



ResponSEable project used the concept of Key Stories (e.g. Sustainable Fisheries, Invasive Alien Species, etc.) as a vehicle for structuring our knowledge on specific Ocean Literacy related topics, and as a vehicle for our efforts and tools to increase Ocean Literacy. However there was no suitable tool to support us in capturing the complexity of these Key Stories as well as the knowledge relating to them. Each story is a web of the causal links between the human activities and ultimately impacts on the oceans and associated with each of those links is knowledge. Knowledge about how we as human actors are involved, about the science behind the impacts on ocean life, and about our responses to the challenges involved. To support our development of Ocean Literacy tools, and other education and communication activities, we needed a means of capturing and organising that knowledge around the Key Story structure.



Each Story is build using the concepts of Drivers (of change), which drive human Activities, which in turn create Pressure on ecosystems. This Pressure can result in changes in the State

of the ecosystem, causing Impacts which may affect human Welfare. As a society and individuals, we act in Response to these changes to prevent or mitigate this chain reaction of cause-and-effect. In the knowledge base we use this Drive-Activity-Pressure-State-Impact-Welfare-Response (DAPSIWR) approach to model our Key Stories. Associated with the Activities can be human Actors, and associated with each node and link in the story can be Knowledge. In the Knowledge Base (KB) we first build the story model, and then import the knowledge for that story, thereby creating a rich, navigable resource. The purpose of this resource is to:

- Allow marine scientists, ocean literacy experts, domain experts in general, to create rich integrated models representing the human-ocean relationship, ocean economy and related knowledge on ocean literacy.
- Build complex models of specific marine topics, incorporating links to knowledge (evidence) associated with particular topics or causal links.
- Create a searchable resource for available knowledge on the human-ocean relationships that can help developing 'ocean literacy' products.
- Assist those wishing to continue the work of developing Key Stories using the DAPSI(W)R framework, and attaching relevant knowledge in order to build out the scope and depth of the knowledge base.



- In schools and universities by teachers and students who are doing projects on ocean topics and want to develop their own key story maps.

In order to accurately understand and model the system under examination, it is necessary to gather knowledge and information on individual Drivers, Pressures etc., but also on the Causal links between the components of the system.

### WHY SHOULD I USE IT?

There are some causal mapping tools available, including some online tools. However there are none which incorporate the DAPSIWR ontology and allow the integration of both Actors and Knowledge into the story map. This tool is also unique in providing a search / query tool which traverses the story map to find knowledge on links between nodes in the story graph.

### HOW TO USE IT?

The KB Editor provides an easy to use browser-based drag-and-drop modelling tool. The user can drill down into a comprehensive ontology of Drivers, Activities etc. related to the marine. However other ontologies could also be incorporated into future versions to allow it be used in general Environmental work. We support the importation of knowledge into the database for association with a story and it's nodes and links via an Excel file import facility.

The tool supports the export of story maps and knowledge to JSON format. These can be imported into a companion tool called the KB Viewer which provides fast browser-based viewing of the story and knowledge.

### HOW CAN I ACCESS THE TOOL

Contact us and we will help get you set up as a user on the tool. If you are interested in helping us to develop this tool further and bring it to a wider audience and user based, then we would be delighted to discuss this with you.

Help us share our knowledge to help you share yours!

