

# SWISS JUNIOR WATER PRIZE

 SWISS WATER  
PARTNERSHIP



Photo: SYIS

Willisau, September 2019

## Water – a subject that concerns youth

As the need to speed efforts towards achieving the UN Sustainable Development Goals becomes more urgent, youth around the world are increasingly getting involved demanding solutions for the environmental problems we face. In this sense, the concern for water issues is connecting younger and older generations with the common vision achieving a sustainable management of water resources, and speeding efforts towards the UN Sustainable Development Goals, especially SDG6.

The Swiss Water Partnership (SWP) and the Swiss Toilet Organisation (STO) join efforts to grant the Swiss Junior Water Prize, an award to incentivize young students to grow an interest in water and sustainability issues, and to create interaction opportunities between promising young talents and professionals in the Swiss water sector.

The Swiss Junior Water Prize (Swiss-JWP) is awarded to young students between 15 and 20 years old, who have conducted school projects related to water and sanitation with proven environmental, scientific, social or technological significance. The winners of the Swiss-JWP are entitled to represent Switzerland in the international contest Stockholm Junior Water Prize (SJWP), held every year during the World Water Week in Stockholm.

This report provides an overview of the Swiss-JWP 2019, covering the selection process of the winning project, the participation of the winner in Stockholm, and exchange opportunities with actors in the water sector.



Photo: STO

## Young minds inspired by water issues

### General Selection Process

The projects eligible to contend for the Swiss-JWP are selected from those ones submitted to the national science contest Swiss Youth in Science (SYiS). This is a prestigious scientific contest with more than 50 years of history that provides an excellent framework to award the Swiss-JWP.

The process starts with students from all over the country registering projects in the different scientific areas by the end of October. A number of specialized committees in SYiS select and evaluate the projects in several steps over a period of six months, finishing with the National Final taking place at the end of April.

In one of the final steps, a water specific jury appointed by the Swiss-JWP evaluates the projects related to water and gives a recommendation to SYiS for the allocation of prize. The Swiss-JWP is presented during the award ceremony following the final, along with more than 30 special prizes granted within SYiS.

### Members of the water specific jury

- Dr. Christian Zurbrügg. Member of the Directorate Eawag.
- Dr. Johannes Heeb. Co-founder and chairman of seecon.
- Mr. Roger Schmid. Water specialist at Skat Consulting Ltd.
- Dr. Roland Schertenleib. Emeritus member Eawag.

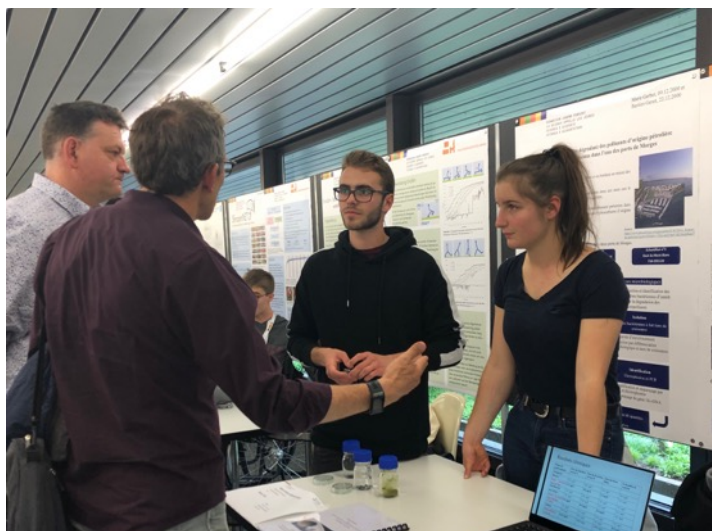


Photo: STO

## Selection process Swiss-JWP 2019

More than 300 students registered to compete at the national science contest and 109 were selected to take part in the finals. 10 of the submitted projects were identified to have been written on water related subjects, 6 from those projects were reviewed in detail, and 3 projects were considered worth receiving the Swiss-JWP

## Winning Project

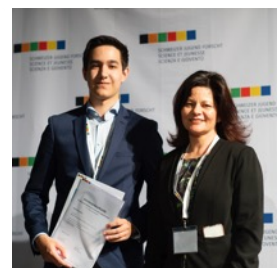
The Swiss Junior Water Prize 2019 was granted to Zamir Borojevic for the project "Tardigrada – Bärtierchen unter dem Einfluss von Säuren/Laugen und UV-C Licht". An extract of the evaluation committee's statement on the project reads:

"The objective of Zamir Borojevic's research project was to characterize and quantify tolerance mechanisms that enable the tardigrades to survive adverse environmental conditions. It is expected that better understanding of the survival mechanisms of the tardigrades will lead to the development of new methods that could enable the conservation of biological material in situ, as well as macromolecules and cells. The drying or freezing of cells usually leads to a massive damage to the cell membranes and proteins. This eventually leads to the death of the cell and ultimately to the death of the organism. Surprisingly, this is not the case with tardigrades. They have the remarkable ability to circumvent such problems and are able to survive complete dehydration, freezing and other extreme environmental conditions such as changes in pH, UV radiation, etc...

...future research on tardigrades could provide fundamental understanding about the interactions between life and water, leading to better ways to cope with environmental and climate changes.



Photos: SYIS, STO, Zamir Borojevic





## Participation at the Stockholm Junior Water Prize

As winner of the Swiss-JWP, Zamir Borojevic was entitled to represent Switzerland at the Stockholm Junior Water Prize (SJWP) during the last week of August 2019. This is the most prestigious event dedicated to water and Mr. Borojevic proved to be a worthy ambassador of Swiss youth, displaying deep knowledge on the subject of his research during the project presentation in front of the international jury.

### Swiss Entry

#### Tardigrades Under the Influence of Acidic and Alkaline Solutions, and UV-C Radiation – Zamir Borojevic

*Tardigrades are very small animals who belong to the taxon of Ecdysozoa, and are found in most water bodies, sediment and moss. They have developed the unique ability to react to rapidly changing environmental conditions by changing their physical characteristics and taking on different stages of resistance. Climate change not only has an influence on temperatures around the world, but it also affects the physical characteristics of different waters, which results in need of adaptation for all organisms living in aquatic ecosystems. The aim is to investigate the tolerance and vitality of *Hypsibius exemplaris* under the influence of different pH values and different dosages of UV-C light and thereby create a diagram for their tolerance and vitality for each experiment.*

Zamir Borojevic presented his research work using an iPoster along with samples of experimental material.



Photo: STO

## Contest and related activities

A total of 56 finalists from 35 countries submitted written projects to enter the SJWP at the beginning of June. During the contest week in Stockholm, each finalist was interviewed by the 7 members of the jury who had previously read and evaluated the submitted projects. The Swiss contestant was interviewed on Monday 26<sup>th</sup> August in the second group of finalists.

Besides the interviews by the jury and the projects' exhibition framed within the World Water Week, the contestants attended a series of events that encourage intercultural exchange and strengthen friendship bonds among the participants. They were also the main actors during Malin Falkenmark's Young Scientists Symposium on Climate Change, where the finalists submitted a common Youth Statement on Water and Climate Change to be included in the final review of the World Water Week. The highlight event was the award ceremony of the SJWP, where the finalists had the opportunity to meet H.R.H. Crown Princess Victoria of Sweden, patron of the prize.

## Winning project

Winner of the Stockholm Junior Water Prize 2019 was Macinley Butson, from the Australia, for her project "The SODIS Sticker – Development of an Inexpensive and Deployable Film-based Detector for Accurate Ultraviolet Solar Disinfection (SODIS) of Water"



Photo: SIWI

## Engaging Swiss Youth in the Water Sector

One of the main goals of the Swiss-JWP is to propitiate opportunities for youth to exchange with professionals in the Swiss water sector; these exchanges aim to foster the interest of youth in water issues and support them in the development of water relevant projects.

### **Exchange with members of the Swiss Water Partnership**

As part of the SWP Youth Strategy, the members of the SWP stay open to support the winners of the Swiss-JWP. In preparation to his participation in Stockholm, Zamir Borojevic was invited for a coaching session at the offices of Skat Consulting, Ltd.. Water experts listened to the project presentation, formulated interesting questions to Mr. Borojevic and gave him suggestions for improvement. During the World Water Week in Stockholm, Zamir Borojevic had the opportunity to attend events organized by the SWP at the Swiss Booth, where he exchanged with experts of the Swiss water sector and representatives of the Swiss Embassy in Sweden.

### **Further Exchange Opportunities**

At the beginning of March 2019, Xylem, Inc. provided an interesting opportunity at their local Town Hall Event, where the winner of the Swiss-JWP 2018 along with other young talents exchanged with water experts. Further similar events are expected to be carried out in the following months.



Photo: STO

## The young scientist talks about his experience

**"The World Water Week in Stockholm was a wonderful experience. As the winner of the Swiss Junior Water Prize, I'm grateful for having the opportunity to have participated in the Stockholm Junior Water Prize competition.** I didn't expect to even win a special prize at Swiss Youth in Science but as I realized that my research got its unexpected recognition, I was overjoyed. Soon after receiving the Swiss Junior Water Prize preparations began. Thanks to Karla Schlie, my National Organizer, I was provided with every information and support I needed as well as had the opportunity to go to a coaching session for my interview in Stockholm at Skat Consulting Ltd. I expected an event with way less activities, less connecting between the finalists and less fun while attending the World Water Week than it actually was. I'm so glad to have been proven wrong.

At first, I was a bit skeptic as to how things will go and how comfortable I will feel in this new environment, but these worried thoughts vanished in a blink of an eye. We were 56 finalists from 35 different countries, from different cultures and different lifestyles. This didn't hold us back to bond throughout this week. We grew to a big family, due to different activities, same mindsets and having fun at any time. Most of us arrived on Saturday and prepared for the interviews on Sunday and Monday. Depending on which day we had our interviews, we did a city tour through the old town of Stockholm and got some free time in the city. Tuesday morning, we visited Xylem's office and got an incredible insight in what they're doing, how their plans in the future look like and what major concerns they have about water.



Photo: STO



In the evening was the big ceremony. We met HRH Crown Princess Victoria, who also awarded the Stockholm Junior Water Prize, we represented our country and went to an after party after the ceremony and dinner. The KTH Royal Institute of Technology in Stockholm was our next destination on Wednesday and in the afternoon the royal banquet awaited us. It was a thrilling experience attending the award ceremony for the Stockholm Water Prize and eating dinner in the Golden Hall with the King and Queen as well as the Stockholm Water Prize Winner Dr Jackie King. But our journey was not over yet. Thursday was the day where the Falkenmark young scientist symposium on Climate Change took place, where we could meet many water experts and listen to their message to the youth. Later that day we ate dinner at the Brazilian Chambers of Commerce. After all of those activities, there was only one thing left for us: the last party and dance at our hotel until the first few members of our new family had to leave for their flight. My favorite memory of this whole journey isn't connected to a single occasion but to all times I could bond with my new and amazing friends I could make with whom I am still in contact. The whole week opened our eyes to different water related problems around the world and what solutions could prove useful in the future, but that is not everything. The memories we created in this week, the people we met, connections we made and the family we built together has taken a special place in my heart. I'm honored to have been the Swiss finalist for the 2019's Stockholm Junior Water Prize."



Photos: SYIS, SIWI, STO, Lila Roumeliotou

## Partners and Sponsors

A key success factor for the Swiss-JWP is a strong network of partners and sponsors. Joining efforts for youth and water ensures that the objectives of awarding the prize can be achieved. Partners of the Swiss-JWP are:



The Swiss Water Partnership hosts the Swiss-JWP and facilitates access to SWP members for the winners to get an insight into the water sector.



The Swiss Toilet Organisation is the National Organiser of the Swiss-JWP and coordinates all activities for the winners of the Swiss-JWP to take part in the international final in Stockholm.



The Stockholm International Water Institute grants the Stockholm Junior Water Prize. The Swiss-JWP is selected following the criteria established by SIWI.



Swiss Youth in Science is the national science contest that frames the award of the Swiss-JWP, along with more than 30 special prizes granted yearly to young researchers.

### Sponsors of the Swiss-JWP 2019

Skat Consulting Ltd.

St. Gallen, SG

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Schaffhausen, SH

seecon – society·economy·ecology·consulting

Luzern, LU

Special thanks to the various sponsors who supported the prize this year and preferred to remain anonymous.

## Join in and support youth

The Swiss-JWP originated from the interest of SWP and STO to encourage youth to get involved in the water sector and contribute towards solving the global water challenges. Both organizations are committed to explore further opportunities for young talents with a passion for water and sanitation. If you or your organization are interested in collaborating in this project, we will be pleased to hear from you.

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