

EVALUATION OF PESTICIDE REGULATION

By passing a new pesticide regulation and extending the list of banned substances, the European Parliament has reignited the debate on effects of pesticide use on the environment and human health. Strong public concerns about this issue were first raised after the publication of Rachel Carson's "Silent Spring" in 1962. Thereafter, increased public consciousness led to the ban of the pesticide DDT – used mainly in agriculture – in the US in 1972. Since then, progress on banning toxic substances has been observed globally, but the efforts are not yet sufficient everywhere.

The use and export of pesticides were issues in multi-lateral environmental agreements (MEA), such as the Stockholm Convention on persistent organic pollutants and the Rotterdam Convention, both of which were ratified in 2004. MEAs are international treaties on transboundary environment problems that target on supranational solutions and oblige parties to implement respective laws. The Stockholm Convention bans the use of many toxic pollutants and specifies a list of twelve persistent organic pollutants (POPs) that move long distances in the environment. The Rotterdam Convention controls trade restrictions and regulations for toxic chemicals. It promotes proper labelling of exported hazardous chemicals and stipulates that exports of banned or restricted chemicals can only take place with the prior consent of the importing party.

Yale and Columbia University have constructed the Environmental Performance Index (EPI). The EPI quantifies the global progress towards higher ecosystem vitality, sound natural resource management and increased human health. The index combines several performance indicators. One is pesticide regulation, which is a particularly interesting variable because it evaluates policies and regulation in the field of environmental pollution.

The EPI is composed of two parts, and a total score of 22 can be reached per country. First, it tracks the political action taken with respect to the ratification of the two MEAs and their implementation into national law. A country receives one point for signing the convention and one point for submitting an implementation plan. Thus a total of 4 points can be gained from this section. Second, the index counts the number of banned pollutants within a country. The index focuses on a list of nine substances that are relevant to agriculture (aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex and toxaphene). Each one is assigned a maximum of two points. A banned pesticide receives a score of two, a restricted pesticide only a score of one. Thus, a country can obtain a score of 18 from banning pollutants.

The table shows a single country's absolute score as well as the proximity-to-target (PT) in percent. In the EPI for 2008 a total of 149 countries are ranked 21 countries reach the full score for pesticide regulation, twelve of which are European. Interestingly, amongst them the African countries Congo and Burundi are also ranked, although they belong to the poorest 20 percent of all ranked countries. About half of the countries have scores of at least 80 percent of

Table

Pesticide regulation

Target value: 22 points							
Rank	Country	Value	PT	Rank	Country	Value	PT
1	Armenia	22	100	26	Estonia	21	95.5
2	Australia	22	100	27	France	21	95.5
3	Austria	22	100	28	Greece	21	95.5
4	Bulgaria	22	100	29	Hungary	21	95.5
5	Burundi	22	100	30	Ireland	21	95.5
6	Canada	22	100	31	Italy	21	95.5
7	Chile	22	100	33	Latvia	21	95.5
8	Congo	22	100	34	Luxembourg	21	95.5
9	Czech Rep.	22	100	37	Netherlands	21	95.5
10	Denmark	22	100	41	Poland	21	95.5
11	Finland	22	100	42	Portugal	21	95.5
12	Germany	22	100	43	Spain	21	95.5
13	Japan	22	100	46	United Kingdom	21	95.5
14	Jordan	22	100	48	Brazil	20	90.9
15	Lithuania	22	100	49	Croatia	20	90.9
16	New Zealand	22	100	66	Slovenia	19	86.4
17	Norway	22	100	68	Turkey	19	86.4
18	Romania	22	100	69	United States	19	86.4
19	Slovakia	22	100	88	South Africa	14	63.6
20	Sweden	22	100	90	China	13	59.1
21	Switzerland	22	100	97	Macedonia	10	45.5
22	Belgium	21	95.5	111	India	3	13.6
24	Cyprus	21	95.5	145	Russian Fed.	0	0

Source: Esty, Daniel C., Marc Levy, Christine Kim, Alexander de Sherbinin, Tanja Srebotnjak, and Valentina Mara (2008), *2008 Environmental Performance Index*. New Haven, Yale Center for Environmental Law and Policy. Available at <http://epi.yale.edu>.

target-fulfilment. Among the countries with a score below 10 are important agricultural countries like Bangladesh, Pakistan, Russia and Taiwan, as well as a number of very poor countries. Some of the lowest scoring countries have signed both conventions, but have not yet eliminated any of the pollutants.

This index is particularly interesting for research questions dealing with the relationship between income and environmental protection or the impact of trade on the environment. The index consistently quantifies the regulatory progress and the awareness of governments for the transboundary problem of pollution.

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