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Charlotte Uram

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International Regulation of the Sale and Use of Pesticides

*Charlotte Uram**

This Article discusses international regulation of the sale and use of pesticides. It examines and compares national, regional, and international models as a means of achieving effective international regulation. For the national model, this article selected the United States because it was the first country to impose national restrictions on the export of pesticides. For the regional model, this article selected the European Economic Community because it has sovereign powers, and has been a market-driven entity. For the international model, this article selected the United Nations Food and Agriculture Organization because it has the most far-reaching code on the regulation of pesticides. The Article then compares these national, regional, and international models and offers recommendations on the development of international regulation of the sale and use of pesticides.

I. BACKGROUND

The rise in global trade has drawn pesticides into the international arena. The varieties and uses of pesticides available internationally have mushroomed over the past thirty years.¹ Companies in the following seven countries have dominated the export trade worldwide: West Germany, the United States, the United Kingdom, Switzerland, France, Ja-

* Charlotte Uram is a partner with the law firm of Landels, Ripley & Diamond in San Francisco, California. She practices environmental law and is Chair of the Subcommittee on Pesticides, International Environmental Law Committee, American Bar Association. The views expressed in this article are her own.

¹ United States General Accounting Office, Report to the Chairman, Environment, Energy, and Natural Resources Subcommittee, Committee on Government Operations, House of Representatives PESTICIDES: EXPORT OF UNREGISTERED PESTICIDES IS NOT ADEQUATELY MONITORED BY EPA, April 1989, p. 10, GAO/RCED-89-128 [hereinafter 1989 GAO Report].

pan, and Italy.² Growth continued steadily throughout the post-war period. From 1977 to 1987, worldwide pesticide sales doubled, reaching 17 billion dollars.³ The United Nations predicts increased growth to the year 2000.⁴

The international market sought pesticides because they offer substantial public benefits. The dramatic role of pesticides in reducing the incidence of insect-borne diseases is well-known.⁵ Thus, although it is now banned in many countries, India still uses DDT because it is vital in their fight against malaria.⁶ Pesticides reduce the incidence of disease not only by killing insects but also by killing bacteria in medical equipment, homes, and schools.⁷

Pesticides are highly valued because of their role in enhancing crop production. Pesticides fight weeds, molds, insects, rodents, and diseases that can otherwise destroy 40 to 50 percent of the crops in a country.⁸ Many developing nations, including India, Brazil, and Mexico⁹, turned to pesticides in order to share in the "Green Revolution."¹⁰ Pesticides enabled India, for example, to attain self-sufficiency and export surplus food.¹¹

Pesticide use brought with it, however, its own set of environmental problems. By the early 1980's, authorities estimated at least 500,000 cases of accidental pesticide poisoning annually, resulting in approximately 10,000 deaths.¹² Developing countries bore a disproportionate share of the poisonings and deaths, largely because of misuse.¹³ People in Africa and Latin America stored food and water in empty pesticide containers, local distributors packed pesticides in flimsy makeshift pack-

² PILLS, PESTICIDES & PROFITS: THE INTERNATIONAL TRADE IN TOXIC SUBSTANCES 7-8 (R. Norris ed. 1982) [hereinafter PILLS, PESTICIDES & PROFITS]; See also 1989 GAO Report, *supra* note 2, at 2-11.

³ 1989 GAO Report, *supra* note 2, at 10.

⁴ International Code of Conduct on the Distribution and Use of Pesticides, U.N. FAO Res. 10/85 Annex, (28 November 1985).

⁵ 1989 GAO Report, *supra* note 2, at 8.

⁶ Simons, *Concern Rising Over Harm From Pesticides In Third World*, N.Y. Times, May 30, 1989, at C4, col. 1.

⁷ 1989 GAO Report, *supra* note 2, at 8.

⁸ Prabhu, *International Pesticide Regulatory Programs*, 30 ENV'T 43, 45 (1989).

⁹ See generally Halter, *Regulating Information Exchange and International Trade in Pesticides and Other Toxic Substances to Meet the Needs of Developing Countries*, 12 Colum. J. Env't'l L. 1 (1987).

¹⁰ PILLS, PESTICIDES & PROFITS, *supra* note 3, at 7.

¹¹ Prabhu, *supra* note 9, at 43.

¹² Pallemarts, *Developments in International Pesticides Regulation*, 18 ENVTL. POL'Y & L. 62, 63 (1988), citing D. BULL, A GROWING PROBLEM: PESTICIDES AND THE THIRD WORLD POOR 38 (1982).

¹³ Prabhu, *supra* note 9, at 45.

ages, farm workers toiled without protection in hot climates, and villagers used pesticides as an easy way to kill fish, thus poisoning their food and water supply.¹⁴ Illiteracy compounded these problems.¹⁵

Developed countries, too, suffered from pesticide use. Although their accidental poisoning rate was not as high, proportionately, as that in developing countries, their heavy pesticide use over the last forty years has contaminated water sources with pesticide residues.¹⁶ In addition, international trade in food exposed their consumers to the so-called "circle of poison," the import of food tainted with unsafe pesticides that are banned or severely restricted in the importing country. Rising sensitivity to the problems associated with pesticide use have led some to urge reconsideration of current pesticide use practices. Pesticide Action Network, the major international grass roots organization of people concerned about pesticides, campaigns to stop the use of those pesticides for which safe use cannot be assured. The organization also promotes alternatives to pesticides. Pesticide Action Network initiated a "Dirty Dozen" campaign in 1985 to eliminate the use of twelve pesticides.¹⁷ Pesticide Action Network also promotes education about and alternatives to pesticides, and offers assistance in evaluating non-chemical pest control methods.¹⁸

Experiments with alternatives to chemical pesticides, such as biological controls, crop rotation, proper tillage practices, and the use of pest-resistant plants, have increased in recent years. People turn to these alternatives to combat pests that have grown immune to pesticides. The alternatives also are used for environmental and economic reasons. Stahmann Farms in New Mexico, perhaps the world's largest single pecan orchard, had, over the course of forty-two years, used nine different pesticides, moving to the next one each time the aphids became immune to the chemical. Two years ago they eliminated the pesticides and reintroduced ladybugs. With dramatically reduced costs, they are harvesting

¹⁴ Halter, *supra* note 10, at 4-5; PILLS, PESTICIDES & PROFITS, *supra* note 3, at 13-14.

¹⁵ PILLS, PESTICIDES & PROFITS, *supra* note 3, at 15; Simons, *supra* note 7.

¹⁶ International Environmental Reporter, December 1988, p. 663 (presence of pesticide residues in drinking water has become a national problem in the Netherlands); International Environmental Reporter, February 1989, p. 60 (the European Community accepted a complaint from Friends of the Earth over excessive pesticides in water in the United Kingdom).

¹⁷ The twelve pesticides on the "Dirty Dozen" list are: toxaphene, chlordane/heptachlor, chlordaneform, dibromochloropropane (DBCP), DDT, aldrin/dieldrin/endrin, ethylene dibromide (EDB), lindane/hexachlorocyclohexane, paraquat, ethyl parathion, pentachlorophenol (PCP) and 2,4,5-T.

¹⁸ G. GOLDENMAN & S. RENGAM, PROBLEM PESTICIDES, PESTICIDE PROBLEMS 97-100 (1988) [hereinafter GOLDENMAN].

“one of the highest quality crops ever.”¹⁹ Similarly, Indonesia brought the brown planthopper levels under control through an integrated pest management system which used only limited amounts of insecticide.²⁰

Changes in consumer taste may also accelerate shifts away from pesticide use. The market for organic foods has grown as people seek to avoid toxic chemicals. The recent Alar scare in the United States advanced that trend. The United States Department of Agriculture recently stated that within the next decade organic farm production may constitute ten percent of the nation’s agriculture.²¹

Because of these changes, the pace of growth in pesticide use worldwide may slacken. Pesticide use may become more limited and more selective. These trends, however, are not the dominant ones now. Pesticide use is still substantial, widespread, and growing. Therefore, societies are increasingly seeking ways to allow people to enjoy the important benefits of chemical pesticides without suffering unreasonable risk from their use. To achieve that goal, societies generally turn to regulation of the sale and use of pesticides.

II. THE UNITED STATES

The Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”)²² is the primary law in the United States governing the sale and use of pesticides. Congress enacted FIFRA in 1947 to ensure product performance.²³ In 1972, responding to rising environmental concerns, Congress amended FIFRA to incorporate measures designed to protect public health and safety.²⁴ The resulting statute embodies both the original and subsequent goals.

A. Provisions Applicable to Sale and Use Within the United States

FIFRA controls the sale and use of pesticides in the United States through a system of registration. FIFRA prohibits the sale of any pesticide in the United States unless it is registered with the United States Environmental Protection Agency (EPA).²⁵ Before registering a pesticide, EPA must determine that:

¹⁹ San Francisco Chron., Dec. 3, 1989, (Magazine), at 17.

²⁰ GOLDENMAN, *supra* note 19, at 101-02.

²¹ San Francisco Chron., Jan. 13, 1990, at B3.

²² 7 U.S.C. §§ 135-136y (1980).

²³ See House Comm. on Agric., Federal Insecticide, Fungicide and Rodenticide Act, H.R. No. 313, 80th Cong., 1st Sess., reprinted in 1947 U.S. Code Cong. Serv. 1200.

²⁴ Federal Environmental Pesticide Control Act of 1972, Pub. L. 92-516, 86 Stat. 973 (1972); 1989 GAO Report, *supra* note 2.

²⁵ 7 U.S.C. § 136a(a) (1980).

1. The pesticide "will perform its intended function. . .";²⁶
2. It is properly labeled with product composition, warnings and instructions;²⁷ and
3. Its use will not cause "unreasonable adverse effects on the environment."²⁸

FIFRA defines "unreasonable adverse effects on the environment" to include not only environmental but also economic and social effects.²⁹

Registration may be conditioned on terms restricting use. If, for example, EPA determines that inhaling or touching a pesticide presents a hazard, EPA may require that it be applied "only by or under the direct supervision of a certified applicator."³⁰ Additionally, registration may be suspended or cancelled. EPA may suspend registration to prevent imminent hazard to human health. It may cancel registration if "it appears to" the EPA that the pesticide no longer complies with FIFRA.³¹

B. Provisions Applicable to Pesticides Exported From the United States

FIFRA does not extend the domestic registration system to the sale of pesticides for export and does not prohibit the export of unregistered pesticides from the United States.³² FIFRA does, however, use the registration system to regulate pesticides for export.

Before an unregistered pesticide may be lawfully exported from the United States, FIFRA requires that the foreign purchaser acknowledge in writing that the pesticide is unregistered.³³ The export manufacturer obtains from the foreign purchaser and submits to EPA a statement ac-

²⁶ 7 U.S.C. § 136(a)(c)(5)(c) (1980).

²⁷ 7 U.S.C. § 136(a)(c)(5)(b) (1980).

²⁸ 7 U.S.C. § 136a(c)(5)(c) (1980).

²⁹ 7 U.S.C. § 136(b)(b) (1980) (" 'unreasonable adverse effects on the environment' means any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide").

³⁰ 7 U.S.C. § 136(a)(d)(1)(c)(i) (1980).

³¹ 7 U.S.C. § 136(d)(b)(1) (1980).

³² Unregistered pesticides reportedly constitute approximately 30 percent of the exported products. PILLS, PESTICIDES & PROFITS, *supra* note 3, at 7-8. Pesticides may be unregistered for several reasons: the manufacturer may have decided not to market the pesticide in the United States and therefore not to register; the pesticide registration may have been cancelled for marketing or public health reasons; or the pesticide registration application may be pending. There have been numerous bills introduced in Congress over the last ten years to ban the export of unregistered pesticides. The latest, at the time of submission of this article, is S. 1989 101st Cong., 1st Sess. (1989) entitled "The Global Ban on Dangerous Pesticides Act," introduced by Senator Pete Wilson (R.-California).

³³ 7 U.S.C. § 136o(a)(2) (1980); Labelling Requirements for Exported Pesticides, Devices, and Pesticide Active Ingredients and Procedures for Exporting Unregistered Pesticides, 45 Fed. Reg. 50273 (1980) (Statement of Policy) [hereinafter Labelling Requirements].

knowledging that the purchaser understands that the product is not registered for use in the United States. The statement includes:

1. The name and address of the exporter;
2. The name and address of the foreign purchaser;
3. The identification of the product and active ingredient;
4. An indication that the purchaser understands the product is not registered for use in the United States; and
5. The destination of the shipment.

EPA sends copies of the statements to the United States embassies in the importing countries for their submission to appropriate officials in those countries. The statements are informational only; shipments may proceed upon submission of the foreign purchaser statements to EPA.³⁴

FIFRA also requires the EPA to advise foreign governments and appropriate international agencies of the cancellation or suspension of registered pesticides.³⁵ Through these measures, Congress sought to give users and user countries information about unregistered pesticides manufactured in and exported from the United States.³⁶

Adequate labelling for export of all pesticides, registered or unregistered is also required by FIFRA. Labels for pesticides shipped overseas must meet most of the labeling requirements applied to pesticides sold in the United States.³⁷

In sum, the United States has a law regulating the sale and use of pesticides in the United States. It employs a system of pesticide registration that requires a balancing of economic and environmental costs and benefits. The law also provides for notifications to other countries in connection with the export of pesticides not registered in the United States.³⁸

³⁴ 1989 GAO Report, *supra* note 2, at 2, 11-12, and 19. Although the statements are only informational, countries opposed to importation of the unregistered pesticides may use their sovereign powers to prevent future importation.

³⁵ 7 U.S.C. § 136(o)(b) (1980).

³⁶ The United States General Accounting Office in the 1989 GAO Report criticized EPA for inadequate implementation and enforcement of the export notification requirements and the cancellation notice provisions. 1989 GAO Report, *supra* note 2, at 3.

³⁷ See Labelling Requirements, *supra* note 34.

³⁸ FIFRA is not, of course, the only Federal law regulating pesticides in the United States. For example, the Federal Food, Drug, and Cosmetic Act, establishes maximum allowable limits of pesticide residues in food. Federal Food, Drug, and Cosmetic Act, ch. 675, 52 Stat. 1040 (codified as amended in scattered sections of 21 U.S.C.). The Clean Air Act, regulates air emissions from pesticides. Clean Air Act, ch. 360, 69 Stat. 322 (codified as amended in scattered sections of 33 U.S.C.). The Clean Water Act, regulates discharges of pesticides into surface water. Federal Water Pollution Control Act, ch. 927, 66 Stat. 755 (codified as amended in scattered sections of 33 U.S.C.). The Resources Conservation and Recovery Act, regulates pesticide waste. Resource Conservation and Recovery Act of 1976, Pub. L. No. 94-580, 90 Stat. 1227 (codified as amended in scattered sections of 42 U.S.C.) The Comprehensive Environmental Response and Liability Act, regulates pesticide

III. THE EUROPEAN ECONOMIC COMMUNITY

The European Economic Community ("EEC") was created by the 1957 Treaty of Rome.³⁹ The EEC is a powerful regional organization because its Member States transferred to it a portion of their sovereign powers.⁴⁰

A. Environmental Regulation in General

The Treaty of Rome did not specifically authorize the EEC to address environmental issues. The EEC nevertheless did address environmental issues to achieve its goal of abolishing trade obstacles between the Member States. Differing environmental and product regulations in the different Member States created obstacles to free trade. Therefore, the EEC developed environmental programs to harmonize the Community requirements. The EEC initiated these efforts in earnest in 1972 by adopting a series of environmental programs.⁴¹

On February 14, 1987, the Member States amended the Treaty of Rome by signing the Single European Act, which took effect July 1, 1987.⁴² The Single European Act inserted into the EEC treaty a new Environmental Title. Articles 130r through 130t set the environmental objectives and authority for the EEC. Among the provisions are the following principles:

-preventative action should be taken

wastes. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 1909 (codified as amended in scattered sections of 26 U.S.C., 33 U.S.C., 42 U.S.C., and 49 U.S.C.). In addition, the Export Administration Act, can be used to prohibit export of pesticides. Export Administration Act of 1969, Pub. L. No. 91-184, 83 Stat. 841 (codified as amended in scattered sections of 50 U.S.C.).

³⁹ EEC member states signing the Treaty of Rome on March 25, 1957 were Belgium, France, Germany, Italy, Luxembourg, and the Netherlands. The United Kingdom, Ireland, and Denmark joined on January 1, 1973. Greece joined on January 1, 1981. Spain and Portugal joined on January 1, 1986. Treaty Establishing the European Economic Community, Rome, Mar. 25, 1957, 298 U.N.T.S. 3 [hereinafter Treaty of Rome].

⁴⁰ *Costa v. E.N.E.L.*, 10 Recueil 1141, [1961-1966 Transfer Binder] Common Mkt. Rep. (CCH) ¶ 8023 (1964) (Member states transferred sovereign powers to the Community).

⁴¹ See Reh binder & Stewart, *Legal Integration in Federal Systems: European Community Environmental Law*, 33 AM. J. COMP. L. 371, 383 (1985). The EEC adopted a Programme on Environment in 1973, 16 O.J. (No. C 112) 1 (1973). The EEC modified the Programme by Council Resolution in 1977, 20 O.J. Eur. Comm. (No. C 139) 1 (1977); by Council Resolution in 1983, 26 O.J. (No. C 46) 1 (1983); and by Council Resolution in 1987, 30 O.J. (No. C 328) 1 (1987). These programs were generally intended to be five-year action programs. See Vandermeersch, *The Single European Act and the Environmental Policy of the European Economic Community*, 12 EUR. L. REV. 407, 409 (1987); Haagsma, *Environmental Policy: A Case Study in Federalism*, 12 FORDHAM INT. L. J. 311, 317 (1989).

⁴² 30 O.J. Eur. Comm. (No. L 169) 1 (1987).

-environmental damage should be rectified at its source at the expense of the polluter

-economic and social developments in the Community as a whole and the balanced development of its regions should be taken into account in environmental matters

-the Community should take action only if the objectives can be better attained by the Community than by the individual states

-the Community and the Member States will cooperate, within their respective spheres of competence, with third countries and international organizations

-action will be unanimous unless the Council decides certain measures may be determined by a qualified majority.⁴³

In the environmental area, the EEC has usually proceeded by directive rather than by regulation. A regulation applies directly within each Member State.⁴⁴ A directive, however, is addressed to the Member States and requires them to achieve by a certain date the goals, standards or requirements specified in the directive.⁴⁵ The Member States are free to choose how to comply with the directive within the parameters set by the directive. They are also responsible to enforce the requirements within their respective jurisdictions. A Member State that fails to fulfill its obligations under the EEC Treaty is subject to suit by the EEC Commission and other Member States in the European Court of Justice and may also be subject to suit in its national courts under national law.⁴⁶

B. Pesticide Regulation in the EEC

Unlike the United States, the EEC does not have any system for registration or prior approval of pesticides marketed for sale within the Community. In 1976, the Commission entertained, but did not adopt, a proposal for a Council directive on the marketing of pesticides authorized for the European Community.⁴⁷ The Commission now appears to favor a system allowing marketing of any pesticide approved within any Member State, unless banned by the EEC.⁴⁸

The EEC has, however, adopted directives concerning pesticides. Directive 78/631, which took effect in 1985, harmonizes the laws of the

⁴³ For additional information and commentary about the Environmental Title of the Single European Act *See* Vandermeersch, *supra* note 42, at 407 and Haagsma, *supra* note 42, at 311.

⁴⁴ Treaty of Rome, *supra* note 40, at Article 189.

⁴⁵ *Id.*

⁴⁶ *Id.* at Art. 169-170.

⁴⁷ 19 O.J. Eur. Comm. (No. C 212) 3 (1976).

⁴⁸ *See* E. REHBINDER & R. STEWART, II INTEGRATION THROUGH LAW, ENVIRONMENTAL PROTECTION POLICY 95 (1985).

Member States on the classification, packaging, and labeling of pesticides.⁴⁹ Although directed to the Member States, it contains specific provisions which appear regulatory in nature. It requires use of the criteria in the Directive to determine the health hazards of pesticides and to classify them accordingly as "very toxic," "toxic," or "harmful."⁵⁰ Member States are to ensure that pesticide labels provide specified information concerning its preparation, its hazards, and its proper use.⁵¹ To promote consistency and clarity, the Directive dictates the appropriate symbols and wording of key phrases. The Directive specifies the size and location of the labeling. Criteria on the strength, leak-tightness, fastening, shape, and presentation of pesticide packaging also is established by the Directive.⁵² Member States are not permitted to authorize the sale of pesticides that do not comply with the packaging provisions of the Directive.⁵³

The EEC also adopted a directive banning certain active substances in pesticides.⁵⁴ The Directive requires Member States to prohibit, with limited exceptions, the sale and use of pesticides with certain mercury compounds and certain organo-chlorine compounds, such as DDT, aldrin, dieldrin, chlordane, endrin, heptachlor, and hexachlorobenzene. The prohibitions of this Directive apply to products intended for sale and use in the EEC, not those intended for export to other countries.⁵⁵

The EEC lacks rules governing export of pesticides from the Community to third countries. The Community has debated the issue since 1986. West Germany, France, and the United Kingdom, the EEC's main exporters of pesticides, have vigorously opposed export controls,

⁴⁹ Directive of 1978 on classification, packaging and labeling of pesticides, Directive 78/631 of 26 June 1978, 21 O.J. Eur. Comm. (No. L 206) 13 (1978), as amended by Directive 79/831, 22 O.J. Eur. Comm. (No. L 259) 10 (1979); Directive 81/187, 24 O.J. Eur. Comm. (No. L 88) 29 (1981); and Directive 84/291, 27 O.J. Eur. Comm. (No. L 144) 1 (1984).

⁵⁰ Directive 78/631, Articles 3, 4 and 5; 21 O.J. Eur. Comm. (No. L 206) art. 3 at 15 (1978).

⁵¹ *Id.* at art. 7,8, at 16-17.

⁵² *Id.* at art. 6, at 16.

⁵³ *Id.* at art. 5, at 15.

⁵⁴ Directive of December 21, 1978 prohibiting the placing on the market on the market and use of plant protection products containing certain active substances, Directive 79/117, 33 O.J. Eur. Comm. (No. L 33) 36 (1979).

⁵⁵ There are various other directives relating to pesticides. For example, Directive 76/895 limits pesticide residues in fruit and vegetables, 19 O.J. Eur. Comm. (No. L 340) 26 (1976). Water quality directives affect pesticides. Directive 80/778 of 15 July 1980, 23 O.J. Eur. Comm. (No. L 229) 11 (1980) (limits pesticides in drinking water); Directive 80/68 of December 17, 1979, 23 O.J. Eur. Comm. (No. L 20) 43 (1980) (water pollution of groundwater); Directive 76/464 of May 4, 1976, 19 O.J. Eur. Comm. (No. L 129) 23 (1976) (water pollution of surface and internal coastal waters); Directive 84/360 of 28 June 1984, 27 O.J. (No. L 188) (1984) (requires member states to regulate air pollution from industrial plants); Directive 78/319 of March 20, 1978, 21 O.J. Eur. Comm. (No. L 84) 43 (1978) (on toxic and dangerous waste disposal including pesticides).

favoring limited voluntary notification schemes only.⁵⁶

In sum, the EEC has established a directive requiring Member States to harmonize their laws governing the classification, packaging and labeling of pesticides. The EEC has also banned certain pesticides from the EEC market. The Community has not, however, asserted authority to decide which pesticides may be marketed in the EEC nor which may be exported and under what terms to third countries.

IV. THE UNITED NATIONS FOOD AND AGRICULTURAL ORGANIZATION

A. Context of the Code's Development

In 1985, the United Nations Food and Agricultural Organization (FAO) adopted an International Code of Conduct on the Distribution and Use of Pesticides (the "Code") to reduce the hazards associated with the use of pesticides.⁵⁷

The Code represents a compromise between the industrialized countries manufacturing and exporting pesticides and developing countries importing them. Many developing countries do not have the legal, technical, and administrative resources to control the sale and use of pesticides and thus can not protect the health and environment of their people. The industrialized nations impose stringent controls to protect their own populace but generally have no controls on exports to developing countries. The result has been a proportionately greater incidence of poisoning in developing countries. Developing countries became angry over the industrialized nations' "double standard" which exposed their people to hazards unacceptable in the industrialized nations. Because the developing countries outnumbered the industrialized pesticide-exporting countries in international organizations, the governments of the industrialized countries took the initiative and sought a compromise. One product of that compromise was the Code.⁵⁸

The Code sought to provide a way to reduce the risks of pesticide use, particularly in those countries without adequate pesticide registration and control schemes.⁵⁹ The Code established voluntary standards, relying on cooperative efforts. At its adoption, "[i]t [was] designed to be mainly an interim measure until adequate national regulations are

⁵⁶ Simons, *supra* note 7; Pallemarts, *supra* note 13, at 67.

⁵⁷ U.N. Food and Agricultural Organization, International Code of Conduct on the Distribution and Use of Pesticides, U.N. Doc. M/R8130, E/8.86/1/5000 (1986) [hereinafter Code].

⁵⁸ For further discussion of this history and the other consequences, see Pallemarts *supra* note 13, at 62.

⁵⁹ Code, *supra* note 56, at Annex.

instituted.”⁶⁰

B. The Code Provisions on Pesticides

The Code establishes voluntary, legally non-binding standards of conduct for all governmental, public, and private entities associated with the distribution and use of pesticides.⁶¹ Its language is general and wide-ranging.

Article 3, for example, on pesticide management, states that “Governments have the overall responsibility and should take the specific powers to regulate the distribution and use of pesticides in their countries.”⁶² The same article directs governments of exporting countries to “provide technical assistance to other countries”⁶³ and “ensure that good trading practices are followed.”⁶⁴ It urges manufacturers and traders in pesticides to adhere to the Code provisions in the manufacture, distribution and advertising of pesticides, especially in countries without legislation or regulation, and to take special care to ensure safe and effective use of the product worldwide.⁶⁵ It requests that all entities and organizations, including public sector groups, provide information and disseminate educational materials on pesticides and their use.⁶⁶ Under Article 3 of the Code, everyone bears and shares broad responsibility.

Similarly, Article 4 on testing of pesticides, states that “[p]esticide manufacturers are expected to ” ensure adequate testing of pesticides in accordance with sound scientific procedures and good laboratory practices.⁶⁷ The Code does not specify those tests and practices, but the FAO and other international organizations have published guidelines on these tests and practices. The manufacturers are also expected to make copies or summaries of the tests available to governments where the pesticide is offered for sale.⁶⁸ They are to see that the proposed use, label and directions accurately reflect the outcome of the tests, and they are to provide any technical training necessary.⁶⁹

Article 10, on labelling, packaging, storage, and disposal, also directs most of its standards to industry. It states that “Industry should

⁶⁰ A.V. Adam, *The International Code of Conduct on the Distribution and Use of Pesticides*, 23 CTC REPORTER 45 (1987).

⁶¹ Code, *supra* note 58, at art. 1.

⁶² *Id.* at art. 3.1.

⁶³ *Id.* at art. 3.3.1.

⁶⁴ *Id.* at art. 3.3.2.

⁶⁵ *Id.* at art. 3.2, 3.4.

⁶⁶ *Id.* at art. 3.6, 5.4.

⁶⁷ *Id.* at art. 4.1.1, 4.1.2.

⁶⁸ *Id.* at art. 4.1.3.

⁶⁹ *Id.* at art. 4.1.4.

use labels that” show the appropriate hazard classification of warnings⁷⁰; use appropriate symbols or pictograms, whenever possible, in addition to written warnings and instructions⁷¹; warn against reuse of the containers⁷²; and provide product batch or lot information⁷³. Reflecting an international concern about the reuse of pesticide containers for food storage, the Code also places burdens on governments. Specifically, “[g]overnments should take the necessary regulatory measures to prohibit the repacking, decanting or dispensing of any pesticide into food or beverage containers in trade channels and rigidly enforce punitive measures that effectively deter such practices.”⁷⁴

The Code also establishes in Article 12 a general prescription that “Governments should monitor the observance of the Code and report on progress made to the Director-General of FAO.”⁷⁵ In accordance with Article 12 of the Code, the FAO issued a questionnaire designed to indicate the extent to which countries were observing the Code. Seventy-three percent of the countries responded to the questionnaire in 1988. Of the 115 responding countries, 84 developing countries stated that they did not have adequate governmental resources to control pesticides and comply fully with the Code. Africa had the greatest number of countries with difficulty observing the Code.⁷⁶

C. The Amendment of the Code to Incorporate Prior Informed Consent

One of the issues left unresolved by adoption of the Code in 1985 was the issue of “prior informed consent.” The principle of “prior informed consent” would allow importing countries the opportunity to refuse shipments of pesticides banned or severely restricted in exporting countries. Early drafts of the Code had provided for prior informed consent, but pressure from industry resulted in its deletion. A last-minute effort by the developing countries to reinstate it failed. The developing countries ultimately consented to the 1985 Code but recorded their reser-

⁷⁰ *Id.* at art. 10.2.3.

⁷¹ *Id.* at art. 10.2.2.

⁷² *Id.* at art. 10.2.4.

⁷³ *Id.* at art. 10.2.5.

⁷⁴ *Id.* at art. 10.4.

⁷⁵ *Id.* at art. 12.6.

⁷⁶ International Code of Conduct on the Distribution and Use of Pesticides Analysis of Responses to the Questionnaire by Governments, Background Paper Number 1, January 1989, AGP/GC/89/BP.1. According to a report by Pesticide Education and Action Project, pesticide use practices in three parts of the United States (California, Louisiana and Ohio) and one province of Canada also failed to meet the standards of the Code. See International Environmental Reporter, May 11, 1988, p. 295.

vation that prior informed consent did not appear in the Code and asked that the Code be revised to include it. In response to concerns by developing countries, the FAO in November 1987 adopted a resolution deciding that prior informed consent should be incorporated into the Code within two years.⁷⁷ In November 1989, the FAO amended the Code to adopt the principle of prior informed consent.⁷⁸

Article 9.7 on prior informed consent (PIC) states:

Pesticides that are banned or severely restricted for reasons of health or the environment are subject to the Prior Informed Consent procedure. No pesticide in these categories should be exported to an importing country participating in the PIC procedure contrary to that country's decision made in accordance with the FAO operational procedures for PIC.

FAO's operational procedures for PIC and the guidelines accompanying the amendments to the Code provide an eight-step process in which the FAO plays a central organizational role. The eight steps are summarized below.

Step 1 - FAO invites member importing states to participate in the PIC process. Those responding affirmatively will be included in the process. All pesticide exporting nations are expected to participate.

Step 2 - Participating nations designate the appropriate authority for giving and receiving notice in the process.

Step 3 - The national authorities designated in Step 2 advise the FAO of all actions taken in the country to ban, refuse registration or severely restrict a pesticide for health or environmental reasons.

Step 4 - For each pesticide for which notice is received under Step 3 and for any pesticide selected by an FAO expert panel on acutely hazardous pesticides, the FAO will develop a "PIC Decision Guidance Document".

Step 5 - The PIC Decision Guidance Document will be sent to the participating countries for response and to other countries for their information. The document will summarize information on the pesticides, chemical and physical properties, uses, source of exposure, toxicity profile and regulatory status in other countries.

Step 6 - The participating importing country will advise FAO within 90 days whether it will allow imports of the pesticide in question. The importing country may make a final decision to ban import, in which case it will also discontinue any domestic production of the pesticide.

⁷⁷ For further discussion of this debate, see Pallemmaerts, *supra* note 13, at 67.

⁷⁸ Revision of Articles 2 and 9 of the International Code of Conduct on the Distribution and Use of Pesticides, and Guidelines on the Operation of Prior Informed Consent, adopted 21 November 1989.

Alternatively, the importing country may make an interim response. If a country makes no response, the status quo with respect to importations will be maintained.

Step 7 - The FAO will advise all designated national authorities of the responses of individual countries and maintain a database on country decisions.

Step 8 - Designated national authorities of exporting countries will inform the pesticide export industry and appropriate authorities of the decisions by importing countries.

The FAO thus has established wide-ranging standards for pesticides generally and unique standards for prior informed consent. Although the Code is only a voluntary standard, upon its adoption, it represented a global consensus on the standards that should govern the sale and use of pesticides.

V. COMPARISON OF THE MODELS

The United States, the EEC and the United Nations FAO models have certain obvious differences. Structurally, the United States provisions are generally the strongest because they are legally binding and directly applicable.⁷⁹ The EEC provisions are legally binding, too, but, because they were issued as directives rather than regulations, they apply to the Member States and are not directly applicable within each Member State. The FAO provisions are structurally the weakest because they are not legally binding.

In terms of export, the FAO Code is the most far-reaching because it provides for prior informed consent. The FAO's strength in this area is not surprising since a primary motivation in the development of the Code was to protect Third World countries without adequate internal regulation of pesticides. The United States also has provisions governing export, but they are weaker than the Code's because they are only informational. The EEC lacks provisions governing export of pesticides.

In terms of controlling sale and use within its jurisdiction, the United States' law is the most rigorous because it requires registration of pesticides prior to sale and use. The EEC does not require registration, and the FAO Code does not specifically address the means to control sale or use.

From this brief comparison, it would appear that the nation model of regulation may be the strongest and thus bear the most fruit for international regulation of pesticides. In fact, that is not the conclusion of

⁷⁹ See *supra* note 78 and accompanying text.

this article. The discussion below compares the strengths and weaknesses of the preceding national, regional and international models as a means for international regulation of pesticides.

A. National Model

Relying solely on national regulation to provide a means for regulation of pesticides internationally holds little promise for two reasons. First, many countries do not have adequate pesticide regulations. Second, those that do are unlikely to effectively regulate export of pesticides unilaterally because it potentially injures domestic business and market position.

Those favoring the nation model of international regulations argue that the burden should be on nations to regulate pesticide sale and use within their countries. The theory is that nations, by exercising their sovereign powers, would establish sound pesticide regulations enabling people to enjoy the many benefits of pesticide use without suffering the worst costs. National regulation can be specific to the needs, values and circumstances of each country. It respects the sovereignty of each country. It also frees other countries and companies from the burden of deciding how to protect their neighbors and customers.

In fact, a system in which each nation has a separate and distinct form of pesticide regulations would probably increase international frictions by erecting barriers to trade, which would frustrate companies and governments alike, and by setting differing standards affecting food imports and groundwater pollution and other matters extending beyond national boundaries. In any event, scores of countries do not have adequate pesticide controls because they do not have the resources to adopt, administer, or enforce regulations. Therefore, the nation model of international regulation, even if it were ideal, is unworkable at the present time.

Assuming that not all nations regulate pesticides, a form of international pesticide regulation could still emerge from the nation model if exporting countries were to act individually to regulate exported pesticides. The problem with this nation model is that countries are not likely to take actions to harm their domestic business or market position through unilateral regulation. If they did, the companies could relocate elsewhere and continue exporting from the new home country. The original exporting company would thus injure itself without achieving the aim desired by the export regulations.

The United States, it is true, unilaterally adopted export regulations. Upon closer examination, however, these export regulations appear weak. First, they are informational only. The United States need only

inform importing countries of the shipment of banned or restricted pesticides. It need not seek or await any response.⁸⁰

Second, the United States provisions on export of pesticides are reportedly not functioning properly. In 1989, the United States General Accounting Office concluded that after a decade, EPA's implementation of the export provisions in FIFRA was still inadequate.⁸¹ The General Accounting Office found the following flaws: (1) EPA had no program for determining whether export manufacturers are complying with the program and does not know if they are; (2) EPA's policy interpreting the export provisions exempted most unregistered pesticide exports from the notice requirements;⁸² and (3) EPA had no procedures for and has failed to issue the required notices to other governments upon cancellation or suspension of the registration of a pesticide.

Finally, the United States provisions on export of pesticides may not be enforceable. The enforceability of FIFRA's export provisions on foreign purchaser statements and government notifications is not clear from the text of the statute. The statute, for example, does not explicitly impose on anyone the duty to obtain the foreign purchaser statement. The statute simply says: "No pesticide . . . shall be deemed in violation . . . if, prior to purchase, the foreign purchaser has signed a statement . . ."⁸³ Without a statutory duty on someone, there is no violator and thus no enforcement. Similarly, the statutory section designating unlawful acts under FIFRA does not refer to or explicitly include the section requiring foreign purchaser statements, again raising questions about the enforceability of these provisions.⁸⁴

Similar questions surround the enforceability of the government's obligations to give foreign purchaser statements and pesticide cancellation notices to importing countries. FIFRA identifies the government as the entity responsible to take these actions, but exempts public officials in the performance of their official duties from liability.⁸⁵ From the structure of the statute and its language, one cannot readily discern whether Congress intended simply to prevent assessment of penalties against government officials who fail to perform statutory duties, or whether Con-

⁸⁰ 7 U.S.C. § 136(o)(a) (1989).

⁸¹ 1989 GAO Report, *supra* note 2.

⁸² The policy exempts unregistered pesticides that are minor variations on formulas registered in the United States and contain only active ingredients registered in the United States. 45 Fed. Reg. 50274, 50275-76 (1980).

⁸³ 7 U.S.C. § 136(o)(a) (1989).

⁸⁴ 7 U.S.C. § 136(j) (1989).

⁸⁵ 7 U.S.C. § 136(j)(b)(3) (1989).

gress also intended to define their acts as not unlawful, thus preventing a court from granting injunctive relief against them.

In sum, the nation model has the appeal, in international regulation, of respecting sovereignty and national differences. As a means to produce international regulation of pesticides, however, it is unlikely to succeed because it requires either that all nations have operational regulations on the sale and use of pesticides, or, alternatively, that all exporting nations individually place restrictions on their own businesses to provide significant protections for importing countries. Both forms ask too much of individual nations.

B. Regional Model

The regional approach represented by the EEC has significant advantages over the nation model of international regulation.⁸⁶ First, the regional model allows nations to take steps in concert with other nations, thus reducing the competitive disadvantage of regulation to any one nation. Second, it harmonizes national requirements, which facilitates free trade. The regional model thus offers economic benefit in exchange for regulation, making it potentially more successful. The regional model does, however, have limitations for the international regulation of pesticides. The first is that it is only regional. For third countries outside the regions, the nation model may again be dominant, as nations seek to preserve all trading opportunities with third countries without restraint. That has been true of the EEC. The second is that it will probably succeed only where there are no dramatic differences in capabilities among the nations within the region. Harmonizing regulations is not a realistic goal between highly developed countries and developing countries. Despite these limitations, the regional model offers a greater likelihood of success for international regulation than the national model.

C. International Model

The international model, the United Nations FAO Code, would appear to offer the greatest likelihood of success in international regulation because it sets international standards applicable to all nations. This system is potentially the most orderly way to regulate to the common benefit.

The FAO Code, however, was not devised as an enforceable, binding document. It was designed primarily to protect those countries with-

⁸⁶ "Regional model" is not intended to be limited to nations within a geographical area. Instead, it speaks to similarly situated nations entering into a treaty for common advantage.

out adequate pesticide regulation through a program of voluntary, cooperative action by governments, pesticide manufacturers and exporters, and non-governmental organizations such as public interest groups. The voluntary aspect of the Code would appear to be a serious flaw in the regulatory system, giving rise to the question whether the Code should be converted to a treaty so that it will become a binding international regulation.

Converting the Code to a treaty now cannot be easily done. First, the language in the Code is not directly transferable to a binding treaty. Much of it is general and exhortatory. Binding language would have to be significantly more specific, so that those subject to it would know exactly what the language requires.

Devising the necessary specific language would be difficult because of the gap in the regulatory capabilities of countries in the world. Any binding treaty would either have low standards that all can meet or higher standards that those countries most in need would necessarily violate. In that context, making the Code legally binding would not significantly advance its goal of promoting international regulations to ensure safe use of pesticides in all countries. The resources at this stage might be better spent on scientific and educational programs designed to close the gap, using the FAO Code as a beacon, rather than on efforts to try to eliminate the gap through legal declaration.

In any event, before struggling to convert the Code to a binding document, it makes sense to see if the voluntary Code is accomplishing its objectives and in what areas and to what extent. The Code is a recent document, with its most controversial provision, prior informed consent, adopted only within the last year, on November 21, 1989. It should be given an opportunity to work so that all countries can evaluate the voluntary Code and determine those aspects that are most successful and those that may be more successful as binding law.

Viewed in perspective, the system is evolving. Transforming the FAO Code into a legally binding document now may not significantly advance international regulation of pesticides, but given the continuing global changes resulting from trade and computer communications, the ingredients for successful enforceable international regulation may arise in the not too distant future.

VI. CONCLUSION

The sale and use of pesticides worldwide has fostered a need for international regulation of pesticides to promote their safe and beneficial use. Reliance on laws within each sovereign nation is not likely to pro-

duce successful international regulation of pesticide sale and use. Regional entities are better positioned to offer a successful model of regulation. An international regulatory system binding all nations may be the ideal model, but, at this point, appears premature. At the international level, the best course for now is to devote resources to the science and education needed to help developing countries and to evaluate, periodically, the success of the voluntary compliance with the FAO Code. Development of a legally binding international code may be guided by experience drawn from the current voluntary Code.