



Figure 5.1

**Summary Framework for Characterizing Risks of Marine Shipping Accidents**

Risk is determined by the probability that an adverse event will occur, and the type and magnitude of any resulting impacts, both of which are influenced by a range of factors, controllable and uncontrollable. Prior to the voyage itself, prevention and mitigation measures (blue boxes), for example, are critical to reducing the likelihood of an event. When events occur, however, they can happen at one of several stages of shipping (be it piloting a vessel through a busy harbour or unloading cargo) and can be one of several types, including a grounding or collision. The nature of the event, the physical and social environment in which it occurs, and the quality and speed of response will all shape the type(s) and magnitude of impact(s) that result immediately from the event and following accident response efforts. Examples of controllable factors that influence the nature of the event and degree of impact are indicated in yellow boxes; examples of those that cannot be controlled or only partially controlled are identified in orange boxes. The figure also acknowledges feedback influencing social licence (green box) to operate: the level of satisfaction with response measures and the type/magnitude of environmental, economic, social, and health impacts can either help or hinder the degree of public support and social licence.