

# To prevent new environmental disasters, China needs national conservation horizon scanning

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This figure shows a heavy haze in Beijing in 2014. If China had carried out environmental horizon scanning nationwide and identified the emerging problem, the large-scale air pollution might have been averted, suggest two Chinese scientists in a new study, "Scanning the horizon for nascent environmental hazards," published in the journal *National Science Review*. Credit: Science China Press

Globe Conservation Horizon Scanning, which involves collaboration of the worldwide conservation community, focuses on identifying potential environmental problems across the planet that have not yet been noticed by society as a whole. This scanning of the environmental horizons has been conducted every year since 2010.

Although scientific findings and reports are issued - in English - based on these global scans, the limited proportion of the worldwide populace that has advanced English reading skills limits the readership of these materials. Less than one fifth of the world population speaks English; even less can read English.

Access to academic journals outlining global scanning discoveries and theories - predominantly in English - is restricted to scientific circles.

In some situations, people who need information about these world-spanning surveys might not be able to obtain it.

Every country in the world faces a unique mixture of environmental problems. For instance, the serious haze caused by heavy air pollution in northern China and across the Yangtze River Delta was not foreseen by most decision makers.

If China had carried out environmental horizon scanning nationwide and identified the emerging problem, this large-scale air pollution might have been averted, suggest two Chinese scientists in a new study, "Scanning the horizon for nascent environmental hazards," published in the journal *National Science Review*.

Co-authors Zhigang Jiang, based at the Institute of Zoology, Chinese Academy of Sciences, and Keping Ma, of the Institute of Botany, state in the study that other conservation setbacks including the functional extinction of the Yangtze River dolphin *Lipotes vexillifer* and the South

China tiger *Panthera tigris amoyensis*, along with the endangerment of the finless porpoise *Neophocaena asiaeorientalis* and many other species, might have been prevented.

Other disasters that might have been detected earlier include the heavy metal pollution of soil across China.

Global surveys of nascent [environmental problems](#) on the horizon are a useful tool in implementing multilateral environmental agreements including the Convention on Biological Diversity, the Intergovernmental Platform for Biodiversity and Ecosystem Services and the Convention on International Trade on Endangered Species of Wild Fauna and Flora. When conservation horizon scanning is conducted at the national level, the issues identified can help signatories to these agreements achieve their conservation goals.

The methods deployed in global scanning of the ecological horizons can be developed, adapted and refined when used at the national level.

The first parameter of environmental scans that might be adjusted at the national level is the frequency of these surveys. They might be conducted less frequently than on an annual basis because new [environmental issues](#) with great potential impacts in some cases might not emerge at a local scale within such a limited period.

Second, at the regional or national level, conservation horizon scanning probably should not be confined only to the issues that are in the penumbra of detection or understanding; established as well as emerging problems should all be examined.

Third, in order to broaden the scope of conservation scans, and to bring in fresh expertise, the participation of international experts should be encouraged when conducting these surveys at the national level.

In contrast with global conservation scans, at the regional or national level these checks can involve the participation of the local community and indigenous residents; using the local language in conservation scans can facilitate smooth communication of findings and conclusions among decision makers, scientists, media and practitioners.

When conducting regional or national conservation horizon scanning, it is necessary to decide the following issues:

- How often should the scans be carried out?
- Should known environmental issues be considered in the horizon scanning?
- How many problems should be identified in the scans?

Conservation horizon scanning could lead to an early warning system tailored for regional or national environmental and conservation issues.

The findings and studies resulting from these surveys can be integrated into standard environmental and [conservation](#) practices, which in turn could help provide appropriate information for policy makers.

**More information:** Zhigang Jiang and Keping Ma. "Scanning the horizon for nascent environmental hazards". *National Science Review*, [nsr.oxfordjournals.org/content/1/3/330.full](https://nsr.oxfordjournals.org/content/1/3/330.full)

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