Environment for Development

A global network of research centers solving the world's most pressing environmental and development challenges.



EfD Strategic Plan 2021-2025

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EfD in 2025

EfD is a unique organization. It is tackling one of the most important challenges of the 21st century – inclusive, resilient, sustainable development, in which everyone has the chance to participate and benefit from advancements. EfD is solution-oriented, by developing a vibrant community of specialized economists in the Global South who devote their careers to solving critical sustainability challenges in their societies. EfD's focus on theoretically sound, evidence-based, and locally and globally policy-relevant research at the intersection between the environment and development, is energetic, networked, engaged, and optimistic.

The ambition for 2021-2025 is to further develop EfD as a dynamic international organization that effectively fills the societal gaps we have identified in capacity (human capital), knowledge creation and acceleration (research), engagement with policy actors (sharing findings), and institutional development. Successful implementation of EfD's strategy requires that the organization reaches the following strategic goals:

Capacity development: EfD will ensure required capacity to carry out the necessary analysis and support the implementation of policies on the environment, natural resources, and climate change in the Global South for a transition to an inclusive and resilient sustainable development. A senior policy makers' capacity development program and collaborative MSc and PhD programs at EfD centers will be established, combining a digital learning platform and in-person learning with highly trained instructors. These programs will educate the current and future leaders needed to create environmentally sustainable, resilient, gender-responsive, and economically just policy solutions, emanating from within the countries themselves. Graduates will bridge the science-policy interface and be equipped to provide technical advice to governments.

Policy-relevant research: EfD research will be used in evidence-based policies for poverty reduction, equality including gender equality, environmental and resource management, and climate change impacts in the Global South. EfD will be recognized by policy actors for the research syntheses used in the Global South. EfD will achieve its objectives on research through solid South-South and South-North research collaborations, supported by a substantial research fund backed by multiple donors.

Policy engagement: EfD centers will create and maintain a strong research-policy interface, particularly in the context of connecting their applied, domestically relevant research to key stakeholders to achieve real-world positive impacts on poverty reduction, gender equality, and the efficient management of the environment, resources, and climate change impacts in the Global South. At the international level, EfD will actively contribute to policy-relevant knowledge and participate in relevant high-level commissions to become a well-recognized and globally esteemed partner with other organizations working in research-policy interfaces, in the realm of inclusive sustainable development.

Institutional development: EfD centers will become "internationally excellent" research environments that each have the capacity to run graduate academic programs, implement policy research, and foster engagement with key policy actors regarding evidence-based policies in the Global South. EfD centers will have strong backing from their domestic host institutions, and more academic institutions in the North will contribute as partners both to center-specific and network activities.

By the end of the 2021-2025 strategy period, EfD will have contributed to evidence-based domestic and international policies for poverty reduction, gender equality, environmental and resource management, and climate change impacts in the Global South through integrated capacity development, research and policy engagement. EfD will have contributed to enlightened and accelerated integrated policy-making as well as sharing to advance Agenda 2030, the Paris Agreement, the Convention on Biological Diversity mandate, and the Sendai framework on disaster risk reduction. This includes policies to speed up transitions towards decarbonized economies and sustainable food systems needed to achieve the SDGs by 2030.

1 The knowledge challenge for sustainable development

1.1 Context

When EfD was founded in 2007, it challenged the belief that conservation of natural resources should be viewed as a constraint to economic development. Instead, the name EfD, "Environment for Development", promotes the notion that the environment and natural resources are in fact the basis for inclusive green development, provided that evidence-based policies are put in place to manage these resources effectively and, for the long-term greater societal good.

When the concept of sustainable development was popularized in 1987, environmental economics was singled out as a promising discipline to support this vision. The relevance of environmental economics has increased ever since and is the foundation for current "green growth", and "green new deal" strategies in many countries, which aim to promote growth or recovery while using resources in a sustainable manner.

The essence of environmental economics is to uncover the forces behind environmental degradation, and to analyze the links between economic growth (and poverty) and impacts on the environment. It also analyzes the value of environmental and resource endowments for economic and social development, so that societal trade-offs can be made wisely. Environmental economics is also dedicated to the design of policy instruments to produce outcomes that are sustainable environmentally, economically, and socially as called for by the 2030 Agenda.

To produce sound policy advice, the analyses need to be undertaken by people who have advanced skills in environmental economics; who know how to frame choices and solutions in a manner that is relevant in the local context; and whose presence and engagement help shape the national discourse. The rhetoric of sustainability will not be converted into reality unless this capacity exists at the country level, with the appropriate training, institutional positioning and recognition, research facilities, access to research funding, and platforms for international collaboration. This is even more true now that countries are putting in place recovery plans that take into consideration nature-based solutions as called for by the UN UNSG Socio-Economic response to COVID-19 strategy. Academia thus has an important role to play in achieving sustainable societies, and EfD delivers on all of these elements and by doing so also acts as a positive role model in the host institutions of its centers.

Five major policy areas that have received growing attention by world leaders over the last five years are: biodiversity conservation (under the Convention on Biological Diversity, or CBD); climate change (under the United Nations Framework Convention on Climate Change, or UNFCCC); sustainable development (under the UN 2030 Agenda on Sustainable Development, and its 17 SDG); disaster risk reduction (under the Sendai Framework on Disaster Risk Reduction, or UNDRR), and the Beijing Declaration and Platform for Action for the advancement of gender equality. EfD's work contributes systematically to the goals laid out in these conventions and frameworks. But is it enough?

EfD faces a dramatic contradiction today. On the one hand, environmental economics and related disciplines have been successful in terms of maturing as a science, institutionalized in academia, well-tooled in addressing challenges in society. Many talented scholars from all corners of the world have been successfully trained. Journals and associations throughout the Global South bear witness to this professional success. On the other hand, time is running out for saving species, habitats and limiting future climate change implications. The number of climate Conferences keep increasing as do greenhouse gas emissions, while the second largest emitter, the USA, is withdrawing from the Paris Agreement. Biodiversity loss is rampant in the 6th mass extinction and the major forests of the Amazon, Congo delta and Indonesia are literally on fire. The situation is equally dire when it comes to sophisticated but toxic man-made chemicals, local air and water pollution, unsustainable food systems, access to sanitation and clean energy and several other environmental problems.

¹ WCED (World Commission on Environment and Development) (Brundtland Commission) (1987), 'Our common future', ('Brundtland Report'), Oxford: Oxford University Press.

Adding to the sense of emergency, and society's possibility to address these challenges, there is the polarization of politics, the rise of authoritarianism, and that truth, science and free press are under attack. The COVID-19 crisis — itself linked to biodiversity loss - adds new dimensions of danger. In particular the lock-down of economies threatened billions of the world's poorest who have to work every day to feed their families. The image of a hundred million people walking back to their villages in India symbolizes the scale of the tragedy. Not even southern Europe can afford the stimulus needed to re-start the economy and support job creation. The Global South even less so. Never before has collective action across the world for a "Global New Green Deal" been so much needed.

While EfD was created to address many of these challenges, there is still a daunting issue of scale and urgency. The transitions needed for sustainable development are formidable in scope and they become harder and harder to accomplish the longer we wait. To become part of the solution, EfD needs to both grow in scale and be more efficient at reaching impact. An impact that ultimately depends on local, regional and international political processes that are both complicated – with multiple stakeholders and cross-sectorial – and time-consuming.

1.2 Gap analysis

To ensure that environmental economics would fulfill its role in improving resource management and supporting sustainable development, we have identified four gaps that need to be addressed simultaneously, since even one gap is enough to impede the use of research in policy:

The capacity gap: The design of enlightened policies that are integrated along social, environmental, and economic dimensions depends on advanced domestic capacity to understand the complex interaction between ecological and economic systems marred by market and institutional failures. Domestic capacity is needed to design, implement, and evaluate policies. Such capacity is also needed for a country to be able to participate in global negotiations, and to take advantage of external funding and financing mechanisms (e.g. the Green Climate Fund², consider for example the dismal experience of the distribution of Clean Development Mechanism funding under the Kyoto Protocol). In addition, cost-effective solutions depend on a thorough understanding of the functioning and limitations of local institutions. The most fundamental gap is that there are not enough professionals (men and women) with these specialized skills in the Global South, where the needs are the greatest. The current capacity gap is unfortunately monumental. The first Global Sustainable Development Report highlights the unequal global distribution of scientific capacity. While OECD countries have about 3500 researchers per million inhabitants, in the lowest income countries there are only about 66 researchers per million inhabitants.³

The knowledge gap: Closely linked to the capacity gap is the gap in generation of new knowledge, especially that which is relevant to solving current societal challenges. This is one of the primary roles of environmental economics' research. Despite the fact that a majority of people in extreme poverty are directly dependent on dwindling natural resources, there is a dire shortage of high-quality research on, and thus knowledge of, the best management of these resources. To start, there is little access to research funding in many countries in the Global South. The 2016 World Social Science Report shows that the focus of social science research tends to be concentrated in countries of the North, and by researchers from the North, to the detriment of the countries of the Global South which lack robust data.⁴ In the wake of the COVID-19 pandemic, the situation for research in the Global South has become even more susceptible.

In addition, a handful of studies have already converged on the same grim picture: women in academia are publishing far less since the pandemic hit. This disparity is thought to be driven by mothers that pick up a disproportionate share of childcare responsibilities as schools across the globe closed in the wake of COVID-19. Most of these studies look at the situation in the US and Europe, but we expect this to be replicated in the Global South as well. And if the gap continues to grow, it could have lasting consequences on the careers of women in academia who are already underrepresented, even in the Global North. The

³ Global Sustainable Development Report 2019 - The Future is Now: Science for Achieving Sustainable Development https://sustainabledevelopment.un.org/globalsdreport/2019

² https://www.greenclimate.fund/home

⁴ ISSC, IDS and UNESCO (2016), World Social Science Report 2016, Challenging Inequalities: Pathways to a Just World, UNESCO Publishing, Paris.

underrepresentation of women in economics is shown to be larger than that of traditional STEM subjects⁵. A 2017 report by the Committee on the Status of Women in the Economics Profession⁶ shows that while significant gains to close the gender disparities in STEM-related fields have been made, the past 15 years has shown little or no improvement in terms of female representation in Economics. Very little data exist on the situation in countries in the Global South.

The policy engagement gap: When key capacity and knowledge do exist, a fundamental challenge is to integrate relevant knowledge based on applied research into domestic and international policies and practice. Awareness of the importance of environmental management for poverty reduction and gender equality is the first step, but moving beyond awareness to real policymaking, based on evidence, is critical for advancement to occur. To make information useful to stakeholders, it needs to be readily available to them, in an accessible format and language, and at the right time. For research to have real impact on policy, researchers need to be involved in a close and long-term dialogue with policy actors.

The institutional gap: A well-functioning institutional platform is needed to bring researchers, funding, and policy processes together. Experience shows that there are substantial institutional weaknesses in many countries in the Global South. This, coupled with a lack of local expertise, often leads to missed opportunities in terms of improving integrated policy, or an almost complete reliance on international consultants that have limited local and institutional knowledge and spend little time in the country.

EfD's gap analysis has led to the formulation of a cohesive program that addresses all four identified gaps simultaneously. It rests on the firm belief that research and evidence play important roles in making a rapid green and inclusive transition possible in a cost-efficient manner. For that to happen, all gaps need to be addressed within each country – ideally with support from a global network.

2 EfD's vision and theory of change

EfD's vision

Inclusive sustainable development in the Global South founded on efficient management of the environment, natural resources, and climate change impacts.

EfD's overarching goal

EfD contributes to evidence-based domestic and international policies for poverty reduction, gender equality and environmental and resource management, including climate change impacts in the Global South through integrated capacity development, knowledge sharing, research and policy engagement.

2.1 Context

Sustainable development is slow, particularly in the Global South, because five gaps are impeding enlightened policies and practices based on evidence. First, there is not a critical mass of appropriately trained people who understand and can promote poverty reduction, gender equality, and the efficient management of the environment, natural resources, and climate change impacts. Second, knowledge creation in support of these aims are inadequate; relevant high-quality evidence is often missing. Third, the few experts who do create relevant knowledge have limited capacity and platforms to communicate it to the responsible policy actors and practitioners. Fourth, there are not enough well-developed institutions where knowledge creators and users can come together and address poverty, gender, environmental, resource, and climate challenges as they arise. Lastly, integrated policy making is messy, with extended

⁵ Bayer, A., & Rouse, C. E. (2016). Diversity in the economics profession: A new attack on an old problem. Journal of Economic Perspectives, 30(4), 221-42.

⁶ Lundberg, S. (2017). Report: Committee on the Status of Women in the Economics Profession (CSWEP). American Economic Review, 107(5), 759-76

timelines between research and policy implementation, and in addition both research and policy work is highly context and location specific.

2.2 The intervention

The EfD intervention is based on the tenet that sustainable solutions must arise from within countries themselves, developed in large part by people with an intimate knowledge of the local setting and a real stake in the outcomes. Building on this premise, acting on EfD's theory of change requires a multifaceted approach that addresses the four gaps simultaneously, since even just one gap is enough to impede the use of capacity development and research for effective policy. To catalyze reliable inputs of evidence-based knowledge into national and regional policy processes, EfD engages in:

- Capacity development: by strengthening domestic graduate programs that develop skills to carry out the necessary analyses on poverty, gender, environmental, resource and climate challenges, and conducting on-the-job training for policy actors to successfully implement evidence-based policies and programs.
- ➤ High-quality and relevant research: by defining policy-relevant research priorities, developing and screening proposals, funding and implementing of research, fostering South-South and South-North collaborations, collecting and curating data, and disseminating research. All of these elements of the research process are conducted in close cooperation with domestic stakeholders.
- Policy engagement: by improving and, when it does not exist, creating the interface between research and policy actors within and between countries. This two-way interaction between experts and policy actors ensures well-targeted capacity development, relevant applied research, and ultimately, policy impact.
- Institutional development: by establishing and supporting vibrant, productive, and well-respected research centers at leading domestic academic institutions. The institutions where EfD centers are housed have the capacity to run graduate academic programs, implement high-quality policy research, and foster interaction with key stakeholders and policymakers.

While EfD's pillars are identified as distinct for practical purposes of planning, priority setting, and evaluation, in fact they are all intimately connected and mutually reinforcing. This is a hallmark of EfD: the emphasis on holistic and integrated approaches. Just as it is folly to treat the environment and the economy as wholly separate domains, or the interests of the Global South as somehow completely distinct from those of the North, institutional development, capacity in the form of human capital, knowledge creation through relevant research, and policy engagement must be addressed together.

2.3 The outcomes

By addressing these critical gaps in a coordinated and strategic fashion, EfD cultivates a positive dynamic that serves as an engine for long-term success. By connecting local centers to the international academic and policy communities, EfD promotes a two-way exchange that simultaneously improves local conditions and advances the global sustainability agenda by tuning it in to local contexts. This model guides EfD's investments as it leverages the commitment, drive, and creativity of talented people from the Global South by providing them with the tools and training needed to promote poverty reduction and the efficient management of the environment, natural resources, and climate change impacts and share their knowledge with the global community. In this way, the centers and the network as a whole become much more than the sum of their parts.

The EfD model has been scrutinized, tested, and improved over the past decade. It has provided policy makers with key information important for contributing to inclusive sustainable development. EfD is thereby supporting a new generation of intellectual leaders by developing, sustaining, strengthening, and expanding a vibrant community of engaged scholars based in the Global South. Examples of EfD's impact are posted on EfD's website.

3 Implementation strategy

3.1 Capacity development

Capacity Development Goals

Graduate Programs

EfD trains a critical mass of domestic, gender-balanced capacity within a global network to carry out the necessary analysis on the environment, natural resources, and climate change impacts in the Global South for a transition to an inclusive sustainable development.

Policy Actors

EfD trains required domestic capacity within a global network to support the implementation of policies on poverty reduction, the environment, natural resources, and climate change mitigation and adaptation in the Global South for a transition to an inclusive sustainable development.

3.1.1 Context

EfD is founded on the belief that it is the people in the Global South themselves that can best transform their countries through improved management of their resources. Human capacity (skills, knowledge, and expertise) is therefore fundamental to a sustainable future. Capacity development in the areas of poverty, the environment, natural resources, and climate change impacts is thus the single most important contribution EfD can make.

Broadly speaking, EfD capacity development takes two forms: academic training and on-the-job training. Academic training is crucial as it creates long-term skills and competencies, and cultivates a new generation of expertise in leaders. On-the-job training helps policy actors, such as government officials and other professionals working in fields related to environment and development, address immediate challenges with evidence-based thinking. Sometimes a need for very specific competencies to close policy gaps is identified by EfD centers, and on-the-job training is a useful tool to quickly address this need.

3.1.2 Capacity development for policy actors

EfD facilitates on-the-job training by establishing executive education programs for policy makers, government officials, and other professionals in relevant fields, to inform of economic tools available for instituting evidence-based policies and programs with the aim to achieve strategic goals concerning poverty, the environment, resources, and climate change impacts. Importantly, training recipients will develop skills to bridge the science-policy interface, and to utilize evidence-based knowledge in policy decisions.

On-the-job training is currently offered at many EfD centers on an ad hoc basis, and tends to be designed in the context of research projects and associated policy engagement.⁷

These experiences will be refined to a new joint on-the-job training program to support transformation towards an Inclusive Green Economy (IGE), which is high on the agenda in many EfD countries and a prerequisite for achieving Agenda 2030. The program will increase knowledge and capabilities on IGE, and promote practical applications of environmental policy instruments and organizational change. Innovations include cross-country learning, organizational change projects, training-of-trainers, use of a joint digital learning platform and personalized networking that will enable participating organizations, local universities and other stakeholders to work more closely together and better meet their capacity needs.

⁷ EfD Central America has offered free-standing courses each year on "Economic Assessment of Ecosystem Services", "Climate Smart Agriculture and Territories", and "Water and Economics" for 15 to 20 participants from all over Central and South America.

3.1.3 Strengthening existing graduate programs

Two modalities are currently used for academic training:

- a. EfD supports existing residential graduate programs in environmental and natural resource economics at EfD centers. Almost all EfD centers are connected to Masters and PhD programs at their home institutions. While many of these programs at the centers' institutions do not offer specialized degrees in environmental and natural resource economics, EfD promotes the field of study through elective courses and dissertation or thesis supervision.
- b. EfD supports graduate programs in economics with specializations in environmental and natural resource economics in select countries. The EfD Global Hub currently coordinates PhD programs in Ethiopia and Rwanda with bilateral funding from Sida.

EfD will strengthen domestic graduate academic programs that develop skills necessary for cutting edge policy analyses, and create expertise on how to implement policies and programs concerning poverty, gender equality, the environment, natural resources, and climate change impacts.

EfD will increase the number of graduate students and trainees at all EfD centers, and gender balance of students accepted onto the program will be a primary concern (thought will also be given to the gender balance of teachers within the program where possible, because in our experience that may be important for female students in terms of mentorship and inspiration). The increase will be achieved primarily through scholarships and dissertation/thesis research grants. In many EfD countries, students need scholarships to be able to study at the Masters or PhD level. The dearth of research grants for environmental dissertations/theses has directly led to a lack of students. Subsequently, scholarship and dissertation funding are critical components of EfD's capacity development.

Augmenting direct support of academic programs, EfD will cultivate collaborative teaching initiatives to address educator skill shortages and differences in instruction quality across sites. The goal is peer-learning, leading to network-wide improvement of teaching and learning standards, as well as an increase in covered topics. Other benefits are collaborative skills and long-term professional relationships. EfD's specific activities in this respect are as follows:

- a) EfD will facilitate Masters and PhD student bootcamps on topical tools relevant to environmental economics (e.g. Panel Data Econometrics, Behavioral Nudges, Randomized Control Trials).
- b) EfD will facilitate Masters and PhD student exchanges between centers and visiting professorships within the network.
- c) EfD will support annual regional PhD student workshops, where participants present their research and share feedback.
- d) EfD will support international PhD "webinars" (academic seminars online).

The gender balance will also be considered in terms of access to resources, funding and opportunities such a presentation in academic seminars or internships.

Capacity development at EfD centers is distinguished by its strong links to applied research and policy engagement. For example, EfD will create opportunities for students to participate in hands-on policy interaction by EfD researchers involving students in meetings with policy makers and government officials. Students will also participate in "Policy Days", which are EfD-organized events fostering close interaction

between practitioners in the domestic policy sphere and EfD researchers, on themes that are deemed pressing current issues.⁸

Additionally, EfD will facilitate internship opportunities for its graduate students and postdoctoral fellows, for example at the Multinational Development Banks in Africa, Asia, and Latin America, and at government ministries.

3.1.4 Establishing new capacity development programs

EfD has conducted extensive appraisals of current environmental economics capacity in the Global South, focusing on specific skills for addressing climate challenges and broader sustainable development. The analysis has concluded that necessary capacity in these fields can be delivered through integrated, dynamic, and multilayered education comprised of: (i) On-the-job training for those currently responsible for making decisions on climate change issues, (ii) Masters-level training that provides capacity to implement policies and projects, and (iii) PhD-level training that creates transformative scholarship and leadership on new approaches to deal with climate change and sustainable development in the coming decades. EfD intends to create and launch such capacity development as a multi-country "Collaborative Program in Climate Change and Sustainable Development" (3CSD) which, subject to funding, will be rolled out to all EfD centers and, eventually, beyond.⁹

3.1.4.1 Joint graduate degrees between centers

International collaboration between higher education institutions can benefit students through collective offering of graduate degrees that allow students to engage in curricula from different academic settings and from a broader array of contexts and expertise. The collaborations can be South-South and North-South. EfD will catalyze and support the roll-out of joint graduate degrees between centers. These programs have advantages above and beyond the more typical "semester abroad" exchange model, because the curriculum for joint degrees are synchronized between the individual institutions, and the mutual benefits of "exchange" are well thought-out and incorporated into the curriculum. Advanced online technology also allows students to engage, work together, and form relationships across international borders, even when in residence at their home universities.

3.1.4.2 Digitized learning for capacity development

Use of digital teaching technology in graduate programs is essential to take part in the next generation of education advances, and to reap the profound benefits of digitization over time. For example, digital learning can allow universities in the Global South to be internationally connected, stay current on cutting-edge content, and harness skills they are in short supply of from the digital commons. ¹⁰ Generally speaking, universities in the Global South have not yet effectively exploited the latest (or sometimes any) advances in digital technology, such as "Virtual Learning Environments" that use digital teaching and learning tools to enhance students' learning (although the expectations are high regarding these technologies in most universities in the Global South). ¹¹

EfD will develop a digital learning platform to facilitate sharing and accumulation of teaching material for EfD centers. This learning platform, together with investment in high-quality video conference equipment, will also pave the way for new and ever-advancing pedagogical approaches to be used in EfD programs,

⁸ Going forward, each EfD center will organize at least one Policy Day per year. Relatedly, each EfD center will commission a "Policy Board", made up of domestic policy-making professionals of note; the Policy Boards will help create opportunities for more frequent and topically relevant Policy Day events.

⁹ This initiative is elaborated in a separate EfD proposal on the Collaborative Program in Climate Change and Sustainable Development. The concept has already been piloted and proofed.

¹⁰ As one example, all of the PhD specialization courses in environmental economics that have been taught at the University of Gothenburg can be put into a digital format and made available for PhD programs within the EfD network.

¹¹ In a recent IAU report, "Higher Education in the Digital Era" https://www.iau-aiu.net/IMG/pdf/technology report 2019.pdf, 97% of the responding universities in Africa strongly agree that digital transformation and new technologies are essential to improving higher education and 77% strongly agree and 22% somewhat agree that digital transformation is necessary and inevitable in preparing students to actively participate in society. At the same time, only 33% of the responding universities globally feel equipped for this future.

making EfD's capacity development activities both more effective and efficient. PhD students at participating institutions will be trained using the latest pedagogical tools and, as such, they will also provide important capacity as teachers delivering the suite of new EfD-supported academic programs.

3.1.4.3 Educator development

EfD's analysis of gaps in the Global South indicates a strong need to support educators with state-of-the-art teaching tools, to achieve more effective learning outcomes for their students. This is not only to fully benefit from the digital learning platforms and novel interactive teaching but, most importantly, to foster strong skills in appreciating the contributions by different disciplines in solving complex environmental challenges. There is also a well-developed philosophy to the art and science of teaching that should be incorporated into learning, for capacity development programs to achieve concrete impact within societies. Educators thus need to be equipped with relevant pedagogical tools for cultivating effective leaders and problem-solvers in society at large. Contemporary capacity development ought, for example, to provide skills for integrating both local and global considerations when addressing real-world problems such as climate change, since local and global considerations are increasingly intertwined. EfD educators will be trained in the concept of glocal curricula that combine local and global aspects in the learning experience of the students and in the teaching experience of instructors.

3.2 Policy relevant research

Research goals

Policy-relevant research

EfD research is used in evidence-based policies for poverty reduction, gender equality, environmental and resource management, and climate change in the Global South.

Collaborative Programs

EfD is recognized by policy actors for research syntheses and methods used in evidence-based policies for poverty reduction, gender equality, environmental and resource management, and climate change mitigation and adaptation in the Global South.

3.2.1 Context

EfD aims to generate knowledge through rigorous policy-relevant research in the field of environmental and natural resource economics, with the intent of achieving strategic national goals regarding poverty, gender equality, the environment, natural resources and climate change impacts. EfD will promote three strands of rigorous research: (i) research whose topics are identified in consultation with domestic policy makers, government officials, and other stakeholders at EfD centers, particularly in sub-Saharan Africa, (ii) Broader poverty and gender relevant environmental research, including synthesis of existing research that is generally needed in countries where EfD is active, and (iii) Collaborative Programs on significant themes of regional interest and importance identified in cross-country policy engagement.

3.2.2 Guiding principles for EfD research support

EfD strives to achieve:

- a. **Excellence in research:** by ensuring that research is of the highest academic quality and therefore can be relied on for real-world policy use in domestic and international contexts.
- b. **Policy relevance:** by ensuring that research addresses key real-world challenges at the intersection of environment and development, aiming for improved decision-making. Though EfD targets challenges emanating from or affecting the environmental sector, the overriding social goals are poverty reduction and gender equality.
- c. **Vibrant and inclusive research environments:** by supporting centers to implement best practices such as inclusivity and ethics, and research infrastructure such as up-to-date facilities and services,

data management, research funding, and research collaborations both within and across centers.

d. **Partnership or knowledge sharing:** by involving researchers in the Global South in productive international collaborations such as original research, research syntheses and meta-analyses, policy reports, global commissions convened by international agencies, and panel discussion at high-profile events (see Section 3.3.5 for details).

3.2.3 Thematic research areas and priorities

EfD has a focus on the poverty-environment nexus in the Global South, when applicable with a gender lens. In order to match research with policy applications the research is also organized into 17 topics as well as according to the 17 Sustainable Development Goals (see figure 1). The research priorities for each center are updated every five years when they conduct their "Policy Research Reviews". In these reviews the centers identify relevant policies, as well as policies under development, and relate these to the centers' capacity-development and research competencies in order to prioritize research with the highest potential impact on poverty and sustainability.

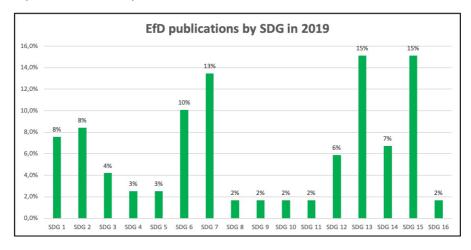


Figure 1. EfD publications by SDG in 2019

3.2.4 Guiding principles for EfD research funding

EfD research funding seeks to achieve various end goals. Though the proposal targets challenges emanating from or affecting the environmental sector, the overriding social goals are poverty reduction and gender equality.

To ensure that EfD research in practice is relevant for these goals, a review has been carried out and shared with the Research Committee which reviews proposals and allocates research funding. Most recently, a review of all 273 EfD discussion papers to date (Somanathan, 2020) show that much of the research is on extremely poor communities. However, for this report, a very conservative classification was used, choosing only those papers that explicitly address the role of poverty, either in the choices made by households or in public policy debates. Based on this definition, 29 papers explicitly address the role of poverty, either in the choices made by households or in public policy debates. In terms of gender as a topic, the review classified papers in the same tradition as the "Rio markers" – that is in three categories, in this case "the project had not been carried out without the gender focus", "the project had some gender focus" or "there was no gender focus". In approximately 50% of the papers, gender was a theme in the research piece, whilst in 15% of those, there was a strong focus on gender. Given that only about 30% of the papers were assessed as having no particular gender angle, the conclusion of the external evaluation of EfD 2015-2019¹³ was that this is a good performance given the range of themes that EfD must address as part of its overall thematic mission statement. However, it also highlights that, whilst EfD has performed well on gender research, there is considerable untapped potential to deliver further on this agenda. The Research Committee ensures that all research proposals funded by EfD targets challenges emanating from or affecting the environmental

¹² These classifications can be found on the EfD website: https://efdinitiative.org/topics and https://efdinitiative.org/efd-by-sdgs

¹³ https://efdinitiative.org/news/read-efds-evaluation-report-2020-here

sector, and that the social aims of poverty reduction and gender equality are considered to ensure societal relevance.

EfD research has always had a strong focus on the multidimensionality of poverty. In the coming five-year period, EfD will also have increased focus on providing policy actors with access to gender-disaggregated data and gender-relevant research, which is essential for evidence-based policy making. Two main pathways can effectively be pursued to achieve this:

- i. Within EfD, historically the ratio of males to females as lead authors of research papers has been roughly 2 to 1. Where practically possible, the EfD Global Hub will support early career female researchers in order to address this imbalance.
- ii. The EfD Research Committee has further increased the priority for gender analysis and will seek to make the most of the inherent potential for increased gender analysis within the network.

The EfD Research Fund is subdivided into three parts in order to support (i) the development of research capacity particularly in Sub-Saharan Africa (SSA), (ii) broader poverty and gender relevant environmental research and (ii) studies in Collaborative Programs with earmarked external funding.

3.2.4.1 Support to research capacity in SSA

EfD prioritizes supporting capacity in the countries with the greatest capacity needs. EfD will therefore earmark research funding for the new centers and centers that benefit the most from EfD's annual research cycle (currently Ethiopia, Kenya, Tanzania, Uganda, Ghana and Nigeria). Support for these centers will create required research capacity as well as address pressing poverty-environmental issues in these countries. A concerted effort is also underway to support all EfD centers (those with the most difficult challenges, in particular in Africa, will receive additional support) in increasing the number of women carrying out research at these centers. In addition, the Research Committee will ensure that women have equal access to research funding as men, with a particular focus on supporting early career researchers where possible.

3.2.4.2 Support to broader poverty and gender relevant environmental research

Many sustainability challenges are shared among most countries in the Global South and there are therefore great opportunities for learning between countries. Broader poverty-relevant environmental research, including synthesis of existing research and experience-sharing between countries, will therefore be supported. This funding will be open to all centers in the Global South, preferably in partnership between centers at various levels of development. Priority will be given to proposals that have large potential for "copycat policy transfers" between countries.

3.2.4.3 Support to studies in collaborative programs with earmarked funding

EfD Collaborative Programs typically have (or are searching for) earmarked funds from external sources to run long-term activities. In order to leverage more funding to such programs, EfD will ensure that specific studies to be conducted have proper scientific review. Research funding for Collaborative Programs will therefore be managed through the EfD Research Fund. EfD will also prioritize proposals coming directly from poorly-resourced Collaborative Programs.

3.2.5 The EfD Research Fund

Over the years, the capacity of EfD researchers has been developed by directing researchers toward policy-relevant research and implementing an annual cycle of research planning, policy interaction, and research outputs. This has been facilitated by the EfD Research Fund, largely supported by Sida. The success is proven by the increasing quantity and quality of EfD research outputs as noted in the 2020 EfD External Evaluation¹⁴.

The current size of the EfD Research Fund is insufficient to support all of the high-quality policy research proposals submitted by centers. As such, much of the research that EfD could be producing never gets done, as researchers fail to get adequate funding because other funders do not prioritize policy research by local universities. Accordingly, EfD intends to augment its Research Fund to match the research capacity at the

¹⁴ https://efdinitiative.org/news/read-efds-evaluation-report-2020-here

EfD center by soliciting support from a diverse group of donors and partners (see Section 3.3.5 for more details).

3.2.6 Collaborative programs

An important advantage of EfD is its inherent capacity to cultivate cross-country research and policy peer-learning, with particular emphasis on South-South collaborative work. EfD researchers will work in cross-country teams to produce high-impact policy research for several countries, drawing on each other's perspectives and experience. EfD's Collaborative Programs uniquely foster this kind of highly-applied international collaborative research and, going forward, EfD Programs will be designed to spur collaborations across all four pillars (not just research, but also capacity development, policy engagement, and institutional development). The dearth of research funding is even more striking for such Collaborative Programs that catalyze evidence-based policy promotion across several countries at once. EfD will therefore play an important role in promoting the funding of such programs.¹⁵

3.2.7 Research Fellow development

Enhancing the capacity of researchers within the network is the utmost priority of EfD. To achieve this, EfD will institute innovative programs and measures to support resident Research Fellows and early career researchers, particularly female researchers since they are still underrepresented at Economics departments. Specific programs will be tailored to meet the needs of researchers in the network regarding best practice for research. For example, "retooling courses" for Research Fellows to bring them up-to-date with current techniques and advances in core fields of research will be supported e.g. Randomized Control Trials, Gender Analysis and Environmental Linkages, Behavioral Nudges, Panel Data and Spatial Econometrics, and Ethics in Research.

3.2.8 Tools for the science-policy interface

The 2020 EfD External Evaluation¹⁶ identified the potential to increase researchers' engagement with policy processes. While researchers are involved in policy engagement through activities such as "Policy Research Reviews", consultations with stakeholders in setting the research agenda and designing research projects, workshops during the research process and dissemination during Policy Days, there is still improvements to be made in bringing the research all the way to policy impact. EfD will therefore organize courses on science-policy interaction to enable EfD researchers to effectively interact and communicate their research for enhanced policy impact.

3.2.9 Vibrant research environments

EfD's support of high-quality, vibrant research environments fosters creative and impactful research. EfD will mobilize resources to further improve the research infrastructure at centers, for example with video conferencing hardware, computers, software, books, academic journals, and access to data sets. The aim is for the research environment at each center to be of high international standard in order to enable international collaborations. To ensure the quality, EfD will continue to make external evaluations of all centers every five years.

The quality of EfD research is further enhanced by constructive scrutiny and feedback at regular EfD research meetings. To advance this crucial part of the research process, EfD will provide support for organizing academic interaction, including participation in conferences, academic workshops, panel discussions, and specialized training sessions. At the domestic level, EfD centers will organize regular seminar series where researchers present their ongoing research and new proposals, for feedback from colleagues and other relevant local stakeholders. At the network level, EfD will coordinate a network-wide virtual seminar series and facilitate participation at the EfD Annual Meeting, which has grown to become

¹⁵ The current collaborative programs focus on ecosystem services, energy transition, forestry, marine management (both resources and pollution) and "women in environmental economics for development" (WinEED aims to support the EfD network in building a pipeline and enhanced capacity of women from the Global South to take on substantive research leadership and mentoring positions in the EfD network and beyond). These will need funding to be sustained, and ideally strengthened as each of these programs has an ambitious and impactful collaborative research program which cannot be fully realized without substantial funding. New proposed collaborative programs that are also looking for funding include emission pricing, air pollution, and water & sanitation.

¹⁶ https://efdinitiative.org/news/read-efds-evaluation-report-2020-here

the largest annual conference in the Global South on the application of environmental economics to development. The Policy Day alongside the Annual Meeting will continue to assemble policymakers and academics to interact around current policy issues; Policy Days are hosted by the local EfD center hosting the Annual Meeting, while drawing on the resources of the EfD network globally. Going forward, EfD will approach regional Multilateral Development Banks with proposals to co-host its flagship EfD Annual Meetings and Policy Days.

3.2.10 Research management

EfD is committed to creating and maintaining impactful policy-relevant research programs. A primary strategy for achieving this outcome is to help researchers choose policy-relevant topics through centers' regular interaction with policymakers throughout the research process, as discussed above, and to incentivize researchers to excel in the quality of their research products. Specifically, EfD's research management process includes aiding in the development of proposals, evaluating proposals, awarding research funding accordingly, and incorporating quality assurance for both proposals and research outputs. Researchers receive editorial support in preparing both deliverable research outputs and submissions to peer-reviewed journals; this process is designed to strengthen their writing capacity, communicate policy-relevant messages, and promote success in academic publishing. Quality evaluation will occur in ways to be decided by the gender-balanced EfD Research Committee on an ongoing basis; one example is number of peer-reviewed publications and journal ranking, but quality will be incentivized and measured along many metrics. EfD research management will ensure that there is no discrimination in access to resources and opportunities.

3.3 Policy engagement

Policy engagement goals

Center policy engagement

EfD centers create and maintain a strong research-policy interface, particularly in the context of connecting their applied, domestically relevant research to key stakeholders to achieve real-world positive impacts on poverty reduction, gender equality, and the efficient management of the environment, resources, and climate change impacts.

Global policy engagement

EfD is a well-recognized and globally esteemed partner with other organizations working in research-policy interfaces, in the realm of inclusive sustainable development.

3.3.1 Context

EfD centers strive to collaborate, directly and indirectly, with governments and other country-level stakeholders to influence policy priorities or the design, implementation and assessment of policies that shape the opportunities for inclusive sustainable development.

While policy makers do rely on existing local expertise for evidence-based policy advice, this capacity is severely limited in the Global South. One primary driver of this limitation is that academic institutions are often not in a position – financially or otherwise – to invest in science-policy interfaces. Centers engage in regular dialogues with policy actors, other government officials, and those to whom they listen, such as NGOs and political organizations, to get inputs for their research and capacity-development agendas. The over-arching goal is to provide the most timely and relevant solutions possible to existing policy challenges, both through training and research outputs.

EfD's Collaborative Programs provide opportunities to deploy expertise from other centers in the network, greatly broadening the range of expertise available for specific policy challenges. In addition, being a network with similar policy interaction processes across centers, EfD presents opportunities for efficient "copycat policy transfers"; essentially, lessons from one center's policy interaction can be adapted and applied to analogous situations at other centers.

Similarly, even at a given center, interaction with separate sets of policy makers can sometimes be inefficient in the face of limited time and staff. One way to broaden EfD's reach can be to interact regularly with groups of policy actors at a given time, as part of the centers' Policy Board meetings. Policy Boards also can ensure that local capacity is at hand when it is most needed, by guiding the centers' research and training agendas on an ongoing basis.

3.3.2 Training researchers for improved policy engagement

As most researchers are not trained in policy interaction and communication, finding ways to share experiences, and to develop communication skills and methodologies, is important for strengthening EfD's policy impact. Approaches that will be implemented include:

- a. Present methods and real-world experiences from successful policy interactions to the network. Presentations will be given with online webinars broadcast at the centers, as well as in-person with designated sessions at EfD's Annual Meeting.
- b. At the inception of Collaborative Programs, incorporate a concrete plan for policy interaction in connection with specific applied research projects, including a plan for how researchers and other staff will be trained in communication and what methodologies will be used. EfD will encourage the use of center "Policy Research Review" documents to aid in this planning, as they can help connect projects with the relevant real-world gaps and specific stakeholders.
- c. Offer short courses to researchers and policy makers on how to improve the science-policy interface. EfD will organize these courses, bringing in experts, to be offered both digitally at centers and in-person in tandem with the Annual Meeting.

3.3.3 Ongoing identification of policy needs

'Horizon scanning' by the EfD network is important for anticipating where future needs will arise that require high-quality research and researchers to advise on policy. This work is conducted on an ongoing basis by EfD centers (with the help of Policy Boards), EfD collaborative programs, and by EfD's Global Hub and Board.

3.3.4 Institutionalization of policy engagement

Policymaking is a complex process with many varied stakeholders, and research is only one piece of the policy process. It is therefore important to develop a range of platforms and tools to ensure that useful information is made available to the right people at the right time, and on a consistent basis, for actual impact to be sustained. Currently, the majority of policy engagement by researchers is carried out by individual researchers acting on their own. There is a strong need to institutionalize policy interaction for more sustained and deeper impact. Centers will therefore take structured approaches to their policy interaction activities, with the aim of an institutionalized research-policy interface. Centers will accordingly adopt several strategies:

- a. Centers will update their Policy Research Reviews regularly, and will incorporate a detailed policy engagement strategy into their overall center-specific strategic plans for 2021-2025.
- b. Centers will set up Policy Boards, as discussed in previous sections, to help formalize and enhance their pathways into domestic policy making and implementation. By advising centers on the identification, design, and dissemination of useful policy research, a Policy Board institutionalizes relationships between researchers and policy-making practitioners, enhancing their ability to communicate regularly.
- c. The scope of EfD Collaborative Programs will be expanded to explicitly incorporate policy interaction. Going forward, centers will play leading roles in the Collaborative Programs, setting them up to better mainstream their results among domestic policy actors.
- d. An important element of policy-relevant research is to strengthen the dialogue between researchers and stakeholders at early stages in the research process, so that researchers fully understand the policy context and research can be tailored to the questions that most need answering. This also allows for stakeholders to more readily anticipate, endorse, and ultimately use research results once they are produced. EfD will promote and facilitate consultative workshops to achieve the objective of early-stage policy engagement at all centers.

- e. Some policy gaps can be filled by providing policy makers and government officials training in concepts, tools, and options for solving particular challenges. This is especially true in cases where policy makers and practitioners are grappling with problems which have already received much attention in other jurisdictions. EfD will, in these circumstances, provide the necessary training to create awareness of the concepts, tools, and specific options available for addressing the policy gaps, based on existing best practice.
- f. Centers will create regular public platforms for showcasing their activities at the research-policy interface. Once a year, EfD does this through hosting a Policy Day in tandem with the EfD Annual Meeting. Government representatives and experts, both from within EfD and from partner networks, are invited to this event, which showcases policy implications of EfD research. Centers not hosting the EfD Annual Meeting in a given year will create their own national events of similar stature.

3.3.5 Effective partnerships for policy engagement

Partnerships are another important and effective element of fulfilling EfD's policy impact goals successfully. Our experience working with a broad range of partners has shown that two types of partnerships are especially effective.

- a. Partnerships with relevant bilateral agencies (e.g. Swedish embassies) and multilateral institutions (notably development banks such as the African Development Bank and the World Bank) have proven effective for enhancing policy dialogues and bringing EfD research into diverse policy processes. One ambition is therefore to continue and expand existing collaborations with the World Bank around Country Environmental Analyses (country-specific reports that the World Bank publishes each year to highlight current environmental challenges and opportunities, and which EfD has supported in the past). Other strategic collaborations may include participation in UNencouraged "Voluntary National Reviews", which are regular reviews of a country's sustainability progress, aimed at facilitating the sharing of experiences to accelerate implementation of the UN 2030 Agenda for Sustainable Development. EfD will also actively seek opportunities for assisting governments in formulating inclusive green transition policies, in partnership with multilateral agencies. Continued collaboration with agencies such as the UN Conference on Trade and Development (UNCTAD), the UN Department of Economic and Social Affairs (UN-DESA) and UN Regional Commissions, will also be actively sought out and prioritized. Other promising partners include the European Union, the Norwegian Agency for Development Cooperation (NORAD), the Netherlands Foreign Trade and Development Agency (NFTDA), and World Resources Institute (WRI). EfD will seek more collaborations with stakeholders such as the Swedish embassies in EfD countries and the UNESCO ambassadors from EfD countries. Collaborations on synergistic issues can bring about more impact on the ground. The OECD Development Assistance Committee has recently called on Sweden to "systematically apply its joined-up approach to addressing development, humanitarian needs and peace in all its fragile partner countries". The EfD could therefore seek collaborations with embassies on development research (e.g. climate) so as to meaningfully address possible humanitarian needs and conflict and refugee implications.
- b. Collaborations with international organizations generally focus on providing EfD's expertise in particular topic areas, and on co-hosting conferences with the aim of disseminating research, increasing exposure of researchers to policy makers and practitioners, and exchanging experiences. In these collaborations, a main ambition is to establish EfD as a key knowledge-generating partner. One strategic focus along these lines will be to further develop EfD's participation in the Green Growth Knowledge Platform, which is a UN-assembled global network of organizations and experts that address major knowledge gaps in green growth theory and practice.

3.3.6 Policy engagement through consultancy work

High-level technical consultancy can be an efficient way of introducing EfD's research outputs into policy processes. EfD will therefore create a platform for EfD's researchers to carry out consultancies collaboratively. Such a platform will allow EfD to contribute to a broader range of policy relevant work. EfD will ensure that consulting activities are streamlined so that researchers will continue to leave sufficient

time for their teaching and research engagements and so that they will maintain their academic independence.

3.3.7 Global policy engagement

The EfD Global Hub will support centers in all of the above-discussed policy engagement activities, by providing guidance and lessons from related policy processes at the domestic and international levels. It will also:

- a. Actively enhance international visibility and availability of EfD research and policy engagement, for example by attending and supporting researcher attendance at high-level meetings for international organizations such as the UN, GGKP, etc.
- b. Provide researchers with the technical support, training, and products needed for them to be effective in their policy engagement activities, for example with short communications courses discussed previously;
- c. Create metrics for measuring EfD policy impact. The EfD Global Hub will create a template with data/information for researchers to collect during the policy engagement process. This will range from confirmations by policy actors that interaction took place to measures that attribute the significance of the researchers' engagement in influencing policy priorities or the design, implementation and assessment of formal policies.

3.4 Institutional development: Center functions

Center Institutional Development Goal

EfD centers are "internationally excellent" research environments [UK REF methodology] that each have the capacity to run graduate academic programs, implement policy research, and foster engagement with key policy actors regarding evidence-based policies for poverty reduction, gender equality, environmental and resource management, and climate change mitigation and adaptation in the Global South.

3.4.1 Context

Centers are the building blocks of EfD. Comprising of 13 centers across the Global South, in Chile, China, Colombia, Central America, Ethiopia, Ghana, India, Kenya, Nigeria, South Africa, Tanzania, Uganda, and Vietnam (and with many partners in Europe and the US), the EfD Initiative is now an entity of considerable scope and scale. Current EfD centers all share some common characteristics, including (i) strong links to policy making bodies, (ii) a fertile environment for applied research, and (iii) close association with academic graduate programs. This enables a high degree of learning between centers, both in terms of research findings and institutional lessons. It has also provided the network with dynamic and robust South-South interactions, in terms of collaborative research, mutual academic learning, and sharing of institutional innovations. The centers institutionalize capacity development, policy research, and policy interaction in support of dealing with policy challenges regarding poverty, the environment, resources, and climate change impacts. EfD centers will strive to become "internationally excellent" research environments (see footnote) that each have the capacity to run graduate academic programs, implement policy research, and foster engagement with key policy actors regarding evidence-based policies for poverty reduction, gender equality, environmental and resource management, and climate change in the Global South.

According to the EfD External Evaluation $2015-2019^{17}$, the quality profile of centers has improved over time. A summary for 2019 can be found in the table 1 below.

¹⁷ https://efdinitiative.org/news/read-efds-evaluation-report-2020-here

Quality profile by EfD center in 2019

Percentage of research activity at each quality level (UK REF methodology)

			, , , , , , , , , , , , , , , , , , ,	377	
	Internationally leading (%)	Internationally excellent (%)	Internationally recognised (%)	Nationally recognised (%)	Unclassified or missing (%)
China	42	31	4	5	18
Central America	10	40	20	10	20
Ethiopia	8	75	13	0	4
Kenya	0	44	33	14	9
South Africa	13	56	31	0	0
Tanzania	3	31	37	13	16
Chile	4	46	29	7	14
India	8	37	38	16	1
Vietnam	3	59	28	10	0
Colombia	24	60	12	4	0

Centers in Nigeria, Ghana and Uganda did not form part of the EfD External Evaluation 2015-2019 as they became full-fledged centers in 2019.

Table 1. Quality profile by EfD center in 2019

3.4.2 Tailored support to centers

EfD now consists of three generations of centers, according to admission timelines. Recognizing the various sources of heterogeneity across centers, EfD will provide tailored support to centers. Core funding will be provided where it can most productively be used (hopefully leveraging on additional funding locally but also supporting vital functions that cannot be funded in other ways), while also ensuring that each center continues to benefit from remaining within, and contributing to, the network. Centers will propose how their core support should be structured across administrative support, research infrastructure, and policy interaction – with a focus on policy impact. This process will then open up for a constructive conversation with detailed action points agreed between each center and the EfD Global Hub.

More developed centers are expected to increasingly cover administrative support and research infrastructure from other sources e.g. host institution and research grants from external sources. As policy impact is at the core of the EfD, outside funding needs to continue increasing and any savings that centers generate for EfD funds on administrative support and research infrastructure will be committed to greater policy engagement. The EfD Global Hub will work with centers to ensure that the transition to more tailored support happens without loss of research productivity and policy impact. Centers will enhance their policy engagement by forming and operationalizing Policy Boards.

3.4.3 Quality assurance for centers

Evaluations by EfD's Center Evaluation Expert Committee is the primary quality assurance mechanism to strengthen the network globally and centers nationally by ensuring that center activities related to (i) Institutional Development, (ii) Policy-Relevant Research, (iii) Capacity Development and (iv) Policy Engagement evolve as required to achieve set goals. For continued membership within EfD, centers must pass rigorous center evaluations every 5 years. All centers in the Global South will undergo center evaluations in the next 5 years: Chile, Colombia, India and Vietnam at the end of 2021; Ethiopia, Kenya and Tanzania at the end of 2022; Central America and China in mid-2023; Ghana, Nigeria, South Africa and Uganda at the end of 2023.

3.4.4 Institutionalization at host institutions

There are positions for EfD centers within host institutions which augur well for centers' sustainability and their ability to mobilize sustainable financing, particularly from host institutions. The EfD will support centers to institutionalize by becoming formal organizations recognized by their host institutions with bylaws that govern the organisation (i.e. not just exist in project form). EfD aims to be a positive force in terms of institutional development at host institutions, for example, by sharing policies and practices. In particular, EfD centers should have the necessary academic freedom to determine their research agenda and conduct independent research and sufficient autonomy in order to carry out its mandate efficiently.

3.4.5 Center strategies

Centers will develop their 2021-2025 strategies based on the overarching EfD Strategic Plan 2021-2025. Center strategies will guide their institutional development paths, capacity development activities, research agenda, policy interaction, resource mobilization, branding, and impact. Each center strategy will incorporate a plan for institutional sustainability, accounting for the "tailored support to centers" model and centralized network functions.

3.4.6 Policies on inclusivity

EfD takes the issue of inclusivity, particularly gender equality, seriously. Inclusion broadens the talent pool, incorporates diverse perspectives, reduces risks, and ultimately increases the likelihood of socially relevant and impactful research. While EfD has always adhered to the principle of equal opportunity for men and women, the network is embedded in cultures, institutions, and a disciplinary field which are maledominated and hold well-known, long-standing biases against women. Given this context, and due to a persistent dearth of women from the Global South with advanced training in environmental economics, EfD recognizes the need for a more proactive approach to promoting the training, inclusion, and success of female researchers. The EfD Global Hub will focus on structural issues for the network, including representation on EfD boards and committees, opportunities in terms of EfD funding, keynotes at EfD events, etc.

Centers will be expected to be more proactive on inclusivity. However, as mentioned in chapter 1.2 Gap analysis, there is a data scarcity on the situation for female academics in the Global South. The Global Hub has therefore commissioned a study, indented to provide insight into existing gender dynamics for researchers at different levels of seniority at EfD centers and their host institutions. This study will inform EfD's future work to address inequalities.

In addition, the Global Hub will provide a platform function to facilitate the sharing of good practices with centers for dealing with gender-specific and other equality, diversity, and inclusion issues e.g. childcare and nursing solutions, professional norms of behavior, meeting hours and dates, gender balance on search committees, interview and assessment panels, and the mentoring and encouragement of women in writing proposals. Centers will be asked to formally declare their host institution's policies for dealing with malpractices on inclusivity, including gender, and to be proactive about their use. Each center's (and host institution where centers do not have full control) approach and success including recruitment and promotion processes, access to funding and resources, work to prevent harassment and to promote equal treatment, flexible working, etc. will be considered as part of the external center reviews.

3.4.7 Exchanges between centers

The five-year phase will see an increase in cross-center and cross-country learning. This will be structured into three major joint activities: (i) There will be opportunities for Center Directors and Managers to visit other centers to learn about different options for institutionalizing and running centers; (ii) There will be opportunities for collaboration among centers in jointly serving policy makers from several countries, in support of more high-impact "copycat policy transfers" across centers (essentially adapting and applying lessons from one center's policy analysis to other centers' analogous policy challenges); (iii) There will be

more interactions between researchers at different centers, facilitated by supplementing the video conferencing hardware at centers with Zoom subscriptions.

3.4.8 Network expansion and influence

The EfD Initiative will grow its reputation as the global network that enables the execution of excellent research and capacity development at the intersection of environment and development, and the translation of this increased capacity into policy in the Global South. The above sections have outlined how EfD will intensify its support for centers to become sustainable and viable institutions that have lasting impacts on poverty alleviation and efficient management of the environment, natural resources, and climate impacts. Additionally, EfD will: (i) strategically invite new partners from the North who may support EfD in securing new major funding of research, as well as new inroads for policy-impact strategies and (ii) promote its principles to other countries in the Global South through collaborations with the regional environmental economics associations in Africa, Asia, and Latin America.

3.4.8.1 Partners from the North

More EfD partners from the Global North will be recruited, provided they meet the criteria determined by the EfD Board. First preference will be given to the research groupings in the North that the EfD has already collaborated with e.g. Duke University, Portland State University, Toulouse School of Economics, and University of North Carolina at Chapel Hill. In cases where admission to the network as centers is more appropriate than partnership, the criteria will include, among other things, a review system applied on new center applicants. In addition, admission of new centers from the North will require their commitment to leverage more (intellectual and financial) resources from other sources to enable future expansion in the Global South.

3.4.8.2 Regional environmental economics associations

EfD's collaboration with regional environmental economic networks is part of its strategy to enhance its global visibility and to be increasingly successful in bringing in support from a more diverse group of funders for future large-scale collaborative research programs. By increasing the influence of EfD through enhanced collaboration with regional networks in Africa, Asia, and Latin America, EfD research will have the opportunity to influence environmental policy and affect reforms in a growing number of developing countries. Greater collaboration with regional environmental economics networks will allow more countries to take advantage of EfD's collective experience and sharing of knowledge within the network, but regional networks will also increase the knowledge pool of EfD and thereby strengthen 'best practices' and improve the quality of research in all developing countries. EfD will increase its collaboration with the African Association for Environmental and Resource Economists (AFAERE); South Asian Network for Development and Environmental Economics (SANDEE); Economy and Environment Program for Southeast Asia (EEPSEA); and Latin American and Caribbean Environmental Economics Program (LACEEP).

3.5 Institutional development: Network functions

Network Institutional Development Goal

EfD is recognized by policy actors and academia as a leading global network for fostering high-quality research and capacity development, leading to evidence-based domestic and international policies for poverty reduction, gender equality, environmental and resource management, and climate change impacts in the Global South.

3.5.1 Context

EfD was established 2007 and today, the network consists of 13 centers and close to 230 accomplished environmental economists based in the Global South, with many different specializations.

EfD is a well-governed international organization. The EfD Global Hub is housed by the School of Business, Economics and Commercial Law at the University of Gothenburg, Sweden, and is supporting the EfD Board, the EfD Research Committee, the EfD Coordination Committee, and the EfD Capacity Development Committee (see figure 2). The EfD Global Hub has decade-long experience in coordinating the EfD global network.

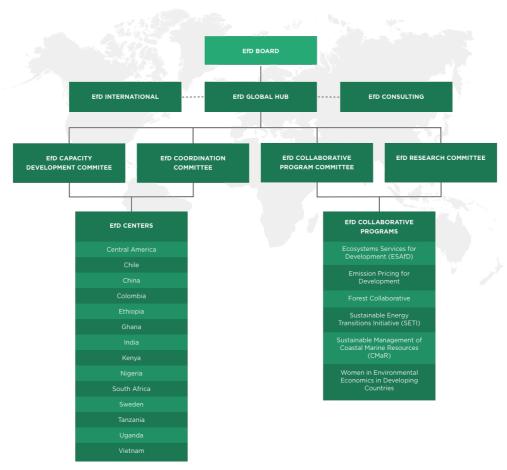


Figure 2. Organization

Over time, it has become apparent that certain specific functions can be centralized to ensure that resources are used more efficiently for the network. Centralizing these functions would ensure high quality, coordinated and efficient services available to all centers and collaborative activities of the network. It would also reduce some bureaucratic hurdles faced by centers and allow for continuity in terms of staff. ¹⁸

The centralized network functions are global policy engagement, communications, data management, fundraising, governance support functions, monitoring and evaluation indicator system, and contract management.

3.5.2 Global policy engagement

EfD seeks to become a leading global network for fostering high-quality research and capacity development, leading to evidence-based domestic and international policies for poverty reduction, environmental and resource management, and climate change adaptation in the Global South. As mentioned earlier, the three major policy areas that have occupied the attention of world leaders during the last five years are: biodiversity conservation (under the Convention on Biological Diversity, or CBD), climate change (under the United Nations Framework Convention on Climate Change, or UNFCCC) and sustainable development goals or SDGs (under UN 2030 Agenda on Sustainable Development). While EfD Centers concentrate on their

¹⁸ Some of these tasks, when carried out at centers, are the responsibility of junior researchers or temporary administrators and it is often a challenge to combine these with their other responsibilities.

respective country policy engagement, the network will be involved in global policy engagement with a view to share lessons from EfD countries with the international community and scanning for lessons from international platforms for consideration in country level policy engagement. EfD will proactively seek representation at international fora dealing with poverty reduction and the management of environmental, resources and climate impacts.

3.5.3 Communications

A commitment to effective communications is a central component of the EfD strategy for the years ahead. The rich body of research produced and communicated over the last decade has created the foundation for taking EfD to its next level of impact by further integrating communications into its daily operations. EfD's communications efforts will focus on delivering in four core areas:

- a. Building the communications capacity of the EfD centers through trainings and increased support services from the Global Hub;
- b. Delivering targeted communications through campaigns tailored to key audiences and employing products designed for policy and intellectual impact;
- c. Sharpening EfD's institutional identity through coherent branding and messaging;
- d. Raising EfD's profile through traditional media and social media outreach.

It will achieve these goals through the following means:

3.5.3.1 Annual reports and websites

In particular, as annual reports and the EfD websites are key communication tools, the EfD communications team will develop a format for the joint annual report with readily detachable center sections. The new EfD website features site-in-site functionality for each center and collaborative program. The ambition is to enable the import and export of information between the joint EfD website and the centers' host websites through Application Programming Interfaces (APIs). New website content and audiovisual material will be further developed, for example, by integrating research interviews, presentations, and teaching material online. All material will reflect key elements of EfD's institutional identity – the organization's "DNA".

3.5.3.2 Targeted material for policymakers

EfD will invest in communications outputs that increase the accessibility of its high-quality research through effective presentations for non-technical decision-makers. A key feature of this effort will be thinking about EfD's research portfolio broadly, so that communications strategies and products are not limited to individual reports or projects but are instead oriented to the ways that policymakers understand and analyze issues. For example, newly developed workflows will allow for the creation of short, accessible briefs to accompany research outputs. These briefs will emphasize the "policy bottom-line" that motivates the research and connects it to the concerns of key decision-makers.

3.5.3.3 Social media

EfD will increase its engagement with key audiences through a targeted social media strategy that emphasizes the value of EfD's work. Elements of the strategy include partnering with key influencers, more frequent posting, developing high-quality content, more sophisticated use of hashtags, audience research, and tracking analytics.

3.5.3.4 Media outreach

The EfD Global Hub will cultivate relationships with key journalists around the world. This effort will include expanding EfD's contact list for journalists, creating targeted press releases for compelling EfD research, offering reporters background briefings, and placing op-eds in various outlets.

3.5.3.5 Exhibitions

EfD will take part in the exhibitions at significant events such as the EAERE (European Association for Environmental and Resource Economists) and the WCERE (World Conference for Environmental and Resource Economists) conferences.

3.5.3.6 Policy engagement stories

EfD will continue to use policy engagement stories to qualitatively describe and demonstrate what a difference environmental economics can make in policy design and how to organize effective research-policy interaction. These stories are developed through interviews between researchers and communication staff. Another function of the policy interaction interviews is to guide EfD's ongoing self-evaluation process regarding policy impacts, and possibly unexpected results.

3.5.3.7 Communications capacity building

EfD's central communications staff will offer a series of trainings to communications officers and other interested staff in the network via regularly scheduled virtual conferences. Topics will range from the basics of activities like writing a press release to the key steps involved in creating a strategic communications plan. The trainings will be recorded and archived to create an easily accessible library. EfD will further standardize workflows for producing communications materials and developing communications strategies. Embedding the creation of policy relevant communications material in existing editorial processes will enable EfD to greatly expand its outreach to new audiences cost-effectively.

3.5.4 Data management

Solid empirical analysis needs to be based on solid data. Given the dearth of reliable poverty/environmental data in the Global South, EfD supports the generation of such data. It is important to make the data readily available to researchers that can generate domestic and/or cross-country evidence in support of policies on poverty reduction and the efficient management of environmental, resources and climate impacts. EfD will increase its storage of data on the EfD "Data Access Unit" (DAU) hosted by the Swedish National Data Service, which is a platform for all major Swedish universities. The EfD Data Manager will be responsible for the interface function between the EfD network and the DAU. All primary data from EfD funded research will need to be submitted to the DAU as part of project reporting and clearance.

3.5.5 Fundraising

EfD will formulate a fundraising strategy which assures adequate resourcing for this strategic plan and associated implementation plans¹⁹. Greater efforts will be geared towards securing more core support for EfD, in addition to support to the various programs. In addition to potential continued funding from Sida, EfD will approach a diverse group of donors and partners for augmentation (e.g. African Development Bank, the Canadian International Development Research Center, the European Union, the Netherlands Foreign Trade and Development Agency, the Norwegian Agency for Development Cooperation, and the World Resources Institute). The Global Hub will support EfD centers on grant proposals with guidance material and templates. Furthermore, in the case of major consortium proposals, the coordination and completion of major proposals will be managed by the Global Hub on behalf of participating centers.

3.5.6 Support to EfD bodies

The EfD Global Hub will support the activities of the network governance bodies: EfD Board, EfD Research Committee, EfD Coordination Committee, and EfD Capacity Development Committee. These bodies meet frequently and preside over matters relating to this strategy, research management, institutional development and policy engagement, and capacity development.

3.5.7 Indicator system

This strategy is accompanied by a Results Based Management (RBM) document which summarizes the objectives, outcomes, outputs, performance indicators, verification, baseline data and data collection strategy. This information facilitates the monitoring and management of implementation of this strategy. The EfD Global Hub will maintain an indicator system (Master Indicator Management Information aka MIMI) for use in adaptive implementation of the strategy and future evaluations. The MIMI database enables time series analyses and will also form the basis of future donor and annual reports. The EfD Global Hub will also

¹⁹ Total EfD budget in 2019 (including both Global Hub and center generated funds) was around 75 million SEK (approximately USD 8,2 million). External funding was obtained from 36 unique donors, of which 8 were first time funders in 2019.

minimize transaction costs by managing multi-donor funds in support of EfD centers consistent with the internal administrative routines of each host institution.

3.5.8 Equal treatment and gender perspectives

EfD aims for equality including gender equality within its program, and in addition works to serve as a catalyst for improvements within each host university. The program places specific importance on gender equality. In the coming five years, resources will be dedicated to a range of initiatives including in the distribution and access to resources and opportunities, ensuring representation in formal planning and decision-making contexts, as well as in workgroups and committees, and encourage the recruitment of women where they are under-represented. Women are also given prominent roles in the program; as lead researchers, educators (lecturers and workshop leaders), mentors and advisors. In addition, the importance of gender analysis and gender perspectives will also be communicated, in particular within the research pillar, and within capacity building. A key aim with regards to EfD research is to ensure increased access to and use of sex-disaggregated data and gender equality research for policy makers and the public.

The Global Hub will establish an EfD advisory committee on equal treatment and inclusivity to provide feedback and propose strategies for improving retention and success of female researchers within the network, at EfD centers and within their host institutions. The Global Hub will also provide a platform for discussion between centers to enable exchange of ideas in how to ensure that women join the research and management teams at the centers, and are given the same opportunities and resources as men. Resources will be targeted at those centers that face the steepest challenges in terms of equal treatment. There is also strong commitment to strive for gender equality across EfD committees, boards and other appointments.

The Global Hub will ramp up support to the Women in Environmental Economics and Development (WinEED) network that was established in 2017. WinEED aims to support early career women in academia by establishing a mentorship and support network. A structured mentoring program for junior scholars will be developed further, providing opportunities for regular virtual and face-to-face discussions and exchanges. Support may include anything from open discussions around work-life balance to opportunities to submit research ideas to WinEED senior researchers ahead of the annual EfD Research Fund submissions, creating the opportunity for guidance, input, and possibly scouting of research collaborators, which will motivate more junior fellows to participate in the process. WinEED will also, with the support of the Global Hub, aim to secure external funding for a dedicated fund to support junior scholars applying for PhD and post-doctoral training.

3.5.9 Operations management

The EfD Board is the highest-level governance body for EfD and oversees its work. The EfD Board is responsible for this strategy and monitors progress in achieving the objectives of EfD. The daily operations of EfD are carried out by the EfD Global Hub, headed by an Executive Director. The Executive Director is the Chief Operating Officer of the EfD.

The EfD Global Hub will service the EfD Board, EfD Research Committee, EfD Coordination Committee and EfD Capacity Development Committee.

The EfD Global Hub will (i) coordinate with centers all EfD-sanctioned activities and events; (ii) ensure the flow of information between centers and the EfD Global Hub and seek to catalyze effective collaboration and synergies among centers; (iii) lead global information campaigns; (iv) build and manage the EfD Initiative brand and logo; (v) in collaboration with centers, represent the EfD Initiative at meetings, public events, and forums; (vi) prepare annual plans, budgets, and reports on progress for approval by the EfD Board and for presentation to Sida; and (vii) engage in fundraising for the full program and its components.

The EfD Global Hub will ensure good administrative routines for all kinds of document handling and funding agreements with center host institutions including due diligence and accountability.

4 Conclusion

Reducing poverty while respecting planetary boundaries will require major policy and investment interventions. Currently, there is a unique window of opportunity arising from a number of parallel global processes, among them the Post-2020 Global Biodiversity Framework, the Paris Agreement, the UN 2030 Agenda on Sustainable Development, and the Sendai Framework for Disaster Risk Reduction. At the same time, an increasing number of lower-income countries see the merits of a development path that involves a reduction in carbon emissions and sustainable use of natural resources. International funding mechanisms have been developed, such as the Green Climate Fund and a host of countries, ranging from China to Sweden, are making pledges to support climate mitigation and adaption.

All of this is positive, but there is an unfortunate catch. National processes are key to the development and ownership of national plans and policies, however domestic capacity in the Global South is often insufficient in order to negotiate, design and implement the necessary policies and investments. Analytical capacity needs to be enhanced so that the Global South will be in a better position to analyze the situation, create policies tailored to local circumstances, evaluate their position and make use of opportunities as they arise. This capacity is scarce and takes a long time to develop. EfD is in a unique position to further build on three decades of such capacity development and make the best use of it by supporting vibrant academic environments and increase the knowledge-sharing between countries.

In order to capture the potential of environmental economics to support poverty alleviation and sustainable development, we therefore propose to build on the ongoing successes of the EfD initiative that addresses the four gaps—in capacity, knowledge, communications, and institutions—that preclude knowledge-based policy making. This strategy has outlined the strategic interventions planned for the four pillars of the EfD: (i) capacity development; (ii) policy-relevant research; (iii) policy engagement; and (iv) institutional development.