



# ICEBERG MODEL

## PURPOSE OF ACTIVITY

The iceberg model is a useful learning device (heuristic) to support discussions with your team and with stakeholders about the need for a complexity-based approach to addressing sustainability problems. Creating an iceberg model of your own system helps you internalize the idea that to create change in complex systems you need to look beyond surface events, and strive for a wholistic view of the underlying system dynamics. During subsequent steps of the Wayfinder process, you can draw people's attention back to the iceberg model, reflecting on whether you are thinking 'above or below the water about this issue?'

## RESOURCES NEEDED

Required skills: a general understanding of complexity and system dynamics

Time: 30 minutes for explanation and discussion

Materials: white board or poster paper and markers, or powerpoint

Useful links: <http://graid.earth/briefs/a-resilience-perspective-on-complexity-and-development/>

## HOW TO DO IT

Draw the iceberg model on e.g. a whiteboard and jointly discuss your system. Fill in the detail as you go so the participants see the 'story' evolve. Make the process a discussion rather than a 'lecture', drawing examples from the participants, checking if they understand the picture that is emerging.

### STEP 1

Draw the outline of the tip of the iceberg, i.e. what is above the water surface. At the tip of the iceberg, you have the most visible part of any system and the things we see around us every day, including the shocks that often dominate our thinking

about the system. Things like droughts, floods, hurricanes, famine, and conflict are obvious, but it could also be policy, trade decisions, pollution events, etc. Ask the participants for examples of shocks or major events that have impacted the system. It is important to not downplay the importance of these events in impacting the wellbeing of people. However, the discussion needs to move to the fact that these events can dominate our thinking, locking us in to short-term, reactive interventions. To manage systems long term and instead shape change, we need to look at the underlying dynamics creating these events.

#### **STEP 2**

Next, draw the underwater part of the iceberg. This is not visible most of the time, stress however that to really understand and work with systems, we need to work 'below the water' that is where the real potential for change lays. The role of Wayfinder is to help you to explore and understand what is happening 'below the water'. Under the water, talk first about patterns, processes and functions. For example, you may have identified drought and famine being 'above the water'. But if we step back from any particular event, there may be a recognizable pattern. Climate extremes are driven by global weather patterns. In the global south, whether cycles such as the Southern Oscillation give rise to particular repeated patterns of shocks, loss of crops and livestock and consequently famine in the years immediately after the shock. Try to draw out patterns, processes and functions related to your surface events.

#### **STEP 3**

Now move deeper, focusing in on systemic structures. These are the major structuring or ordering parts of the system. Think here about the physical structure of the landscape, living at the top of a river valley versus at the bottom, or inland versus coast, is important for determining what types of shocks and the related patterns and processes may impact this system. Think also about the 'rules' that organize and shape the system, things like policy, property rights (how resources are allocated, owned and shared), the structure of the economy, judicial and law systems, cultural practices, norms and traditional lore.

#### **STEP 4**

Finally, draw in the base of the ice berg, the paradigms, world views and values. These form the foundation for everything above, how we think about the system and the way we impose our values and worldviews on the world. So for example, how we think about the allocation and access to resources for people will fundamentally determine the structure of the system over time.

### STEP 5

Having drawn the whole iceberg, it is now time to illustrate the link between the layers under the water up to that above. Try to draw out how patterns, processes, functions, structures, and values influence the surface event. For example, creating infrastructure to provide access to water will change the structure of the landscape, shifting water flows across the landscape. That in turn may render the community and the landscape vulnerable to droughts, flooding and possibly the spread of aquatic pests.

### STEP 6

In the closing discussion, reflect in where people are focusing their efforts and attention currently? Above the water being reactive, or below the water being more proactive? Which layers have the most potential for creating change?

## TIPS

This is a fairly robust process, not many things can go wrong. But it is easy to get bogged down in detail, keep the discussions high level, it is metaphor to aid learning and insight, not an analytical tool. In hot and arid landscapes, you may want to change the metaphor as the notion of an iceberg model may seem too far removed from their reality. You could use a volcano, following the same logic that the tip of a volcano is the visible part, it is what is happening underneath that really matters.

