**What is AXIS?**

The ERA-NET Consortium AXIS (Assessment of Cross(X) - sectoral climate Impacts and pathways for Sustainable transformation) aims to promote cross-boundary, cross-community research with the overall goal to improve coherence, integration and robustness of climate impact research and connect it to societal needs. To this effect, AXIS aims to overcome boundaries between science communities through inter- or transdisciplinary research projects, in particular connecting biophysical disciplines and economics as well as other social sciences.

Participating countries of the Joint Call are: Austria, Belgium, France, Germany, Ireland, Moldova, The Netherlands, Norway, Spain, Sweden.

AXIS is a successor of the previous JPI Climate ERA-Net on Climate Services (ERA4CS). Both are part of the efforts of JPI Climate to contribute to the implementation of the European Roadmap for Climate Services. Within AXIS the goals are in particular to improve the “Integration of physical and socioeconomic data and information” (Challenge 3, Activity 3.1a) and “establishing confidence in [CS], and the role of uncertainty in climate services and decision-support systems” (Challenge 3, Activity 3.1c).

The call had an indicative budget of 15 – 17 Mio. € to support international research projects of a duration of up to 3 years. The AXIS joint call was structured into three interlinked themes:

1. **Cross-sectoral and cross-scale climate change impact assessments**
2. **Integration of biophysical climate change impact estimates with economic models**
3. **Developing pathways to achieve the long-term objectives of the Paris Agreement, taking into account interactions with SDGs closely linked to SDG 13 (“climate action”)**

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<td>AXIS Coordinator</td>
<td>Dr. Rolf von Kuhlmann</td>
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These projects are funded by JPI Climate and co-funded by the European Union.
The following 10 projects were selected for funding and will receive a total of 15.6 Mio € by the funding partners. The European Union supports these projects with 5.1 Mio € from the Horizon 2020.

CROSSDRO

Title: Cross-sectoral impact assessment of droughts in complex European basins

Lead PI: Juan Ignacio López Moreno, Consejo Superior de Investigaciones Científicas (CSIC), Instituto Pirenaico de Ecología, Zaragoza, Spain

Partner PIs:
- Tobias Conradt, Potsdam Institute for Climate Impact Research (PIK), Germany
- Conor Murphy, Maynooth University (MU), Ireland
- Lars Eklundh, Lund University (ULUND), Sweden
- Boris Boincean, Selectia Research Institute of Field Crops (RIFC), Moldova
- Gert Cornelissen, Universitat Pompeu Fabra, Spain

Research funding agencies: BMBF (Germany), EPA (Ireland), FORMAS (Sweden), MINECO-AEI (Spain), NARD (Moldova)

Abstract:

During the last 20 years drought losses have amounted to 6.2 billion per year in Europe. Drought causes multi- and cross-sectorial impacts both from environmental and socio-economic points of view. There are complex hydrological and environmental connections among drought types (meteorological, hydrological, environmental, agricultural and socioeconomic) making it very difficult to assess impacts. CROSSDRO will develop a multi-sectoral and cross-scale evaluation of drought impacts in complex European basins with contrasting climatic, hydrologic, environmental and socioeconomic conditions and it will assess impacts at the continental level.

Project objectives seek to advance scientific understanding and develop practical guidance through the engagement of key stakeholders throughout the work. Specifically, CROSSDRO will determine the interrelated impacts of droughts on forestry and land cover, water resources (over different sub-systems i.e. snow, streamflow, reservoir level and ground water), and different economic sectors that are highly vulnerable to water resources availability: e.g. agriculture, hydro-power and tourism. The objectives will be reached by means of experimental studies, both in the field and the laboratory, remote sensing, historical series and modelling approaches that account for past droughts and future scenarios. The objectives will be underpinned through the involvement of key stakeholders to learn about past drought challenges and problems on the stakeholders’ side and specifically address their information needs. Land and water managers, end-users and economic agents will be involved from the outset of the project. This will allow development of more efficient drought management models with potential to improve multi-sectoral adaptation to drought impacts.
**DIRT-X**

**Title:** Evaluating sediment Delivery Impacts on Reservoirs in changing climate and society across scales and sectors

**Lead PI:** Alena Bartosova, Swedish Meteorological and Hydrological Institute, Sweden

**Partner PIs:**
- Silke Wieprecht, University of Stuttgart, Institute for Modelling Hydraulic and Environmental Systems, Germany
- Kristian Förster, Leibniz Universität Hannover, Germany
- Nils Rüther, Norwegian University of Science and Technology, Norway
- Stefan Achleitner, University of Innsbruck, Unit of Hydraulic Engineering, Austria
- Machteld Van den Broek, Copernicus Institute of Sustainable Development, Faculty of Geosciences, Utrecht University, The Netherlands

**Research funding agencies:** FFG (Austria), BMBF (Germany), FORMAS (Sweden), NWO (NL), RCN (Norway)

**Abstract:**

There are currently about 7000 large dams and thousands of smaller dams in Europe providing important but vulnerable services such as hydropower generation, drinking water supply, irrigation, flood protection, and recreation. The project DIRT-X addresses the question of how the changing climate and socioeconomic conditions influence water reservoirs and the services they provide to different economic sectors through integration of existing climate services (Copernicus Climate Change Service Climate Data Store, CDS, and Toolbox), Shared Socioeconomic Pathways (SSPs), impact models, and close cooperation with stakeholders from the relevant sectors.

DIRT-X addresses Theme 1 and Theme 2 of the call directly through cross-sectoral and cross-scale analyses of climate impact assessment models, integrating hydrologic and sediment models with energy and economic models. DIRT-X builds on three case studies with hydropower production with each highlighting a different process (glacial melt, sediment load, and downstream impacts on sensitive coastal zone) to increase our understanding of how changes in sediment can affect different societal sectors. The DIRT-X partners share their expertise across the case studies, cooperating and transferring knowledge across borders and sectors. Stakeholders play a crucial role; the resulting Climate Impact Indicators (CIIs) must be relevant to stakeholders and policy makers and compatible with existing operational climate services.

The integration of hydrological process modelling with economic models assessing water stress, cross-sectoral conflicts, and energy system enables investigation into the how hydrologic impacts are best translated into economic consequences and what are the implications of climate impacts within these systems. The project will improve models to assess interdependencies and economic value of water usage across sectors and their response to changes in runoff and water storage (Theme 2). Theme 3 is supported indirectly through assessing socioeconomic impact (SSPs), targeted model experiments, and comparing outcomes with the long-term objectives in the Paris Agreement.

These projects are funded by JPI Climate and co-funded by the European Union.
MAPPY

Title: Multisectoral analysis of climate and land use change impacts on pollinators, plant diversity and crops yields

Lead PI: Louis François, University of Liège, Belgium

Partner PIs:
- Nicolas Dendoncker, University of Namur, Belgium
- Koos Biesmeijer, Naturalis Biodiversity Center, Leiden, The Netherlands
- Merja Tölle, Justus-Liebig University Giessen, Germany
- Thomas Hickler, Senckenberg Biodiversity and Climate Research Centre (BiK-F), Germany
- Christoph Müller, Potsdam Institute for Climate Impact Research (PIK), Germany
- Luca Testi, Consejo Superior de Investigaciones Científicas (CSIC), Spain
- Veronika Gaube, University of Natural Resources and Life Sciences, Austria

Research funding agencies: FFG (Austria), BMBF, Germany, FNRS (Belgium), AEI (Spain), NWO (NL), BELSPO (Belgium)

Abstract:

The objective of this project is to study quantitatively the feedback processes linking pollinators, plant diversity and crop yields in the framework of climate and land use changes. The response of agricultural yields to climate change is critically dependent on these feedbacks that until now remain largely unexplored. In order to fill this gap, we will focus on studying interactions between three main sectors: biodiversity/nature conservation, forestry and agriculture. Within agriculture, the emphasis will be put on three sub-sectors: fruit crops, food/fodder crops and energy crops. We will use diverse types of crop and vegetation models to estimate the impacts of climate change on each studied sector in several case study regions in Europe. The study will be undertaken with local stakeholders, who will identify most relevant topics to be addressed by the consortium. The interdependencies between the sectors will be analysed through the dynamics of land use and land cover on the one hand and dynamics of pollinator communities on the other hand.

We will assemble a small set of complementary models to capture the dynamics of this complex system at regional level. First, we will produce spatio-temporal high-resolution climatic scenarios over the studied regions, by using a regional climate model. Then, we will use various (agricultural/fruit) crop models, dynamic vegetation models and species distribution models to assess the impacts of future climate change on agricultural yields and biodiversity, using ensemble means whenever relevant. An agent-based model will then be used to derive detailed land use and land cover change scenarios for the future at the scale of the studied regions. This suite of models will allow assessing potential impacts on pollinator communities. This improved knowledge of pollinator dynamics will then be used to refine the calculation of some agricultural yields, especially those of some selected fruit crops. Finally, the social and economic impacts of the projected changes in the studied regions will be evaluated, by assessing quantitative indicators developed from the model results in concertation with project stakeholders.

The study will be driven by stakeholder interests. Pollinator decline, fruit crop damage, and more generally, climate change impacts on crop yields are problems of increasing concern among stakeholders. We will shape the project along the major problems identified in each studied region by local stakeholders. A web platform will be developed with online tools allowing to visualize results on selected regions or to perform simple simulations of interest for the user.

These projects are funded by JPI Climate and co-funded by the European Union.
CHIPS

Title: Climate Change Impacts and Policies in Heterogeneous Societies

Lead PI: Franziska Piontek, Potsdam Institute for Climate Impact Research (PIK), Germany

Partner PIs:
- Ulrike Kornek, Mercator Research Institute on Global Commons and Climate Change, Berlin, Germany
- Thomas Sterner, University of Gothenburg, Sweden
- Stéphane Zuber, Centre d’Économie de la Sorbonne (UMR 8174), France
- José María Labeaga Azcona, Universidad Nacional de Educación a Distancia, Facultad de Ciencias Económicas y Empresariales, Madrid, Spain

Research funding agencies: ANR (France), BMBF (Germany), FORMAS (Sweden), AEI (Spain)

Abstract:

Distributional effects of climate change impacts and climate policies are under-researched despite being at the core of sustainability challenges. Assessing climate change impacts and policies in the context of the Sustainable Development Goals (SDGs) requires Integrated Assessment Models (IAMs) to take into account socioeconomic inequalities. This is not only important at the country level, but also within countries, because poor people are more vulnerable to climate damages and climate policies might widen the income gap. However, very few global models currently have such capabilities. Furthermore, climate change impacts are still poorly represented in most IAMs, through highly aggregated damage functions. IAMs are therefore not equipped to provide the most relevant policy advice, especially for national policy makers.

CHIPS brings together a multidisciplinary, international consortium to advance the state-of-the-art in four ways: (i) novel damage functions specific for impact channels relevant for distribution and growth, bridging the scales between spatially explicit impact data and aggregate macro regions; (ii) an explicit representation of household heterogeneity in the REMIND-MAgPIE and NICE IAMs; (iii) conceptual advances to address multi-level equity considerations and new welfare metrics with a focus on poverty; (iv) assessment of the distributional effects of carbon pricing and climate impacts in Europe through empirics and micro-simulation. In a comprehensive analysis the enhanced modeling framework will be applied to study distributional impacts of climate change and climate policies in a rich scenario framework based on the Shared Socioeconomic Pathways. A specific regional focus will be put on Europe and synergies with the SDGs will be explored.

The project is of high relevance for policy makers on EU and national level in the area of climate change mitigation, adaptation and development as well as adaptation planners and NGOs. Building on existing stakeholder connections CHIPS will involve an active stakeholder dialogue with a focus on co-design and co-production. The planned methodological advances are relying on a distinguished consortium of impact modelers (Intersectoral Impact Model Intercomparison Project), economists (U Gothenburg, CNRS-CES Paris, Mercator Research Center on Global Commons and Climate Change), micro-simulation experts (UNED Madrid) and integrated assessment modelers (REMIND-MAgPIE team at PIK). Outcomes of the project will be made available in scientific publications and policy briefs, but also through open databases and climate service-oriented outlets like the ISIpedia portal, making use of close connections to existing projects and networks. Thus CHIPS will contribute decisively to the next generation of integrated assessment important for the global stocktake in 2023 and for future climate policy advice on the national and international level.

These projects are funded by JPI Climate and co-funded by the European Union.
LAMACLIMA

Title: LAnd MAnagement for CLImate Mitigation and Adaptation

Lead PI: Carl-Friedrich Schleussner, Climate Analytics, Berlin, Germany

Partner PIs:
- Wim Thiery, Vrije Universiteit Brussel, Belgium
- Dim Coumou, Vrije Universiteit Amsterdam, The Netherlands
- Julia Pongratz, Ludwig-Maximilians-Universität München, Germany
- Anton Orlov, CICERO, Potsdam, Germany
- Alexander Popp, Potsdam Institute for Climate Impact Research (PIK), Germany
- Sonia Seneviratne, ETH Zurich, Switzerland

Research funding agencies: BMBF (Germany), NWO (NL), RCN (Norway), BELSPO (Belgium)

Abstract:

Anthropogenic changes in land cover and land management (LCLM) are substantially affecting climate through the release of carbon in the atmosphere (biogeochemical effects), and the alteration of local energy and water fluxes at the land surface and their interaction with large-scale atmospheric dynamics (biogeophysical effects). Accounting for the coupled LCLM-climate effect is thus very relevant for future climate mitigation and adaptation efforts. However, these coupled effects receive overall limited consideration in land use decision processes due to uncertainties on the full implications of changes in LCLM for climate and ecosystem services, but also due to a lack of dialogue between the relevant science and practice communities.

The goal of the LAMACLIMA project is to advance the scientific and public understanding of LCLM-climate coupling effects and to inform the elaboration of sustainable land-based adaptation and mitigation measures. It will investigate the biogeophysical and biogeochemical effects of three key changes in LCLM (re/afforestation, irrigation and wood harvest) on climate, their implications for several sectors (agriculture, water availability, biodiversity and economic productivity) as well as the resulting economic impacts, including teleconnections across key regions such as the world’s breadbaskets. This will allow for an integrated analysis of their implications for the achievement of both the mitigation and adaptation objectives of the Paris Agreement and the Sustainable Development Goals. The research outcomes will be synthesised into an open-access and user-friendly emulator, allowing their appropriate dissemination to regional-level adaptation planners and development actors as well as international institutions, environmental organisations and relevant private actors during dedicated workshops and online collaboration. Continuous stakeholder engagement and knowledge brokerage will bridge the gap between scientists and stakeholders, fostering the co-design of future trajectories for land management as adaptation and mitigation measures that will complement the Shared Socio-economic Pathways (SSPs).

The consortium includes experts on the interactions between LCLM and climate who will run a coordinated set of experiments with several climate models, economists who will integrate their results into a Computable General Equilibrium model and an agro-economic model, and stakeholder engagement experts. The emulator will be made available as open source, and results from the climate model experiments will be stored according to EU guidelines. The project outputs, in particular the expanded SSPs or the emulator, will broadly serve the scientific community in addition to its societal benefits.

These projects are funded by JPI Climate and co-funded by the European Union.
BIO-CLIMAPATHS

Title: Assessing climate-led social-ecological impacts and opportunities for resilient pathways in the EU bioeconomy

Lead PI: Irene Monasterolo, Vienna University of Economics & Business, Austria

Partner PIs:
- Prajal Pradhan, Potsdam Institute for Climate Impact Research (PIK), Germany
- Sebastian Poledna, International Institute for Applied Systems Analysis, Risk and Resilience, Advanced
- Systems Analysis, Austria
- Patricia Fuentes Saguar, Pablo de Olavide University, Spain

Research funding agencies: FFG (Austria), BMBF (Germany), AEI (Spain)

Abstract:

The EU is in the process of developing and implementing bioeconomy strategies to foster the transition from a fossil fuel-based to a renewable, biobased economy. Nevertheless, a more direct dependency of economic value chains on the provisioning function of ecosystems increases the socioeconomic system’s vulnerability to climate hazards. Hence, innovative, interdisciplinary approaches are needed to assess different climate hazard related, cross-sectoral impacts in society. In particular, there is a need to assess climate-led resilience pathways that account for socioeconomic factors, including direct losses, indirect distributive effects and the role of finance.

Filling in a major knowledge gap, BIOCLIMAPATHS develops the first interdisciplinary methodological framework that contains the whole logic flow of the knowledge development process based on:

1. A novel databases of cross-sectoral climate risks that allow to map spatially explicit climate hazards’ impact of the biophysical dimension (biomass losses) in the bioeconomy;

2. Advances the state of the art in bioeconomy sector modelling to disclose the channels of climate risks’ transmission across interdependent biophysical, economic and financial systems at the subnational level with an ABM, integrated in a global input-output framework;

3. Identification of co-produced resilience solutions based on the assessment of challenges and opportunities for sustainable, inclusive and climate-resilient development in the EU under different bioeconomy pathways (food, materials and energy).

BIOCLIMAPATHS’ added value stands in exploiting knowledge co-production within a novel network of interdisciplinary research teams from Austria, Germany and Spain, and non-academic stakeholders. Our aim is to deliver a breakthrough methodological approach based on qualitative stakeholder inputs and quantitative modelling advancements.

BIOCLIMAPATHS will provide policy-relevant information and recommendations to a variety of academic and non-academic stakeholders as regards strategies and resilient pathways to achieve the EU2030 climate and energy targets with a bioeconomy approach.

These projects are funded by JPI Climate and co-funded by the European Union.
SHAPE

Title: Sustainable development pathways achieving Human well-being while safeguarding the climate And Planet Earth

Lead PI: Elmar Kriegler, Potsdam Institute for Climate Impact Research (PIK), Germany

Partner PIs:
- Detlev van Vuuren, Utrecht University, The Netherlands
- Bastiaan van Ruijven, International Institute for Applied Systems Analysis, Energy Program, Austria
- Richard Wood, Norwegian University of Science and Technology, Norway
- Ines Dombrowsky, German Development Institute (DIE), Bonn, Germany
- Sarah Cornell, Stockholm University, Sweden
- Falk Schmidt, Institute for Advanced Sustainability Studies (IASS), Germany

Research funding agencies: FFG (Austria), BMBF (Germany), FORMAS (Sweden), NWO (NL), RCN (Norway)

Abstract:

The UN 2030 Agenda and its Sustainable Development Goals (SDGs) present a vision for the wellbeing of all people in prosperity, peace and partnership while preserving the integrity of our planet. The goal of protecting Earth’s climate, SDG 13, is underpinned by the Paris Agreement to hold global warming well below 2°C, through international climate action architecture of coordinated nationally determined contributions.

SHAPE aims to contribute an in-depth analysis of sustainable development pathways (SDPs) that achieve the SDGs in 2030 and maintain sustainable development to reach the Paris climate goals until 2100. It will investigate measures to overcome trade-offs to enable simultaneous achievement of a broad range of sustainable development objectives. The SDPs will be developed using world-leading state-of-the-art integrated assessment models taking climate change as the entry point. They will be combined with regional and global scale analysis of governance challenges, where business and civil society actors now play as significant a role as national governments. Through engagement with diverse SDG action processes, stakeholders will steer the identification of regionally and sector-relevant sustainable development indicators for 2030 and beyond, and refine the usefulness of the SDPs for informing policy processes on multiple scales.

SHAPE brings together lead members of the Integrated Assessment Modelling Consortium (PIK, IIASA, UU) with experts in sustainability science and governance (DIE, SRC, IASS) and industrial ecology (NTNU), establishing a new European constellation of policy and business-engaged research centres equipped to link global-level integrated analysis with context-situated dialogue and engagement. A priority is to support robust decision-making by co-designing SDPs through dialogue with diverse stakeholders such as international negotiators and national experts in policy, business and NGOs; and clearly communicating the strengths and limitations of its analytic approaches.

These projects are funded by JPI Climate and co-funded by the European Union.
UNCHAIN

Title: UNpacking climate impact CHAINs. A new generation of action- and user-oriented climate change risk assessments

Lead PI: Carlo Aall, Vestlandsforsking (Western Norway Research Institute), Norway

Partner PIs:
- Fulco Ludwig, Wageningen University & Research, The Netherlands
- Ulrike Lehr, Gesellschaft für Wirtschaftliche Strukturforschung, Institute of Economic Structures Research, Germany
- Gabriel Jordà, Instituto Español de Oceanografía (IEO), Palma, Spain
- Stefan Kienberger, Paris-Lodron University Salzburg (PLUS), Salzburg, Austria
- Brigt Dale, Nordland research Institute, Norway
- Erich Rome, Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V., Germany
- Åsa Swartling, Stockholm Environment Institute, Sweden
- Ghislain Duboir, TEC Conseil, France
- Florence Rudolf, INSA Strasbourg, France

Research funding agencies: ANR (France), FFG (Austria), BMBF (Germany), FORMAS (Sweden), AEI (Spain), NWO (NL), RCN (Norway)

Abstract:

UNCHAIN aims at further developing a practical and manageable climate change risk assessment framework based on the concept of Impact Chains. UNCHAIN will address, support and integrate a broad array of stakeholders. Its audiences are local authorities, private businesses, private home owners, and sub-national and national authorities in their capacity of supporting and facilitating local policy-making.

UNCHAIN's scientific objectives will in general contributing to enabling accurate, science based, high resolution CC risk assessments, and will in particular relate to six innovations relating to existing climate change risk assessment frameworks: (1) address a shift in adaptation focus from merely adjusting to the possible need for transforming society; (2) apply the concept of co-production of knowledge during all stages of knowledge production; (3) analyze how societal change, regardless of climate change, can affect local climate change vulnerabilities and the socio-economic consequences involved in local climate change adaptation; (4) develop a framework for an improved understanding of uncertainties involved in local decision-making on climate change adaptation, aiming to shift focus from mastering to managing such uncertainties; (5) identify risks of mal-mitigation and mal-adaptation and how to reduce such risks, and (6) identify transnational climate risks and ways to adapt to such risks.

At the core of the project are cases (two cases per country) that will be used as a ‘laboratory’ to develop and test the new climate change risk assessment framework. The partners will have the main responsibility for the cases in their country, but will also be involved in cases in other countries depending on their knowledge profile. A case can be either a local authority or a (major) private business.

These projects are funded by JPI Climate and co-funded by the European Union.
MECCA

Title: Targeting mental models of climate change risk to facilitate climate action

Lead PI: Maryse Chappin, Utrecht University, The Netherlands

Partner PIs:
- Stefan Liersch, Potsdam Institute for Climate Impact Research (PIK), Germany
- Gisela Böhm, University of Bergen, Norway

Research funding agencies: BMBF (Germany), NWO (NL), RCN (Norway)

Abstract:

Our team of social and natural scientists and a wide network of local stakeholders in West and East Africa join forces to co-develop pathways to effectively facilitate climate action, to achieve the long-term objectives of the Paris Agreement, contribute to SDG 13 (among others), and inform the nationally determined contributions (NDCs) strategies. The overarching objective of the project is to identify adaptation and mitigation strategies by analysing the gap between stakeholder’s perceptions of change and risk and projected impacts of human activities under changing climatic conditions in East Africa (Lake Victoria) and West Africa (Lagos). This is a promising avenue to induce climate action as divergence in perceptions limits effective approaches for sustainable development. Moreover, it is crucial to study developing regions as they are particularly susceptible to the impact of climate change due to its far-reaching impact on livelihoods, health, safety, and economic and political instability. These regions have been selected due to their high vulnerability to climate change impacts and the fact that they span large populations.

We will develop (bio-)physical models of the climate challenges of Lagos and Lake Victoria. We will use a novel mental model elicitation tool to investigate perceptions of climate change and identify possibilities for converging understanding across decision-makers. In addition, this project will assess climate change risk perception among communities, how risk perceptions are shaped by socio-cultural influences and how they can contribute to facilitating appropriate responses to climate change. As a climate service, scenario simulations considering climate change and human interventions into the environment will be conducted with (bio-)physical models to test and evaluate stakeholder’s perceptions and possible action.

To meet the information needs of the stakeholders, we will develop the scenario components in close collaboration with the stakeholders. Discrepancies across different stakeholder groups and gaps in understanding of natural science-based climate change risks will be investigated to identify avenues for facilitating convergence. We will pursue convergence of mental models across decision-makers using multiple approaches, including field experiments and a deliberation exercise. Importantly, we investigate how convergent understanding of climate change risks can aid collective decision-making and action. Through iterations of observing, measuring, modelling, field interventions and integration of findings, the partners will extend the knowledge base to better understand the social-cognitive barriers to climate change adaptation and mitigation action in the two study areas. The research will be geared toward developing evidence-based recommendations for local adaptation policies and behavioral strategies for promoting climate action.

These projects are funded by JPI Climate and co-funded by the European Union.
NorthWesternPaths

Title: Scenarios and pathways toward sustainable land-use and food production for Western and the Nordic European countries as part of the global FABLE Consortium

Lead PI: Line Gordon, Stockholm University, Sweden

Partner PIs:
- Ingo Fetzer, Stockholm University, Sweden
- Serina Ahlgren, RISE Research Institute of Sweden, Sweden
- Torjörn Jansson, Swedish University of Agricultural Sciences, Sweden
- Uwe Schneider, University of Hamburg, Germany
- Robbie Andrew, CICERO Center for International Climate Research, Norway

Research funding agencies: BMBF (Germany), FORMAS (Sweden), RCN (Norway)

Abstract:
The program aims to create an EU/Nordic community of practice (CoP) as a unique self-governed network of leading knowledge institutions tasked with supporting the design of integrated pathways towards sustainable food and land-use systems consistent with the 2030 Agenda for Sustainable Development (including the Sustainable Development Goals, SDGs) and implementation of the Paris Climate Agreement. The pathways developed by this community aim to identify the extent to which investments and action on (a) reducing food waste, (b) strict management of land and water resources, (c) dietary shifts (d) sustainable intensification of agriculture and (e) trade enable CoP countries to meet national climate, conservation, water quality, and public health commitments. It will operate as part of the global FABLE (1) network led by UN-SDSN (Sustainable Development Solutions Network) and IIASA including 20 additional countries in the America’s, Africa, Asia and the Pacific. The global FABLE analyses assess international spillover effects to help countries determine the impact of their policies on other countries and to anticipate impacts on their land-use and food systems that may emanate from developments in other countries. In this way, the EuroNordic FABLE will pursue science-based modeling frameworks, targets and pathways that countries can use to assess policies relating to land-use and food systems. Further, and as part of the global FABLE network, they will help align the ambition of national pathways with the SDGs and the commitment to keep the rise in average global temperatures to “well below 2°C”.

The partners propose an integrated program including three work streams: (1) the development of national and regional pathways to sustainable food and land use systems, (2) scoping with national and regional partners to identify pathway narratives, (3) integration of Nordic EU pathways into global models pursued by the FABLE network. A small secretariat led by Stockholm Resilience Centre (SRC) will coordinate the Nordic-Central EU partnership, including its contribution to the Global FABLE network which operates as part of the broader Food and Land-Use Coalition to provide the integrated analysis that can support policymakers, business leaders, and civil society in undertaking the deep transformations needed to achieve sustainable food and land-use systems.