

Facilitator Guidance #1

Prompts for use during the ice-breaker and creation of the list of possible projects, and selection of projects to be drafted.

- **Time:** 0.5 hour total.
- **Equipment:** A blank A4 paper, pens. Perhaps a whistle for time-keeping. A white board. Ideally an assistant to help with writing. This is deliberately low-tech.
- **Key awareness:** List of topics to be shared with all participants in the workshop, and may be retained by the facilitators (for internal purposes only, i.e. will not be disseminated publicly such as on a website).

Task 1 – PICK THE PROJECT TOPICS [20-25 mins total]

What are the topics that participants would like to spend the session creating a draft project for? Why?

1. Intro/Break the ice [5 mins] – Please Introduce yourself briefly on tables please, what you do, what sort of organization you represent – that sort of thing.
 - e.g. I'm John, a university-based academic. I'm currently also a government funded knowledge exchange fellow, mainly because one of the thing I find motivating is someone saying '*we can use this research*'. Previously I've worked for Zurich insurance for 2 years, and I've been interested in co-occurring hazards for the last 10 years
2. On your tables, brainstorm co-occurring hazards of interest to you [5 mins] – simply get them down on paper, there's no need to debate or prioritise at this stage. Update 'co-occurring hazards' with the topic of this workshop.
3. Create ranked list [10 mins]- Which is most interesting? We're going to bring this all together into a ranked list.
 - First, we're going to go around the tables, call out one you think is good to us, we'll add it to the list, and go around until we've got a good number. If you'd like to explain in a sentence or two why it's an important dependency then please do!
 - If anything good occurs to you whilst this is going on, we can just add it in!
 - Now, let's rank them. Pretend each of you has £30k each to allocate to research, and you can only do this in £10k units. Each of you decide which of the topics you would invest in, and raise your hand if you want to invest as we go down the list (i.e. in other words, raise your hand 3 times for your 3 favourites). Such ranking works to equalize voices within the room, and financial framing is relatable for businesses.
4. Assign to tables [5 mins] – See if there's a clear preference per table (i.e. can they self-organise), and if not, allocate.

Backup ideas in case participants don't come up with any. These are purely illustrative, but ensure that you have some you suspect may be of interest to the sector and topic of your workshop.

- European flooding and extreme wind, in winter *or* (separately) in summer.
- Wildfire and flooding, with a potential negative correlation.
- Global interconnections for any hazard, such as flooding or heatwave.

Facilitator Guidance #2

Prompts for use during creation of Maps 1-3. This section will create a project plan for each group.

- **Time:** 1.5 hour total (plus a break, and allowing for 5 mins of introduction to each segment).
- **Equipment:** A blank A1 copy of each of the 'Maps', felt pens in the required colours (i.e. black, red, green, orange, blue, grey). Perhaps A3 copies of Maps as backup, and a whistle for time-keeping. This is deliberately low-tech. Copies of the filled Maps from Case Study #1 at tables will likely be useful.
- **Key awareness:** Each plan to be shared 'as is' with all participants in the workshop, scanned into a collated pdf, and may be retained by the facilitators (for internal purposes only, i.e. will not be disseminated without seeking further explicit consent). **So**, only add detail at a level of detail appropriate to this sharing, and groups should scan for any inappropriate content (e.g. related to protect characteristics before handing in). **Do not** include any individual's name or personal details please!

Map 1 – ORGANISATIONAL LANDSCAPE [20 mins total]

Who are the types of people you need to involve? Why? And, what is their positionality?

This Map is at the broad, strategic level. Types of organisation, types of task, types of concern. Try to keep things general, we get more detailed in Maps 2 & 3. For Map 1, all stick to the same broad area e.g. *UK co-occurring natural hazard risks* to give the workshop a focus (so that participants have a shared interest).

Groups to work on Map 1 for 10 mins. Then, take 5 mins to take some feedback and pose some question. After this, participants get another 5 mins to finalize their plan. For feedback, ask each group to have 1 observation they'd like to make, and 1 question they'd like to get thoughts on.

Some aspect of planning might come up. If they do not, some prompts are below, categorised under the six themes identified during the hindsight analysis of the TOGETHER project.

- **Stakeholders:** Which types of stakeholder are there? Can you add some illustrative examples?
- **Organisational viewpoints:** Do you understand the viewpoints of all stakeholders, and any tensions? Tensions due to organisations' 'positionality' are inevitable. The task is finding a project path that is likely acceptable to all. This is an example of a 'collective action dilemma'.
 - Remember: Barriers/constraints, Concerns (relating to own actions), Useful outputs/outcomes, Motivations, Contributions, and perhaps most importantly 'Insertion points' i.e. in *exactly* what type of place might the science effect a change?
 - Importantly, what are the 'red-line' non-negotiable things?
- **Participant selection:** What types of organisation are core? Which are optional? And, are there any either/or options?
- **Concerns relating to actions of others (outside boxes):** For this map, there might be concerns about what other stakeholders might do, place these outside but close to that stakeholder. As a key issue in collective action is trust, these are good things to discuss early!
- **Power to motivate:** Who has the power to set the agenda and motivate action relating to this type of question? Scientists may be ignored, regulators might have significant power to catalyse/steer debate but not wanting to pre-determine topics of interest, which are perhaps best left to emerge from the market, but commercial organisations may not act without an immediate financial imperative.

Map 2 – PROJECT LANDSCAPE

Who *specifically* would you intend to involve? Why? And, what is their positionality i.e. motivations, concerns etc?

Repeat 10-5-5 format from Map 1, and some prompts based on Case Study #1 and wider experience are below.

- **Which tractable question:** Which specific, more focussed topic or issue have you selected?
- **Purpose of translating the science:** What *exactly* might the scientific insight change? Identifying this as precisely as possible will be a great help in focussing on, and designing the analytical work (e.g. determining if an outcome of sufficient certainty is likely possible with the data and analytical capability available to the project).
- **Necessary inputs/metrics:** Exactly what metrics or inputs are needed to make these changes? E.g. difference to 250 year OEP combined loss estimates needs, pragmatically, a minimum of a rank correlation coefficient.
- **Necessary analysis:** Typically, an evidential base will be more powerful an output than simply a viewpoint alone. So, what analysis will be done to provide the necessary inputs/metrics?
- **Participant selection:** A key quote from TOGETHER is '*The strength was the group*'. Can you see how to organise a group that will work? At least for pilot studies (e.g. TOGETHER), a small group worked well because
 - It is agile and participants can be more open (e.g. with results that are work in progress) as no direct competitors are in the room.
 - But, types of stakeholder may not be able to select partners to avoid showing favour (e.g. to particular clients or regulated firms). Might an individual academic or consultant be less inhibited? They may have significant experience in bringing together multi-actor teams for projects.
 - Has an appropriate way been agreed upon of selecting project partners?
- **Scientific research:** Is there an opportunity for a piece of new (novel) applied science? Or, how might the project directly lead to a future journal article? This is very important for a university-based scientist.
- **Mitigating positionalities:** Have you identified means to mitigate any biases entities positionalities may bring? Raw data may be able to go so far, then derived quantities a bit further. Some organisations may step outside some decisions/choices, such as selecting values for a sensitivity in an analysis they are doing test (i.e. avoid framing of the analytics they will be performing with the intention of retaining an objective standpoint).
- **Sector-specific experience:** Do all partners have sufficient experience in the sector? If not, how might this be mitigated.
- **Inter-personal positionalities:** Not to write down, but it's necessary to consider individuals as well. A quote from TOGETHER highlights this '*You didn't have to worry about offending people. You could voice your opinion*'.

Map 3 – PROJECT PLANNER (framed as a multi-hazard risk framework)

How *exactly* are you going to make this project work?

Repeat 20 mins prep, with 2 minute/table reports back at the end. Some prompts based on Case Study #1 and wider experience are below. To make this a bit less like school, use boxes of chocolates for prizes, with participants voting for the best project (whatever criteria they like) – folded slips of paper, one per participant into a tub/bag or similar. If participants want to jazz it up a little, they can pick a table/team name, project title and logo, and play the role of a project pitch if they like (no pressure). Aspects they might like to ‘sell’ include

- Why it’ll provide value
- Why it’ll use and nurture would leading research and researchers
- Which great people it has already, and who it’ll bring in

GENERAL

- **Success criteria:** What are the project's success criteria? And, is it clearly stated what are they for each party?
- **Project management:**
 - Is there a named ‘point person’ in each organisation?
 - Has a broad timeline been agreed? It may be flexible, but something (e.g. a Gantt chart) will likely be useful in communicating internally and mitigate frictions about sequencing of work. Noting known high-pressure periods might be useful (e.g. *“I never have time in Oct-Nov because”*)

CONTEXT SPECIFIC

- **Tractable task:** Have you found a pragmatic way, likely leveraging existing resources, of getting from scientific A to usable metric B?
- **Project management**
 - Who will chair/coordinate? It is best if one person or organisation acts as a coordinator, yet a partner (e.g. regulator) may wish to avoid undue influence, or it may seem unwise to elevate one type of partner.
 - An individual academic or consultant may be of use here.
- **Publication – how/when/if:** Continue talking about the mode of publication. It may change depending on results, immediate priorities, and where the interesting element of the analysis turns out to be.
 - It may be necessary to state that all must agree to any output.
 - Have you considered a means of peer-review? (e.g. internal, academic peer-review, via invited external parties) This will add complexity and duration to the project but also credibility. A mechanism to keep this timely and avoid publication being halted or overly delayed may be needed.
- **Agreed understanding:** How will you avoid misunderstandings/mistranslations? Perhaps a co-written working, internal document as it’s easier to spot discrepancies in black and white.
- **Involvement of all:** Do all parties have at least one outcome/output to motivate them to stay involved? And, indeed, a task (e.g. specific analysis, writing/synthesis task) to do? That you haven’t already paid a large consultant significant sums of money indicates that this work is ‘nice to have’ and strategically useful rather than immediately mission critical. So, everyone needs something to ‘sell’ internally. It is also best-practice in collective action studies. This is not a burden, but important for parties to extract benefit; illustratively, *‘We did’* is typically the basis of any publicity or promotion at the end of the work.