	Key definition	Scope of consideration	Primary applications
SES	Integrated complex systems that include social (human) and ecological (biophysical) subsystems in a two-way feedback relationship (Berkes, 2011).	- Gives equal attention to the social and the ecological system and the interlinkages between them. - Links with ecosystem services (Daily, 1997; Partelow and Winkler, 2016), resilience (Berkes and Folke, 1998), and other environmental governance theories (Folke et al., 2005; Cox et al., 2016).	Evaluation of community-based systems such as conflict and collaboration in situations including: - Irrigation systems (Hoogesteger, 2015; McCord et al., 2016), - Small-scale fisheries (Blythe et al., 2017; Silvia et al., 2017; Partelow et al., 2018), - Forestry (Fleischman et al., 2010; Oberlack et al., 2015; Davenport et al., 2016)
EAM	Integrated adaptive management approach to help marine managers consider trade-offs to protect and sustain diverse and productive ecosystems and the services they provide. Informed by science, it incorporates the entire ecosystem, including humans, into management decisions (FAO, 2003; Marshall, 2012).	- Aims to balance human activities and environmental stewardship in a multiple-use context (Smith et al., 2017); - Has evolved to be fully inclusive of ecological, social, economic, and governance considerations and inherently recognizes coupled social-ecological systems with stakeholders involved in an integrated and adaptive management process where decisions reflect societal choice.	- First implemented in the management of terrestrial parks (Grumbine, 1994); - Started to be considered in the marine world during the 1990s, epitomized by: Canada's Oceans Act South Africa's Marine Living Resources Act and Australia's Ocean policy. - Written into the common fisheries policy and has been implemented as the Marine Strategy Framework Directive (Europe) (ICES, 2005; EU, 2008).
IM	Approach that links planning, decision-making, and management arrangements across sectors in a unified framework, to enable a more comprehensive view of sustainability and the consideration of cumulative effects and trade-offs (Stephenson et al., 2019).	- Encompasses the interconnectedness of natural systems, human systems, and management (Bernal, 2015), - Emphasizes practical management of multiple sectors to achieve diverse objectives, - Brings together relevant actors from government, business, academia, and civil society from the entire spectrum of ocean-related human activities (Winther et al., 2020).	- Integrated Management of the Australian NSW Marine Estate (Brooks et al., 2020) - Integrated Management for the Barent's Sea (Olsen et al., 2016) - Integrated Management Plan for the North Sea - Pacific Coast: Marine Plan Partnership for the North Pacific Coast - Integrated Management of the Canadian North.
MSP	A public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that have been specified through a political process (Douvere, 2008).	- Recognizes the legal, political, economic, and ecological complexity of ocean governance (Ehler and Douvere, 2009), - Should entail a cyclical and iterative approach incorporating new information over time and adapting its objectives and measures according to the evolution of the socio-ecological system.	- It was first stimulated by international and national interest in developing marine protected areas (MPAs), such as the Great Barrier Reef Marine Park (Australia) (Douvere, 2008). - Currently, approximately 80 countries have implemented MSP in some form: - Belgium, Germany, the Netherlands, Norway, China, and Belize (where MSP covers the majority of the maritime space), and - United States, Canada, and Croatia (where MSP is in place just for a particular area under national jurisdiction).
PCM	A system of rights and obligations for those with a shared interest or stake in a resource (e.g., fishery). A collection of rules indicating actions that different actors (e.g., state and community) are expected to follow (e.g., compliance with quotas). Procedures through which to make collective decisions (Osherenko, 1998).	- Requires sharing of power and responsibility between government and local resource users (Berkes et al., 1991); - Draws attention to numerous applied and policy-orientated attributes: 1) ensuring the engagement of a diversity of actors that are relevant, appropriate, and connected to the primary issues of concern; 2) creating an accessible process for deliberation and decision making in terms of space, timing, neutrality and the language used; 3) linking actors vertically and horizontally; 4) recognizing that co-management is a long-term process and that there is ample evidence it takes a decade or more to actually develop; 5) highlighting the importance of learning and the need to learn through complexity; 6) encouraging the establishment of a legal foundation for co-management as opposed to voluntary notions of engagement.	- There are numerous descriptions of co-management in the literature, in wildlife, forests, parks and fisheries and ocean: - The Bolt Decision in Washington State, USA, in the 1970s, - Canada's Arctic starting from the late 1970s (Pinkerton, 1989; Armitage et al., 2007), - The Gwaii Haanas Land-Sea-People plan which establishes a cooperative agreement between the Haida Nation and the federal government (Canada) (ParksCanada, 2018).
PA	In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.	- Calls for proactive measures to be taken where there is scientific uncertainty on the environmental impacts of proposed activities or use of the environment; - Aims to ensure environmental protection through taking early actions and preventing environmental risks at an early stage, even when scientific uncertainties about the risks remain (Trouwborst, 2007); - Provides critical guidance for making environmental decisions under uncertainty (Peel, 2005).	- Environmental protection of the North Sea in the 1980s (deFur and Kaszuba, 2002), - The North Pacific Fishery Management Council in the United States in the new Fishery Management Plan for Fish Resources of the Arctic Management Area (2009) (NPFMC, 2009). - The Protocol to the London Convention on ocean dumping (1996); - UN Sustainable Fisheries Resolution 61/105 in December 2006 and the International Guidelines for the Management of Deep-Sea Fisheries on the High Seas (2008).

Further information is provided in ***Supplementary Information File S1*** *(Available online at: https://www.frontiersin.org/articles/10.3389/fmars.2021.630547/full#supplementary-material).*