

# GRAF

## WORKING GROUP TERMS OF REFERENCE

### Fostering Systems Thinking Working Group

#### Background

The adoption of The Sendai Framework for Disaster Risk Reduction 2015-2030 on 18 March 2015 articulated the need for improved understanding of risk in all its dimensions and created new requirements and new opportunities for those building societal resilience to environmental and technological shocks.

The United Nations Office for Disaster Risk Reduction (UNDRR) – mandated to support the achievement of the outcome and goals of the Sendai Framework and the 2030 Agenda for Sustainable Development – was called upon by experts to establish a process to co-design and develop a Global Risk Assessment Framework (GRAF) to inform decision-making and transform behaviour. This will explicitly support national and sub-national governments, as well as non-State actors, to achieve the global targets of all 2015 agreements: the Sendai Framework, Paris Agreement, the New Urban Agenda and the 2030 Agenda for Sustainable Development (the 2030 Agenda).

The GRAF co-design will be an evolutionary, emergent process focused on the needs of all stakeholders, especially decision makers (including local leaders)– both current and anticipated – and will offer a space for contributions to build a comprehensive assessment across contexts, geographies, sectors and scales of the determinants and drivers of risk in all its dimensions. It is a collaborative framework in which risk modelling and assessment capabilities, impact and consequence analyses, risk knowledge and tools can be braided together and made available, providing information for decision making as part of an integrated platform on prevention as well as within the UN Resilience Framework.

More information [about the GRAF](#) is available on the PreventionWeb site.

The GRAF Delivery Plan is an evolving road map to achieve the GRAF vision and objectives. In early 2018 an Expert Group was assembled to inform the early strategy and operational procedures of the GRAF.

## **Working Groups**

Within the Expert Group, Working Groups have been formed to address priority issues. These include:

1. Mapping and gap analysis;
2. Fostering systems thinking;
3. Demonstrators and pilot projects and
4. Communication and IT.

### **Purpose of the working groups overall**

Working groups address ongoing activities and facilitate continued discussions on topics relevant to the aims of the GRAF. They expand the work of the Expert Group currently advising the Secretariat, and allow for input and participation of a much wider audience, interests and capabilities.

### **Additional working groups.**

Additional working groups may be proposed by members of the Expert Group, members of existing Working Groups or by individuals external to the GRAF willing to lead new groups who meet the membership selection criteria indicated below. Proposals will be evaluated by the Secretariat based on the current priorities for the GRAF, the applicant's match to the selection criteria and the ability of the applicant to lead an active working group. Applications can be submitted to the GRAF Coordinators at any point during the year. The Secretariat will review the proposal in consultation with the Expert Group and other working group leaders, and the applicant will be informed of their decision: approval, approval conditional on specified revisions, or rejection.

The vision of the Fostering Systems Thinking Working Group (FST WG) is “humans living with and understanding uncertainty and complexity and being empowered to act”.

The FST WG will explore establishing projects to better understand:

1. The level of understanding and competence in systems thinking and systems-based approaches to understanding and managing risk, particularly considering the challenges and opportunities inherent in the wider scope of hazards and risks as represented in the Sendai Framework (including in Paragraph 15). Projects will explore methods to better understand the context of hazards, exposure and vulnerability (including probabilistic modelling, expert opinion, bow-tie analysis, stochastic simulation and more) as well as the development of approaches to incorporating them into the GRAF outputs.
2. The basis of decision making which does not incorporate systems thinking - and which leads to increasing risk creation, including exploration of the incentives and information typologies used by different types of decision makers and the nature of silos and barriers to interdisciplinarity.
3. The opportunities for alignment and synergies across the 2030 Agenda, the Paris Agreement, the New Urban Agenda and the Sendai Framework by fostering systems thinking paradigms.
4. The drivers of risk creation (societal, ecological, financial and political).
5. Systemic risk and transition risks, potentially using the global financial crisis of 2008 as an exemplar to understand gaps in the current processes and approaches to identifying systemic risk.
6. The opportunities for systemic innovation, including developing the positive impacts of fostering interdisciplinary systems thinking.

Working from a starting point of the certainty of near-term non-linear changes, the critical assumption of the relationship between past and future must now be revisited. We are entering a new era for the classification, description and management of risk. We need to raise awareness, build capacities, identify or create (and scale) new tools and practices to address the challenges ahead.

Some of the key guiding questions for the FST WG in the shaping of GRAF include:

- What do we still not know, and how and who can we learn from?
- What have we forgotten that we need to remember?
- How do we define the limits of our reach and scope?
- How do we make decisions in uncertainty?
- What insights are needed to make better decisions?
- How do we generate the needed insights into signals of future non-linearity?
- How do we assign accountability and responsibility for systemic risks?
- Can we map the topology of risk through time?
- How can we bring humans/ humanity together?
- How can we build human systems in the context of natural systems?

**Overall aim of the Fostering Systems Thinking Working Group:** to build systems literacy to better understand, make sense of, and manage the dynamic nature of risk.

**Focus areas of the Fostering Systems Thinking Working Group (with approximate timing):**

1. *Explanatory Materials (Mar-Sep 2020)*

Multi-language, multi-media, multi-purpose, universally accessible set of principles and guidance materials on “What is Systems Literacy?” and “How To Build Systems Literacy?” for all target groups, including National and Subnational Authorities, private sector and financial institutions, research and academic institutions, and community groups. Also prioritise guide to “How to Evaluate Systems Literacy?” for all target groups.

Create and disseminate a Handbook(s) or Masterclass or other materials for all target groups (including conversation space for interactive Q&A exchange, BD/ cartoon for schools, podcasts/ vodcasts, lecture materials, games and other learning approaches...) including for distribution through UNDRR to National and Subnational Governments; available online and accessible, including incorporation of the emerging processes and outcomes of the Pilot Project Spaces.

2. *Peer reviewed “Systemic Risks” publication (by end 2020)*

Update the content included in GAR2019 Chapter 2: ‘Systemic Risks, the Sendai Framework and the 2030 Agenda’ for submission for peer review to provide a substantive evidence base from which to inform, explore and expand on the other Focus Areas and the Pilot Project Spaces.

3. *Framework for systemic risk indicators (ongoing)*

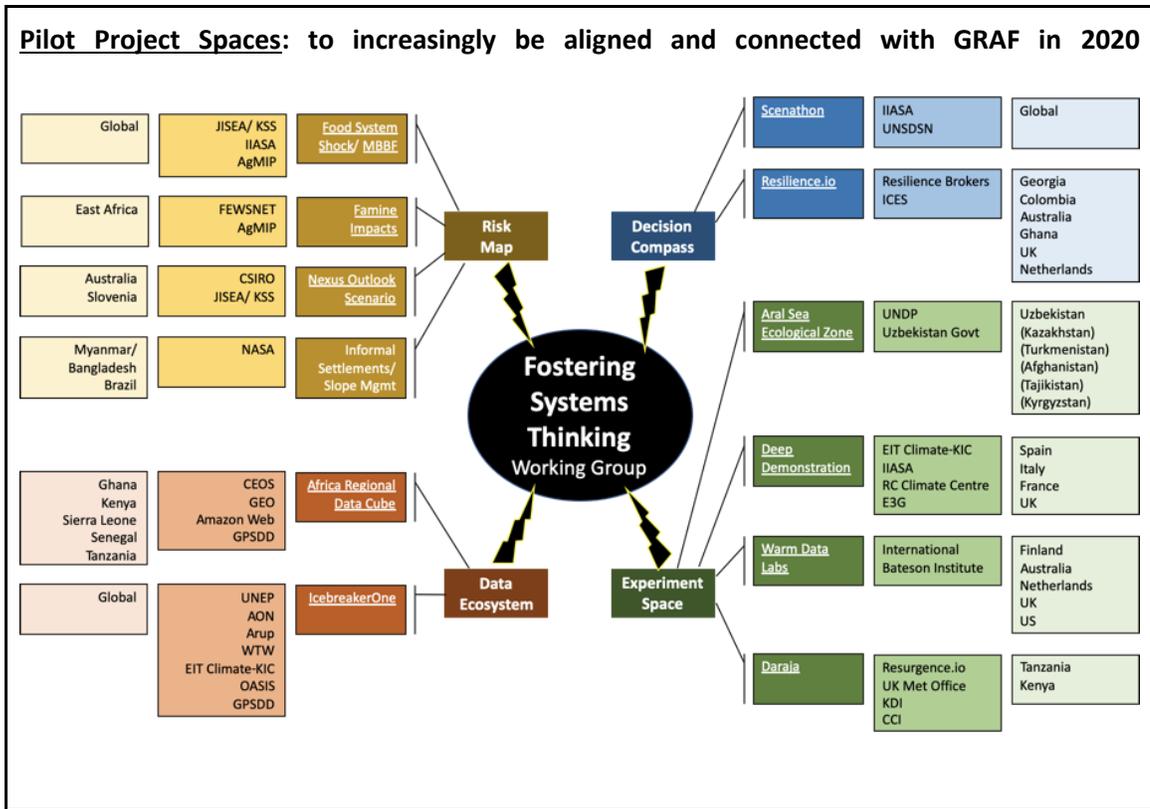
Support the shift from managing disasters to managing risks (from a reactive to a proactive approach) aiming at a (re)generative approach creating the conditions for substantial transformation and encouraging efforts for the expansion of the scope of risks articulated in the Sendai Framework, including to supplement DesInventar with systemic risk data. Potentially incorporate into the Explanatory Materials.

4. *Dissemination and transfer of better practices (ongoing)*

Communications (working with the GRAF Communications WG), interactive exchanges, and highlighting of successful improvements and implementations of advanced systems thinking, can be served through the Global Risk Assessment Platform (GRASP) and through the periodic GAR and GAR Special Reports process.

5. *Expansion and connection across the core elements (ongoing)*

Building the Data Ecosystem  
Mapping the Topography of Risk  
Developing Decision Compasses  
Opening Experimental Spaces



Further information on the proposed activities of the FST WG is available at: [https://docs.google.com/document/d/1\\_UeVZfcJ1\\_Rrpxa6JeQirr\\_vhGhCvfQosvmguTurW2A/edit?usp=sharing](https://docs.google.com/document/d/1_UeVZfcJ1_Rrpxa6JeQirr_vhGhCvfQosvmguTurW2A/edit?usp=sharing)

## Membership

- **Identification and selection**

Working group members are selected based on an application process. [\[Click here to apply\]](#).

The criteria for selection will be based on:

- High level of expertise in at least one of the relevant areas indicated;
- Appropriate range of skills in the areas indicated by the working group
- Willingness to volunteer for tasks within the WG program of work and/or bring resources (time, funding, influence, etc) to bear on the problem being addressed

**Skills are required in a wide range of disciplines, experience and intentions.**

When the above conditions are satisfied, other criteria will be also taken into consideration:

- Members may come from a wide range of contexts including NGOs, UN agencies, academic and research institutions, government, community and faith institutions, and private sector expertise
  - A reasonable balance of gender
  - A reasonable balance of geographical origins and focus of activity
- **Number of members**  
The maximum number of members is set by individual working groups.

The Working Group has **no set maximum number of members**, although an initial cohort of a **minimum of twelve (12) members** will be selected through the Call for Expressions of Interest.

- **Categories of members**  
There will be two categories of members:
  - Fixed-term members (1-2 years) who constitute the core of the group
  - Temporary members who are participants and contributors to specific focus areas of the Working Group or who may be unable to commit time beyond a certain prescribed timeframe.
- **Duration of membership**  
Working Group members will be selected to serve for a maximum of **two (2) years** based on the needs and duration of the Working Group activities. Members may be re-selected to serve a subsequent term if the skill set and contributions continue to meet the Working Group's needs.

The Fostering Systems Thinking Working Group is currently selecting new members for **April 2020-March 2022**

## Working Methods

- **Roles and Responsibilities**  
The FST WG Co-Chairs – currently Dr Alexander Ruane (NASA-GISS) and Mr Scott Williams (EIT Climate-KIC & UNDP) will lead the group and periodically appoint a rapporteur(s).
  - The Co-Chairs will decide through consultation with members on the group's working methods.
  - The Co-Chairs position(s) will be reviewed by the GRAF Secretariat and members of the GRAF Expert Group at each GRAF Expert Group meeting with opportunities for consultation and feedback from members of the Working Group available in advance of any decisions on changes to either Co-Chair. Co-Chairs may step down at any time by providing one (1) month advance notice to the GRAF Secretariat, the GRAF Expert Group and the members of the Working Group.

- The rapporteur(s) will report to the other GRAF Working Groups and work with the Co-Chairs to prepare materials for the GRAF Secretariat and for the GRAF Expert Group and periodic Expert Group meetings.
  - The Co-Chairs and the rapporteur(s) will be in regular contact with the members of the Working Group to ensure smooth running of the group and any sub-groups and progress towards the fulfilment of its mission. In addition, they will liaise with the GRAF Expert Group and with the Secretariat to ensure that the Working Group activities are aligned with and provide outcomes helpful to the Expert Group and overall direction and mandate of the GRAF.
  - All members of the Working Group will participate in activities and make contributions in their areas of expertise according with guidelines that are to be discussed by the Working Group in conjunction with the GRAF Secretariat. Such contributions will be coordinated by the Working Group's rapporteur(s). The latter will be also responsible to prepare the draft documents for discussion and all the relevant reports and documents to be released by the Working Group.
  - The GRAF Secretariat will provide appropriate administrative, secretariat, and technical support for the activities of the Working Group and will support the rapporteur in the tasks noted in the previous point. This Working Group shall cooperate with and provide input into other relevant Working Groups as required on a collaborative working basis.
  - Ad-hoc external experts may be invited to attend Working Group meetings to provide expert input on specific issues, on agreement by a simple majority of Working Group members.
- **Way of working:** Working Groups accomplish all their work virtually and through occasional face-to-face meetings when possible, as decided by the individual working groups. The working group shall meet (virtually or by teleconference) at least **three (3) times per year**.
  - **Reporting:** Updates on progress should be sent to the GRAF Secretariat on a regular basis, and in response to ad-hoc requests.
  - **Budget:** Working Groups are responsible for securing their own operational budgets as deemed necessary, and to organize activities in consultation with the Secretariat.

The Fostering Systems Thinking Working Group does not currently have an operational budget.
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