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T7 Task Force Climate and Environment

POLICY BRIEF

COMMUNITY CLIMATE CLUBS TO MOTIVATE AND SUPPORT PERSONAL ACTION FOR AN EQUITABLE WORLD

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Abstract

The health and vitality of our planet should not be in the hands of a select few individuals, organizations, or governments. The wellbeing of the planet should be in the hands of each individual whether in a family, a neighborhood, working in organizations, governments or corporations. In the current landscape, many individuals and communities are either unaware of the magnitude and scope of the climate crisis, or if aware, they feel powerless to do anything to create change. Progress to an Equitable World Climate action must be translated into something K-12 students, rural, poor, urban, vulnerable individuals, and all working people and all communities can see that they benefit from. To succeed, individuals and communities must be the driver of this transformation. Once aware as an individual, the second part of this proposition is to increase the sense of personal agency by connecting individuals with a group/club/community which forges a common purpose and becomes the source of more powerful collective agency to address the need and purpose. Through project-based learning and community endeavours, science and engineering challenges and the Emissions Clock, each person can witness their own and the group's efforts making a difference and feel incentivized and motivated to make better choices. Fridays for the Future, CAN - the Climate Action Network in the UK, CBS Climate Club in Denmark, Earth Team in the US are already underway and represent networks with which we can connect. Corporations like SAP are highlighting the need for sustainability standards which SAP is in a unique position to accelerate implementation across the global supply chain. It is not enough just to look at the climate data, people must make sense of the data holistically, including ecosystem, economic, climate, human well-being aspects, to understand and appreciate how the impact of climate change is causing harm to them and their community. But there is also good news: Benefits from improving resilience and mitigation of climate change risk could improve well-being, reduce waste, and help people reconnect to the world they live in. The Circular Economy and Sustainability standards have powerful advocates in the German government, the European tech giant, SAP and major philanthropies like the Ellen MacArthur Foundation. Early Warning systems cannot be organized in elite institutions and developed by scientists – everyone has a role, at school, at play, in our homes and at work, in our day-to-day lives. We recommend Community Climate Club Competitions to engage everyone in corporations, schools and universities: students, parents, teachers, all working people - applying their cooperative energy to effective action and impact.

Challenges

1. **Carbon emissions data and the potential effect of individual behaviour on the cumulative effect of emission and the tremendous impact those emissions are having and will have on everyone’s lives and well-being.** (Strong C. et al 2021). The data visualisations of climate change are aimed scientists and policy makers (Florea N. 2021) and are not easily understood by - teachers, journalists, students, parents, grandparents; Families hesitate to raise the topic. (Wright-Gladstein, A.,2021)
2. **Climate care has not been a sufficiently collaborative endeavour in countries or between countries** (Euronews, 2021).
3. **Individuals are not educated or informed** about the climate crisis and their individual impact or what they can do to respond to the challenge (Kwauk, C., Winthrop, R., 2021).
4. **Existing data efforts do not take a holistic view that embeds other phenomena beyond climate information into account.** It is not enough just to look at the climate data, we must take the data “in the round” including all economic, social, human well-being data, to understand how the impact of climate change is causing harm. (Grue, C., 2019)
5. **We have no equivalent of a “Global Climate Olympics”** where students participate and train and work with others at the school level, district level, provincial level and national, then regional and global level - to advance collective climate action (Neubert, J. 2017).
6. **We have no clearing house of knowledge on who is doing what, and what is working where** -we need a Digital Technology Knowledge Commons (Luiken, M., Shah, A., 2022) which could be in collaboration with Future Earth (<https://futureearth.org/>). We are not applying the findings and tools of Digital Economics (Fung, M., Sahdev, N. et al 2022)
7. **We identify despair and frustration in young people** (Nesson, L., 2021). This growing discontent could be shifted to a renewed sense of agency and responsibility and offer new avenues for action, skill acquisition and career development.
8. **Danger of increasing ennui and indifference in consumers** (Cho, R., 2020) when they perceive shifting their purchasing decisions and the efforts they are making, are not paying off. We are not tapping Indigenous cultures to learn better responses developed over millennia.
9. **A myriad of Climate and Sustainability initiatives in professional, business, and technical associations, like The International Science Council and Future Earth, are to different degrees working in their own silos** (Rannard, G. 2022), when as a network of communities, they could complement and augment each other's efforts. (Kay, A., 2021)
10. **The missing standards in sustainability, in particular standards related to Carbon Trading, are preventing companies from being able to adapt their practices.** Global companies struggle to navigate in a fragmented jungle of policies and regulations. (Ahlers, P., 2022)
11. **Realtime information on the effects of climate change is imperative.** Reality shows that industries and economies are still far away from it. (Ahlers, P., 2022)

- 12. Digitalization is essential to get the Paris Agreement done**, but companies are still facing big gaps in their operations and supply chains. (Ahlers, P., 2022)

Proposals

1. **Give individuals an evidence-based framework for evaluating their impact**- Individual connection to climate change comes most effectively not from raw data, but from attention to the locally salient evidence of impact of climate change, as well as other unsustainable patterns, such as biodiversity loss and disease, drought/flood, and food access, etc. (Abraham, J. 2017). It is imperative to offer accessible resources that allow each person agency and ownership over their environmental impact. Allowing individuals to understand their contribution to carbon emissions and to evaluate quantitatively how changes in their consumption and mobility behaviour can contribute to climate change mitigation is in the centre of the modelling exercise embedded in the proposal. We can build upon and expand existing modelling tools such as the World Data Lab’s World Climate Clock, which is being currently developed by part of the team and provides accessible real time estimates and projections of carbon emissions by sector for practically all countries of the world. It is important that people feel that the information they receive is trustworthy and informative, rather than manipulative or persuasive. Community engagement is a key to establishing trustworthiness for effective collective action.
2. **Connect the universities' communications, statistics, information, and social science departments and create education pathways for future generations** to understand their impact and role in the global climate conversation by focusing on learner-centred, inquiry-based learning and problem-oriented educational practices. This applies to schools and informal learning environments from early childhood to lifelong education. At the high school level through tertiary education, it will require more interdisciplinary learning and communication models such as decision theatre and gamified curricula.
3. **Safeguards and governance networks for Climate Clubs** wherein local community climate clubs can bolster international alliances of Climate Clubs and provide mechanisms for feedback and gaining popular support and action, which enable safeguards and governance at the local level within the national Climate Club countries.
4. **Flexibilizing models of climate change at the local level** - by harnessing gamification, or using techniques from “decision theatre” (<https://dt.asu.edu/>) adapt global or national models of climate change to the local level within STEM and project-based learning Challenges at the school, district, county, province/state for incentivizing local action with real outcomes and impact. Data created in the context of local models can be employed to validate and inform less granular models and thus improve their

“No company, no government, no country will solve the greatest challenges of our time alone! We need to move from ego-systems to eco-systems and operate in networks.”

SAP CEO, Christian Klein

(Ahlers, P., 2021). With backing by the G7, SAP’s industrial global supply chains can be a key part of an essential engineering global shift: **Connecting the supply chain dots** would bring global action into focus. Public, Private sectors and people can enable the shift to a Circular Economy.

Implementation

Short term:

Year 1: Euro 35 million in total. Adopt Community Climate Clubs as a global network open to all groups, communities, and existing organisations, with access to common climate knowledge base

1. **Create a Network of Community Climate Clubs**, open first to G7 countries then all countries: Members to be found by a directory by geography, topic, discipline, and more. Include a Communication and Outreach plan that extends the [EuroStat - recovery](#) dashboard to include more on the climate impact, building on [Our World in Data](#). With information as accessible and visual as possible Work with the global National Research and Education network backbones of the Internet in every country. Euro 7.5 million.
2. **Initiate the development of Global Knowledge Commons and Climate Blueprint Clearing house with IEEE, ACM, and global knowledge networks**. The Hasso Plattner School of Design Thinking has set up a Global Design Thinking Alliance in 17 countries which can serve as the initial scaffolding of the Knowledge Commons to educate in the skills needed for Sustainability by Design. By partnering with the IEEE, ACM the Community Climate Clubs can tap these existing knowledge hubs and apply the blueprints in local communities. (Luiken, M., Shah, A., 2022) Euro 2.5 million
3. **Globalise and adapt BMZ App "NachhaltICH"** launched in Nov 2019 with more than 300 challenges, which inspire people to act more sustainably. Collecting and analysing data can continually improve development cooperation services, by legitimising the use of funds through well-founded data. Connect to the untapped sources of important data for modelling individual and group behaviours: Narratives are purposeful expressions of future visions and social identities that link people in groups or communities through shared purposes and values. Understanding narratives affecting collective behaviours on sustainability challenges is at the core of the KLASICA international research alliance (Chabay, I.,2021) particularly in digital media. A novel Digital Observatory of Narratives of Sustainability (DONS) as a “Societal LandSat” is being developed by KLASICA to identify and respond

constructively to patterns and dynamics of issues leading people to support or reject changes toward more sustainable futures, which of course includes climate change. Euro 5 million

4. **Enhance the capability of existing modelling efforts (the World Climate Clock) to obtain more granular information about the effect of individual behaviour on emissions.** This implies the development of a statistical/econometric tool that allows hands-on adaptive modelling of local community projections of carbon emissions from today to 2050 to examine the impact of local present action options over time and to examine their relative efficacy to garner local support, action and behaviour change that mitigates carbon emission. Euro 10 million
5. **KLASICA symposium Nov/Dec 2022 is in planning as a major hybrid international event by the Research Institute for Humanities and Nature in Kyoto, Japan.** The integration of art and humanities on an equal footing with social and natural sciences, engineering, medicine, and design is the central theme. This integration is essential for us to make substantive progress in addressing the existential challenges of ensuring sustainable futures with equity and justice in the diverse contexts and cultures of the world. German G7 2022 and Japan G7 2023 could harness this symposium as an important transitional bridge for the concept of Community Climate Clubs to be started in G7 countries in 2022 and expanded further in 2023. Euro 5 million
6. **Align on Carbon Trading standards and start a Proof of Concept for a Carbon Trading Decision and Support System.** Together with the G7, align on viable standards to connect Carbon Credit producers seamlessly with Carbon Credit Buyers. Such standardization will allow third-party auditors to verify the integrity of carbon credit processes and enable the automation and streamlining of processes. Euro 5 million.

Mid Term:

Year 2-3: Euro 95 million in total. Networks for Climate Action with Global Impact

1. **Incorporate Clearinghouse(s)** for Technical Expertise, Blueprints, Discussion Forums and MOOC's with the [National Research and Education Networks](#) which form the backbone of the Internet. (Luiken, M., Shah, A., 2022) Euro 10 million.
2. **Scale up networks for collaborations by Geography and Topic and more**, building on the Global Design Thinking Alliance of the Hasso Plattner Institute. Euro 15 million.
3. **Fund initiatives in the most promising groups already conducting Climate Action activities**, ideally as joint initiatives where they collaborate for greater impact. Allocate 20% of the budget for governance and conflict resolution. Euro 20 million
4. **Incentivise the private sector to develop “personal” information signals** for climate impact that are

shown on our appliances, smart metres, social media interactions and more. Euro 20 million

5. **Set up a Community Climate Clubs Competition (4C)** modelled on the success of school, district, state, national and global competitions already implemented for 4 decades by HOSA.org, such competitions bring parents, teachers, and whole communities together responding in parallel activities to Climate Challenges. Teams of 2-6 compete against their peers judged by members of their own community, to make a difference in climate challenges – academic, social, technical topics categories can be set by the universities for which the schools are the network. This builds on the scaffolding of the National Research and Education Network of higher education institutions and schools. Euro 30 million
6. **Adapt to other Greenhouse Gases (GHG) and Substances**, such as Methane and Hydrogen. As CO₂ is just one of the Greenhouse gases, other gasses need to follow suit and become tradeable. Euro 5 million
7. **Enable companies to report consistently on Science Based Targets**, as this methodology aims on reducing the Scope 1,2,3 emissions. The adaptation requires a high level of transparency and data. Such data generation and provision will be made easier by establishing standards, which the G7 is uniquely positioned to lead on, and work with the G20 to establish as the global convention. Euro 5 million
8. **Scale to other GHG related policies and going beyond the EU Emission Trading System (EU ETS)**, such as the sub-national justifications in California (US), Carbon Pricing Scheme in Australia, Carbon Pricing mechanisms in India and others. Euro 5 million

Long Term:

Year 4-10: Euro 35 million a year. Promote and expand use of “Digital Twin” in Global Supply Chain, educate in MOOC’s for “sustainability by design”, Network Improvement Communities for Community Climate Clubs, Support “Digital Humanism” to support Climate Action.

1. **Ensure carbon and other sustainability data, such as product eco-profiles are handled as “Digital Twin”** along supply chains (Simsek, H., 2022), to understand the real environmental impact of industrial activities.
2. **Establish a MOOC platform¹ at Hasso Plattner Institute for the movement** spreading breakthroughs in 3 to 6-month cycles of “Plan-Do-Study-Act” within networks of Community Climate Club’s working

1

Open online course platform <https://www.mooc.org/>

on pivoting communities towards action with real present or future impact on climate. Spread Sustainability by Design through the Global Design Thinking Alliance (Fung, M. 2022)

3. **Advanced Community Climate Clubs set up joint labs with research institutions** for developing new approaches to enhance use of knowledge commons for problem solving
4. **Music, Performance Art, Humanities join with Science, Statistics, Engineering, Economics:** Art and humanities stimulate and express futures to which individuals and groups can aspire and act. Art and humanities can inspire, support, motivate and build networks of friendships fuelling a better future through joint action building Physical and Mental Resilience. Science, Statistics, Engineering, Economics become tools for everyday life.

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Mei Lin Fung co-founded the People Centered Internet with Vint Cerf and chaired Douglas Engelbart's Bootstrap Core Planning Committee. She is an early pioneer of CRM at Intel and Oracle and was Socio-Technical lead for the US Department of Defense Health Futures (2009-2013), she is the founding chair of both the Technical Committee for Sustainability within IEEE's Society for Social Impact of Technology, and the IEEE Standards Association working group on Social Impact Measurement. Member of the World Economic Forum

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futures. His current career (his third, so far) in social science began in 2006 as Hasselblad Professor in the sociology and applied IT departments at Univ. of Gothenburg and Chalmers Univ. in Sweden, before coming to IASS in 2012. In addition to his research and more than 80 publications in both natural and social sciences, he continues to design games to engage and inspire people with authentic processes of scientific inquiry that enhance understanding, agency, and commitment for moving to just and equitable sustainable futures.

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Pedro Ahlers is heading the Sustainability Innovation Process which helps SAP and its eco-system to identify challenges and generate a proper views and recommendations on how to deal with them. In this role he considers sustainability challenges across all the 17 SDGs. His focus is on the horizon of 5 to 10 years. To get to such insights, Pedro works not only cross SAP but with universities, alliances, customers, and other organizations who are either impacted by sustainability challenges or solving them. Pedro brings 12 years of experience in the chemical sector, as prior of joining SAP in 2017, he has been working for BASF.

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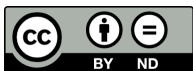
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