

Noise Pollution

Noise pollution in the marine environment is still an emerging, but undoubtedly serious, concern. Compared to other problems, such as non-point source pollution, its implications are less well understood and usually largely undetectable to anyone but specialists. Naturally occurring environmental noises include the sound of weather, wind and waves, tides and currents, tectonic and volcanic activity, as well as all of the sounds produced by ocean animals. Anthropogenic noises (i.e., noise pollution) include the sound of watercraft (from jet skis to supertankers); offshore oil/gas exploration and production; sonar, especially military high-power active sonar; underwater telemetry and communication for exploration and research; mining and minerals extraction; “fish bombing” and other underwater explosives; civil engineering projects (e.g., pile driving and blasting), and over-flying aircraft.

At present we know little about the effects of anthropogenic noise on marine life, though rapidly mounting evidence indicates that increasing noise pollution is compromising many marine ecosystems. Most of what we do know about ocean bio-acoustics is focused on marine mammals, especially cetaceans. In order to craft policy around a broader understanding of the marine ecosystems, much more research will be needed on how fish and invertebrates use and perceive sound. A core objective of any policy will be to establish environmental noise criteria for the many ocean habitats based on biological evidence, and to determine noise profiles of the many human enterprises in the ocean. These two fields of information can then be fitted together to derive an operating set of noise parameters for our continued and sustainable use of ocean resources.