



External Review

Executive Summary

May 2020

External Review of Future Earth

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EXECUTIVE SUMMARY

Future Earth was created to build and expand on the existing Global Environmental Change programs and to create step-changes in how research and society collaborate to accelerate transformations to global sustainability. In an international arena with key co-actors i.e. WCRP, IPCC, IPBES, and several others, Future Earth aimed to fill the gap between science, business, civil society and policy by promoting and developing transdisciplinary research (co-design, co-produce and co-deliver), as well as interdisciplinary and solutions-oriented research to achieve global sustainability. Future Earth was therefore built as a unique program fostering all dimensions of transdisciplinary research applied to global sustainability.

This review is conducted five years after the creation of the program at the request of the Governing Council of Future Earth. The review attempted to evaluate the governance, science programs and research projects, finances and impacts of Future Earth. Analyses are followed by recommendations proposed by the Review Panel. Recommendations are based on evaluations and syntheses of the self-assessment report provided by the Future Earth secretariat, responses to online questionnaires by numerous stakeholders, focused interviews, website data, annual reports, publications and other Future Earth related documents.

Overall, the Panel considers the continued existence of Future Earth important. Future Earth continues to have a unique and necessary role to fill in strengthening global sustainability science, to sharpen its science-based advice to policy makers and other stakeholders and address global change challenges.

The executive summary provides the major commendations and recommendations that the Review Panel consider important to convey to Future Earth and for consideration by the Governing Council to further develop Future Earth as a force for global sustainability. Recommendations were made with the singular objective to assist Future Earth to strengthen its unique mandate in the complex international arena of global sustainability. As such the executive summary also stands on its own.

Commendations

1. The entire Secretariat of Future Earth, including past and present staff, deserves recognition for their full involvement, dedication and achievements. The Panel fully realizes that these achievements, if objectively assessed, were realized in a highly complex and constraining environment with a distributed Secretariat and fragmented and limited financial resources to execute common actions.
2. The Global Research Programs have made a substantial contribution to fill research gaps by delivering a large volume of high-quality publications, many with policy impact, across numerous areas of global change research.
3. Future Earth managed to make regular contributions to major international and intergovernmental policy processes (e.g., UN Conferences of Parties, IPCC, IPBES, Agenda 2015) and initiated important actions to develop its partnerships with key action-focused partners, including some representing the civil and business sectors.
4. Future Earth was successful in creating new channels for publishing widely accessible, interdisciplinary and solutions-oriented science, for instance through successful publication

such as Anthropocene magazine, the 10 Climate Insights Series, as well as the more recent Our Future on Earth 2020 and the Global Risk Perception report.

Recommendations

Visibility, outputs and impacts

1. **Revisit the mandate and stick to the core:** A rapid expansion of activities has been a hallmark of the first 5 years during which Future Earth established itself. This rapid expansion of activities may have been to the detriment of Future Earth, particularly considering its financial constraints. At this stage of its development, the Panel holds the view that Future Earth should conduct a thorough review of its original mission and mandate, and clearly define its core mandate and objectives to ensure that it aligns its activities and priority actions accordingly. Future Earth cannot be everything to everybody. Future Earth's role in and impact on setting the international science agenda on transdisciplinary research for global sustainability is not crystal clear to either the research or broader stakeholder communities.

Future Earth should reposition transdisciplinary research at the center of its research and synthesis activities. Transdisciplinary research may also achieve impact more readily in a research synthesis context (see Recommendation 2), rather than spending scarce resources to inject transdisciplinary approaches into all primary research activities.

2. **Focus outputs on transdisciplinary actionable policy support:** Future Earth should focus on deliverables that position Future Earth as a prominent platform that delivers actionable and highly relevant policy outputs based on transdisciplinary research synthesis and scenarios for sustainability. This can be achieved by targeting high impact annual policy products that position Future Earth at the center of transdisciplinary research for sustainability by collaborating with a one or more top-ranking and high impact international journals. Negotiate an annual special *Future Earth issue* focusing on priority sustainability syntheses and scenarios conducted by high-profile, international and multi-sector research groups in a transdisciplinary manner with clear and actionable policy outcomes. Broad and representative participation by the scientific, business and policy communities in these transdisciplinary activities is critical for achieving impact and credibility.
3. **Continue to explore approaches to further improve the visibility of GRPs and KANs as well as their interfaces and association with Future Earth:** Such visibility would strengthen the Future Earth brand, emphasize its inclusivity and enhance the understanding of stakeholders, including potential funders.

Research programs and research community engagement

4. **Review the relationship with the global research community:** Review the current working relationship between Future Earth and the global research community to address frustrations caused by the promise of an ambitious science work program and a perceived lack of resources to deliver. This tension can undermine the viability, impact, reputation and long-term sustainability of Future Earth. As the research community is a pillar of the transdisciplinary endeavor, it is imperative that the degree of trust between Future Earth and the science community be strengthened. This may require some reconsideration of the nature of the relationship with the GRPs, the KANs and other national Future Earth research communities, including their funding modalities. A highly committed research community provides Future Earth with access to a critical resource and partnership to carry out its mission.

5. **Avoid overlaps and ambiguities:** The current Global network set-up should be reviewed and evaluated. In particular, Future Earth should reconsider whether there is value in continuing the current distinction between the Global Research Projects and the Knowledge Action Networks. The current distinction between them is unclear and confusing to the community and seems to needlessly raise the level of institutional complexity.
6. **Global south and intergenerational representation:** The global south is underrepresented in the Future Earth decision making process, the scientific programs and in conducting international research projects. This despite the array of opportunities that exist to tackle emerging sustainability issues resulting from the rapid transformation of economies and societies in the south. Therefore, it is imperative for Future Earth to broaden the extent and degree of participation from scientists from across the globe, particularly the global south. This should be accompanied by enhanced intergenerational participation in decision making, projects and activities. This will likely require some adjustments to prevailing institutional processes and arrangements to increasingly work across geographies, communities (academic, public, private) and disciplines to deliver pertinent and relevant evidence-based information in support of sustainability.

Finance and governance

7. **Empower the secretariat to fulfill its mandate:** The Review Panel identified a significant mismatch between the ambitions of Future Earth for the Secretariat, partially driven through the expectations of its Governing Council and funders, and the resources made available to the Secretariat. A consistent message from stakeholders was that Future Earth was inappropriately resourced. The Future Earth Secretariat should be financially empowered to fulfill its full mandate and to deliver on all of its obligations. A gap and consequence analysis may be useful to inject the necessary re-alignment between expectations and resource availability.

Failure to do so may necessitate the Secretariat to pursue additional funding to sustain its own operations that are misaligned with the core mandate of Future Earth. This will be a distraction and reduce impact. A fit for purpose relationship between the mandate of Future Earth and its Secretariat, its operational mode and the available resources is required.

Currently the Governing Council seems to act, quite correctly, to define the strategic focus of the organization, but seems to be less effective at facilitating access to resources on behalf of Future Earth. The Governing Council should reflect on whether its current composition is fit for purpose to optimally assist Future Earth strategically as well as to open doors to potential funding opportunities. An effective Governing Council should incorporate a healthy mix of scientific expertise, funders and end-users that can collectively facilitate and enable the delivery of the entire Future Earth mandate.

8. **Improve transparency in financial reporting:** The way activity budgets are reflected in the expenses section of the Future Earth financial reports is not transparent. The current reporting is highly aggregated. It is proposed that the Future Earth expenditure budget be improved by indicating clearly how expenses are distributed across different activity types. This would enhance the confidence of all stakeholders and funders about how Future earth is using its available resources and will contribute to building confidence to invest.

9. **Improve the operational efficiency of Future Earth:** During the review process as well as in the background material many references were made to the complexity of Future Earth structures. This not only makes it difficult for stakeholders to understand Future Earth, but even staff have difficulty understanding how the organisation functions. Conceding that some degree of complexity may be inevitable for Future Earth to maintain a global impact and footprint, many internal and external stakeholders believed that the current configurations were not working well and require change. This may include considerations about how tasks could be assigned in a more efficient manner over geographies and time-zones, or how resources could be more clearly prioritized between global and local tasks. In terms of overall organisation, two potential models were offered for consideration regarding their potential benefits and consequences:
- a. The establishment of a single headquarters for the Secretariat should be explored. This can be complemented by a few distributed offices where resources can be secured, possibly through national investments. The objective of the central Secretariat would be to focus on the overarching Future Earth objectives, while distributed or national offices would nurture a local footprint for Future Earth. This approach could also leverage increased national investments in Future Earth activities. The role of the established global hubs, regional centres and offices should be re-assessed during the process of defining a new global operational configuration.
 - b. The expansion of the global hubs model around the world but linked to a mechanism that creates a global pool of resources for common actions. This model should ideally be expanded to the global south while ensuring that national governments stay involved with the Future Earth endeavors.
10. **Clarify the roles of the Future Earth governing structures:** Future Earth should ensure that there is a clear and consistent interpretation of the roles of its different governing bodies as well as the responsibilities of representatives on these. The Governing Council should govern, Advisory structures should advise, and the Executive should execute projects and programs of Future earth. The apparent practice of wearing multiple hats across different governance structures and functions should be addressed. This is not good governance and the governance principle of an appropriate segregation of duties of different bodies and participants, should be strictly applied. In addition, mechanisms should be explored to improve the information flow between governing functions, management functions, the Future Earth staff and projects.

ANNEX: Terms of Reference for the External Review

The Review Panel will assess the performance and possible strategic remit of Future Earth. The Panel will develop its own work plan to generate a written review by fulfilling the following specific duties.

1. Review Future Earth current and past work (beginning in late 2015 when the Global Secretariat became operational) as well as strategic plans for the future, with specific attention to:
 - uniqueness (or preeminence) of the role played by Future Earth in the international sustainability research landscape and attainment of the Sustainable Development Goals;
 - the role in and impact on setting international scientific agenda on inter- and transdisciplinary research for global sustainability;
 - provision of opportunities for innovative co-designed inter/trans- disciplinary research and action;
 - generation of high-quality scientific outputs useful to decision-makers, for example, provision of scientific input for major international policy processes and assessment activities (e.g. the Paris Agreement of UNFCCC, Agenda 2030, IPCC assessments, etc.); and
 - involvement of the scientific communities from all parts of the world, including developing countries, as well as attracting a younger generation of scientists.

2. Assess linkages and relationships within the international sustainability research community and with non-academic, public and private stakeholders (including those in the technical development and industrial sectors). Particular attention should be paid to:
 - Actions to identify potential knowledge and action gaps in global sustainability, particularly drawing on input from the Global Research Projects, Knowledge Action Networks, Future Earth Society, national entities and relevant public and private stakeholders (including those in the technical development and industrial sectors);
 - Actions to fill knowledge and action gaps through collaboration between the Global Research Projects, the Knowledge Action Networks, national entities and Future Earth Society, technical development and industry; and to link the Future Earth community to Action-Driven Projects and Targeted Research Initiatives, and public and private stakeholders (including those in the technical development and industrial sectors);
 - Leveraging of global, regional and national Future Earth entities, activities and resources.

3. Review appropriateness and effectiveness of the governance, operational structure, management and resourcing of Future Earth. Specific attention should be given to:
 - Reviewing the roles and contributions of sponsors;
 - Assessing the adequacy of the competence, magnitude, diversity and Terms of Reference of the Governing Council;
 - Assessing roles, effectiveness and complementarity of Future Earth operational structure and roles of various bodies;
 - Assessing the adequacy and efficacy of the Secretariat structure, its

- human and financial capacities, and modes of work;
 - Assessing the role of the Secretariat in supporting the GRPs and KANs;
 - Evaluating the adequacy and effectiveness of fundraising efforts, including the diversity of the Future Earth funding portfolio; and
 - Assessing the extent to which Future Earth has been able to influence the international funding of sustainability research (e.g., Belmont Forum, Foundations etc.) and how this could be more effective.
4. Assess the appropriateness and effectiveness of Future Earth communication actions for visibility of Future Earth and its sponsors, as well as their positioning in the overall global sustainability arena (including policy fora e.g. the 2030 Agenda).
 5. Assess how the aims and strategy of Future Earth support and complement the strategies and priorities of the sponsors (including assessing linkages between the research and stakeholder communities mobilized by each organization) and make recommendation on how synergies can be enhanced and potential activities leveraged.
 6. Provide strategic directions for development of Future Earth by assessing the degree to which Future Earth has achieved its original mandate and making recommendations regarding Future Earth's current course and necessary corrections to attain set goals and mandates.