Pathways to the SDGs Collaborative Research Action
Scoping Workshop Framework Document

The Belmont Forum (BF) is a partnership of 29 science funding institutions representing 50 countries and 6 science coordinating bodies committed to providing knowledge for understanding, mitigating, and adapting to global environmental change. Members identify areas of shared priority, where transnational and transdisciplinary approaches that leverage existing investments bring added value, develop synergy, and avoid duplication.

While the BF is a catalyst for its members, the most successful collaborative research actions (CRA) include support from funders and organizations that are not members of the Belmont Forum. The Pathways to the SDGs CRA scoping process actively seeks to engage BF members and other institutions and programs interested in leveraging their funds or other resources in this highly flexible funding process. This Framework will help guide both the priority setting for the CRA itself and possible funding mechanisms (such as capacity building and evaluation) that would enhance CRA success. By November 2019, the scoping process is expected to produce call text, joint implementation plan with associated review criteria, and monetary or in-kind commitments from joining partners. The call is expected to be released in late 2019 with funding of successful multinational, transdisciplinary efforts in 2020.

Objectives of the CRA Workshop:

1. Define a Collaborative Research Action that:
   - Meets the spirit of the Belmont Challenge (i.e. accelerate provision of knowledge to address societally relevant global environmental change challenges);
   - Is ripe for international collaboration, (i.e. providing added value through levering Belmont Forum members existing investments); and
   - Is decision relevant and includes consideration of human and natural systems, bringing together new partnerships of natural scientists, social scientists and stakeholders
2. Develop a list of priorities (research areas/topics) corresponding to challenges on which the Belmont Forum should collectively focus its resources to meet Objective 1.
3. Develop a suite of options to deliver the priorities through a call for proposals for example:
   - Potential work-packages focused on specific topics
   - Specific use case scenarios
   - Types of activities (e.g., research projects, workshops, community forum, etc.) needed to meet the objectives of the CRA
   - Mechanisms for coordination among activities
   - Strategies for linking these activities with previous Belmont Forum calls/activities where appropriate
   - Other ideas

SCIENCE FOR SUSTAINABLE DEVELOPMENT GOALS

The Belmont Forum and its partners recognize that we currently lack a truly integrated, comprehensive qualitative and quantitative understanding of sustainable development pathways that account for the inter-linkages between the economy, technology, institutions, environment, climate, and human development and that are anchored *within the constraints of a sustainable Earth system*. The viability of

achieving these multiple social-economic-environmental planetary goals simultaneously needs to be assessed. To help provide a science base for achieving the SDGs, the Belmont Forum and partners are exploring integrated qualitative and quantitative approaches to develop Earth system-based targets and pathways for sustainable development. Our goal is to support integrative, qualitative and quantitative analyses and the employment of systemic methodological approaches, especially where current analytical and quantitative modeling capabilities fall short capturing specific SDGs and associated targets.

We want to bring together international, transdisciplinary research comprised of natural and social scientists, modelers, governance experts and stakeholders from around the world to set targets and create sustainable development pathways to achieve the SDGs through integrated systems approaches.

The overarching goal is to develop a network of cutting edge transdisciplinary scientific capacity addressing multiple Sustainable Development Goals at once that:

- provides information useful to decision-makers
- improves understanding and addresses risks and vulnerabilities across multiple time scales
- develops robust modeling and prediction at useful temporal and spatial scales
- stimulates innovative solutions and the use of new technologies
- facilitates sustained partnerships that develop, deliver and communicate useful science

The CRA also creates an institutional structure that specifically allows and encourages capacity building, training and skill development, decision maker engagement, and evaluation to occur around the fundamental research the CRA and Belmont Forum members fund.

Background and rationale

The Sustainable Development Goals (SDGs) were unanimously adopted by all member states of the United Nations in September 2015 (UN GA 2015). These goals encompass a broad range of economic, social, and environmental dimensions of sustainable development and set specific targets for implementation of these ambitious goals. If the timeframe set by the UN to achieve these ambitious goals by 2030 is to be realized, there will need to be unrivalled international collaboration over the next fifteen years within the political, scientific and civil societal realms. Furthermore, if humanity is to meet these goals, then clear targets and pathways to achieve these goals within a sustainable Earth system must be identified. The targets and pathways must account for critical drivers of human capacity, demographic changes, opportunities for technological innovation and diffusion, sound institutions and transformative governance capabilities, sustainable diets, and other critical socio-economic developments.

It is imperative to deliver sound, science-based pathways in a manner useful to policy- and decision-makers to enable them to make the difficult choices regarding sustainable development. These comprehensive targets and pathways should help decision makers identify and exploit synergies and anticipate and manage trade-offs. To be more decision and policy relevant, governments, businesses, and civil society, need to know what implications the different sustainable development pathways might have at both global and regional scales. The available projections must be provided for different world regions, so that decision-makers can understand what global pathways imply for their region and what

the costs and benefits of action are relative to business as usual. Policymakers from around the world will need fact-based and integrated, global and regional, transformational pathways to craft long-term strategies.

While substantial progress has been made in our fundamental understanding of how some of the goals, we currently lack an integrated understanding of how many of the goals and targets might fit together, at global and regional levels. From a research perspective, this raises important questions of how to fill major gaps in our understanding of and capacity to project changes in areas such as governance, biophysical processes (e.g. oceans), and social transformations. There are many potentially consequential examples of this lack of integration:

- economic projections often fail to account for the impact of climate change, or the impacts of different demographic developments.
- Models for climate change mitigation to reach current targets often involve the development of land intensive negative emissions technologies (e.g. BECCS), but tend to be poorly integrated with models of agricultural productivity, the impacts of agricultural interventions aimed at reducing carbon emissions, and the impacts of both of these drivers on biodiversity conservation.
- policies aimed at productivity growth, material welfare, energy access and environmental sustainability are poorly integrated, and current models do little to bring these policy realms together.

Need for International, Transdisciplinary Research

Sustainable development pathways address complex questions encompassing several SDGs, at local, national, regional and global scales. Questions might include, but are not limited to:

- How do we meet multiple SDGs (e.g., hunger, poverty, energy, growth) while meeting global environmental goals?   We need to identify essential targets and indicators, clearly define target spaces and proceed to quantify these target and indicators.

- What are the synergies and trade-offs between the proposed pathways and different SDGs? We can build on recent advancements in Earth system governance, social, economic and technological advances and Earth system science (e.g., energy, food, population, education, macroeconomics, biodiversity, and climate) as well as existing global, regional and/or local assessments, roadmaps and analytical scenarios relevant to the proposed pathways.

- What are the costs of pursuing social goals without meeting sustainability goals and vise verse? We can consider approaches that "back-cast" from desired development outcomes at a time beyond 2030 to a more immediate future and build on shorter-term achievements that various SDGs define. These may be particularly useful where relevant SDGs require longer timeframes for achieving sustainable development pathways.

- How do various pathways toward specific and multiple SDGs differ regarding implementation attributes (i.e., political feasibility, social acceptability, economic reasonableness)? To answer

this, we need integrated assessment modeling, impact modeling, socio-economic and earth-system modeling, narrative and scenario development.

BELMONT FORUM SDGS CRA SCOPING PLAN

The CRA topic has been accepted by the Belmont Forum Members at their annual meeting, and the year-long scoping process started.

- November 2018 – February 2019 – Leverage Points 2019 offered to host a scoping workshop
- February-August 2019 – a series of scoping workshops and meetings to refine research funding priorities and develop initial CRA text and framing. identify BF members and other partners who want to contribute to call text, including Thematic Program Office (TPO) for the CRA, and set-up steering group subgroups to refine drafting.
    o February 7, 2019 Leverage Points workshop: Lüneburg, Germany--Scoping workshop with international science community with BF members and interested partners.
    o June 2, 2019 Brasilia, Brasil workshop
    o Other dates and locations to be determined (African regional scoping TBC)
- August-September 2019 – Concept note text writing (program partnership building continues), members draft their individual annexes for the CRA
- October 2019 – Concept note text presented to Belmont Forum, Funding partners make formal commitments,
- November 2019 – CRA text writing based on approved concept note, CRA can be issued as soon as possible thereafter with funding to begin in 2020*. Funding can take place over multiple years if it is laid out as part of the overall CRA Roadmap as such.

Outcomes from Scoping Workshop at Leverage Points 2019:

The research community expressed the following issues:
○ Not having a common language (natural vs. social scientists)
○ We need to analyze what is already there.
○ How do we connect with achievement/evaluation?
○ We must not replicate existing efforts!
○ Need for multiscale research geographically and temporarily, commitment to long term programs
○ Bridge the gap between science – evaluation - on the ground development.
○ Project-driven, competitive funding nature has to change (emotional response)

The priorities from the funder's point of view emerged as the following:
○ Need a different process: researching the process itself

- Community building:
    ○ Seed grants to build the community
    ○ Make the community building competitive grant

- ○ SRI2020 as a community building event, fund travel grants to bring people together

- The program will likely have multiple Steps/stages.

- Need to assess existing initiatives – synthesis, then move to innovation (tools to implement)
  - ○ Mapping, so we do not duplicate
  - ○ DFG/Germany has a good community
  - ○ Research is fragmented
  - ○ Utilize existing networks
  - ○ Engage regional approaches
  - ○ Include networking with existing CRAs, KANs explicitly
  - ○ Need to develop sustainability science globally
- The first product might be an implementation plan/strategy
  - ○ Cross-cutting themes, Cross-cutting activities
  - ○ Evaluation & methodology (Internal evaluation, processes)
  - ○ Seek to develop a strategy
- How would we navigate without being prescriptive?
  - ○ We need to develop pathways to pathways

Mutual concerns:
- No shared language, lack of synthesis of existing approaches, lack of community connectivity, not enough implementation or evaluation of research outcomes

Aim to:
- Ensure how projects become complementary contributions as part of a geography - or issue-based transformative system
- increase ability to communicate in the same language, literacy in spheres of collaboration + transformation
- Foster support and perennialize new forms of collaboration across differences (sectors, expertise, public private, civil, society)

Gaps:
- blind spot = the private sector
  - ○ go back to the economy as a function (process) and detect economic infrastructures that serve that function, e.g. circular economy 2.0, commons governance, regenerative design, cooperative ownership etc.
  - ○ emergence
  - ○ co-creation of support and knowledge co-creation with whom and why specified

Metaframeworks, measurements in adaptation, learning for a place-based systems change / transformation
- build new and mobilize capacities for future-oriented systems thinking using scenarios
- support the development / evolution of the field of evaluation of human response to global systems change - called blue marble evaluation
- creating knowledge to resist / change policy, then will bring government in from the beginning

- economic functionality
- requires new infrastructure (money, laws, language)

Development in the south --> converge--> degrowth in the north (involve economic actors)
- include in the call multilevel research:
  - local - regional - national - global
- or cluster projects into multilevel as well as multi-scale in several areas\
- support the development and application of methods that help communities
- analyze and act upon governance response to ecosystem change
- bring in the concept of stewardship of systems / earth issues or collective stewardship

Regional issues in Africa
- urban agriculture
- water / wastewater
- rural - urban interface

Stakeholder engagement:
- pastoralists
- urban poor
- smallholder farms

Move beyond projectification - link with EU RRI (responsible research and infrastructure) or missions
- epistemology, reflexivity = meta-level
- reflect on own assumptions about science, truth, development, economy, etc
- leverage locally managed innovation support funds (LISF)
- think in terms of developing transformations systems
- bridging science with business, public, private partnerships, collaborations
- evaluate critically SD solutions and policies, synthesize and share good and diverse practices
- evaluate impacts of new technologies on SDG, including opportunities and risks

Who gives us a mandate?
  - legitimacy
  - high level support
  - power
  - systems leadership
  - systems literacy
  - capacity building for systems

BELMONT FORUM

Tentative Agenda - Belmont Forum Program Managers and Invited Experts
DATE: June 2nd, 2019   LOCATION: Brasilia

Registration		9:00 - 9:15
Welcome and Introduction	Maria Uhle	9:15 - 9:30
Overview of the Belmont Forum CRA Process	Maria Uhle / Erica Key	9:30 - 9:50
Update and outcomes from the first Scoping Workshop in Luneburg, Germany	Judit Ungvari / Susanna Ehlers	9:50 - 10:15
Break		10:15 - 10:30
Discussion What is already funded? ● Identify existing priorities ● Identify gaps in funding *Focus on specific SDGs and how the CRA can leverage existing programs where possible and add value through international collaboration*	All Participants – break-out groups as needed	10:30 - 12:00
Networking Lunch		12:00 - 13:00
Focus the CRA Activities (Roadmap) Mapping of priorities ● What are the research questions? ● What potential activities should the CRA include?	All Participants – break-out groups as needed	13:00 - 15:00
Break		15:00 - 15:15
Who are the stakeholders? ● How to be inclusive from the start for codesign and co-implementation?	All Participants – break-out groups as needed	15:15 - 16:00

Pathways to the SDGs

<u>Closed Session – for Funders Only</u>
 	
Formulate the CRA Action Plan - who does what by when?
 	
      ● Confirmation of TPO lead(s)
      ● Establish Points of contact
      ● Develop list of tasks
            ○ CRA proposal to Belmont Plenary
            ○ Recruitment of other partners
	Belmont Forum, organizational representatives	16:00 - 17:00

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