

## CLIMACT Starting Grant – Project ideas

This document presents project ideas to inspire applicants in the call for proposals “CLIMACT Starting Grant”. The following ideas list the potentialities discussed during the CLIMACT Workshop of 26 January 2021, together with the people interested in these topics and their institution of affiliation.

### **Climate and health: Moving from Planetary Health global principles to meaningful community actions**

Description:

The role of health care professionals and possible framework for research that integrates health and climate change into clinical and public health meaningful interventions.

People who showed interest in the topic:

Nicolas Senn (UNIL), Maria del Rio Carral (UNIL), Nicola Banwell (EPFL), Miriam Tola (UNIL), Nathalie Chèvre (UNIL), Laine Chanteloup (UNIL), Stéphane Joost (EPFL), Christelle Oltramare (Unisanté), Hélène André (UNIL), Delphine Amstutz (Unisanté), Kevin Vallo (Hôpital Fribourgeois), Jacques Cornuz (Unisanté), Laurence Moeri (Unisanté), Bengt Kayser (UNIL), Alain Kaufmann (UNIL), Julia Gonzalezholguera (UNIL)

### **Climate and social sciences, from individual behavior to collective action**

Description:

Possible ways to stimulate individual, collective and institutional behaviors aiming at addressing climate change. Much is known about factors that facilitate vs. hinder such behaviors, but research is needed to address the challenges of actual large-scale implementation, from education to social movements, to policy making. Large-scale implementation requires new research on how to reconcile possible contradictions between individual and collective interests, how to articulate individual and collective action in a multi-level fashion, and how to identify thresholds that determine when it is possible to move from individual behavior to collective action.

People who showed interest in the topic:

Fabrizio Butera (UNIL), Claudia Binder (EPFL), Christina Hertel (EPFL), Ruediger Fahlenbrach (EPFL), Maria Hecher (EPFL), Anna Jasinenko (UNIL), Yasmin Schwegler (UNIL), Nicolas Margas (UNIL), Arindam Roy (EPFL), Ulrich Hoffrage (UNIL), Fantine Surret (UNIL), Robert Avery (UNIL), Anna Pagani (EPFL), Anne de Muralt Vocat (UNIL), Julian Marewski (UNIL), Lea Valentina Lancini (UNIL)

### **Climate, economics, political and legal science: A focus on governance, public policy and justice**

Description:

Exploration of how economics, political and legal sciences in EPFL & UNIL can contribute to raising climate ambition and action, either with other programs/projects (assisting with local climate plans, energy scenario/modelling, accompanying industrial policy) or through projects with major

focus on getting economic incentives right for protecting the climate, legal changes, institutions and governance and evidence from political science. The goal is to align diverse scientific approaches of economic/legal/political science and capacities to develop new research and engagement directions on climate relevant to governance, public policy and justice. The aim is that evidence-based public policies can contribute to save the planet.

People who showed interest in the topic:

Julia Steinberger (UNIL), Dominic Rohner (UNIL), Dominique Foray (EPFL), Anna Katharina Keil (UNIL), Christian Arnsperger (UNIL), Adèle Gaveau (UNIL), Jose Ibarra (UNIL), Lucile Maertens (UNIL), Matthieu Galvez (ETHZ), Lea Trogrlic (EPFL), Paula Cacault (EPFL), Jerome Voumard (UNIL), Jean-Christophe Graz (UNIL), Livia Fritz (EPFL)

### **Urban challenges, mobility and territorial management**

Description:

How to address the challenges posed by climate change in Swiss urban and territorial settings through geographical, environmental, urban and architectural tools. With a specific focus on the links between health, mobility and biodiversity, we will consider two potential stages of collaboration, a) urban and territorial analysis linking the quantitative and qualitative aspects of the urban and territorial to address both the ecological and sociotechnical issues at stake in a holistic way, and b) which systemic and transcalar schemes could bring together the different approaches and levels of intervention present at both Unil and ENAC/EPFL to actively intervene in our cities and territories towards a more sustainable future (from material science to building design, urban, infrastructural and territorial planning, mobility networks, etc.).

People who showed interest in the topic:

Dieter Dietz (EPFL), Lucía Jalón Oyarzun (EPFL), René Véron (UNIL), Céline Rozenblat (UNIL), Patrick Rérat (UNIL), Antoine Vialle (EPFL), Maxime Vincent (UNIL), Alexandre Alahi (EPFL), Pekka Halla (EPFL)

### **Natural hazards and how they change**

Description:

How climate change is intensifying natural hazards that can cause tremendous impacts on societies, the environment, and economic wealth of affected regions.

People who showed interest in the topic:

Marie Violay (EPFL), Niklas Linde (UNIL), Alessandro Cicoira (EPFL), Marj Tonini (UNIL), Valerie Chavez (UNIL), Klaus Holliger (UNIL), Silvia Hostettler (EPFL), Johan Gaume (EPFL), Michail Styllas (EPFL), Michel Jaboyedoff (UNIL), Fatemeh Zakeri (UNIL), Anne Oppliger (Unisanté), Maud Hemmendinger (Unisanté), Christophe Lambiel (UNIL), Alessio Ferrari (EPFL), Dimitrios Lignos (EPFL), Raphaël de Fondeville (EPFL)

### **Natural environment**

Description:

To explore how research on natural environments in EPFL & UNIL can contribute to raising climate ambition and action, either by connecting different research fields and disciplines, or by making the consequences of climate change more tangible for the public.

People who showed interest in the topic:

Julia Schmale (EPFL), Marie-Elodie Perga (UNIL), Pascal Vittoz (UNIL), Charlotte Grossiord (EPFL), Tom Battin (EPFL), Georgina King (UNIL), Ghislain Motos (EPFL), Johanna Marincarbonne (UNIL), Andrea Arangio (EPFL)

### **Modelling Platform - taking Earth System Models to society**

Description:

Models are ideal tools to explore the possible effects of actions on a complex system, such as the global climate, a catchment, or the economy. While individual models are often tailored for a specific type of data, combining different modeling frameworks and associating the related expertise can bring unprecedented advances. This working group will discuss ways to bridge numerical representations of natural and social systems, such as to address questions that cannot be tackled with disciplinary frameworks.

People who showed interest in the topic:

Grégoire Mariethoz (UNIL), Athanasios Nenes (EPFL), Simon Scheidegger (UNIL), Stefan Schmalholz (UNIL), Marco Picasso (EPFL), Devis Tuia (EPFL), Antoine Guisan (UNIL), Julien Gamarro (EPFL), Mária Lbadaoui-Darvas (EPFL), Georgia Sotiropoulou (EPFL), Paraskevi Georgakaki (EPFL), Eric Jondeau (UNIL), Daniela Domeisen (ETHZ), Fernando Porté-Agel (EPFL)

### **Observation platform: MOUNTEGAL Multi-site Observatory of Urban and Natural Environments and Testing Ground in an Alpine Landscape**

Description:

The observatory and testing ground aims to provide a platform that allows integrated projects that probe the intricacies of implementation of technological and policy actions in the diverse mountain ecosystems. The observatory aspects will include instrumented plots while the testing ground intends to offer the opportunity for real-life deployment of technologies and policies.

People who showed interest in the topic:

Rizlan Bernier-Latmani (EPFL), Stuart Lane (UNIL), James Irving (UNIL), Anders Meibom (EPFL), Alcherio Martinoli (EPFL), Jan Skaloud (EPFL), Stéphanie Grand (UNIL), Iago Otero (UNIL), Davnah Payne (UNIBE), Christophe Randin (UNIL), Satoshi Takahama (EPFL), Nicola Pontiggia (EPFL), Hendrik Huwald (EPFL)

### **Energy system, buildings, climate and sustainability**

Description:

Energy system encompasses the supply of the society's energy services from resources. Its emissions contribute to about  $\frac{3}{4}$  of Global Warming Potential. The transformation of the current fossil-based energy system to CLIMACT compatible and renewable based system is a challenge

that implies changes in behaviors, technologies, infrastructures and business models. The transformation needs to focus on the mitigation of GHG emissions but also the resiliency, security of supply, sustainability and economic viability. A holistic and systemic approach addressing the competition between technologies within given physical and socioeconomic constraints, accounting for the life cycle perspective & multiple impact indicators and considering the nexus between energy and material circularity is key to go beyond a-priori solutions and shed light on the numerous trade-offs of a sustainable solution.

People who showed interest in the topic:

François Maréchal (EPFL), Manuele Margni (HES-SO - EPFL), Suren Erkman (UNIL), Mario Paolone (EPFL), Yasmine Calisesi (EPFL), Giovanni Decesare (EPFL), Ambrogio Fasoli (EPFL), Romano Wyss (EPFL), Simone Amorosi (EPFL), Evelina Trutnevte (UNIGE), Dolaana Khovalyg (EPFL), Verena Barthelmes (EPFL), Antoine Guillemin (EPFL)

**You can contact CLIMACT at [calls@climact.ch](mailto:calls@climact.ch) for more information about the call for proposals “CLIMACT Starting Grant”, and more details about the discussions and outcomes of the above-mentioned workshop.**

C. Nault 07.07.2021