

The Allen Coral Atlas in support of UN Sustainable Development Goal (SDG) 14, *Life Below Water*

The Allen Coral Atlas is an instrumental tool in spatial planning, protected area management and coastal protection/disaster risk reduction. Never before has the global coral conservation community had consistent, comparable, up-to-date access to detailed maps and monitoring data of the world's coral reefs at the local, national, regional and global scales.

The following describes how the Atlas supports the implementation of actions to achieve SDGs and effective management.

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution

Indicator 14.1.1: Index of coastal eutrophication and floating plastic debris density

The Allen Coral Atlas is unable to identify all marine pollution. However, its dynamic turbidity monitoring data identifies relative nutrient pollution on a quarterly basis, which can be used as a proxy for eutrophication levels in a reef area. This means that users are able to track the highest average levels of turbidity that may be stemming from localized river outputs or areas with polluting coastal development.

Target 14.2: By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans

Indicator 14.2.1: Proportion of national exclusive economic zones managed using ecosystem-based approaches

The Allen Coral Atlas will play a major role in remotely managing marine and coastal ecosystems, especially coral reefs. The Atlas is most useful for identifying ecologically significant areas within an Exclusive Economic Zone that are high priority for management using an ecosystem-based approach. The World Database on Protected Areas is displayed on the Atlas to identify where coral reef ecosystems are present in a protected area of interest. The Allen Coral Atlas' bleaching and turbidity monitoring systems allow for near real time sustainable management of established MPAs as well as aiding marine managers in identifying areas that require intervention due to increased stressors. Many monitoring efforts are adapting to use the Atlas to manage MPAs and OECMs more effectively.

Target 14.5: By 2020, conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information

Indicator 14.5.1: Coverage of protected areas in relation to marine areas

The Allen Coral Atlas habitat maps offer detailed insight into the benthic composition of reef areas, allowing users to see and quantify what zones coral reefs are found in (often referred to as *coral reef extent*). In the context of the Global Coral Reef Monitoring Network Report, the Atlas is a tool to measure coral reef extent in the future. With this information alongside Marine Protected Area and country boundary data, not only can coverage of protected areas in relation to marine areas be quantified, but protection of biologically important areas within broader marine areas can be quantified. In this way, the Atlas provides data for national marine protection goalsetting such as Convention on Biological Diversity's Post-2020 Global Biodiversity Framework indicators related to coral reefs. As many as 14 countries are currently using the Atlas' reef extent data to inform increased protection measures in pursuit of reaching their 30% protection by 2030 goals.