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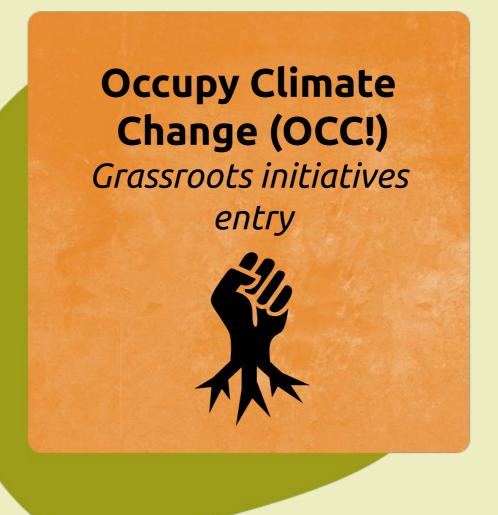












Figure 1. KTH Students mobilizing for the global climate strike on September 27, 2019. KTH Student for Sustainability stand at the front right. Photo by: KTH Innovation.

KTH Students for Sustainability: Sea levels are rising and so are we students - Emile Lemaitre, 2020

As a response to insufficient climate action from national and international governance levels, grassroot initiatives are emerging to address the climate crisis. Most Swedish politicians acknowledge the necessity to act, but the actions and strategies are not aligned to the magnitude of what has started, and what lays ahead. In 2018, Greta Thunberg began her weekly school strikes for the climate (*Skolstrejk för klimatet*) outside the Swedish parliament demanding the government to reduce emissions in accordance with the Paris Agreement (Fridays for Future, 2020). The movement rise with Friday's for Future, and during the global climate strikes in September 2019 around 4500 strikes spanned over 150 countries across the world (Milman, 2019).

Simultaneously as children strike for their future, students are organizing sustainability and climate networks at universities, from Stockholm School of Economics' SSE Students for Climate Action, Karolinska Institute's Klimatföreningen, to Royal Institute of Technology's KTH Students for Sustainability. Universities are role models for society where knowledge and science for sustainable development flourish, but their internal work to reduce carbon emissions lack behind. In 2019, the engineering school of Stockholm, KTH Royal Institute of Technology, was ranked as one of the top ten leading universities regarding the United Nations' Sustainability Development Goals (SDGs). For SDG 9, Industry, innovation, and infrastructure, the university ranked in 3rd place. But in the eyes of students the simple waste infrastructure at the main KTH campus on Valhallavägen has sometimes, quite honestly, been horrible (*see figure 2*). Regarding SDG 13, Climate action, KTH is ranked 9th (Gummeson, 2019) and the university has recently set ambitious climate goals. Until 2022, KTH aims to become climate neutral regarding their scope 1 emissions and by 2025 regarding their scope 2 emissions (KTH, 2019). Nevertheless, it stays unclear whether universities such as KTH, or stakeholders at all levels, from governments to enterprises, understand the real urgency and magnitude of the climate issue, and the required magnitude of necessary actions.

At KTH, students have since 2018 organized KTH Students for Sustainability (SforS) (SforS, 2020a). The group states that their purpose is "to bring people together, to empower KTH students engaging with sustainability issues and to create an environment of collaboration among sustainability initiatives. We work in unison with Klimatstudenterna KTH". SforS raises climate and environmental awareness amongst students, mobilizes KTH students for climate strikes and pressures KTH to lead the way in sustainability, climate action, and to really "practice what they preach" (KTH Students for sustainability, 2020; Nießner, 2020a; KTH Students for sustainability, n.d.). The organization is so far based on KTH's main Campus Valhallavägen in central Stockholm, but initiatives have existed to expand to KTH's other campuses in Kista, Solna, Flemingsberg, and Södertälje (Nießner, 2020a). Currently, the organization has around 15 active members consisting of the board and the teams. Additionally, roughly 50-60 passive members either want to become active or are only interested to stay updated on what is going on (Nießner, 2020b).

SforS works in three main ways: by encouraging collaboration, educating students on sustainability topics, and conducting own initiatives and projects. The organization collaborates closely with Klimatstudenterna KTH (KTH Climate Students) and it is sometimes impossible to distinct where to draw the line between the two organizations at KTH (Nießner, 2020a). SforS consists of five main teams: collaboration, celebration, campus, climate, and communication. The Student Sustainability Forum nurtures ideas and solutions through collaboration with various stakeholders and students with diverse backgrounds by organizing events and workshops. The celebration team aims to build a strong internal community. The campus team strives to make KTH Campus more sustainable and the communication team promotes events, raises awareness, and supports the other teams. The climate team promotes climate action, organizes lectures, and raises awareness (Nießner, 2020c).

Essentially, Klimatstudenterna KTH is representing the climate team (Nießner, 2020a; SforS, 2020d). Klimatstudenterna is a student movement with local groups across primarily Swedish universities that aims to bend emissions to stay below 1.5 °C average global warming (Klimatstudenterna, n.d.). SforS in contrast are larger in their scope and works with sustainability in general, with a focus on environmental issues and solutions. Nevertheless, climate change remains a center of attention for the organization. Work is conducted that tackle the issue both directly and indirectly through other sustainability projects (Nießner, 2020a).

One of SforS' biggest tangible achievements is improving the waste management on Campus Valhallavägen. Students realised the campus is not as sustainable as they thought, and they were disappointed by the improper waste sorting. By collecting a petition of 470 student signatures and collaborating with the KTH Sustainability Office and the KTH Library, a test run has been implemented in the library with 9 different sorting bins (see figure 2 and 3 for comparison). The aim is to enlarge waste sorting to become the new status-quo on campus (SforS, 2020c).



Figure 2. Waste handling in the library before implementation. Photo by SforS, 2018.



Figure 3. New sorting modules in the library. Photo by SforS, Mars 2020.

It is a fact that students drink a lot of coffee, and unfortunately this generates waste. To tackle this problem and encourage a circular economy, SforS has implemented reusable coffee cups together with Loop-it, the Swedish Environmental Research Institute (IVL), and three restaurants and cafés on Campus (see figure 4) (SforS, 2020c; Loop-it, 2020). The reuse infrastructure is implemented, but cafés where forced to close during the COVID-19 epidemic in spring 2020, and currently only a few are using it. Thus, it is a success but requires more progress and promotion, which SforS is currently working on (Nießner, 2020a).

With Klimatstudenterna KTH, SforS have organized KTH students for several climate strikes and by these raised public awareness on the climate crisis. The biggest gathering occurred on the 27th of September 2019, where more than 500 KTH students came together to join the global climate strike (*see figure 1*) (SforS, 2020d).



Figure 4. How the reusable cup system works. By loop-it, n.d.

Moreover, SforS have had some collaborative workshops internally on Campus with the student chapters. The Student Sustainability Forum is planning to collectively with all chapters develop a sustainability policy for the chapters. The campus team aims to "reduce the environmental impact of food consumed at KTH" and propose KTH to set plant-based food as the default option, while still keeping animal based food as an option (SforS, 2020e). The campus team is working on creating a smart map for KTH, similar to Smarta Kartan in Gothenburg. According to SforS "this map will collate all the relevant sharing-projects and activities on campus as well as around our neighborhoods and provide students with useful information about where and how they can find shared resources easily" (Göteborgs Stad, n.d.; Nießner, 2019; SforS, 2020f). Furthermore, the organization is providing and collecting useful information to students on their website on waste reduction, as where to rescue food in Stockholm; secondhand goods; and traveling, with maps on biking pump stations in Stockholm and a sustainable travel guide (SforS, 2020g).

KTH Sustainability Office works with integrating environmental concerns and sustainable development in KTH's education, research, and cooperation. They are responsible for environmental sustainability on Campus and KTH's environmental management system (KTH, 2020). One of SforS's key tasks is to collaborate, attend meetings, and give input to the office to improve the sustainability work on Campus (Nießner, 2020a). In return KTH Sustainability Office helps finance certain projects for SforS (Nießner, 2020c). The organization work as a node between the students and the KTH Sustainability Office. In an interview with SforS's current president Silvio Nießner (2020a) he mentions his personal view on KTH Sustainability Office and their collaboration. He pinpoints that at most universities there are one, maximum two persons that does not even work full time with sustainability. At KTH Sustainability Office, there are 10 people (where at least some) work full time with it – this is unique (Nießner, 2020a; KTH Sustainability Office, 2020). Additionally, he explains how the office welcomes everyone for discussion, from professors and researchers, to students and staff (Nießner, 2020a).

In the interview with Silvio (2020a), he mentioned how it is sometimes hard for SforS to ensure constant communication with the office so that "we know what they do, and they know what we do". This is partly because all active members work with the organization aside of their university studies

and must balance time and effort with school and other activities (Nießner, 2020c). Currently, the office does not use any communicational platform or social media channels; he explains that "if they do good stuff, they cannot show it". Thus, they rely on SforS to show progress to the students (Nießner, 2020a). By attending meetings with the office on KTH's strategic sustainability goals, Silvio (2020a) describes how the discussions were often based on negotiations rather than scientific evidence.

While observing actions taken today Silvio thinks more will be needed by KTH and other universities in order to be aligned with the 1.5 °C target. In Germany, Fridays for Future has demanded a study on what practical actions are required right now to stay below the threshold. Similar studies could guide KTH, other universities, and governments. Nevertheless, firstly, science-based targets must be set that are aligned with the 1.5 °C target. Secondly, he thinks that KTH should focus on reducing staff's flight emissions. Students representing Klimatstudenterna from four universities in Stockholm, including Björn Nordin from KTH recently published a debate article in the sustainability news journal Aktuell Hållbarhet (*in English*; "Topical Sustainability") demanding universities to reduce their flight travels. Carbon budgets, which encourage alternatives to flying are already used by some working groups at KTH but is not generally implemented throughout the university (Nießner, 2020a).

While SforS's focus stays at KTH, the organization does together with Klimatstudenterna KTH have external contact with other local Klimatstudenterna associations throughout Swedish universities, from Malmö University and Lund University in the south to Uppsala University, and Luleå University of Technology in the north (to name a few) (Nießner, 2020a; Klimatstudenterna, n.d.). In Stockholm, SforS are in contact with local university student associations that work with climate and sustainability. Many ideas for collaboration projects exist such as creating a Stockholm sustainability guide (Nießner, 2020a).

Silvio (2020a) believes that SforS's main strength is that they practically manage the organization. They have a basic setting, some funding for projects, and an office place. They are recognized by KTH and asked for their input on sustainability. The organization's biggest current challenge is that they are understaffed, and this restrict them to develop and expand projects (ibid.). As abovementioned, the organization currently has around 15 active members spread throughout the board and the different teams (Nießner, 2020b). As for many organizations, the current epidemic does not make it easier to recruit people, neither to engage people online. "Maybe we do it wrong" he says pinpointing that it as a challenge. Furthermore, since the organization mostly consist of international students', members usually stay no longer than two years. As Silvio (2020a) explains "you need half a year to on-board them, they work half a year, and then they hand over half a year. Basically, you are always in the process of handing over and never getting into the working stuff."

While asking Silvio (2020a) on politics and SforS he replies that he do think the organization takes a political stance. "We support Fridays for Future; we are also going on the street to protest." When it comes to tendencies of left or right-side politics, he tells me that "we are politically independent and do not accept any form of discrimination or racism", (Nießner, 2020c) "we are mostly international students that are not active in Swedish politics". To summarize, he explains, "we are fighting for a purpose, and with that purpose comes a political direction, not a political party, but a direction".

Climate activists and some journals such as The Guardian have started to incorporate alternative terms to climate change such as 'climate breakdown' and 'climate crisis' to highlight the urgency and importance of the issue (The Guardian, 2019; Extinction Rebellion, 2020; Fridays for Future, 2020). In contrast, according to Silvio (2020a) the tendency of SforS is towards a positive approach and to be solution oriented. This is something he has noticed while designing the signs for the climate strikes.

He describes the importance of "not getting captured in the loop of what is the problem and we have so many problems but what could be a way out of that?".

To summarize, multiple stakeholders on different spatial and temporal levels benefit from SforS's work while some might also indirectly lose. Silvio (2020a) mention how the organization's activities are linked to consumption and travel, and this is always a trade-off. This consumption is linked to the current configuration of the economy, and indirectly, people and planet gets negatively affected. Nevertheless, the organization has almost certainly a net positive impact. For KTH they are practically a free workforce, and visual effects are already emerging on Campus Valhallavägen. By bringing people together they have built a forum for sustainability interested students. The organization raises awareness and encourage students to take environmental action through different events, workshops and lectures and drive students toward more sustainable practices. As Silvio says, they have been able to create a sense of community for the people of the organization and say "hey, there are other mindlike people who care as well!".

KTH and other Swedish universities are role models for Sweden, and SforS steer KTH a step in the right direction. Subsequently, Sweden is internationally a role model for sustainable development and in 2020, the country ranked at 8th place in the Environmental Performance Index¹.

Collectively, the youth, the striking school children, and university students abroad and in Sweden such as Stockholm School of Economics' SSE Students for Climate Action, Karolinska Institute's Klimatföreningen, and KTH Students for Sustainability are rising. They demand their universities to lead the way and to practice what they preach (Klimatstudenterna KTH, n.d.). The young generation are the future lawyers, engineers, and politicians. But we know well that the future cannot wait and that the climate crisis requires action now. So, while sea levels are rising so are we students.

¹ To put things in perspective, WWF's Living Planet Report 2016 concluded that if the world followed an average Swedish lifestyle with its related ecological footprint, we would require 4.2 globes (von Zeipel, 2016).

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Figure 5. Me at the front, Silvio to the right, and other KTH students at the Global Climate Strike at Medborgarplatsen, Stockholm. 20th of September 2019.

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Figures

Figure 1. KTH students on Campus preparing to join the Global Climate Strike. From KTH Innovation, September 27, 2019. Reprinted with permission by Lisa Bäckman at KTH Innovation. Available at: https://www.facebook.com/events/2921515534544573/?active_tab=discussion

Figure 2. Waste handling in the library before implementation. From KTH Students for Sustainability, 2018. Reprinted with permission by SforS (Silvio Nießner). Available at: https://sites.google.com/view/kthsfors/sfors-teams/campus/waste [Accessed 2020-11-07].

Figure 3. New sorting modules in the library. From KTH Students for Sustainability, Mars 2020. Reprinted with permission by SforS (Silvio Nießner). Available at: https://sites.google.com/view/kthsfors/sfors-teams/campus/waste [Accessed 2020-11-07].

Figure 4. How the reusable cup system works. From loop-it, n.d. Reprinted with permission by loop-it. Available at: https://sites.google.com/view/kthsfors/sfors-teams/campus/waste [Accessed 2020-11-07].

Figure 5. Me at the front, Silvio to the right, and other KTH students at the Global Climate Strike at Medborgarplatsen, Stockholm. Photo by author, September 20, 2019.