

Interdisciplinary Programmes

Academic Year 2021-2022

ARP – Environment and Sustainability

ARP_4_S – Spring

Course Description

Applied Research Projects (ARPs) are a foundational part of the Interdisciplinary Master Programme, a key learning experience through which student groups conduct policy-relevant research with partner organizations in Geneva and beyond. Through ARPs, students learn and apply analytical and research skills to practical and policy-relevant issues in international relations and development. Students work with autonomy and professionalism under the supervision of a team of Graduate Institute faculty and teaching assistants. Over the course of the ARP, students elaborate project Terms of Reference, conduct in-depth literature reviews, frame appropriate research questions and design methodologies, undertake original research, analyze data, write analytic inception, preliminary and final reports, and present final research findings. Teamwork, collaboration, professionalism, effective communication, and problem-solving are crucial skills that the ARP process offers students.

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Syllabus

Building on the concepts and theories studied in the environment and sustainability specialisation, the ARPs in this track offer students the opportunity to apply critical skills and analytical perspectives to the policies and practices of environment and sustainability with organisations working in Geneva and beyond. Partners include intergovernmental agencies that shape the global policy such as the World Meteorological organisation (climate) and UN-Habitat (sustainable cities). It also includes global associations that establish global sustainable standards (International Organisation for Standardisation - ISO) or that work on specific sustainable issues (such as the Monaco Hydrogen Alliance on maritime transport). It also includes think-tanks which analyse how environmental and sustainability issues could be upscaled and mainstreamed (such as CleantechAlps for clean technologies and Climate Action Accelerator to improve sustainability practices in development aid). It also includes some thought organisations implementing projects on the ground and advocating for sustainability at local, national and international level (such as the Bruno Manser Foundation for community forest management in Malaysia). Finally, it includes some scientific-based agencies focusing on practical solutions (such as the Antenna foundation to develop microfinance for cold rooms to avoid food waste in West Africa, in particular Mali).

Each project has been carefully elaborated by the partner organization to provide students with meaningful experiences which should contribute to addressing the challenges and opportunities in the environment and sustainability field. Throughout the projects, students will be able to build, strengthen and practice professional skills relevant to their careers in these fields.

ARPs are designed to build student capacities to:

- formulate relevant and feasible research questions to guide rigorous examination of the issue;
- review and analyze relevant academic and policy-based literature;
- develop and design a methodology appropriate to the research questions;
- implement and conduct research;
- analyze data and generate findings that respond to the research questions; and
- prepare a professionally-oriented written report or other final output explaining the main findings in line with the partner organization's needs; and
- orally present the final research findings at the end of the project period.

Learning Objectives

Through the ARP, students are expected to:

- Gain practical experience and expertise in the skills and processes required to conduct academically rigorous applied research;
- Strengthen capacities in mobilizing theoretical frameworks and research methods, and formulating research-based policy recommendations;
- Increase proficiency in effectively communicating research findings, including across different media and fora;
- Acquire key transferable skills, including: teamwork and interpersonal collaboration; problem-solving; project management and planning; and internal and external communications.

ARP Process

The ARP process includes three key phases: inception, implementation and management, and finalization.

Project Inception

- Partner project proposals—outlining background, project objectives, research questions and suggested methods and approaches—are shared with students by **14 February 2022**.
- Students apply for projects with a 100-word (maximum) motivation statement, their CV and a ranking of the top five preferences; applications due at 12:00 (CET) **23 February 2022**.
- Applications are reviewed by the ARP teaching team; project groups are formed and notified by **28 February 2022**.
- Kick-off meetings between the students, partners and teaching team in the **first half of March 2022**.
- Project Terms of Reference finalized by **28 March 2022**.

Project Implementation and Management

- Research begins, including in-depth literature review and, in consultation with the project partner, research methodology elaborated.
- Inception report drafted and submitted to the teaching team by **8 July 2022**, and subsequently shared with the partner.
- Research continues over the summer, including collection of primary data.
- By **late September 2022**, a progress update meeting held with partner and supervisor.
- Preliminary report drafted and submitted to the teaching team by **28 October 2022**, and subsequently shared with the partner.

Project finalization

- Final report due to the teaching team and the partner by **2 December 2022**.
- Final presentations with partners scheduled **between 5- 16 December 2022**.

Deliverables

- Terms of Reference, due 28 March 2022
- Inception report, due 8 July 2022
- Preliminary report, due 28 October 2022
- Final Report, due 2 December 2022
- Final presentation, held between 5- 16 December 2022

Grading

- Inception report: 20%
- Final Report: 60%
- Final presentation: 10%
- Professionalism, project management and problem-solving: 10%

Workshops:

Professional skills development is a core component of the ARP process, and students will be expected to attend MINT-wide ARP workshops as well as any track-specific workshops. Dates are still to be determined and topics finalized, but will likely include:

- Project Management Skills
- Group Work and Team Building
- Methods and skills-building workshops including
 - Constructing a research framework (questions and methods)
 - Interviewing skills
 - Citation 101, academic referencing, and plagiarism
- Communicating Research Results (research reports, oral presentation/pitch)
- Research ethics and working with sensitive information

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Applied Research Projects 2022

Final Project List

ARP_4: Environment and Sustainability

14 February 2022

ARP_4: Environment and Sustainability

ARP_4 Project 1 (Rosa Luxemburg Foundation): Transformation and insecurity along the Global Supply Chains: what role for lithium in a Just Transition? Rosa Luxemburg Foundation Geneva Global Supply Chains are insecure: even before the COVID pandemic, the climate crisis was forcing corporations and governments to change their production priorities. One such example is occurring in the context of a transition towards a net-zero carbon economy, with the automotive industry embracing the electric car, hugely spiking demand for lithium batteries. This is having a significant impact along the global supply chain as workers, parts suppliers and others depending on existing lines of production are at risk of losing their livelihoods and being left behind. What options are available to them at national and international levels? Is organizing possible along the supply chain? At the same time, the environmental impact of lithium extraction, transport and processing, as well as battery manufacture, use and disposal remains a real concern. How “environmentally-friendly” is it when all these effects are taken into account? How “just” is the transition that we are witnessing in the global supply chains? Desired competencies: Spanish language; knowledge of Latin American context

ARP_4 Project 2 (ISO): Achieving climate neutrality by non-state actors: from definitions to implementation International Organization for Standardization (ISO) In the wake of COP26 and a renewed global focus on addressing the threat of climate change, more and more organizations are rushing to make ‘net zero’ pledges – that is, they are promising to balance their greenhouse gas (GHG) emissions with GHG removals from the atmosphere, so that their net GHG contribution is zero. However, there is no standardized definition of ‘net zero’ for non-state actors. It is clear that there are currently a wide range of approaches being used and that this has potentially significant consequences on how much GHG emissions are really being reduced. This project would identify the range of approaches to measuring and calculating emissions, and identify the key dimensions of variation (this would include a mapping of the different standards used, for example, the ISO 1406X series of standards). It would also investigate why certain actors prefer certain approaches. The scope of the project could focus on a specific sector, for example, agriculture, transportation or buildings.

ARP_4 Project 3 (UN Habitat): City Diplomacy and Climate Change UN Habitat In order to tackle climate change, City diplomacy (CD) can play a key role in invoking local government engagement with the international community. There are potentially good opportunities to leverage the global connections and the unique resources of cities. Based on the shared values of inclusion, partnership and cooperation CD can exchange best practices globally, against a background where national governments are reluctant to engage. The body of this research will review the current experience of such processes and lessons learned and look at the potential opportunities to develop a more strategic approach, going beyond networks to develop communities of practice. The relationships with multilateral organisations will also be factored in and how such approaches can contribute to inclusive multilateralism.

ARP_4 Project 4 (WMO): Socio-Economic benefits of climate services for Energy World Meteorological Organization Increasing temperatures are resulting in global and regional precipitation changes, leading to shifts in rainfall patterns and agricultural seasons, with a major impact on food security and human health and 21 well-being. There is good news, however. As climate change continues to threaten human lives, ecosystems and economies, climate services, risk information and early warning systems are increasingly recognized as key for reducing impacts of weather-, water-, and climate-related hazards and adapting to climate change. Climate services provide science-based and user-specific information relating to past, present and potential future climates. Once equipped with improved weather, water and climate information, countries can make better, informed decisions in sectors sensitive to climate

and thus generate both substantial economic benefits and sustainable development. This can not only save lives and preserve assets, but also enhance safety, agricultural productivity and water security. This research project will focus on the development of in-depth case studies for demonstrating the socio-economic benefits of climate services for energy (both for mitigation and adaptation), focusing on 5-10 pilot countries through the collection of information through desktop review and structured calls with service providers and users. Desired competencies: statistical analysis

ARP_4 Project 5 (Bruno Manser Fund): Securing community/indigenous ownership of the Baram Peace Park (Malaysian Borneo) Bruno Manser Fund Whether in the SDGs or by the countries at COP26 2021 in Glasgow, the need to halt deforestation and the key role forests play for biodiversity conservation and mitigating climate change is broadly acknowledged nowadays. Traditional conservation approaches have seen limited success in halting deforestation. By now, the global community acknowledges the role indigenous and local communities play in conservation. The challenge is to develop new, innovative conservation models with high local ownership. The proposed applied research project would help to identify strategies to reach the goal for a specific conservation project, the so-called Baram Peace Park in Northern Sarawak, a Malaysian state on the island of Borneo. The project, initially proposed by indigenous communities, aims at combining rainforest protection and indigenous self-determination in a territory of life. The local communities, the involved NGOs, the Sarawak Government and the International ITTO are about to start the implementation. The proposed research project helps identify tools and set ups to reach high ownership by local communities. The research is based on academic and grey literature review of participative/co management/shared governance conservation projects and also on interviews with stakeholders of the Baram Peace Park.

ARP_4 Project 6 (UN Environment): Ecological connectivity and nature based solutions in the pan-european region United Nations Environment Programme Assessment of the potential contributions of establishing sustainable ecological connectivity between key ecosystems in the pan European region to sustain nature based solutions for improved resilience to climate change and human health. Identification of the priority eco-(sub) regions based on a common set of criteria. This research project will assess gaps in connectivity, research on governance systems in place for protection of ecosystems, highlight added value in terms of environmental, social and economic benefits of improved connectivity for the implementation of customized nature based solutions. The main research question to answer is: Can improved ecological connectivity sustain nature-based solutions for adaptation to climate change and sustainable livelihoods?

ARP_4 Project 7 (MHA): Moving with Green Hydrogen: Recommendations to Decarbonize the Maritime Mobility Value Chain Monaco Hydrogen Alliance (MHA) We suggest exploring the best practices for (green) hydrogen adoption in the maritime mobility sectors to facilitate a global scaling. This would require comparing a given set of countries and deep diving into extraterritorial practices, particularly from a regulatory standpoint – to scale its adoption globally. To do so, it would be critical to deep dive into regulatory measures, private sector and infrastructure needs, current production capabilities, pricing and current anticipation plans by government and industry leaders. The research project will: identify best practices; identify barriers to adoption; identify if anticipation is corresponding to industry needs; compare financial incentives provided by different government entities to facilitate capital investment in green hydrogen transition; compare progress made across different mobility industries (air, urban mobility, shipping) develop a research paper and corresponding 10-point policy toolkit document for the maritime mobility value-chain. This project seeks to answer: Which policy and regulatory frameworks are needed to implement a green hydrogen transformation in the maritime mobility industry? Which factors are slowing down its implementation? How can we address them?

Desired competencies: Strong qualitative and quantitative analytical skills Interest in energy policy, regulatory issues, investment frameworks Interest in sustainability Interest in new technologies, such as hydrogen production

ARP_4 Project 8 (FAO): How can policies and actions addressing climate change impacts in the agriculture and food security sector contribute to peace and help address climate security risk **FAO - Geneva Office**

The climate security nexus - the way climate, socio economic and political risks and insecurities are linked to each other – has become increasingly visible on the international agenda. With climate change, the impact and magnitude and severity of climate related disasters is on the rise. FAO estimates that the agriculture sectors absorb more than 26 percent of all damages and losses caused by medium- to large scale climate related disasters (droughts, floods and storms). Climate change threatens the physical security of most vulnerable communities (such as in Small Island Developing States (SIDS) affected by sea level rise) and especially in fragile and conflict-affected countries, where institutional responses are limited or ineffective. In these settings, climate change and its cohort of related disasters and variabilities (i.e. changing seasonal patterns in terms of rain and temperature), water scarcity, desertification, sea level rises etc. can severely affect livelihoods, food and nutrition security, leading to forced displacement and limiting possibilities of voluntary return. FAO has contributed to various climate security discussions, providing field experiences and perspectives. When FAO does contribute it is highly valued and appreciated. It is recognised that climate change adaptation and natural resource management mechanisms are critical entry points. Yet, despite the growing urgency on this topic, FAO is still fine tuning its positioning and strategy on climate security. Whilst FAO's 2017 Strategy on Climate Change Output 2c states that "FAO will explore the possible role of climate change in triggering or exacerbating conflict, migration and social instability", this has not yet been operationalised. Engagement has often been ad hoc and inconsistent, and reliant on a few individuals trying to position FAO in the climate security space when opportunities arise. Still, agriculture and food security sectors play a critical contribution to the climate security agenda that needs to be better understood, articulated and promoted. Building as a starting point on the expertise available within the existing Geneva based actors and networks (e.g. Geneva Peacebuilding Platform, Geneva Water Hub, Interpeace) the project will: (i) contribute to articulate how combined climate shocks, environmental degradation and conflict create a vicious circle of growing vulnerabilities and crisis impacts that further devastate livelihoods and food security and nutrition, 23 especially for people living in protracted crisis or fragile situations; and (ii) articulate the contribution of climate change interventions in the agriculture and food security sector to peace and security. Desired competencies: French language

ARP_4 Project 9 (CleantechAlps): Frugal innovation to accelerate cleantech dissemination?

CleantechAlps Switzerland is a nation of innovation. For the last 10 years it has been a top-ranked country. Many of these innovations have provided solutions for climate change challenges that both Switzerland and the world are facing. But we are still too slow compared to the climate emergency and the urgent need to manage waste. Several approaches seem to exist to boost at a larger scale the development of these technologies helping the environment (cleantech). Is frugal innovation one of them? Could this approach/concept really accelerate the dissemination of cleantech? Are other concepts/approaches more adequate? Desired competencies: French language

ARP_4 Project 10 (Climate Action Accelerator): Climate action in the aid sector: Building an environmental and decarbonisation roadmap for aid organisations **Climate Action Accelerator**

The Climate Action Accelerator is a non-profit initiative that aims to mobilise a critical mass of community organisations in the aid, health and higher education/research sectors, in order to scale up climate

solutions. These organisations are important levers for climate action, whose trend-setting potentials and contributions to total greenhouse gas emissions are significant but have been largely overlooked so far. They have significant amplification potential, in terms of trustfulness and connectedness, as they provide care, protect, generate knowledge, and prepare future generations. With their inherent social missions, they also have a responsibility to act, and their example has the power to a domino effect across society towards net-zero emissions. The initiative is beginning with a focus on the aid and humanitarian world, which is a sector paying more and more attention to the nexus between climate change and human suffering, the alleviation of which is their *raison d'être*. How can stakeholders in this sector actually cut their emissions and become champions of the climate transition while fulfilling their mandate towards vulnerable populations? The Climate Action Accelerator aims to publish in the 1st term of 2023 a generic roadmap for aid organisations based on the lessons with first partners and good practices from other sectors. Students will be able to contribute in an instrumental way to constructing an environmental and decarbonisation roadmap that provides organisations in the international aid sector with a sound and science-based methodology and the accompanying solutions in order to achieve -50% of emissions by 2030 without compensation. Working along a high-level panel, students will be important contributors to a peer-reviewed publication that will be available to the community through our sharing platform, but also through other networks and platforms. The final publication of this generic roadmap will allow all organisations in the sector to benefit from a transfer of knowledge and know-how, therefore accelerating the transformation. Desired competencies: French language; visual design