

# Correspondence

## Build back better after devastating Brazil floods

Torrential rains caused widespread flooding and landslides in southern Brazil last month, displacing more than 540,000 people and killing at least 150 (see [go.nature.com/3qxujmy](https://go.nature.com/3qxujmy)). Climate change and the loss of natural ecosystems and their protective services almost certainly contributed. The estimated cost of the clean-up is US\$3.7 billion.

Well-thought-out responses are essential in minimizing the risk of future extreme events – yet, rushed proposals are already emerging. Many involve large-scale engineering projects, such as huge drainage canals and multiple dams to hold back and divert river waters. These projects will affect the hydrological regime in a region roughly the size of Portugal, and threaten livelihoods and biodiversity, including the fauna of river basins, which have high levels of endemism and numerous threatened species.

With such responses, governments risk intensifying the environmental degradation that is the ultimate trigger for these catastrophes. Humanity must learn its lesson and urgently adopt better environmental-restoration practices. This requires valuing local scientific knowledge and embracing concepts of natural ecosystem services and nature-based adaptive and protective solutions. These are well known among environmental-science researchers, but must become better known in wider society.

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## Protect freedom of thought in the age of neurotechnology

In Paris this April, the United Nations agency UNESCO began work on a global-standard-setting instrument for brain-influencing neurotechnologies (see [go.nature.com/44vkywn](https://go.nature.com/44vkywn)). This is a good moment to recall a recurrent theme in the history of ideas: the concept of an inner human dimension that should remain free from control of governments, religious authorities or other powerful actors.

The idea was enshrined in Article 18 of the 1948 UN Universal Declaration of Human Rights – the right to freedom of thought, conscience and religion – and is codified in many human-rights treaties. But the scope of the protection is largely unclear. It needs to be redefined for an age in which neurotechnologies might infringe on freedom of thought.

One example is neuroimaging technologies that infer the contents of a person's thoughts, such as devices that translate internal speech into text (S. K. Wandelt *et al.* *Nature Hum. Behav.* <https://doi.org/mxn3>; 2024). Another is brain-stimulation methods that might substantially alter a person's thoughts. These could be deployed in a variety of contexts, from law enforcement to consumer technologies.

Such interventions should never be imposed against a person's will. It would be a pivotal achievement if the UNESCO recommendation forged a consensus among member states to sustain and update the idea of an inviolable and intangible inner realm.

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## Organic-product legislation should consider plastic use

Consumers are drawn to organically grown foods by the promise of sustainable agriculture and healthier, less contaminated products. But much of the current legislation doesn't consider a crucial factor: the pervasive use of plastics.

Plastics have infiltrated almost every aspect of agriculture, from mulching to irrigation, pest protection and seedling care (T. Hoffman *et al.* *Commun. Earth. Environ.* **4**, 332; 2023). The introduction of innovative technologies, such as polymer-coated seeds and fertilizers, further contributes to plastic pollution by introducing microplastics directly into the soil, where they can disrupt microbiota and impair seedling emergence and plant yield (see [go.nature.com/3r2a4eo](https://go.nature.com/3r2a4eo)).

Currently, organic-production legislation worldwide lacks significant plastics regulation, apart from minor stipulations about the use of mulch in a few countries. For example, the US Department of Agriculture's organic regulation mentions the need to recover plastic mulch at the end of the growing season, but lacks guidance on managing or recycling this residue.

To promote sustainable agriculture, the role of plastics must be re-evaluated in organic farming, awareness among producers and consumers increased, and plastics regulation introduced into organic-certification processes. Transparency can empower consumers to make informed choices and drive demand for responsible plastic use.

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## Lack of cannabis research boosts misinformation

Some 220 million people worldwide used cannabis at least once in 2021, according to the United Nations. Another report suggests that, in the United States, more people use cannabis daily than drink alcohol. Yet, research into the effects, benefits and risks of cannabis use remains severely underfunded. For example, one source suggests that, of the Can\$111 million (US\$81 million) spent by the provincial Cannabis Prevention and Research Fund in Quebec, Canada, in 2022–23, less than Can\$6 million was allocated to research.

Without robust scientific data, policymakers make decisions on the basis of incomplete or biased information, leading to ineffective or harmful regulations. Moreover, the lack of research stymies the safe development of medical cannabis. In 2023, 10% of Canadians over the age of 16 indicated that they used cannabis for medical purposes. Although there is evidence that cannabis use could help people with various conditions, the absence of large-scale clinical trials means that these benefits remain unverified.

When combined with the proliferation of non-scientific information available online, a lack of credible research hampers understanding and helps to sustain unregulated sources of cannabis, posing public-health and safety risks. Re-evaluating cannabis funding and regulations is crucial to empower researchers and ensure that policies are based on solid scientific evidence.

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