professionals to join the specific RWSN youth DGroups within the network and explores possible collaboration with RWSN to organize youth events (organized by youth and targeting youth) at key events like Stockholm World Water Week. SWP and RWSN could exchange on their mentoring program (criteria, quality control, results etc.).

5. Action Plan 2019-2021

The Action Plan presented next page will be refined with the SWP members willing to dedicate time to contribute to the implementation of the youth strategy and further budgeted and detailed per year. It highlights the main activities according to education level (gymnasium, tertiary level or post-education stage).

Draft Action Plan 2019-2021 to be fine-tuned with SWP members

Education level	Contribution of SWP members	Lead by SWP secretariat	Synergies with members or external organizations
Gymnasium	<ul style="list-style-type: none"> - Suggesting topics for maturity work - Contributing to the promotion of the SJWP - Sponsoring the SJWP 	<ul style="list-style-type: none"> - Promotion of the SJWP (conception of communication documents, choice of diffusion channels and targets) - Hosting the SJWP in coordination with STO 	<ul style="list-style-type: none"> - Synergy with SYiS promotion activities - Synergy with members actions towards gymnasiums (e.g. ETHZ) - Synergy with SVGW (video contest) - Synergy with Xylem
Tertiary Level	<ul style="list-style-type: none"> - Suggesting topics for MSc work, suggesting research question for PhD - Participation to Student Talks (speakers) 	<ul style="list-style-type: none"> - Connecting with Youth Associations - Participation to Open Days, Job Forums to raise the water profile - Co-organization of Student Talks with youth associations - Triggering participation of youth to SWP events 	<ul style="list-style-type: none"> - Synergy with Academia jobs events
Post-education/ young professionals	<ul style="list-style-type: none"> - Offering an internship - Participation to Job Forum - Adhering to SWP mentoring program - Providing space to test youth ideas and/or solutions - Providing peer-review to youth - Hosting/ Participating to young professionals- expert meeting 	<ul style="list-style-type: none"> - Participation to Job Forums - Creating a catalogue of available water-related internships - Organizing young professionals- water expert meeting - Setting a mentoring program (defining criteria, guidelines and quality control) - Supporting the creation of a young professional working group (exchange platform) - Exploring the feasibility of a SWP JPO - Exploring the relevance and feasibility of a youth water challenge to allow youth to test their ideas/solutions³ (for masters students and/or young professionals) 	<ul style="list-style-type: none"> - Synergy with RWSN mentoring program - Synergy with youth network (e.g. ISW)

³ In the manner of the Geneva Challenge of the Graduate Institute of International and Development Studies

