COMMITTEE 2

P1: Dam good solar – Efficient use of water infrastructure by solar panels

Due to the high use of energy, fossil fuels are destroying the planet. To satisfy the consumer's rising demand, a solution like “Dam good solar” can provide energy without using any more space which helps to preserve the natural ecosystem by building solar panels on dams.

In fact, the burning of fossil fuels is invading our air with greenhouse gases because of the exploitation by humans. Due to this problem, people started thinking about possible replacements for these fundamental energies. At the same time, the increase of consumerism since the late 1940s saw an increase in building throughout the Alps, which is now visible with the lack of space on livable lands. That is why finding renewable energies that do not harm the environment and fit among the accommodations should be a priority.

The mountainous regions in general are largely exposed to the sun. Indeed, these receive an average of 300 days of sunshine per year, and less then 10% of all this energy is used. Furthermore, Alpine regions developed hydroelectric power, leaving vast facades, mostly with significant sun exposure, empty.

“Dam good solar” would be a concept where the dam's frontages would provide benefits, rather than just being there. According to a study in Switzerland, fixing solar panels on every dam could provide 8% more energy to the country. A part of that produced energy could also be reserved for the dam it is fixed on, in case some is needed to pump the water up or to start the turbines.

Moreover, research shows that snow isn't an actual problem in winter for the solar energy harvesters. As the dam's facades are very steep, the snow will just slide down the panels, only leaving the frost layer. The photovoltaic cells will heat themselves up with their own energy to melt the frost and prevent them from breaking in cold temperatures. The systems would be supervised by the companies in charge.

COMMITTEE 3

P3: Graduate with impact

We propose that every student must complete an obligatory climate project during their school career as a requirement for graduation. This project can be done in different formats, which would move climate education from theory to practice and contribute to long-term public awareness.

With climate change being one of the biggest global threats, high-quality climate education is more important than ever. Inspired by the CAS-projects (self-organized projects where students create, stay active or help others while learning from real life experiences) of the IB-Diploma program, fulfilling the project is a requirement for graduation. This could be implemented in the school system of alpine countries as well, however with an environmental focus. The project can be done either individually or in groups and should go beyond factual knowledge, be holistic and interdisciplinary. Students can choose between different formats, empowering young people to see themselves as part of the solution and help them to develop a more sustainable behavior. Examples for such projects could include things like reflecting on their own ecological footprint, conducting research, doing an internship at sustainable companies and organizations, personal challenges and projects, or even organizing an active initiative

tackling global climate change. The projects would not be graded traditionally, instead students must demonstrate genuine engagement confirmed by supervising teachers. The reflection and process of the project does not necessarily be in written form, but the results have to be presentable and documented in some way. In this the aim would not necessarily be to achieve perfection, but to encourage personal reflection and real engagement in the matter by an active experience of challenges for students.

COMMITTEE 3

P2: Module nature

Every mountain guide, instructor, and coach has a responsibility to protect the environment they work in. Therefore, we suggest a mandatory module in their required training on climate awareness, which covers both the environmental impacts of their sport, and how to actively reduce them.

To become a classified guide, instructor, or coach, certain training is required. This training includes multiple modules, ranging from sport-specific skills to handling worst-case-scenarios. The curriculum could be expanded by introducing a new module, which would teach guides, instructors, and coaches on how to preserve, treat, and respect the natural environments of their working space. It is also essential that they understand the consequences of not applying best-practice. These skills would include respecting and not disturbing wildlife and understanding the importance of every part of ecosystems. Therefore, they would be familiar with the impacts of their sport as well as their actions. By developing these skills, the instructors, guides, and coaches can preserve nature and pass their knowledge and skills on to their customers. This provides a guarantee that they know how to behave in a way that protects and preserves the environment.

COMMITTEE 1

P2: New Land, New Life - Let Nature Thrive

To address the management of glacier forefields, we propose their designation as natural parks to ensure the long-term protection of the ecosystems that will emerge in these areas.

Numerous models on glaciers predict that by the year 2100, about 90 percent of Alpine glaciers will have melted leaving behind a great abundance of land called glacier forefields. On this patch of land new ecosystems develop, with unique species and dynamics. We would encourage local governments or organizations to make glacier forefields and the surrounding land into natural parks or reserves. This way plants and animals can naturally inhabit the area. It’s important to protect these areas so we can preserve these one-of-a-kind habitats and the uniqueness of the Alpine region and promote biodiversity. If the area is safe, it will also provide a beautiful hiking area for tourists and locals alike. We plan to implement this around smaller glaciers that have a surface area of up to two square kilometres. In the long term when plants grow, they stabilize the soil, preventing landslides, and larger plants provide obstacles that slow down avalanches. This protects the valley from damage.

COMMITTEE 2

P2: Watt’s in the water

In the Alpine area hydroelectric power is widely used but not utilized to its full potential. The solution is “Watt’s in the water”, that builds upon preexisting facilities with the integration of small and efficient turbines to produce electricity.

The construction of new dams has long damaged ecosystems and landscapes. “Watt’s in the water” does not change micro environments because it uses drinking water pipes which are already present. The water comes from a reservoir at a higher altitude, which is typical for mountain villages. It then descends to a lower point as it builds up high pressure. Along the way it distributes water to households. Water that is not used then goes to the lowest point where a micro hydro facility is located. There the water turns a turbine which produces electricity. The system is suitable for almost every site in the Alpine region. Because water pipes are underground, they are not visible and therefore are not aesthetically disruptive. In addition they are cheaper and easier to install than conventional hydro power facilities. Since you can cut off part of the network, it is easy to maintain. If there is not enough water the turbine automatically turns off. “Watt’s in the water” can provide Alpine villages with clean energy without further harming the environment.