Correspondence

Industry noise ends quiet seas

The industrialization of the oceans is bringing with it a new suite of unregulated noise sources. A formula for quieter seas is looking increasingly remote (see *Nature* **568**, 158–161; 2019).

For example, ever-deeper petroleum operations need seafloor equipment to separate hydrocarbons from brine, gas, sand and mud before piping them to the surface. Multiphase pumps then inject these unwanted substances back into the deposit at extremely high pressures. Such industrial submarine equipment is typically controlled by acoustical communication networks that often operate in the 10–85-kilohertz range. This overlaps with the biosonar range of toothed whales, the hearing range of pinnipeds, such as seals and walruses, and the upper hearing range of baleen whales.

In preparation for the ocean industrial age, NATO has developed JANUS, an underwater acoustical communications protocol. And the US Defense Advanced Research Projects Agency is developing POSYDON, an underwater acoustical global-positioning system. As these technologies advance, high-frequency control and navigation signals could become the most pervasive anthropogenic noises in the sea.

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Win–win action for climate and health

A zero-carbon economy based on clean renewable energy could avert hundreds of thousands of premature deaths caused annually by air pollutants from the burning of fossil fuels. That's the conclusion of a report released last month by the European Academies' Science Advisory Council (EASAC); see go.nature.com/2jqzxid. Many of EASAC's recommendations are relevant worldwide. They include making better use of scientific evidence, filling knowledge gaps and tackling misinformation.

The report describes the direct risks to health from climate change — from extreme heat or flooding, for example. Other threats include food shortages resulting from ecosystem damage, and migration driven by socioeconomic consequences.

The report identifies vulnerable groups, reviews models of projected impacts under different scenarios and suggests adaptation strategies for limiting adverse effects on health. It recommends nutritious, more-sustainable diets and active forms of travel, such as walking and cycling, as ways of reducing greenhouse-gas emissions and promoting physical well-being.

We hope that the report will stimulate analysis by all academies of science and medicine through their global network, the InterAcademy Partnership. Science must inform integrated policy to improve systems' resilience and support rapid decarbonization of the economy.

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Markets must back climate mitigation

I suggest that climate policy could more effectively direct financial investments. The momentum is there.

More than 525 investors, with combined assets worth around US$96 trillion, have signed up to the CDP (formerly the Carbon Disclosure Project). Companies are starting to measure and manage their environmental impacts. The Principles for Responsible Investment, an international investment network supported by the United Nations, has more than 2,000 signatories. Of those, 74% of asset owners and 62% of investment managers acknowledge that climate change is a long-term threat (see go.nature.com/2ikkuph). The Task Force on Climate-Related Financial Disclosures, chaired by Michael Bloomberg, provides detailed guidance on how to measure and respond to climate risks effectively.

Many companies and financial institutions are failing to do this, however. For example, pension funds, which should take a long-term view, are still highly invested in carbon-intensive sectors (see, for instance, go.nature.com/2jqaure).

Whenever large divestments occur — as in the case of the Rockefeller Family Fund, which in 2016 withdrew all its investments in fossil-fuel companies — there are no lasting financial consequences for the divested firms. Furthermore, many carbon-related assets are currently overpriced ('stranded') because fossil fuels are being overtaken by renewable energy.

Financial markets need reassurance that investing in support of climate policy will be a winner. A reliable carbon-pricing system, for example, would encourage markets to invest in a low-carbon future.

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Fisheries subsidies wreck ecosystems

In a major policy reversal, the European Parliament and the Council of the European Union are on the brink of lifting a ban from 2004 on subsidies for building new fishing vessels. Reintroducing these subsidies contravenes the international consensus to end them by 2020 in order to meet United Nations Sustainable Development Goal 14.6.

Lifting the ban would override warnings that European marine biodiversity is in a terrible state (see go.nature.com/2fwsjbv). Fisheries subsidies are partly responsible for this damage to ocean ecosystems and the services they provide (see U. R. Sumaila and D. Pauly *Nature* **450**, 945; 2007).

In our view, a generous slice of the European Maritime and Fisheries Fund for 2021–27 should be allocated to environmental protection, research, control and data collection. Instead, the parliament wants up to 60% of the total budget for capacity-enhancing investments onboard (including construction). And the council has not earmarked any budget for environmental protection.

Europe must avoid providing subsidies that take fish from future generations and that set a bad example for the rest of the world at this crucial stage in World Trade Organization negotiations. Academia, non-governmental organizations and civil society must push the European Union to fulfil its sustainability obligations under international agreements and fisheries law.

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