

Correspondence

New environment law shows its fangs

China's revised Environmental Protection Law went into effect on 1 January this year. Severe punishments for polluting businesses swiftly followed.

Some 292 cases incurred an accumulating daily fine within the first 6 months, totalling 236 million yuan (US\$37 million). The highest single levy was 15.8 million yuan (data from the Ministry of Environmental Protection; see www.mep.gov.cn). Over the same period, production was curtailed in 1,092 cases and equipment was locked down in 1,814 instances. Criminal charges were brought against 740 polluting businesses, and 782 were punished with police administrative detention.

Local governments are cooperating with the new law, contrary to earlier misgivings (see B. Zhang and C. Cao *Nature* **517**, 433–434; 2015 and H. Yang *et al. Science* **347**, 834–835; 2015). In Linyi in Shandong province, for example, several dozen businesses (including some responsible for high employment and large tax revenues) have been closed down. **Dasheng Liu** *Shandong Institute of Environmental Science, Jinan, China.*

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Tailor checklists to clinical teams

The problems of replicating the effects of patient-safety checklist trials in routine practice could be mitigated by adapting checklists for individual hospital environments and teams (see *Nature* **523**, 516–518; 2015). An F-16 fighter aircraft would not rely on a checklist devised for flying a jumbo jet.

For instance, much of the World Health Organization's surgical safety checklist is irrelevant to a cardiac catheterization procedure. There is no general anaesthetic or expected blood loss, for example,

but monitoring kidney function is crucial. We therefore designed a bespoke safety checklist to brief the cardiac clinical team on the planned procedure and on any potential problems. Endorsed by the British Cardiovascular Society (www.bcs.com/checklist), the checklist is regularly modified in response to end-user evaluation.

Smart electronic checklists will further improve safety by highlighting patient-specific risks and acting as a guide in emergencies and for auditing near-misses.

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Mining shell waste will not be easy

If the chemical industry is to profit from refining waste crustacean shells and other by-products of seafood processing, collection problems and food-safety issues need to be overcome (see N. Yan and X. Chen *Nature* **524**, 155–157; 2015).

Gathering sufficient animal feedstock for commercial purposes will be a formidable challenge (R. L. Naylor *et al. Proc. Natl Acad. Sci. USA* **106**, 15103–15110; 2009). The transport and storage of seafood by-products from different processing plants is also likely to be extremely costly.

Moreover, expensive energy-intensive drying of crustacean shells would be necessary to prevent microbial growth and production of carcinogenic bacterial aflatoxins. Other health risks could arise from bioaccumulation of contaminants (such as heavy metals in shells) or from cross-species transmission of pathogens and perhaps even of prions through the food chain (L. Cao *et al. Science* **347**, 133–135; 2015).

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Seal of approval for ocean observations

We announce that the Pacific Islands Ocean Observing System was certified last month as the first regional partner to attain full membership of the US Integrated Ocean Observing System (IOOS). This certification is a hallmark of the quality of data provided by the IOOS, to the benefit of the public, the private sector and individuals.

It is also an indicator to the global community that IOOS regional partners providing data from the oceans, Great Lakes and coasts of North America have met rigorous criteria for system oversight, information security, public engagement and financial controls.

The IOOS includes federal and non-federal partners in an interagency investment by the US government of more than US\$2 billion annually for the collection and provision of ocean data and for improved forecast capabilities. It comprises about 10,000 unique oceanographic data sets and some 4,000 services that provide data, metadata and refined data products to tens of millions of US users. For instance, IOOS data are used in search-and-rescue operations and to ensure safe operation of commercial vessels.

Certified IOOS data can be entered in the permanent US archive at the National Centers for Environmental Information and can be used internationally by the Global Telecommunication System for meteorological data.

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Lack of help stymied community care

John Foot's book on psychiatrist Franco Basaglia's movement to reform Italy's psychiatric hospitals ends with the passing of Law 180 in 1978 to close down asylums (see A. Tone *Nature* **524**, 290; 2015). Sadly, the law was poorly implemented owing to woefully inadequate resources.

Families received little or no support in caring for those who returned home. For some it was too much, forcing general hospitals to take up the slack. Psychiatrists found their hands tied when confronted with people who were seriously mentally ill, so many ended up in prison stigmatized as criminals.

Even Basaglia's widow, Franca Ongaro Basaglia — a core member of the reform movement and later an Italian senator — described Law 180 as a failure. **Laura Spinney** *Paris, France.*
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Education reforms ring true 50 years on

Stephen Bradforth and colleagues' discussion of what is needed to develop "a science-literate population" (*Nature* **523**, 282–284; 2015) echoes the words of a *Nature* editorial 50 years ago, entitled 'New thinking in undergraduate teaching' (*Nature* **205**, 835; 1965).

According to the editorial, "the student is in danger of spending too much of his [*sic*] limited time memorizing facts, and has insufficient time at his disposal to master the principles underlying his subject and to develop his powers of thought". It continues: "the most important purpose of a university education is to teach the student to think for himself... it may on occasion demand a re-examination of the whole approach to a subject in undergraduate courses." Indeed. **Barry S. Winkler** *Eye Research Institute, Oakland University, Rochester, Michigan, USA.*
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