

China in the Sustainable Development Agenda: Key environmental issues and responses

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Summary

China is dealing with very serious pollution levels and the unsustainable use of many natural resources. Environmental issues, concerning both air, ground, and ocean, have gained increasing recognition in Chinese domestic politics, and China is stepping into more active roles in international environmental governance. By committing to international agreements but insisting on differentiated responsibilities and voluntary contributions, China is taking something of a middle position between developing countries and many higher-income states.

As the world's most populous country, the second-largest economy, and the largest polluter, the importance of the People's Republic of China (PRC) to addressing global environmental challenges is self-evident.

Chinese politics have been greening for several years, from narrowly prioritizing economic growth in the first post-Mao reform period to moving environmental issues upward on the national agenda. Ecological civilization was introduced as a key term in the latest Five-Year Plan (2016), adding emphasis to the “new normal” in Chinese socioeconomic development, in which sustainability and quality considerations are supposed to trump traditional measures of economic growth.

China is an active partner in the UN 2030 Agenda and wants to play a critical role in achieving many Sustainable Development Goals (SDGs). Illustratively, China is working to make sustainability a profiled focus within the Belt and Road Initiative (BRI), although

many international observers remain skeptical about Chinese contributions. To be clear, China is facing serious environmental degradation on many fronts and will have to innovate, regulate, clean, and sow to get closer to sustainable development.¹

This short brief offers no room for exhaustive examples or detailed discussions. Instead, we focus on select issues that we believe illustrate the dynamics of Chinese environmental politics regarding air, ground, and ocean. We offer short assessments, discuss policy responses, and consider international engagements.

Air

Air pollution is a serious problem in China and has many causes, including pollution from industries, transport, and agriculture. However, the leading pollutant for air is carbon dioxide (CO₂), and the leading cause is coal, which accounts for 59 percent of Chinese energy consumption.

Situation

Access to energy, largely coal, has been fundamental for China's industrial and economic growth. Burning coal causes air pollution, smog, and the creation of small PM_{2.5} particles, which are damaging to human health. Oil consumption has also increased rapidly in industry and transport. Overall, air pollution has many places that reach dangerous levels very far above World Health Organization recommendations. Globally, China is the largest CO₂ emitter, accounting for 28 percent of the world's total in 2016. Although per-capita emissions are lower than the global average (7.452 ton/pc in 2016), they have now reached EU levels.

Domestic responses

Air pollution is a key driver of climate action, presenting strong incentives for reforming the energy sector and linking SDG 7 (affordable clean energy) with SDG 13 (climate action). The PRC launched something of an energy revolution in 2014, focusing on increasing the share of non-fossil energy sources. The 13th Five-Year Plan for Energy Development (2016) included for the first time a binding goal to limit the share of coal in the energy mix to 58 percent or less. Spurring renewable energy use is a priority, and the growth in renewables has in some regards skyrocketed, with China being behind almost half the renewable power capacity added globally in 2017. Energy efficiency and saving have been improved in many energy-intense industries. Natural gas has replaced thermal power plants in many cities.

PM2.5 levels have improved in many places, and between 2013 and 2015, the overall use of coal did decline. However, coal use has since started increasing again, leading to a new rise in emissions and questioning the lasting effect of some previous years' improvements. Conversely, there has been a very rapid expansion of electric vehicles, including high-speed trains, subways, and cars, with China now having 40 percent of the globe's electric parking lots.² Regarding carbon intensity, this was already in 2017 recorded at 46 percent compared with 2005 levels, meaning China is reaching its 2020 objective (of 40–45 percent) ahead of time. Furthermore, to tackle emissions, China is resorting to market mechanisms and launched its national carbon market in 2017, with regular trading, after an initial trial period, starting in 2020. China aims to peak CO₂ emissions by 2030, but this may happen earlier.

International cooperation

China has been party to the UN Framework Convention on Climate Change (UNFCCC) since 1992. Leading up to 2015, China was seen by many as playing an instrumental role in reaching the Paris Agreement. While the USA decided to withdraw from the agreement in 2017, China remains committed, as illustrated by the joint statement made following a meeting between the Chinese and the French foreign ministers and the UN General Secretary in 2019.³ The PRC, moreover, has established platforms for internationalizing advice on its domestic policies and on the BRI, namely the China Council for International Cooperation on the Environment, and the BRI International Green Development Coalition. However, it should be noted that many observers remain highly critical of BRI-related effects on the environment, pointing to a large bulk of BRI financing being used to build polluting coal plants in other countries.⁴

In international climate discussions, China advocates

common but differentiated responsibilities, insisting that high-income countries should do more to support climate change efforts in the developing world. In 2014, China announced setting up its own South–South Climate Cooperation Fund. Last, many are hoping to see more climate leadership emerge from the 2020 EU–China high-level summit. However, China did not submit updated commitments (nationally determined contributions) to the UNFCCC in January 2020, and the coronavirus crisis has spurred uncertainty about China's ability to raise its ambitions this year.⁵

Ground

By the ground, we here think of soil, vegetation, groundwater, rivers, and lakes, which, to be clear, include many examples of severe pollution in China, to the point that some areas are not fit for agricultural production. However, in this brief, we limit our focus to the biodiversity and pollution of chemicals, mercury in particular. This is relevant for several SDGs, but especially SDG 15 (life on land). Note that plastic, a leading cause of water pollution, is discussed in the section below on the ocean.

Situation

The loss of biodiversity and chemical pollution are serious environmental challenges in China, which is one of the 12 mega-biodiversity countries in the world. According to national assessments, many types of animals are threatened. The overall number of wild animals is decreasing, and several species face likely or possible extinction. Moreover, it is estimated that 15–20 percent of wild higher plants in China are endangered.⁶ Wildlife trade is a problem not only threatening species but also posing public health risks, the debate concerning which is being further spurred by the 2020 coronavirus crisis. Chemical pollution is a serious problem that includes persistent organic pollutants (POPs), hazardous wastes, and mercury. China is one of the leading producers, users, and emitters of both POPs and mercury, counting 30–40 percent of global mercury emissions.

Domestic responses

Concerning biodiversity, the National Biodiversity Conservation Strategy and Action Plan (2011–2030) is the leading guide for domestic responses. China has also issued a series of biodiversity conservation laws, including the Wild Animals Protection Law. It has launched a nature reserve program and invested in reforestation, some of which has produced results regarding tree planting and greening on land. In response to mercury pollution, Chinese policies have changed from almost ignoring the issue ten years ago to now clearly being on the political agenda. Stricter policies and improved technical devices have resulted in a 22 percent reduction of mercury emissions in the coal sector in the period 2013–17. However, legal and

policy system weaknesses, inadequate data resources, and overall continuing pressures from urbanization and land reclamation development represent remaining and very serious risks for biodiversity and overall environmental sustainability.

International cooperation

China is stepping up its international engagements regarding biodiversity and mercury pollution, specifically. The Chinese city of Kunming is set to host the 2020 UN Conference on Biological Diversity. The importance of linking climate change and biodiversity was emphasized in the 2019 joint China–France statement mentioned above, indicating that China is eager to promote this issue internationally. China has ratified many relevant conventions, including the Stockholm Convention on POPs, the Rotterdam Convention on trade with hazardous chemicals, and the Minamata Convention on Mercury. Notably, Norway and China have engaged in bilateral cooperation on mercury since 2006, with the collaboration in 2018 expanded to include other chemicals.

Ocean

China is the world's largest maritime nation, with the largest cargo shipping fleet, the biggest fisheries, and the largest aquaculture production. The PRC is also the world's leading plastic producer and polluter, with many plastics spilling into the ocean by way of China's many polluted rivers. China's coastal saltwater wetlands are under pressure from both land reclamation and pollution. All this is relevant for SDG 14 (life below water), but in this brief, we limit our focus to fishing and plastics.

Situation

For years, China's maritime economy has been one of the fastest-growing sectors, reaching 10 percent of GDP in 2010. Several seafood industries have expanded along the way. China's overall ocean fish catch surpassed 15 million tons in 2013, which is far beyond what is considered sustainable. Overfishing was addressed as a serious problem in the 11th and 12th five-year plans for the fishery industries, but local governments have been reluctant to enforce stricter regulations. Distant water fishing (DWF) has expanded exponentially in recent years, surpassing two million tons annually, according to official reports. This includes high-seas fishing, for which China, according to some studies, takes one-fifth of the world's total.⁷ Considering plastics, China is blamed, based on 2010 estimates, for almost 28 percent of the world's mismanaged plastics, totaling 8.82 million metric tons (MMT) per year. Of this, between 1.32 and 3.53 MMT are estimated to enter the ocean and become marine debris.⁸ The main causes are excessive plastic use and weak waste management systems, especially in rural areas. Significantly, China has imported much plastic

waste, but these imports dropped radically with the passing of new policies in 2016.

Domestic responses

Chinese fishing and plastics regulations have become stricter, especially following the 2016 sector-specific five-year plans. Seasonal moratoriums on fishing have been in place for years, but China has now moved away from encouraging growth to stipulating actual fishery reductions. This includes taking 20,000 vessels out of the industry and cutting the total catch in Chinese waters to a maximum of 10 tons a year. Related measures include scaling down support for building vessels and subsidizing fuel, and strengthening domestic reporting and inspection regimes. Importantly, distant fishing is not subject to such cuts, with targets slightly increased to 2.3 tons DWF annually (up from 2.2 tons in 2015). Nevertheless, illegal DWS is subject to tougher reactions.⁹ Recent revisions to the PRC Fisheries Law incorporate measures like revoking licenses and blacklisting and confiscating vessels that get caught breaking the law. China reorganized its overall natural resources management system in 2018, assembling many leading institutions under the new Ministry of Natural Resources. This is supposed to help coordinate key inspection and enforcement institutions.

Concerning plastics, China has introduced stricter laws and is modernizing many waste management systems, including measures to reduce overall plastic use. A national action plan for marine debris is in the making, as outlined in the 2019 SDG progress report. In a signal of further clamping down on plastic waste, China recently introduced a ban on non-degradable shopping bags, starting with major cities in 2020, which is to expand, include other types of plastics, and cover more cities and towns by 2022.

International cooperation

China signed and ratified the UN Convention on the Law of the Seas in 1996, and it has signed but not ratified the Fish Stock Agreement, reportedly due to concerns over the strong language concerning international inspection and enforcement. Regionally, China has signed several fishing agreements, including with Japan, South Korea, and Vietnam, but effective regional cooperation is hampered by territorial disputes and the PRC's refusal to allow Taiwan, a big player in international fishing, entry into international regulations. China is participating in the World Trade Organization's fisheries subsidy negotiations, which have been ongoing for almost 20 years. The PRC has, moreover, participated in the Our Ocean Conferences, held bi-annually since 2014, and it participated in the new UN Ocean Conference arranged for the first time in 2017. Nevertheless, compared to its increasingly dynamic climate change diplomacy, China has thus far not prioritized sending high-profile delegations to

ocean events. This may change, particularly if China does more to align the BRI with SDG activities and institutions.

Concluding remarks

We gain three major takeaways from studying Chinese politics concerning the air, ground, and ocean.

First, the PRC faces daunting challenges at home. Just considering the issues addressed in this short brief, we note that China is behind the world's largest climate gas emissions, largest chemical and plastic pollution, and the most extensive fishing in waters already vulnerable to overfishing. Although China is the world's most populous country and many other states perform much worse when considering per-capita averages, surely China is a both problem and a solution to the sustainability of the global environment.

Second, China is doing much to address environmental challenges concerning both the air, ground, and ocean. Yet, continuing dependence on coal and increases in recent years' coal production do question China's track record for moving in a more climate-friendly direction. For mercury, plastics, and fishing, we see a combination of tougher regulation and stronger enforcement systems. Most importantly, these issues are now subject to much more political and public attention than just a few years ago. Still, much more needs to be done if China is to realize environmental sustainability in any short- or longer-term scenario.

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Third, China has in recent years been taking a more active role in international environmental governance.

We see this in connection to China embracing climate change agreements, chemical waste conventions, and ocean conferences, and relating China setting up a South–South Climate Cooperation Fund and working to align BRI with SDG activities. On some issues, China is positioning itself somewhere in the middle between the G77 and many higher-income countries. China has shown increasing willingness to commit to more ambitious international agreements but is still insisting on differentiated responsibilities and remains skeptical about international inspection and enforcement regimes and non-voluntary contributions.

The overall conclusion is that Chinese environmental politics are evolving, with the PRC weighing international agreements against domestic interests and priorities.

Notes and select references

1. China's general SDG plans are described in "China's National Plan on Implementation of the 2030 Agenda for Sustainable Development" (2016) and in the 2017 and 2019 SDG progress reports, the latest titled "China's Progress Report on Implementation of the 2030 Agenda for Sustainable Development (2019)," all issued by the Ministry of Foreign Affairs.
2. International Energy Agency (2018): "World Energy Outlook 2018."
3. Link to the statement: <https://www.politico.eu/wp-content/uploads/2019/06/Press-Statement-on-Climate-ChangeFinal-Draft-0628.pdf> (accessed January 5, 2020).
4. See the 2019 report "China at a Crossroads: Continued Support for Coal Power Erodes Country's Clean Energy Leadership" from the Institute for Energy Economics and Financial Analysis.
5. See the transcript of State Councilor and Foreign Minister Wang Yi's interview with Reuters, <https://www.chinadaily.com.cn/a/202002/16/WS5e490fa9a310128217277dca.html> (accessed January 18, 2020).
6. See China National Biodiversity Conservation Strategy and Action Plan (2011–2030), <https://www.cbd.int/doc/world/cn/cn-nbsap-v2-en.pdf> (accessed December 17, 2019).
7. Sala, Enric, et al. (2018): "The economics of fishing the high seas," *Science Advances* 4.
8. Jambeck, Jenna R., et al. (2015): "Plastic waste inputs from land to the ocean," *Science* 347 (6223).
9. Chinese Ministry of Agriculture (former) (2017): "National Five-Year Plan for Fishery Industries" (Chinese language version, author's translation).



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