OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

FAIR USE POLICY

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

RESTRICTED

16167

DP/ID/SER.A/814
24 February 1987
ENGLISH

REGIONAL NETWORK ON PESTICIDES FOR ASIA
AND THE PACIFIC

DP/RAS/85/023

Technical report: Second Regional Meeting on Harmonization of Pesticide Registration Requirements Manila, Philippines, 1-5 December 1986*

Prepared for the Governments of the Member States of the Regional network
(Afghanistan, Bangladesh, India, Indonesia, Pakistan, Philippines,
Republic of Korea, Sri Lanka and Thailand) and other
participating States of the region,
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme
in co-operation with the Food and Agriculture Organization
of the United Nations

Based on the work of a drafting group consisting of
A. Balasubramanyan, A. Kafi and R. L. Raisk

United Nations Industrial Development Organization
Vienna

---

*Organized in collaboration with the Fertilizer and Pesticide Authority and the Agricultural Pesticide Institute of the Philippines.

This report has been reproduced without formal editing.

460

V.87-82400

TABLE OF CONTENTS

1. INTRODUCTION

1. The Second Regional Meeting on Harmonization of Pesticide Registration Requirements organized by the Food and Agriculture Organization (FAO) on a sub-contracting arrangement by the executing agency, the United Nations Industrial Development Organization (UNIDO) and Fertilizer and Pesticides Authority of the Government of the Philippines, was held in Manila from 1 to 5 December 1986.

2. The Meeting was organized as an implementation of one of the activities under the work program approved by the Project Management Committee (PMC) of the Regional Network on Pesticides and had the following objectives:

- To review the progress made, in the implementation of harmonizing registration requirements, in line with the recommendations of the October 1983 meeting.

- To agree on efficacy test protocols both as to the format nad the tests required for the most important pests/crops in the region.

- To consider the various FAO Guidelines on:

  Efficacy data for the Registration of Pesticides for Plant Protection; Crop Residue Data; Environmental Criteria for Registration of Pesticides; Registration and Control of Pesticides; Good Labelling Practice; Packaging and Storage of Pesticides; Disposal of Waste Pesticides and Pesticide Containers on the Farm.

- To consider the subject of proprietary rights to registration data and to explore ways of implementing these principles.

- To note the Code of Conduct on the Distribution and Use of Pesticides, adopted by FAO member countries and to discuss ways to implement the various articles and provisions of the Code.

- To review the proposed scheme for information exchange on registration status of pesticides among participating countries.

3. The Meeting was attended by 51 delegates representing 11 countries, and organizations,like FAO, WHO, Asian Development Bank (ADB), South Pacific Regional Environmental Programme (SPREP), GTZ, GIFAP, Commonwealth Agricultural Bureau (CAB), and South Pacific Commission (SPC). A number of observers from various Philippine government agencies and chemical companies also attended some sessions. The list of participants is attached as Appendix 1.

4. The proceedings of the Meeting are summarized below.

II. OPENING SESSION

5. The Meeting was inaugurated by the Honorable Dante Barbosa, Assistant Minister of Agriculture and Food, who presented the Philippine government's policy directions in agriculture and pesticide regulations. The basic objective of the Ministry of Agriculture and Food's short-term recovery plan for the rural sector is to lay the foundation for equitable and sustainable growth, and to help create the environment that will enable farmers and landless wage earners to increase their incomes.

6. Among the strategies he presented for achieving this goal is one of improvement of policies and regulations with effective enforcement of pesticide regulations in a harmonized way within the region. FPA's principal thrusts are to strengthen enforcement of regulations; improve monitoring on quality control and residues; pesticide usage and applicators' health; and training on safe and efficient use of pesticides. He noted that these coincide with RENPAP objectives and expressed the hope that this meeting strengthened cooperation existing among countries in the region in achieving the benefits of pesticide use while safeguarding the health of users and protecting the environment.

7. Mr. Adrian Ybanez, President of the Agricultural Pesticides Institute of the Philippines (APIP), in his address extended a warm welcome to the delegates. He stressed the importance of the products produced by the pesticide industry in the attainment of sustainable growth in agriculture. He reviewed the history of cooperation between industry and government in achieving workable regulatory programs, protection of health and environment, and described some current cooperative programs to train farmers, dealers, distributors, bulk handlers and medical personnel.

8. Mr. Luis Villa-Real, Officer-in-Charge of the Fertilizer and Pesticide Authority, also welcomed the delegates and presented a picture of the current government status and recent events so the delegates would feel comfortable in discussing the issues with their Philippine counterparts.

9. Mr. Turhan Mangun, UNDP Resident Representative, explained the structure of the Network and its objectives. He acknowledged the progress achieved, the efforts of RENPAP's Regional Coordinator and the host authority, FPA, and expressed his confidence in the future harmonization to be accomplished by the project.

10. Atty. Nicholas Deen, the Administrative and Legal Officer of FPA, introduced the delegates and observers participating in the meeting.

11. Mrs. Cecilia P. Gaston, Deputy Administrator for Pesticides, FPA, in closing the Opening Session, thanked the participants and the industry

associations for their support and assistance in organizing the meeting and moving toward the goals of harmonization.

III. DESIGNATION OF OFFICERS

12. Mrs. Cecilia P. Gaston, Deputy Administrator for Pesticides, FPA and Regional Coordinator of the Network served as Chairman. Dr. Abdul Kafi from Pakistan was designated as Vice-Chairman. Dr.Balasubramaniam (Malaysia), Dr. Abdul Kafi (Pakistan) and Dr. R.L Rajak (India) were appointed members of the Drafting Committee.

IV. ADOPTION OF AGENDA

13. The Meeting adopted the Agenda as presented in Appendix 2.

V. IMPLEMENTATION OF RECOMMENDATIONS OF THE OCTOBER 1983 MEETING

14. The Meeting noted that considerable progress has been achieved in the region since the first meeting in October 1983 on harmonization of pesticide registration requirements. The summary of responses to the questionnaire on implementation of the 1983 Regional Consultation on Harmonization of Pesticide Registration Requirements , is presented in Appendix 3.

VI. FAO GUIDELINES

15. A number of guidelines have been published by FAO and approved by FAO member countries to assist registration authorities in various aspects of pesticide regulations. The highlights of each of these guidelines are summarized below.

VI .1. EFFICACY DATA FOR REGISTRATION OF PESTICIDES FOR CROP PROTECTION

16. The attention of members was drawn to the following:

(i) Efficacy is the ability of a pesticide to fulfill the claims made for it on the (proposed) label.

(ii) In view of the variability of conditions under which pesticides are used, it is necessary to include a reference product in field trials to allow meaningful evaluation of efficacy under the conditions of the trial.

(iii) Care must be exercised in the selection of test sites to ensure they are as uniform as possible. Assessment of phytotoxicity should be made as part of the efficacy testing.

(iv) The type of equipment used during the trial should be similar to that currently used in practice.

(v) Trials must have adequate replication for appropriate statistical analysis.

17. The Meeting recognized that efficacy data was difficult to transport from one country to another due to varying agro-climatic conditions but if trials were carried out in accord with agreed protocols the difficulty could be reduced. Members were encouraged to use the guidelines and provide suggestions to FAO for consideration of the relevant expert group.

18. The Meeting noted that the following suggestions should be considered when revising the Guidelines:

(i) Several other parameters such as the effect on parasites and predators, pest resistance, pest resurgence, effect on should be incorporated .

(ii) Untreated controls are often useful in field tests for efficacy and a comparison with standard pesticides is not always necessary.

VI. 2. CROP RESIDUE DATA

19. The "Guidelines on Residue Trials to Provide Data for the Registration of Pesticides and the Establishment of Maximum Residue Levels" were discussed and attention was drawn to several important points including the fact that the guidelines deal both with plants and plant products and with foods of animal origin. The guidelines had been developed because of an urgent need to improve and harmonize the procedures for obtaining residue data for proposing and introducing maximum residue limits of pesticides in food.

20. The Meeting was informed that these guidelines incorporate the latest proposals by the Codex Committee on Pesticide Residues and contains very useful information for generation of data on maximum residue limits. Participants were asked to use the guidelines and submit any suggestions for revisions to FAO.

21. GIFAP stated that they welcomed in principle the guideline as a useful document and pointed out the following:

(i) Planning of supervised residue trials which are multidisciplinary in nature is very imporant.

(ii) Minor formulation changes with no change in use patterns will not change residue levels significantly.

(iii) The most recent GIFAP Residue Committee recommendations on sample size from supervised trials recommended a number of pieces per sample for large items such as cabbage; for small items (e.g.

grains) weight is still recommended, rather than weight for all.

(iv) The section on residues in human foods of animal origin is welcome. The 1986 JMPR recommendations on the interpretation of studies involving dietary administration of pesticide residues to large animals were also welcomed.

VI. 3. ENVIRONMENTAL CRITERIA FOR REGISTRATION OF PESTICIDES

22. The important points in the "Guidelines on Environmental Criteria for the Registration of Pesticides" were highlighted. The Meeting was informed that the document had been distributed several years ago and that it was in use in many countries.

23. GIFAP emphasized the importance of balanced decisions being made based on the predictive data obtained from tests carried out as stipulated in the guideline and post registration monitoring as an appropriate follow up activity.

VI. 4. GOOD LABELLING PRACTICE FOR PESTICIDES

24. The following important points were made when the document "Guidelines on Good Labelling Practice for Pesticides" was introduced.

(i) The importance of the container label and its information cannot be over emphasized. It provides the only method of direct transmission of technical information, instructions and advice from the supplier, with his research and development backing, to the purchaser and user of the product.

(ii) Colour coding may be used and should be based on the hazard of the product. Uniformity is to be encouraged.

The status of harmonizing labelling guidelines is presented in Appendix 4.

VI. 4.a. THE WHO RECOMMENDED CLASSIFICATION OF PESTICIDES BY HAZARD AND GUIDELINES TO CLASSIFICATION

25. The Meeting was briefed on the document "The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification 1986-1987, VBC/86.1 Rev. 1". It was pointed out that the Classification had been adopted by the World Health Assembly over 10 years ago, and detailed guidelines have been developed and reviewed on a biennial basis. The Classification is definitely intended to be by formulation as is emphasized in several places in the guidelines. The process of classification has to be flexible, and the class of technical product may be altered if new and reliable information on its toxicity becomes available. Every country may adopt individual entries in certain cases, and may refer to compounds which fall into Class III (Table 5)

of the guidelines as Class IV if they so wish.

26. From the discussions it was apparent that most countries in the region adopted the WHO hazard classification particularly for labelling purposes. Some, however, follow the scheme with certain modifications.

VI. 4.b. PROPOSED PICTOGRAMS

27. Five proposed pictograms are being developed by GIFAP and FAO for universal use. In principle, the positive message is a green circle while the negative one is a red circle. Presently, the pictograms have been distributed to GIFAP and certain country representatives for field testing. The findings of the survey will be submitted to the FAO Panel of Experts on Registration for further consideration.

VI. 5. PACKAGING AND STORAGE OF PESTICIDES

28. The Meeting was briefed on the "Guidelines for the Packaging and Storage of Pesticides, FAO March 1985". One important aspect that was discussed was that all pesticide containers shall protect both the active ingredient and the quality of the formulation for a minimum period of two years to an acceptable level. From replies received to the questionnaire (Appendix 3), it is apparent that most countries in the region are generally concerned with the nature of packaging relating to the safety of the product.

VI. 6. DISPOSAL OF SURPLUS PESTICIDES AND PESTICIDE CONTAINERS ON THE FARM

29. The "Guidelines for the Disposal of Waste Pesticide and Pesticide Containers on the Farm, FAO March 1985" were introduced. It was pointed out that one of the most acceptable ways of disposing surplus pesticides on the farm is to use it in accordance with label directions. Recent studies being conducted by WHO show that by filling empty pesticide containers with water, allowing to stand for 24 hours , emptying and repeating the procedure three times reduced the pyrethroid group of pesticides in the containers to levels well within the ADI values. However it was stressed these were preliminary results at this stage, and meantime the provisions of the Guideline on disposal should still be followed.

30. GIFAP informed the Meeting that the industry had a lot of anxiety about using empty pesticide containers for storage of food and water and was studying the implication of the preliminary work referred to by WHO.

VI. 7. GUIDELINES FOR THE REGISTRATION AND CONTROL OF PESTICIDES

31. The FAO Model scheme for the establishment of national registration organizations was briefly introduced. The period needed to obtain a registration in various countries is summarized in Appendix 5. The

elapsed times shown assume that all required data were supplied with the initial application.

32. The Meeting decided that Guidelines including test protocols should be developed for the registration of household pesticides in consultation with WHO and other interested organizations.

VII. EFFICACY TEST PROTOCOLS

33. In accordance with the 1983 Meeting recommendation, protocols for efficacy trials were developed by EPPO for 10 crop/pests combinations, and circulated to the participating countries. The test protocols were developed with a view to harmonize the efficacy testing methodology and to make trial results transportable to other countries for the same crop/pest combination.

34. Appreciating the efforts made by the experts in developing the test protocols, the Meeting noted that the methodology needed to be studied in more detail by the experts concerned with trial work of pesticides in respective countries.

35. The crop/pest combinations for which efficacy protocols have been developed are shown in Appendix 6. It was agreed that an evaluation be made of the trial protocols by the following countries with those underlined being the lead country responsible for ensuring the work is done.

Trials Protocol	Countries on which to be tested
Weeds in Bananas	Philippines
Weeds in Sugar Cane	Thailand, Indonesia, Bangladesh Philippines, Pakistan
Weeds in Maize	India, Pakistan, Indonesia, Thailand China
Leafhoppers, Planthoppers, Lepidopterous Stem Borers in Rice	Pakistan, Philippines, Malaysia China, Korea, Sri Lanka, Bangladesh, Thailand
Weeds in Rice	Malaysia, Philippines, Pakistan, China, Korea, Sri Lanka, Thailand
Phytophthora infestans on Potato	Indonesia, Philippines, Bangladesh,
Plutella xylostella	Thailand, Malaysia, Korea, Pakistan, China, Indonesia, Japan

Alternaria solani and Phytophthora infestans on tomato	Philippines, Malaysia, Indonesia, Korea

36. It was also agreed that any comments and results on the test protocols be transmitted to FAO by the end of December 1987. GTZ offered to cooperate with FAO to support a meeting in a country in the region in early 1988 to review progress and consider further collaborative work.

37. A further number of crop/pest combinations, on which there were considerable pesticide use were identified and are listed in Appendix 7. The Meeting suggested that these should be referred to FAO for discussion with EPPO on the development of further test protocols, including pest/crop combinations.

38. It was emphasized that the reason for developing these test protocols was so that efficacy data developed in accordance with the agreed guidelines would be transportable between countries thus markedly reducing or even eliminating testing in each country. Responses to the questionnaire as shown in Appendix 3 indicate that most countries agreed to this concept in principle.

VIII. POST REGISTRATION ACTIVITIES

VIII.1. LICENSING AND MONITORING ACTIVITIES

39. The Meeting recognized that post-registration activities are extremely important to an effective regulatory program. No matter how good the registration scheme, it will not be effective without enforcement to ensure compliance and monitoring to determine how well the program is meeting its efficacy, health and environmental goals. More effort needs to be placed on post-registration activities as registration is harmonized and strengthened.

40. The participants presented activities in licensing, the results of which are summarized in Appendix 8. Countries have to a large degree instituted licensing requirements for manufacturers/formulators, dealers/retailers and applicators. In many cases, testing, training or other competency-related factors are a condition of licensing. Inspection is used to enforce licensing requirements.

41. The Meeting recognized the importance of being able to monitor aspects of pesticide use and provided written statements about monitoring conducted in each of the following categories:

Type of Monitoring
- enforcement of regulations
- quality of formulations
- residues in the environment
- biological monitoring of the environment
- pesticide residues in food

- accidents and poisonings

Participants also commented on laboratory capabilities including quality assurance ; problems encountered in monitoring. (Appendix 8).

VIII. 2. TRAINING AND INFORMATION DISSEMINATION

42. Legal requirements of registration contribute a great deal towards the safe handling and application of pesticides. However the need for training and dissemination of information cannot be over emphasized particularly in countries of the region, where pesticides are distributed into rural areas often with limited infrastructure for safe handling and storage. Handling and application of pesticides is often made by poor and illiterate farmers who are limited by resources including knowledge essential for the safe and effective application of pesticides. The problem of the farmers and all others who may handle pesticides is further aggravated by the hot and humid environment which makes the wearing of conventional protective clothing almost impossible. Thus, training and information dissemination is an indispensable component in achieving the objectives of safe handling of pesticides.

43. From the information provided by the representatives of countries, the national associations and GIFAP it is apparent that all countries are carrying out training and information dissemination. Nevertheless there is a need to provide funds, training materials and other facilities to make this activity more effective in the region. (Appendix 9).

IX. INTERNATIONAL CODE OF CONDUCT ON THE DISTRIBUTION AND USE OF PESTICIDES

44. The Meeting reviewed the Code and noted the following points:

The code which is voluntary in nature has 12 articles covering pesticide management, testing, availability and use, information exchange, labelling, packaging, advertising and monitoring of the code. The responsibility of implementing the code has to be a cooperative effort between the governments, industry and consumers. To date, over 30,000 copies of the Code have been published and distributed.

45. FAO is implementing a strategy to further promote adoption of the Code which includes :

(i) Model training courses for use at national level with provisions for the practical implementation of the Code directed at middle management.

(ii) Development of pictograms in cooperation with GIFAP.

(iii) Preparation of a simplified version of the Code for farmers.

(iv) Examination of the results of the questionnaire on monitoring the implementation of the Code, pictograms, and other topics by the FAO Expert Committee on Registration Requirements.

(v) Employment of a consultant to examine new areas which may be suggested for the Code, particularly that on prior informed consent before export of restricted pesticides.

(vi) Distribution of a questionnaire to member governments to determine the current status of implementation among member countries; periodic resurveys will measure progress over time.

(vii) Assistance to individual countries in implementing the code.

46. Ways of implementing the Code were discussed. A particularly difficult issue arises when some companies choose not to subscribe to the Code. GIFAP has encouraged adoption of all aspects of the Code. While difficult, social pressure on those in non-compliance may be appropriate. The Meeting discussed this issue and recognized the need to relate such efforts to requirements of national law. The Code could also incorporated into national law by reference to avoid inconsistency.

47. The delegate from Japan indicated the availability of funds from his government for the next 5 years to train countries in the provisions of the Code and how to develop technical and institutional mechanisms needed to comply with the Code. Countries with little or no infrastructure should be given priority. The present situation in Japan is outlined in Appendix 11.

48. Details on the progress of implementation of the Code as reported by the countries of the region is presented in Appendix 10.

X. PROPRIETARY RIGHTS TO DATA

49. Pesticide companies invest a considerable amount of money and expertise to produce the data needed for product registration. These data are submitted to registration officials to support registration. If they can then be used without restriction by subsequent registrants of similar products, the first registrant suffers a competitive disadvantage. While the theory is simple, the actual practice of implementing procedures to provide reasonable protection of data while providing for the availability of products at competitive prices is complex.

50. In accordance with the recommendations of the 1983 Meeting, proprietary protection has been implemented within the region according to the survey discussed earlier. (Appendix 3).

51. Several concepts of importance are noted:

(i) Confidentiality is different from proprietary protection. It is the latter protection which should be provided but confidentiality alone does not guarantee this protection. Confidentiality may also violate the principle of public right-to-know endorsed at the 1983 meeting.

(ii) Recognition of patent rights is a separate matter to proprietary protection. Registration officials often have difficulty in determining patent status.

(iii) Products which are produced by two or more companies often pose problems of conflicting goals. Generating new data for each product is duplicative. Use of secondary reviews such as JMPR or IPCS to register products, may violate proprietary rights.

(iv) The usual attempts to differentiate between products by "proprietary" and "commodity" classes adds to the confusion in this area by mixing patent considerations with data requirements and protection.

52. The Meeting recognized that registration officials need to apply a pragmatic approach which permits reasonable protection of data while not forcing excessive duplicative testing or preventing the availability of products at competitive prices. The meeting noted the recommendations on the Second Ad Hoc Consultation in Rome in 1982.

XI. INFORMATION EXCHANGE ON REGISTRATION STATUS

53. A number of countries have started developing computer programs for information regarding registration status of pesticides. Malaysia and Thailand have started such a system; Philippines, Korea and Indonesia already have one. A few others also issue manual lists of registered pesticides. The FAO Code of Conduct Article 9 list the kind of information each government may notify and make available to other member countries. It was suggested that information on cancellation must give the reasons as well.

54. The 1983 Meeting called for collection and exchange of specific data on registered products in each country and information on cancellations or restrictions. The Meeting reaffirmed the 1983 recommendation and set deadlines for reporting. The Philippine delegation agreed to act as a clearing house for the information exchange.

55. The use of a pesticide should be permitted only if the benefits outweigh the risks involved. The balance between benefit and risk will differ greatly under different socio-economic conditions, and, it is important for each country to study its own priorities when deciding

what compounds may be registered and not be too much influenced by decisions made elsewhere.

56. A proposal for a long term program within the framework of the Agricultural Requisites Scheme for Asia and the Pacific (ARSAP) for regional training, information services and other activities to promote safe use of pesticide was distributed for comment by participating countries. The proposal on "Pesticide Safety Training, Information and Communication Network for Asia and the Pacific" (PESTNAP) was prepared by the International Health Development Foundation (IHDF). Participants were asked to submit comments directly to Luc Maene, Team Leader, FADINAP/ARSAP.

57. Pacific Island countries

The SPREP report entitled "Pesticide use in the South Pacific: a review of present use and existing legislation, of problems associated with use, and recommendations on what needs to be done" was tabled.

The delegates from the Pacific Island countries requested that the problems outlined in the report be brought to the attention of international agencies, e.g. WHO, FAO, UNEP, ADB, UNIDO.

XII. RECOMMENDATIONS

XII.1. PROGRESS IN HARMONIZATION WITHIN THE REGION

58. The Meeting

Recognizing the evident importance of harmonization of pesticide registration requirements within the region to the safe and efficient use of pesticides;

Noting the progress made by participating countries in harmonizing their pesticide registration schemes and pesticide registration requirements since the first consultation in 1983;

Further noting that those countries without operative registration schemes at present are taking concrete step towards the implementation of such schemes;

Further recognizing that considerable progress has already been made towards harmonization within the region, and agreeing that further progress should be made following the present meeting;

Recommends

1. that countries continue the harmonization process in all respects, particularly with regard to labelling within their territories insofar as their law permits or can be amended;

2. that a third regional consultation on the harmonization of pesticide regulation requirements should be held in 1988 or 1989;

3. that the critical need to continue the harmonization process be brought to the attention of funding agencies in order to allow future consultations and related activities take place.

XII. 2. INFORMATION EXCHANGE ON REGISTRATION STATUS

59. The Meeting

Recognizing the value of data on registration status;

Noting the absence of a formal system for exchange of such information among countries in the region;

Noting the offer of the Philippine delegation to act as a clearing house for such exchange;

Accepts the kind offer of the Philippine delegation

Recommends that countries provide to the clearing house by March 31 of each year, commencing with 1987:

(1) data on registered products for the previous years as follows:

- Common name of active ingredient (after ISO, if available)
- Contents of active ingredients: w/w (g/kg) or w/v (g/l);
- Type of formulation, e.g. emulsifiable concentrate; wettable powder; etc.
- Type of use, e.g. herbicide
- Source of active ingredient (country & manufacturer)
- Year of first registration and type of registration
- Crops on which registered
- Restrictions on use if any

(2) a separate list of cancelled or severely restricted products including the reason for the action consistent with Article 9 of the FAO Code.

(3) any changes in registration procedures within the last year.

XII 3. EFFICACY TEST PROTOCOLS

60. The Meeting

Noted that FAO was cooperating with EPPO to develop additional efficacy test protocols for a number of crop/pest combinations in the region as recommended by the 1983 meeting;

Recognizing the value of such guidelines in achieving one of the major objectives of harmonization, namely the transportability of data developed in accordance with agreed methodologies;

Urges countries and industry to use the agreed test protocols;

Thanks the various countries, who have agreed to test the guidelines as outlined in the minutes of the meeting;

Further noted that GTZ offered to cooperate with FAO to support a meeting in a country in the region in early 1988 to review progress and consider further collaborative work;

Recommends that countries undertaking the testing guidelines should provide results to FAO by 31 December 1987.

XII 4. FAO CODE OF CONDUCT

61. The Meeting

Noting with satisfaction the steps which had already been taken by governments, by GIFAP and by national pesticide industry associations to implement the International Code of Conduct on the Distribution and Use of Pesticides, and

Noting the commitment expressed by the delegate from Japan of strong support of his government for the Code and the intention of the government of Japan to provide FAO with funds over a five-year period from 1987, for the provision of technical assistance to developing countries to implement the provisions of the Code

Recommends that countries continue and intensify their own efforts to implement the Code in all respects, in cooperation with national pesticide associations; and

Further recommends that countries make every effort to bring those members of industry who do not follow the Code in all respects into compliance with the Code including, if appropriate incorporation of the Code into national legislation by reference.

Expresses appreciation to the government of Japan for their generous offer

Recommends to FAO that available resources should be used to assist countries to implement the Code as soon as possible, with priority to those countries having no or incomplete legislation and/or regulatory programs and considering the special needs of Pacific Island countries.

XII. 5. FAO GUIDELINES

62. Noting the availability of FAO guidelines on various subjects prepared in the context of the FAO Code of Conduct

Recommends to countries that these should be studied and adapted to national circumstances as far as and as soon as possible

Suggests that those using the guidelines and who have substantive suggestions for their improvement should present these to FAO for consideration in future revisions
Recommends to FAO that additional guidelines should be prepared in consultation with the appropriate UN angencies and non-governmental organizations on (a) the registration of household pesticides and, (b) post registration activities; and,

Further recommends that FAO proceeds to develop additional guidelines and that protocols identified by the 1984 Meeting of the Expert Group on Registration Requirements and by this Meeting.

XII. 6. COMMODITY PESTICIDES AND PROPRIETARY RIGHTS TO DATA

63. The Meeting

Being aware of the problems facing registration authorities in processing applications for registration of pesticide products that are produced by two or more manufacturers, and;

Recognizing that developing data specific to each such product may be in conflict with the goal of obtaining the lowest priced pesticides for farmers;

Agreeing that there is a need to maintain a supply of product of reliable quality;

Further recognizing that manufacturers generating data invest significant funds and expertise and should not be penalized by improper competitive use;

Noting the confusion that results from attempting to differentiate "commodity" from "proprietary" products and in determining patent status;

Recommends that registration officials:

(i) dispense with the unnecessary categorization of products into "proprietary" or "commodity" classes; and not consider patent status as a part of the registration decision;

(ii) require applicants to submit data needed for registration consistent with FAO guidelines;

(iii) consider secondary reviews such as those performed by JMPR or IPCS as reference documents but not substitutes for data submission, and;

(iv) provide proprietary protection of data for a reasonable period of time consistent with FAO guidelines, as a protection provided to registrants.

XIII. ADOPTION OF REPORT

64. The report was adopted incorporating all comments and amendments.

XIV. CLOSING REMARKS

65. The Consultants expressed their thanks to the meeting for the help given to them during their involvement with the project. Considerable progress towards harmonizing registration requirements have been made over the past three years and the hope was expressed that this progress could be speeded up in the future.

66. The representative of FAO expressed satisfaction with the progress in implementing many of the 1983 recommendations. He also expressed the sincere thanks of the meeting and of everyone associated with the Project for the tiring and unselfish dedication of the Chairman and Regional Coordinator in her work over the past few years, a sentiment which was also reflected in the remarks from GIFAP and other delegates.

67. Special thanks were directed to the staff of FPA for their support work and timely production of the draft report.

68. The meeting was formally closed by the Chairman who thanked delegates for their participation and thanked others involved in the Project for their support. She expressed the hope that the progress made would be ever greater in the years ahead and wished all delegates well in their work towards full implementation of the recommendations.

LIST OF APPENDICES

APPENDIX 1

Second Regional Consultation on Harmonization of Pesticide Registration Requirements

LIST OF DELEGATES

COUNTRY REPRESENTATIVES

CHINA

Madame Zhang Chun Juan
Deputy Director, Institute for the Control of Agrochemicals
Ministry of Agriculture, Animal Husbandry & Fishery
San Li Tun, Beijing
China
Tel: 59-59 29

INDIA

Dr. R.L. Rajak
Plant Protection Adviser
Dept. of Plant Protection, Quarantine & Storage
Ministry of Agriculture, Gov't. of India
N.H. IV, FARIDABAD (HARYANA)

Mr. G. S. Sandhu
Joint Secretary, Dept. of Chemicals & Petrochemicals
Ministry of Industry
New Delhi, India 110001
Off: 382176 Res: 697249 / 615522

INDONESIA

Mr. Mulyani Soekardi
Secretary Pesticide Committee
Ministry of Agriculture
Indonesia

JAPAN

Mr. Yuichiro Nagao
Section- Chief for Intelligence
Agricultural Production Bureau

Ministry of Agriculture, Forestry and Fisheries
1-2-1 Kasumigaseki Chiyoda-Ku, Tokyo
Japan

Mr. Kosuke Tsuda
Regional Manager, Product Support Dept.
Plant Protection Division-International
Sumitomo Chemical Co., Ltd.
15, 5-Chome, Kitahama, Higashi-Ku
Osaka 541, Japan
Tel: (06) 220-3695
Telex: 63823 SUMIKA J / 63824 / 0522-7541

KOREA

Mr. Yoo Jai Ki
Researcher, Agricultural Chemicals Research Institute
Rural Development Administration
Korea

MALAYSIA

Dr. Balasubramaniam, A.
Secretary, Pesticides Board
Dept. of Agriculture
Jalan Gallagher
50480 Kuala Lumpur, Malaysia
Tel: 03/983077

NEPAL

Mr. M.D. Bhattarai
Chem Engineer
Ministry of Industry
HMG/Nepal
Tripureswor, Kathmandu, Nepal
Tel: 2-15030 / 2-15026

PAKISTAN

Dr. Abdul Kafi
Plant Protection Adviser & Director
Dept. of Plant Protection
Ministry of Food and Agriculture
Jinnah Avenue, Malir Halt, Karachi
Pakistan

Prof. Abdul Hayee Soomro
Chairman, Dept. of Entomology
Agri. Sind University, Tando Jam
Pakistan
Tel: 330

PAPUA NEW GUINEA

Ms. Lois Kesu
Scientific Officer
Dept. of Environment & Conservation
P.O. Box 6601, Boroko
Papua New Guinea

PHILIPPINES

Mr. Ricardo T. Deang
Pesticide Technical Services Chief
Fertilizer & Pesticide Authority
Raha Sulayman Bldg., Benavidez Street
Legaspi Village, Makati
Metro Manila
Philippines

Ms. Aida V. Ordas
Chief Chemist
Fertilizer & Pesticide Authority
Raha Sulayman Bldg., Benavidez Street
Legaspi Village, Makati
Metro Manila
Philippines

Ms. Josephine D. Maligalig
Senior Project Evaluation Officer
Fertilizer & Pesticide Authority
Raha Sulayman Bldg., Benavidez Street
Legaspi Village, Makati
Metro Manila
Philippines

Dr. Fernando F. Sanchez
National Crop Protection Center
U.P. Los Banos, Laguna
Philippines

THAILAND

Mr. Sukhum Wong-Ek
Pesticide Regulatory Sub-Division
Agri. Reg. Division, Dept. of Agriculture
Bangkok 10900, Thailand
Tel: 5794652 / 5798535

Mrs. Yupa Leelaprute
Chief of Toxic Substances Section
Technical Division
Food and Drug Administration
Ministry of Public Health
Bangkok 10200, Thailand
Off: 2824180 Ext. 24 or 37
Res: 3140656

CONSULTANTS

Mr. Edwin L. Johnson
Director
Developing Countries Staff
U.S. Environmental Protection Agency
International Activities
401 M ST. S.W. (A-106)
Washington, D.C. 20460
Tel: (202) 382-4878
Telex: 892758EPA WSH

Mr. Brian Watts
71 Woodland Road, Wellington
New Zealand

REGIONAL COORDINATOR

Mrs. Cecilia P. Gaston
Deputy Administrator for Pesticides
Fertilizer & Pesticide Authority
Raha Sulayman Bldg., Benavidez Street
Legaspi Village, Makati
Metro Manila, The Philippines
Tel: 818-5115 or 85-50-01 to 03

INTERNATIONAL ORGANIZATIONS

FAO

Dr. A. V. Adam
Senior Officer, Pesticides & Weeds Management Corp.
Plant Protection Service
F A O
00100 Via delle Terme di Caracalla
Rome, 00100 Italy
Tel: 5797-5757
Telex No: 843 610181 FAO I Cable: FOODAGRI ROME

WHO

Dr. J. F. Copplestone
Chief, Pesticide Dev. and Safe Use Unit
WHO, CH1211 Geneva 27
Switzerland

ADB

Dr. Colin Rees
Senior Environment Specialist
Asian Development Bank
P.O. Box 789, Manila

ADB STAFF CONSULTANT

Mr. Francis Roy Pavey
Managing Consultant
International Pesticide & Crop Associates
Pear Tree Farm, Hadlow
Kent TN11 LJG
England
Tel: (0732) 856276

CAB (COMMONWEALTH AGRICULTURE BUREAU)

Mrs. Stella Dextre Clarke
Databank Projects Coordinator
C.A.B. International
Farmham House, Farmham Royal
Slough SL2 3BN. UK
Tel: (02814) 2281
Telex: 847964 (COMAGG G)
Cable: Comag Slough

GIFAP

Mr. G. Willis
Chairman
GIFAP Residue Committee, Avenue Hamoir 12, 1180 Bruxelles, Belgique
C/O ICI Plant Protection Division
Fernhurst
Haslemere, Surrey England GU27 3JE
Tel: (0428) 4061
Telex: 858270 and 858512

Mr. Edwin Bernet
Director Asia
Avenue Hamoir, 12 - 1180 Bruxelles - Belgique
Tel: 02/3745982 - 3745868
Telex: 62120

Mr. D.M. Ashdown
Product Safety & Registration Group
ICI Plant Protection Division
Fernhurst, Haslemere
Surrey, England, GU27 3JE
Tel: (0428) 4061
Telex: 858270 Icipp Fernhurst

Dr. Dietmar Dehne
Technical Delegate of Bayer AG
Leverkusen W. Germany
Business Group Crop Protection
Technical Service
C/O Bayer Thai Co., Ltd.
130/1 North Sathorn Road
P.O. Box 1718, Bangkok 10500
Thailand
Off: 2331440 / 2331450
Res: 3917929

Dr. George B. Fuller
Manager, International Registration
Monsanto Agricultural Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63167
Tel: (314) 694-3440
Telex: 447282

Dr. Heinzjuergen Kaufmann
Manager, Plant Protection Registration Dept.
Hoechst Aktiengesellschaft
Geschaftsbereich Landwirtschaft
Registrierung Pflanzenschutz

D-6230 Frankfurt am Main 80
P.O. Box 80 03 20
Tel: (069) 305-3801
Telex: 41234480 ho d

Dr. Richard W. Waeckers
Bayer AG
Geschaftsbereich Pflanzenschutz
Anwendungstechnik/Beratung
Zentrum Landwirtschaft Monheim
D-5090 Leverkusen, Bayerwerk
Tel: (02173) 383375

SPREP (South Pacific Reg'l. Environment Programme)

David Mowbray
Principal Investigator
South Pacific Regional Environment Program
Biology Dept., University of Papua New Guinea
Box 320 University Post Office
Papua New Guinea

SPC (South Pacific Commission):

Bob Macfarlane
Plant Protection Officer,
South Pacific Commission
Private Mail Bag, Suva, FIJI
Tel: 385796 / 383300 / 381733
Telex: FJ 2385 PLANTPRO

G.T.Z.

Dr. Gero Vaagt
Project Leader, Malaysian-German Pesticide Project
Crop Protection Branch
Dept. of Agriculture
Jalan Gallagher, Kuala Lumpur, Malaysia
Tel: 03/983077

PESTICIDE INDUSTRY ASSOCIATIONS

THAILAND PESTICIDES ASSOCIATION

Dr. Apichai Daorai
Manager, Product Safety and Registration
ICI Asiatic (Agriculture) Co., Ltd.
53-55 Oriental Avenue, Bangkok 10500
G.P.O. Box 1510
Thailand
Tel: 236-0220 / 236-0304
Telex: ASIATIC TH 82615

Mr. Sukont Rungsardthong
Technical Manager
Bayer Thai Co., Ltd.
Crop Protection Business Group
130-1 North Sathorn Road
Bangkok, 10500, Thailand
Tel: 2331440 / 2331450

Mr. Sompong Jinanon
Thai Pesticides Association
Yada Bldg., 56 Silom Road, Bangkok 10500
Thailand
Tel: 236-8585

PESTICIDE ASSOCIATION OF BANGLADESH

Mr. M. A. Jalil
Chairman
Pesticide Association of Bangladesh, C/O Shetu Corp. Ltd.
62/63, MOTIJHEEL Commercial Area, Dhaka-2
Bangladesh
Tel: 255112-3 / 255611 Res: 403060

MALAYSIAN AGRICULTURAL CHEMICAL ASSOCIATION

Mr. Andrew Yap Swee Heng
Marketing Services Manager
I.C.I. Agriculture (Malaysia) Sdn. Berhad
Wisma Sime Darby, Jalan Raja Laut
P.O. Box 10284
50708 Kuala Lumpur
Malaysia
Tel: (03) 2919366
Res: 7760534
Telex: MA 30326

Mr. Wuan Thong Lok
Marketing Development Manager
Ancom Sdn. Bhd.
Persiaran Selangor. 40000 Shah Alam
Selangor, Malaysia
Tel: 5594022
Telex: MA 38665

PAKISTAN AGRICULTURAL PESTICIDE ASSOCIATION

Mr. S. M. Saleem
General Manager
Dow Chemical Pacific Ltd.
Pakistan Office, P.O. Box No. 3147
38/B, Block 6, P.E.C.H.S.
Shahrea Faisal, Karachi-29
Tel: 438286 / 438928 / 446239 Direct: 435900
Telex: 24483 DOW PK

SACI (SOCIETY OF AGROCHEMICAL INDUSTRY)

Mr. Yukio Tase
Director, Patent & Dev. Dept.
Hokko Chemical Industry Co. Ltd.
Mitsui Bldg. No. 2
4-2, Nihonbashi Hongoku-Cho
Chuo-Ku, Tokyo 103, Japan
Tel: (03) 279-5361
Telex: 222-2181 Hokko J

Mr. Kazuhiko Inoue
Manager, Agricultural Chemicals Division
Mitsubishi Chemical Indutries Limited
5-2, Marunouchi 2-Chome
Chiyoda-Ku, Tokyo, Japan
Tel: (03) 283-6850
Telex: BISICH J 24901

INDONESIAN PESTICIDE ASSOCIATION

Mr. Eric Djohan
Marketing Manager, P.T. Bayer Indonesia
Agrochemical Division
Ratu Plaza Office Tower, 3rd Floor
Jl. Jend. Sudirman - Senayan - Jakarta
Telex: 011-47416 Bayer Jkt.

KOREAN AGROCHEMICAL PESTICIDE ASSOCIATION

Mr. Bo Won Chung
Asst. Section Manager, Chemical Section
Sunkyong Ltd.
C.P.O. Box 1380
Seoul, Korea
Tel: 776 9759 / 771-88 Ext. 8323
Telex: K24851 up to 55 (SNKYONG)

SRI LANKA PESTICIDE ASSOCIATION

Quintus Suriaratchie
Managing Director
Haychem Limited
P.O. Box 70, 400, Deans Road
Colombo-10, Sri Lanka
Tel: 598569 / 599087
Telex: 21146 / 21384 CE

AGRICULTURAL PESTICIDE INSTITUTE OF THE PHILIPPINES

Mr. Benjamin P. Angeles
Technical Manager, Agrochemicals Division
Bayer Philippines, Inc.
Equitable Bank Building
Ortigas Avenue corner Roosevelt St.
Greenhills, San Juan, Metro Manila
The Philippines

Mr. Cesar Quillilan
Shell Chemical Co. (Phils.), Inc.
9th Flr. Insular Life Bldg.
Ayala Avenue, Makati, Metro Manila
The Philippines

Mr. Ponciano B. Halos
Monsanto Philippines, Inc.
Rm. II-A, APMC
136 Amorsolo Street, Legaspi Village
Makati, Metro Manila
The Philippines

Mr. Peter Heiss
Du Pont Far East, Inc.
14th Flr. Citibank Centre
8741 Paseo de Roxas, Makati
Metro Manila, The Philippines

APPENDIX 2

Second Regional Consultation on Harmonization of Pesticide Registration Requirements, December 1-5, 1986
Hotel Inter-Continental Manila

A G E N D A

1. Opening Session

2. Designation of Chairman, Vice-Chairman and Drafting Committee

3. Adoption of Agenda

4. Explanation of Objectives and Meeting Rules

5. Country Responses to Questionnaire on Implementation of Recommendations of the October 1983 Meeting

6. Consideration of FAO Guidelines on:

   6.1 Efficacy Data for Registration of Pesticides for Crop Protection

   6.2 Crop Residue Data

   6.3 Environmental Criteria for Registration of Pesticides

   6.4 Good Labelling Practice for Pesticides

   - WHO Classification by Hazards
   - Proposed Pictograms

   6.5 Packaging and Storage of Pesticides

   6.6 Disposal of Surplus Pesticides and Pesticide Containers on the Farm

7. Efficacy Test Protocols

   7.1 Consideration of Draft Proposals

   7.2 Important Crop/Pest Combinations in the Region

8. Post-Registration Activities

   8.1 Licensing and Monitoring Activities

   8.2 Training and Information Dissemination

   8.3 Controls on Availability and Other Related Activities

9. International Code of Conduct on the Distribution and Use of Pesticides

   9.1 Status of implementation by governments

   9.2 Status of implementation by industry

10. Proprietary Rights to Data

   10.1 Current practice in each country

   10.2 Registration requirements for commodity pesticides

11. Information Exchange on Registration Status

12. Conclusions and Recommendations

13. Other Business

14. Adoption of Report

15. Closing of Meeting

REPLIES TO QUESTIONAIRE
ON HARMONIZATION OF REGISTRATION REQUIREMENTS
2ND MEETING 1-5 DEC 1986

	BANGLADESH	INDIA	INDONESIA	JAPAN	KOREA	MALAYSIA	N. ZEALAND	PAKISTAN	PRC	PHIL	SRI-LANKA	THAILAND
CHEMICAL/PHYSICAL PROPERTIES						MOST BEING						
1983 YES/NO	YES	YES	YES	YES	YES	REVIEWED	YES	YES	YES	YES	YES	YES
EFFICACY DATA												
ACCEPT FROM APPLICANT	NO	YES	YES	YES	NO	YES	YES	NO	YES	YES	YES	YES
REQUIRE TESTING BY GOV'T IN COUNTRY	YES	YES	YES	YES	YES	NO	NO	YES	YES	NO	YES	YES
CONSIDER O'SEAS DATA	YES	NO	YES	NO	YES	YES	YES	YES	YES,AS REF	YES	YES	YES
ACCEPT INT'L TRIALS PROTOCOL	YES, BUT	PROBABLE	YES	NO	YES	YES	YES	YES	YES,AS REF	YES	YES	YES
	RULES REQ.	INFO REQ'D			BUT NEED							
	LOCAL	ONPROTOCOL			TO STUDY							
TOXICOLOGY												
DO YOU EVALUATE DATA?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
WHO?	NOT STATED	REG'N	PESTICIDES	MIN OF AGR	P.M.	PESTICIDES	DEPT. OF	RES. LAB	INST. OCC	PEST. TECH	TECH ADV.	DIV. AGRC.
		COMMITTEE	COMMITTEE	MIN.HEALTH	SCOMMITTEE	SECTION	HEALTH	IN COUNTRY	MED.	ADV. CTTEE	COMMITTEE	TOXIC SUBS
SEEK ADVISE	NO	YES	YES	NO	NO	YES	NO	YES	YES	YES	YES	YES
FROM WHOM?		FAO	WHO			EPA,IRPTC		FAO	FAO	FAO	WHO	EPA
		WHO	FAO			COUNTRIES		WHO	WHO	WHO	FAO	UK
		EPA						EPA	EPA	EPA	GIFAP	FAO
REFER TO INT'L REVIEWS	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
WHICH	WHO	IACR	DATA	JMPR & EPA		FAO, WHO	JMPR	PESTICIDE	FAO	JMPR	IRPTC	EPA
		WHO	SHEETS			OTHER	WHO	REVIEWS,	WHO		PEST. DATA	
		FAO	JMPR			COUNTRIES	IRPTC	EXPERTS	EPA		SHEETS	
RESIDUES												
REQUIRE RES. DATA PRIOR TO REG'N	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	VOL. YES
SOME, ALL, NONE IN YOUR COUNTRY	SOME	ALL	SOME	ALL	SOME	SOME	SOME	ALL	SOME	SOME	SOME	NONE
ACCEPT O SEAS DATA	YES	YES	YES	NO	YES	YES	YES	NO	YES	YES	NO	YES
DO YOU HAVE MRL's	NO	YES	YES	YES	YES	YES	YES	NO	YES	NO DEVELOP	NO	YES
MONITORING FACILITIES	NO DEVEL'G	YES	YES	YES	YES	NO	YES	YES	YES	YES	NO	YES

REPLIES TO QUESTIONAIRE
[illegible]ATION OF REGISTRATION REQUIREMENTS
WHO MEETING 1-5 DEC 1986

	BANGLADESH	INDIA	INDONESIA	JAPAN	KOREA	MALAYSIA	N. ZEALAND	PAKISTAN	PRC	PHIL	SRI-LANKA	THAILAND
ENVIRONMENTAL ASPECTS												
VERY IMPORTANT, IMPORTANT	V. IMPT.	V. IMPT.		V. IMPT.	IMPORTANT	IMPORTANT	IMPORTANT	V. IMPT.	V. IMPT.	IMPORTANT	IMPORTANT	IMPORTANT
SPECIAL TESTS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
WHICH	FISH TEST	SOIL,WATER BIRDS,BEES	LAB. TEST FISH TOX. ON RICE	FISH ON RICE SOIL	FISH TOX. ON RICE	FISH TOX. ON RICE	WORM TOX. TEST	BIRDS,FISH BEES,SOIL	DEPENDS eg PYRETHROID SILKWORM	USE PATTERN		
FOLLOW FAO GUIDELINES	YES	YES	NO, DO NOT HAVE	YES	YES	NO	YES	YES	YES	YES		NO
PROPRIETARY RIGHTS												
RECOGNIZE	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES
HOW	TO DEVELOP BUT NOTYET OPERATING	CONFIDEN-TIAL DATA	ALL DATA CONFI-DENTIAL	DATA CONFI DENTIAL UN AGREED	ALL DATA NOT CONFI-DENTIAL	CLEARED BY FIRST REGIST.	15 YEAR PERIOD UNLESS LETTER OF AGREEMENT	UNLESS ALLOWED BY FIRST APPLICANT	CLEARED BY FIRST REGIST.	7 YR DATA PROTECTION UNLESS AGREEMENT FR. IST	TIED TO PATENT	CLEARED BY FIRST REGIST.
TIME PERIOD	NO	NO	NO	NO	NO	NO	YES	YES	NO	YES	NO	NO
NO. YEARS							15	?		7		
PHASED REGISTRATION												
OPERATE	NO	YES	YES	NO	NO	NO	YES	NO	YES	YES	YES	NO
TYPES	NA.	PROV.2 YRS FULL	EXP PROV FULL				NS LS REG		TEMP FULL	EUP COND. FULL	PROV FULL	
RESTRICTIONS ON AVAILABILITY												
CONTROLS BY HAZARD	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO
IF YES, HOW	HIGH TOXIC NOT REQ. FOR IMPORT	REG'N PROCESS	LICENSED USERS	DEALER LIC.&REG'N PROCESS	LABELLING	USE PERMIT	COMM. USERS	DEALER. LICENSE	?	REG'N PROCESS	REG'N PROCESS	EPA

REPLIES TO QUESTIONAIRE
ON HARMONIZATION OF REGISTRATION REQUIREMENTS
2ND MEETING 1-5 DEC 1986

	BANGLADESH	INDIA	INDONESIA	JAPAN	KOREA	MALAYSIA	N. ZEALAND	PAKISTAN	PRC	PHIL	SRI-LANKA	THAILAND
SPECIFICATIONS												
DETAILED INFO ON FORMULATIONS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
CONFIDENTIAL	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
FOR HOW LONG	NO LIMIT	NO LIMIT	FOR LENGTH OF REG'N			AS REQ. BY REGISTRANT	UNTIL REGISTRANT AGREES	SEVERAL YEARS	PATENT LIFE	7 YRS.	NO PERIOD	FOR LENGTH OF REG'N
LOCAL ANALYSES REQUIRED	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES	SOMETIMES	YES
WHICH LAB.	PEST. LAB PLANT PRO-TECTION WG	GOV'T & PRIVATE LABS	GOV'T LABS	MAFF	NAMIO			PROV.GOV'T FED. PEST. LABS	ICAMA	BPI PIPAC	CISIR	DIV.OF AGR TOXIC SUBSTANCES
LABELLING												
FOLLOW 1983 REC.	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
IF NO, HOW DO DIFFER												
WHO CLASSIFICATION	YESMODIF'D	NO	NO	NO	YES	YES	YES	YES	NO	YES	YES	YES
DO YOU USE COLOUR CODING	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES	NO	YES
IF YES, BASED ON WHO CLASSIFICATION	TOXICITY	TOXICITY	NO	TOXICITY	NO	YES		YES	NO	YES	NO	YES
IF NO, ON WHAT IS COLOUR BASED			RESTRICTED PRODUCT		LEGAL RE-QUIREMENT						UNDER DISCUSSION	
COLOUR CODING USED	RED-H TOX	RED	ORANGE	RED BGD -	RED-H.TOX	BLACK		RED	GREEN-HERB	RED		RED
	YELLOW-H	YELLOW		POISON	PINK-FUNG	RED		BLUE	RED-INS	YELLOW		YELLOW
	TOX	BLUE		BLUE - DEL	GREEN-INS.	YELLOW		YELLOW	BLACK-FUNG	BLUE		BLUE
	GREEN-STOX	GREEN			YELLOW-HER	BLUE		BROWN	BLUE-ROD	GREEN		GREEN
					BLUE- G.R.				YELLOW-PRS			
PACKAGES												
REQUIRED TO APPROVE	YES	YES	YES	YES	NO	YES	NO	YES	NO	NO	YES	YES
IF YES, WHAT MAIN CRITERIA	SEALED LEAK PROOF	ISI STANDARDS	TYPE SHAPE STOPPER	GENERALLY SAFE		GENERALLY IS IT SAFE		GENERALLY SAFE			SIZE MATERIAL RIBBED?	GENERALLY SAFE

ALTHOUGH PAPUA NEW GUINEA RESPONDED THEIR RESPONSES HAVE NOT BEEN DETAILED AS THE REGISTRATION SCHEM IN PNG IS STILL BEING DEVELOPED

APPENDIX 4

STATUS OF HARMONIZING LABELLING GUIDELINES

COUNTRY	GENERALLY CONFORM TO GUIDELINES	ITEMS THAT DO NOT CONFORM	STEPS TO HARMONIZE
PHILIPPINES	YES	Colour band is 11% Class IV is included	No, because it was recently implemented; changes are relatively minor
THAILAND	NO	Skull & Cross on all pesticides; No classification: Direction to use in table spoon per 20 liters.	Have started taking steps to change but cannot put a time on when changes will be implemented.
KOREA	YES	Colour coding is based on pesticide type and hazard	YES
INDONESIA	YES	No colour code based on toxicity. Color for restricted use pesticide only (orange). Different cut of on LD50 values	NO

BANGLADESH	YES	Skull & cross bones on all No color band	YES
PEOPLES' REPUBLIC OF CHINA	NO	Color code based on type Classification: based on actual ingredient	YES
MALAYSIA	YES	Black color for Class Ia	YES
PAKISTAN	YES	Skull & cross bones on all categories; Coloured circles instead of band	YES
INDIA	YES	Different colored triangles used; Ia skull & Cross bones Additional requirements on caution and warning statements. Different cut off on LD50 values	YES
PAPUA NEW GUINEA	NO		No legislation requiring labels; Products imported from Australia and New Zealand follow the guidelines

JAPAN	YES	:WHO classifi- :cation not :used; No band :required :No skull and :cross bones :because it :gives a bad :image	:Com achieve goal of protecting :farmers now, but will take note :of it
NEPAL	YES	:No legislation	YES
SRI LANKA	YES	: No skull and :cross bones; : Word "POISON" :must be on :label; :No color code; : Restricted :pesticides :have diagonal :red band	

APPENDIX 5

ESTIMATE OF AVERAGE TIME* TAKE TO REGISTER A PESTICIDE

COUNTRY	TYPE OF CLEARANCE	TIME
INDIA	Small trials clearance	6 months
	Experimental registration	1 - 2 years
	Full registration	2 1/2 - 3 1/2 years
PAKISTAN	Registration	2 - 3 years
MALAYSIA	Registration	2 - 3 years
KOREA	Prior to notification	2 - 5 years
	After notification	2 - 5 months
INDONESIA	Full registration	2 - 3 years
CHINA	Temporary registration	3 months
	Full registration	1 year
JAPAN	Registration	1 - 1 1/2 years
PHILIPPINES	Full registration	1 - 2 years
SRI LANKA	Full registration	1 1/2 years
BANGLADESH	Registration	3 years
THAILAND	Registration	6 months - 1 year

---

* Assumes (a) the product is a new pesticide i.e. not yet registered in the country and

(b) all registered data are submitted at the time of application.

APPENDIX 6

EFFICACY GUIDELINES ALREADY UNDER PREPARATION OR PREPARED

RICE	Rice Stemborer - Chilo suppressalis
	Green leafhopper - Nephotettix virescens
	Brown planthopper - Nilaparvanta lugens
	Cercospora leaf spot - Cercospora spp.
	Barnyard grass - Echinochloa spp.
	Sedges - Cyperus spp.
CORN	Corn borer - Ostrinia furnacalis
	Weeds in corn
BANANA	Banana Blossom thrip - Thrips florum
	Sigatoka - Mycosphaerella musicola
	Purple nut sedge - Cyperus rotundus
PINEAPPLE	White grubs - Leucophoris irrorate
	Mealy ugs - Pseudococcus spp.
MANGO	Mango leafhopper - Idiocerus niveosparus
	Anthracnose - Colletotrichum gleosporium
MUNG/SOY BEAN	Bean pod-borer - Maruca testulalis
	Bean fly - Ophiomyia phaseoli
TOMATO	Tomato fruitworm - Heliothis armigera
	Early Blight - Alternaria solani
	Late Blight - Phytophthora infestans
POTATO	Tuber moth - Phythorimaea operculella
	Late Blight - Phytophthora infestans
CABBAGE	Diamond Black Moth - Plutella xylostella

APPENDIX 7

SOME FURTHER CROP/PEST COMBINATIONS IDENTIFIED AS POSSIBILITIES FOR THE DEVELOPMENT OF EFFICACY TEST PROTOCOLS

COTTON	American bollworm
	Jassids
	Pink bollworm
	Red spider
	Aphids
	White flies
	Thrips
RICE	Black bug
	Whorl maggot
	Hispids
	Blast
	Sheath Blight
	Leaf roller
	Rice gall midge
MUSTARD	Pod borer
	White rust
COCOA	Black pod
	Cocoa pod borer
	Vasicular streak
	Pod blight
	Cocoa moth
ROOT CROPS	Taro beetle
	Taro weevil
	Potato weevil
COFFEE	Rust
	Berry borer
	Green bug
TEA	Shot hole borer
	Psylla beetle
	Spider mite
	Tea mosquito
	Blister blight

CITRUS	Leaf miner Scale insects Phytophthora Citrus psylla Dieback complex
CORN	Corn seedling maggot Corn earworm
PINEAPPLE	Phytophthora
POTATOES	Alternaria solani
CABBAGE	Cabbage worm Cabbage looper
WHEAT	Termites Thrips Aphid Armyworm Rust Powdery mildew Scab
SOYABEANS	Armyworm Leaf bee.e
RUBBER	Weeds
OIL PALM	Weeds Leaf eating insects
TOBACCO	Insects
GROUND NUT	White grub Hairy caterpillar Tikka disease
GRAM PULSE	Cutworm Pod borer Fusarium wilt Gram blight
PIGEON PEA	Pod borer Wilt

PEAS	Stem fly
	Pod borer
	Powdery mildew
COCONUT	Rhinoceros beetle
	Root wilt disease
	Helminthosporium
MANGO	Mango hopper
	Shoot borers
	Scale insects
	Stem borers

APPENDIX 8

LICENSING AND MONITORING

INDONESIA

LICENSING

Licensing is required for manufacturing, formulating and importing any pesticides either technical or formulated, and for distributing and using pesticides registered for restricted use.

* A license to manufacture and to formulate pesticides is granted by the Ministry of Industry after evaluating the report of the applicant on the environmental impacts and analytical studies and taking into account the reccomendation from the Investment Coordinating Board.

* A license to distribute restricted - use pesticides can only be issued by the Pesticides Committee to sole distributor appointed by the registrant which by regulation is responsible for delivering the pesticides only to licensed users which in most cases are plantation companies and pest control operators.

* Licensing for using restricted - use pesticides, which is also within the competence of the Pesticide Committee, is based on the recommendations of the provincial representatives of the industries of Public Health and of Man Power, who inspect and evaluate the capability, facilities and other conditions of the applicant related to safety in handling and use of pesticides.

* License holders are all subject to post-licensing inspection and when they do not comply with license conditions the license may be witdrawn and penalty may be imposed.

MONITORING

To enforce the pesticide regulations, inspectors at national, provincial and district levels have been assigned from the different industries concerned. To promote an effective, efficient and well-coordinated inspection, a coordinating body called Pesticides Inspection Committee has been or is being established at each provincial and district level following up the issuance of Agricultural Industrial Decree No. S 36 of 1984 on pesticides inspection.

The items for inspection include pesticide quality, packages, label, advertisement and all means to distribute, transport, store and use pesticides and all activities dealing with pesticides.

To control the quality of pesticide formulations, a monitoring system has been developed to cover pesticides at formulator level ready for distribution, and pesticides at distributor/retailer level. Samples of formulations and wherever necessary also samples of technical materials from formulators are taken peridically by the national inspectors, and samples of formulations and sometimes containers and labels from distributors/retailers are taken by the provincial and district inspectors when the quality of formulation is suspected to be not in compliance with the specification. All the samples are sent to the laboratories for analysis.

Monitoring of pesticide residues in the environment has been carried to some extent by the government agencies concerned and by some universities by taking samples for laboratory analysis of soil and water from rivers and bays suspected to be badly polluted with pesticides.

Monitoring of negative biological impacts of pesticides has been done by collecting information from farmers and other sources applying pesticides and by conducting trials under field condition with pesticides which have been intensively and widely used.

Pesticide residues on food crops particularly on rice and vegetables have been monitored on a routine basis by taking samples of crops from farmers' field at harvest time for laboratory analysis. Monitoring of residues of pesticides applied on stored cereals have also occasionally been done.

Cases of accidental pesticide poisoning are observed and recorded by public health centers at sub-district level and by hospital and public health agencies at district and provincial level.

JAPAN

LICENSING

1. All the manufacturers, formulators and importers of the registered agrochemical products shall be registered with the Ministry of Agriculture, Forestry and Fisheries on an agrochemical product basis.

2. All the dealers must notify local governors that they are in operations under Agricultural Chemicals Regulation Law. Any dealer who handle pesticide designated as "poisonous" or "deleterious" substance also must get permision from local governor.

A new programme of licensing dealers and contractor is being prepared in the MAFF.

The aim of the programme is to enhance quality and integrity of dealers and contractor by licensing system.

MONITORING

1. The Ministry of Agriculture, Forestry and Fisheries (hereinafter referred as "MAFF") inspects, manufacturers, formulators and dealers in order to enforce them to observe registered items by Agricultural Chemicals Regulation Law.

2. MAFF inspects end-products in the market whether they are consistent with registered items by Agricultural Chemicals Regulation Law.

3. Monitoring on chemical environment impact such as soil residue, water pollution is continously conducted by governmental bodies such as MAFF and Environment Agency.

4. Monitoring on biological environmental impact is conducted by MAFF.

5. Monitoring on residue in food is conducted by several governmental bodies, especially by the Ministry of Health and Welfare.

6. Reporting of occupational health incidents is made mainly by MAFF.

In Japan, there are two poisoning-management centers, which are on a private-sector basis, in Tsukuba and Osaka.

Poisoning-management centers give specialized advices to doctors who take care of poisoning person.

In the near future, it is felt that monitoring on environmental impact should be intensified in Japan.

INDIA

LICENSING

Licensing of pesticide manufacture, distribution, and sale is regulated as per the provisions of the Insecticides Act, 1968 and the Rules formed thereunder. The production is further governed under the Industries (Development and Regulation) Act, 1956. Manufacturing licenses are granted by the State Departments of Agriculture only after the issuance of certification of registration by the Central Government. Safety regulations are pre-requisites for manufacturing activities. Suitable penal provisions are provided against the offenders of conditions of registration/manufacturing licenses.

MONITORING

Enforcement of the provisions of the Insecticides Act is done by the State Governments through their notified functionaries.

In house quality control facilities are necessary for the pesticide formulation/manufacturing units. Monitoring of pesticides quality is done by taking samples from manufacturing to selling stages. The States have, so far, established 34 laboratories with the annual capacity of about 37,000 samples. Ministries of Agriculture, Health and Environment have various on going programmes for random chemicals and biological monitoring of environment. Some nationwide surveys are also undertaken.

Central Food Laboratories are located in different parts of the country for determining residues of food adulterants which inter alia include pesticides as well. Such a monitoring is undertaken in relation to the notified tolerance limits.

State Governments are also required to notify their officers for reporting the cases of pesticides poisoning.

SRI LANKA (Industry Response)

LICENSING

Importers and exporters of any commodity have to posses a trading license from the Ministry of Trade.

Those engaged in formulation and packaging of pesticides were granted approval by the Ministry of Industries and Scientific research.

Importers and formulators of pesticides are inspected to register themselves with the Registrar of Pesticides. Each importer or formulator has to register his distributors and subdistributors (with age level) giving names and addresses with the Registrar of Pesticides and forward same details to the Asst. Director of Agriculture in charge of the district.

The authorized officer who reports to the Asst. Director at the district level is expected to monitor suitability and performance and recommend changes if necessary.

Pest Control Operators are also required expected to register their organizations with the Registrar of Pesticides. Toxic fumigants can be purchased by operators who have the approval of the Registrar.

Registered Dealers only can market chemicals registered for restricted use. Such dealers could market these pesticides only to genuine farmers and are expected to examining records of such sales.

MONITORING

1. Regulations are enforced through "Authorized Officers" in the districts who report to the Registrar of Pesticides. However, the lack of staff limits the degree of enforcement. This would possibly improve but some form of enforcement is carried out e.g. approval of pesticides to be imported; their presentation; Packaging Label Claim re efficacy; distribution.

2. Quality of formulations are checked by formulators and counter checked by their collaborators. Importers of products specially from buying house or trading organization do little or no validty checks locally. The Registrar's staff "authorized officers" take sample from the shelves as laid out in the Act to have those checked periodically.

3. Monitoring of chemical residues in the environment is not a regular feature up to now, unless there is a serious accident. Factories engaged in formulation are checked by EPA (local) Environment Protection Authority and the medical section of the Labour Department.

4. Monitoring of pesticide residues of food. Residues following the use of recommended products are checked. The Tea research Institute supplies a coded sample which are sent to the manufacturing organizations who report on these products.

   Checked - trichlorfon, fenthion

   Being checked carbofuran

   fenamiphos

   bitertanol

   The C.I.S.I.R. will shortly check food stuffs such as vegetables which come into the market place.

5. Accidents are monitored by hospitals and the Ministry of Health and the Registrar. The Central Poison centre which is just established will heep track of all accidents as well.

CHINA

LICENSING

A registered pesticide before being imported into China has to have an import permit from the Ministry of Chemical Industry otherwise it cannot pass through the Customs.

MONITORING

1) The enforcement of regulations in China is limited as there are no inspectors appointed under the law.

2) Formulation quality control is conducted by ICAMA. About 300 or 400 samples are sent from the user, dealer. The others are taken from local formulators by ICAMA.

Fourteen (14) provinces have established stations for the control of pesticide who may do monitoring of formulation quality control for the pesticides used in their local area.

3) Monitoring of residue on food usually is conducted by Ministry of Public Health. The Ministry of Agriculture is also involved in monitoring some persistent pesticide residues on food. In 1983/1984, about 2,000 samples were taken by the two Ministries and were analyzed for the BHC and DDT. Monitoring of residue on export food is conducted by the National Commodity Inspection Authority.

The pesticide poisoning information is collected than the report from hospitals by Ministry of Public Health.

5) China has not done any biological and residue monitoring in environment.

REPUBLIC OF KOREA

LICENSING

* the retailer has to pass an examination to get a license, but a certificate of educational attainment in an agricultural college or experience certificate of qualification of pesticide use can replace the license.

* manager of formulator, technical material business as commercial applicators are the same as above.

MONITORING

* Analysis of formulations: samples are taken from the market and analyzed by NAMIO.

* Formulation Quality: There is "self inspection" by the formulator and inspection by NAMIO before distributing

* Chemical monitoring: Investigation of air or water pollution is carried out by the National Environmental office.

* Food residue - Analyses are carried out by the Ministry of Health and Social Affairs.

NEPAL

LICENSING AND MONITORING

Dealers/traders/importers have to obtain a license from the Dept. of Trade. They also have to get concurrence from the Ministry of Health and the Ministry of Agriculture.

Manufacturing and formulating units have to obtain a license from Department of Industry and become registered. They have to submit details of a feasibility study report showing market, products intended to manufacture, technology to be adopted etc.

Monitoring is carried out by Department of Commerce and Department of Industry as the license holders have to renew their license every year with a statement on their activities during the year.

BANGLADESH (Industry Response)

LICENSING

The following categories of undertakings have to obtain license from the Department of Plant Protection (under the Ministry of Agriculture) to manufacture, formulate, sell, repacking of pesticides.

* Manufacturer/Formulator: Permission from Ministry of Industry is needed to set up the plant. Plant Protection authorities issue a license for the products intended to be formulated and marketed. The Director, Plant Protection directly controls and monitors activities.

* Repacker: A license is required to repack bulk materials imported/formulated locally after fulfilling the requirements such as the facilities for repacking properly, safety measures for the workers and experienced supervision. The Director Plant Protection supervises this activity.

* Wholesaler: A license must be obtained from the District Authorities of Agriculture Extension Department. Prerequisites for a license are good storage facilities, financial solvency, centrally located store. Inspection is by District Authorities (Plant Protection Inspector, Subject matter specialist)

* Retailer: A license is required from the local agricultural officer (Sub-District). Prerequisite are good storage facilities, educated persons. Inspection is by local agricultural staff.

* Pest Control Operator: Licenses are given by Director, Plant Protection upon the recommendation of local officials and after obtaining training on proper and safe handling of pesticide and application. Inspection is by a Plant Protection Inspector.

Each of the above licenses are valid for two years.

MONITORING

* Subject Matter Specialists (Plant Protection), Inspectors frequently visit the shops of dealers and retailers to check whether traders are following the Pesticide Rules and Regulations, in respect of storage, sale. They also check for adulteration and illegal selling of pesticides.

* The Chief Chemist used to collect samples of the different types of pesticides being sold in the market from the dealer's shops and test the same in the laboratory. If there is any deviation in respect of quality, packing, labelling it is referred to the marketing companies for necessary action.

No facilities available for monitoring chemical effect in the environment like soil, water. Only fish toxicity trials are carried out.

No facilities are available to determine the residue in food crops except Tea wherein residue is determined with the help of pesticide manufacturers.

Accident/Poisoning: There is a system to collect an accident and poisoning information. In view of reduced use of pesticides fewer poisoning cases than previously reported are received by companies from the dealers. There are many cases of suicide due to social problems.

PAPUA NEW GUINEA

LICENSING

The Importers (includes manufacturers and formulators) are licensed.

The purposes of a license are:

* To put a stop to people who want to get in "cheap" products that would have some contamination, no good evaluation of toxicity, etc.

* Licensed pest control operators or plantation owners are expected to conduct training requirements for their field staff.

(Please note that all forms of businesses are registered in Papua New Guinea therefore, they are licensed operators).

MONITORING

The Health Inspectors, Agricultural Extension Officers and other specified officers will enforce the pesticide regulation.

* When the regulations are breached there will be a fine of K 2,000 (kina) or the permit granted to them can be revoked.

THAILAND

LICENSING

There are several types of people licensed, namely:

* Importer

* Exporter

* Manufacturer including Formulator & Repacker

* Distributor & Dealer

* Pest Control Operator

Inspection is done on a randomized basis due to the limitation of the budget and action will be taken against those who operate without a license, sell substandards products or inadequately labelled materials.

MONITORING

Inspection is carried out to ensure the requirements of the law are met.

Formulations are analyzed by the Division of Agricultural Toxic Substance.

Chemical residue determinations on the environment are carried out in water and soil by the Department of Agriculture for spot checks and by the National Environmental Board has just started their work with the assistance of Japanese government.

Pesticide residue analysis on food is carried out using the food basket approach by the Ministry of Public Health. Two hundred fifty (250) samples a year were collected and results of residue show Codex MRL and National MRL's are not encoded. Analysis of samples for export are carried out by the Department of Agriculture, of the Ministry of Agriculture as well as the Ministry of Public Health.

MALAYSIA

LICENSING

Under the Pesticides Act 1974 only registered pesticides can be imported, manufactured, packed, labelled, or sold in Malaysia. The import of pesticides is enforced by the Department of Customs while manufacture and sale is enforced by enforcement officers of the Pesticides Section, Department of Agriculture.

MONITORING

Quality of formulation is controlled by pesticide samples being obtained from dealers and analysed. If the formulation is not of acceptable quality, the pesticide is deregistered.

Very little monitoring of residues in the environment is conducted. It is mainly carried out as adhoc studies to determine residue levels in paddy field fish or irrigation water in the rural areas.

Biological monitoring is not conducted except that studies may be carried out to determine if a particular pest had developed resistance to any of the pesticides being used.

Monitoring of residues in food has commenced particularly on vegetables which are controlled under the Food Act 1983.

Monitoring of poisoning cases has not been done in a systematic manner by steps are being taken to establish on system to obtain such data.

PAKISTAN

LICENSING

Licensing is required for

- Import, manufacture and formulation
- Distribution

Licensing is being introduced

- Dealers and retailers

MONITORING

Monitoring is carried out by Federal and Provincial Inspectors appointed and notified in the Government Gazette.

The is a penalty of a fine or imprisonment or both increasing for each subsequent offence.

PHILIPPINES

LICENSING

PD 1144 requires that All Pesticide Handlers must obtain a license from the Fertilizer and Pesticide Authority.

- Handlers include: exporters, importers, manufacturers, formulators, distributors, suppliers, wholesalers, dealers, repackers, commercial applicators, of pesticides and other agricultural inputs.

- Each handler has its own type of license applied with FPA. Application forms should be accompanied with latest income tax, financial statements and SEC registration if applicable.

- Dealers should undergo training before license issued; pest control operator should attend certification course and pass examination.

- Field operation monitoring group including FPA coordinators check on the activities of the handlers as to compliance or isolation of FPA rules and regulations.

- Penalties

A license is revoked or suspended on the following violations.

- False statements on official records filed at FPA
- Violations of FPA rules and regulations
- Refusal to allow inspection
- Commission on prohibited acts under P.D. 1144

Enforcement Actions

When violations are discovered, appropriate penalties ranging from a warning letter to administrative actions like imposition of fines, license revocation, criminal or administrative actions are taken.

Violations are subject to penal provisions of rules and regulations.

MONITORING

Monitoring activities are geared towards assurance of implementation of policies adopted by FPA. Monitoring is carried out through regional and provincial coordinators.

Random sampling of products in the dealers shelves is done to periodically check qualified possible adulteration practices. This is done through the BPI Pesticide Residue & Formulation Laboratory and the Laboratory of the Philippine Institute for Pure and Applied Chemistry.

Monitoring of the environment for chemical residue by FPA and other cooperating agencies provides an overview of the movement and potential contamination of the environment which may affect fish and wildlife. Residue analysis using soil and water have been carried out. This is solely done by the BPI Pesticide Residue Laboratory.

Little is being done on biological monitoring in the environment.

Market basket type sampling for residue analysis of agricultural crops have been carried out to assess the safety of consuming treated foods, detecting residues from illegal or improper use of a pesticide, and protecting the credibility of exporters.

Reports on accidents and poisoning is done in collaboration with the physicians and paramedical practitioners trained through the Agro-Medical Training Programme. Through the Memo of Agreement with the Ministry of Health, monthly reports on pesticide poisoning cases can be obtained from provincial and regional government hospitals. Institutions allowed to handle pesticides restricted for "Institutional Use Only" are also required to submit monthly reports on pesticide poisoning cases.

SOUTH PACIFIC

LICENSING

In US associated countries licensing of some restricted chemicals limit availability of these to pest control operators.

Records are kept in some US associated countries.

MONITORING

In Guam there is some monitoring carried out to enforce the regulations.

No monitoring on a regular basis is done on accidents and poisoning in the South Pacific but an endeavor is being made to obtain this regularly on a regional basis.

GIFAP

MONITORING

GIFAP considers that quality control should be an essential element in the formulation and packing of crop protection chemicals because performance in the field must be effective, predictable and consistent.

A booklet Guidelines Crop Quality Control of Pesticides commissioned by GIFAP has been prepared by a group of experts in the areas of formulation, packing and quality control. This booklet will be of help to national authorities, international organizations as well as crop protection chemical pesticide formulators and packers.

The Guidelines cover not only laboratory operations but also quality control related activities in plant areas. The booklet contains a simple but comprehensive check-list to help managers and others to audit the quality control aspects of formulation and packing plants.

GIFAP hopes that these Guidelines will be implemented throughout the world and that the result will be improved standards of crop protection chemical quality control. Again, the goal is that the end user consistently receives products that meet his expectations.

The Guidelines are the fourth in a series being published by GIFAP; the Guidelines already available are for:

- safe handling of pesticides during their formulation, packing, storage and transport;
- safe and effective use of pesticide;
- emergency measures in cases of pesticide poisoning.

APPENDIX 9

TRAINING AND INFORMATION DISSEMINATION

MALAYSIA

FARMERS: The Department of Agriculture through the field extension staff give training advice and information on the safe handling and use of pesticides.

The Industry assists the Department of Agriculture in the safety campaign and other users of pesticides. Special emphasis has been given to spray operators in plantations who as a group appear to suffer from the hazards of pesticides.

APPLICATORS There is no definite programme to train commercial pest control operators but training has been given by the Malaysian Plant Protection Society and Malaysian Agricultural Chemicals Association to interested personnel on pesticide application technology.

DEALERS/DISTRIBUTOR Advice is given by Pesticide inspectors of the Department of Agriculture on safe storage and proper use of pesticides offices in visits. Industry also provides training to dealers. Industry have organized two dealers meeting in Malaysia on the proposed licensing for sale and storage of pesticides, and the requirements for sale of certain highly toxic pesticides.

MANUFACTURERS/FORMULATORS Almost all manufacturers and formulators have safety teams to ensure the companies safety programs are being carried out. In fact Safety Audit are being carried out in formulation plants and products.

MEDICAL STAFF Same interaction with Ministry of Health on pesticide residue in Food Act, but there is no definite programme. A Poison Center is being planned.

Some members of industries have developed posters on "Treatment of Pesticide Poisoning" for distributors to all licensed Hospitals, district hospitals, health clinic, government clinics and estate hospitals.

Lectures are given to nurses and trainee doctors on a routine basis on pesticide poisoning problems. A guide for treatment of pesticide poisoning cases with an index has been published.

NEWS MEDIA A film on safety and danger of decanting of pesticiddes is being broadcast over local televisions and several are being planned. Similar messages are being conveyed through local radio broadcasts.

TRAINING NEEDS Training of Dealers in collaboration with industry should be provided:

Training of farmers through various Government agencies, should also be intensified.

PAPUA NEW GUINEA

USERS The big plantation owners and pest control operators have their own training programmes on proper spraying techniques. The Department of Primary Industry (DPI) has training programmes on proper spraying incorporated in their 2 years course in tropical agriculture colleges. DPI also published handbooks on spraying techniques and recommended doses of pesticides for each food and cash crops.

INDUSTRY COOPERATION An assurance has been obtained from the newly formed Papua New Guinea Agricultural and Veterinary Chemicals Association (PNGAVCA) that they will help as much as they can on producing such things as manuals on safe use, and whatever training needs that are required in pesticides.

TRAINING NEEDS There is a need for training the small scale cash crop owners on pesticides which is being done by agricultural extension officers

BANGLADESH

FARMERS The government does not conduct training to farmers. They only impart training to the Extension Field staff on the proper use of pesticides. But the industry with the help of their sales staff organize farmers training/rally at advent of cropping season.

APPLICATORS The Department of Plant Protection provides training on the handling of sprayers and safe application of pesticides.

DEALERS All the marketing companies hold regular dealers meetings as a part of sales promotion activities wherein dealers are given knowledge on proper use of pesticides.

MEDICAL STAFF The Industry has undertaken a programme to give a short training to the final year Medical students on the pesticide poisoning symptoms and treatment.

NEWS MEDIA The Plant Protection Department also advertises through the news media during heavy infestation, about proper use of pesticides and other measures to adopt for the control of pests. Industry as a part of their sales programme advertise about their products with cautionary instructions and proper use.

TRAINING PROGRAM ARSAP has a programme to train all the pesticide dealers of the country. For this purpose national training programme for the trainners was taken in 1980-81, wherein 25 trainers were selected both from Plant Protection Department and Industry. ARSAP also prepared the printed manual for dealers training in English which hase been also translated into Bengali. Necessary funds have also been provided by ARSAP.

TRAINING NEED Farmers of Bangladesh are mostly illiterate and unless they are trained on the proper and safe use of pesticides they will be exposed to the hazards of pesticides.

PAKISTAN

FARMERS Training of farmers is being carried out by the extension staff of the Provincial Government down to the Village level. Industry also has its own training programme for farmers and they hold frequently gathering and meetings and show T.V. films on good agricultural practices.

DEALERS Training Courses have been held in 1981 for training of trainers of Govt. in Cooperation with ARSAP. Dealers and retailers are being trainedd of the Industry.

MANUFACTURERS/FORMULATORS Each manufacturer/formulator is bound by law to have a qualified medical staff for the purpose of maintaining minimum standard of safety precautions among the workers. The Govt. oversees that such arrangements are made and maintained for each formulators.

PUBLIC Special supplements of their newspaper are printed with his book and Industry frequently making the public realize his correct and safe use of pesticides.

TRAINING NEEDS Training needs include, equipments, visual aids and literatures etc. for their farmers as well as the dealers.

THAILAND

FARMERS Farmer training is carried out by extension officers of the Department of Agriculture.

DEALERS AND DISTRIBUTORS Dealer Training is jointly conducted by the Department Agriculture Extension Services and Thai Pesticides Association.

PEST CONTROL APPLICATORS Training of pest control applicators is conducted to fumigators of export of agricultural products.

MEDICAL PERSONNEL Training for medical personnel is carried out in cooperation with Toxicological Society of Thailand.

INDUSTRY COOPERATION Strong support is provided by the Thai Pesticides Association on the pesticide safe use campaign.

TRAINING NEEDS Funds and equipment are inadequate and more extensive training can be carried out if additional funds were made available. There is a need for a consultant to set up the operation to computerize pesticide information and to teach local scientists on linking with other national computer information.

NEPAL

The Ministry of Agriculture under the Department of Agriculture has a special section on training and Information. Through the District level Agricultural office training of farmers, dealers and applicators are regularly carried out. In addition this section publishes various guidelines on the safe use, application and storage of pesticides, etc.

Two organizations namely the Agricultural Inputs Corporation, a government corporation and cooperative society deal with 40-60% of Agro chemicals. Rest deal by private importers.

SRI LANKA

FARMERS Farmer training is conducted by the Extension Services of the Department of Agriculture. Industry also carries out farmer training when they demonstrate the use of any pesticide.

APPLICATORS No training is carried out.

DEALERS AND DISTRIBUTORS Industry train dealers (only some have done so seriously). Training has been an ongoing job. More training in this regard is desirable.

MANUFACTURERS/DISTRIBUTORS These groups are trained by their respective major suppliers of pesticides. There are many others who are largely involved in repacking who need training.

MEDICAL PERSONNEL Training carried out by International organizations. More training is handling cases of pesticide poisoning would be useful at the district level.

PUBLIC A safety campaign on safe use of pesticides has been launched by the Pesticide association.

INDUSTRY COOPERATION Industry has always extended their cooperation and has been in the forefront of such programmes. The government sector has also given all the cooperation they can.

TRAINING NEEDS Industry alone will not be able to be responsible for their task. Funds and staff constraints in the Government sector have limited amount of training provided.

International organizations may be able to assist the Government Sector in: training the trainers, farmers pesticide applicators, and the general public.

INDIA

Both Central and State Governments are organizing training programmes for safe and judicious use/application of pesticide for the benefits of manufacturers, formulators, pest control operators and farmers. Regular short-term and specific programmes are arranged at the Central Plant Protection Training Institute, Hyderabad. Relevant information bulletins have also been brought out on Pesticides and on Treatment of Pesticide Poisoning for the benefit of medical and para-medical functionaries.

Associations in the Pesticides Industry have also introduced a number of training aids/programmes for the pesticide manufacturers/distributors/ retailers as well as for the benefit of farmers.

JAPAN

In Japan now dealers are trained on a private-sector basis. It is felt that such training should be conducted on a public-sector basis. A new programme are being prepared in the MAFF. This programme covers not only dealers but also commercial applicators. Officially-trained dealers and contractors will be qualified and licensed by local governors in the new programme.

MAFF encourages farmers to follow the application instructions on the label registered with the MAFF. During the month of June when agrochemicals are extensively applied MAFF, in full cooperation with local governments, conducts a campaign for prevention of incidents caused by agrochemical on a nation-wide basis. Plant Disease and Insect Control Station are located in each of prefective which national government provides with financial and technical support, provides local farmers with specific and intensive instruction to ensure appropriate application consistent with safety and environmental protection.

PHILIPPINES

TRAINING

FARMERS Training is the main responsibility of the Ministry of Agriculture. FPA and the pesticide industry coordinate/assist. Farmers training is regularly conducted in farmers training centers or through the radio daily broadcast. Content is mostly on good agricultural practices and safe use of pesticide.

APPLICATORS Undergo certification course addressed to exterminators or fumigators. To date 1,2028 applicators have been certified by the FPA. Applicator training is more rigid and participants have to pass an examination before they are certified and allowed to use restricted pesticides. Content includes: basic entomology, structural and household pests, rodents and other vermin, pesticides-properties, use label, calculations, storage etc, recognition and first aid for pesticide poisoning = FPA rules and regulations.

DEALERS The training is a prerequisite in getting licence from the FPA to sell pesticide. Dealers training module concentration on the rules and regulations and penalties for violation and on pesticide safe handling, storage, disposal, transport and use.

MANUFACTURERS/FORMULATOR FPA nor other government agency has no training program for these clienteles. However, meetings are called from time to time to discuss occupational health and safety and engineering control.

MEDICAL FPA Agromedical training is designed to educate the medical and paramedical practitioners in rural health hospitals and centers on the recognition and Management of poisoning cases. Medical practitioners training module consists of two aspects knowing the pesticides and the recognition and management of poisoning cases.

OTHERS Ministry of Agriculture Technicians - training to instill awareness on the hazards posed by pesticide use and to promote conciousness in the efficient use and safe handling of pesticides.

After the training, the technicians pass this on to the farmers.

INDUSTRY COOPERATION In all these training activities the pesticide industry is fully cooperating.

TRAINING NEEDS Intensification of existing training programmes more so on training of FARMERS who are the actual user of pesticides.

Public awareness campaign on reading pesticides label before use.

SOUTH PACIFIC

USERS Some training of farmers is done in Guam and Tonga some to dealers in Fiji.

OTHERS No training is directed at medical personnel, with little being directed towards manufacturers/formulators.

TYPES OF TRAINING These are generally in the form of small seminars, parts of curricula at Universities.

TRAINING NEEDS Required at all levels.

REPUBLIC OF KOREA

* There are three kinds training course in KOREA.

* First one is training about application method. Mode action of each pesticide, spectrum, storage and disposal etc. for the extension service man by Rural Development Administrationg. Students will be teaching pesticide utilization to farmers after the course.

* Second one is training about pesticide utilization for the farmer by the Extension service men. The training is carried out in the town or village.

* Third one is training about regulation, utilization, storage etc. of the pesticide by Agricultural Chemicals Industrial Association lectures Government Agricultural Chemicals Industrial Association and pesticide companies carry out a campaign about safe use, disposal, storage, application good methods, etc. to farmers, dealers or commercial applicator through posters, Guideline book of pesticide and pamphlets etc.

Also, many companies of pesticide give guidance on the safe use of pesticide, storage, and disposal etc. through advertising.

APPENDIX 10

INTERNATIONAL CODE OF CONDUCT ON THE DISTRIBUTION AND USE OF PESTICIDES

STATUS OF IMPLEMENTATION

MALAYSIA (Government)

The Technical Committee to the Pesticides Board had convened four meetings with the Technical Committee of the Malaysian agricultural Chemicals Association (MACA). From the discussions it was apparent that as the legislation on registration, labelling and sale of pesticides were already in force in the country a lot of the provisions of the Code had already been achieved. Nevertheless, the meeting agreed that the provisions of the code will as far as possible be incorporated into all future legislations that may be implemented.

The meetings further decided that priorities be established on specific topics for discussions on the mechanics of implementation of the provisions of the code. The following topics were identified:

(i) Management of pesticide packaging and labelling

(ii) Withdrawal of old pesticides (expired registration) from dealers' shops.

(iii) Disposal of empty containers and waste pesticides.

(iv) Adulteration and imitation pesticides.

(Industry)

The Malaysian Agriculture Chemicals Association (MACA) generally supports the FAO Code of Conduct on the Distribution and Use of Pesticides and would do its very best to get all its members to practice and meets its requirements. However, there may be some difficulties with the smaller companies and non-MACA members in following the guidelines and procedures. MACA has participated in 4 meetings with the Pesticide Authority of Malaysia to look into the Code of Conduct in details and have singled out three areas of major concerned:

These are (1) Management of Pesticide,

(a) Packaging and labels

(b) Withdrawal of old products from the dealers shops

(2) Disposal of empty containers and waste.

(3) Adulteration and Imitation of products. This is a serious problems in Malaysia. As much as 10-15% of pesticides sold in Malaysia are being adulterated or imitated by small and big time adulterators. The fines in Malaysia are not enough to deter or protect the industry from such offenders.

MACA activities in Malaysia are: -

(1) Funding a campaign to teach dealers and end-users in the safe use and proper handling of agrochemicals.

(ii) Provide education funds for farmers children to attend university.

(iii) Raise funds to help produce safety films dircted at end-users.

(iv) Develop safety posters, particularly on safe handling of pesticide for distributions to dealers and retailers. There are some 10,000 dealers/retailers distributing pesticide in Malaysia.

(v) Help and train dealers to apply for sales licences as and when these are implemented.

INDONESIA (Government)

Indonesia fully accepts the FAO Code of Conduct on the Distribution and Use of Pesticides for Adoption.

To implement the Code, priorities are given to the following:

1. Enforcement of the existing pesticide regulations. For this purpose, the Pesticides Inspection Committee has been established at each provincial and district level in order to enforce the regulations more effectively and efficiently for coping with problems such as adulteration of pesticides and distribution of unregistered and even banned pesticides.

2. Education and training of pesticide retailers and farmers Cooperation in this field has been made with such international organizations as ESCAP and FAO to solve the problems resulted from improper storage and use of pesticides at retailer and farmer level.

3. Monitoring of negative environmental impacts of pesticides use with emphasis on pesticide residues on food crops, resurgence of major

crop pests and resistance as well and on other beneficial non-target organizations.

(Industry)

1. Regular communication and information exchange with the Pesticide Committee

2. Quality Control

   2.1 Industry would ensure that the standard for the a.i. is in line with FAO specifications where available.

   2.2 Problem of adulteration being discussed with member companies

3. Industrial Safety

   In line with the Industry Safety regulations and GIFAP booklets, a checklist has been prepapred for transport and storage of pesticides. Member companies have discussed matters such as disposal of waste, environmental impact, analysis, protective clothing, etc.

4. Safe and Effective Use

   Protective clothing (apron type) for paddy farmers has been accepted for promotional work.

5. Environment Management

   5.1 Plant visits for the public have been organized

   5.2 Public advice through media publication on safe use is in preparation

   5.3 Medical guidelines in poisoning cases had already been published a few years ago by the association.

THAILAND (Government)

The following activities have been undertaken to implement the Code of conduct by the Government:

1. Farmer and dealer training

2. Introduction of "phased" registration scheme

3. Dissemination of educational material on safe use of pesticides to farmers and general public

4. Establishment of poison control center

5. Quality Control for Products in the market and minimize adulteration of pesticides in the market.

(Industry)

The Thai Pesticides Association has undertaken an active programme to comply with recommendation of the Code.

In particular emphasis is being placed on:

* Dealers Training
  - basic knowledge of pests
  - types/uses of pesticides
  - safe handling/storage
  - safe effective use

* Publicity Material
  - posters
  - leaflets } on safe use.
  - banners

* Discussion with Government
  - working party on amendments to the legislation
  - phased registration
  - manufacturing date on label

PAPUA NEW GUINEA

Status of implementation by Government

We are about to set up our registration scheme, so the code is appropriate at this time in which we will attempt to implement as much of it as possible. Also the local association and have submitted to us their drafts code of conduct. We will try to get them to follow the FAO Code of Conduct.

APPENDIX 11

COUNTRY REPORT: JAPAN

1. Are pesticides required to be registered?

Agricultural Chemical Regulation Law sets a regulation and control system for production, distribution and use of agricultural chemicals used for plant protection and for plant growth regulation mainly through a registration scheme.

Any manufacturer or importer of agrochemicals shall be excluded from selling the chemicals unless he has the registration on an grochemical product basis granted from the Minister of Agriculture, Forestry and Fisheries.

2. Title of Administering Authority

The Ministry of Agriculture, Forestry and Fisheries

3. Title of legislation requiring pesticides to be registered and data introduction

Agricultural Chemical Regulation Law (Law No. 82 of 1948)

4. Office and address

Agricultural Chemicals Planning Office
Plant Protection Division, Agricultural Production Bureau,
Ministry of Agriculture, Forestry and Fisheries (MAFF)
1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo

5. Resources allocated to the registration process

Agricultural Chemicals Planning Office of MAFF --- 10 persons

Agricultural Chemicals Inspection Station of MAFF --- 64 persons

(This station is responsible for conducting official inspection of agrochemical products applied for registration)

Agricultural Materials Council of MAFF --- 20 persons

(This council can, if necessary, give an opinion on a technical basis to Minister.)

Official staff in other ministries who are involved in pesticide problems in full cooperation with MAFF --- approximately 25 persons

TOTAL --- 120 persons

6. Title of published national guidelines or registration procedures

(1) Agricultural Chemical Regulation Law Enforcement Regulation (Ministry of Agriculture, Forestry and Fisheries Ordinance No. 21 of 1951)

(2) Guidance on Toxicology Study Data for application of Agricultural Chemical Registration (59 Nohsan No. 4200, January 28, 1985)

(This guideline is focused on toxicological field).

7. Information on some aspects of registration procedures

(1) Registration based wholly or partly on registration in other countries

Registration in Japan is not dependent upon registration status in other countries. Information on registration status in other countries is used only as reference.

(2) Recognition and/or use of other national or international guidelines

Guidelines for testing on a laboratory basis (especially toxicological testing) are recognized in registration procedures.

(3) Acceptance of data generated in other countries

Testing data on a laboratory basis (for example, chemical and physical properties, toxicology) are fully accepted.

Toxicological testing is required to be consistent with Good Laboratory Practice.

(5) Emphasis/insistence on data to be generated locally in the country and for which aspects.

Testing on efficacy and crop safety, on residues based upon good agricultural practice and on environment impact are required to be conducted locally. The results of these testing are fully dependent upon local conditions.

8. "Phased" or "Stepwise" registration procedure practice

Neither "Phased" nor "Stepwise" procedure are adopted.

9. Adoption and use of hazard classification

Availability of pesticides with high acute toxicity is restricted under the "Poisonous and Deleterious Substances Control Law".

10. Title of official list of registered products

Official list of registered products (Nohyaku Yohran) is published annually in Japanese.

11. Post-registration activities carried out by government

Any agrochemical product registered with the Minister of Agriculture shall be reregistered every three years. The safety of the product is critically reviewed in the reregistration process based on the latest scientific evidence.

If a specific damage is known to be caused by application of an agrochemical when it is applied in accordance with its approved uses, the Minister may alter the conditions under which it was registered the registr ..

The Minister may also if deemed necessary, order the withdrawal of the product from the market; an example of such an action is the withdrawal of BHC and DDT from the market in 1971.

Any agrochemical product may be designated by cabinet order as "agricultural chemical of crop persistence" or "agricultural chemical of soil persistence" when it is known to be highly persistent and hazardous to human and animals.

Any agrochemical product may be designated as "agricultural chemical of water pollution" by cabinet order when it is known to be hazardous to aquatic life and to have a high risk of water pollution when it is applied in a considerably extensive area.

These designated agrochemicals are under strict monitoring activities of authorities.

12. Based on a five point scale the following are the rates of post registration activities:

Check on product quality --- 4

Monitoring for pesticide residues in food --- 4

Environmental monitoring	--- 4
Reporting of occupational poisoning	--- 4
Collection of data on quantity of pesticides manufactured/imported/used	--- 4
Licensing of pesticide manufacturers and dealers	--- 4

Are the data from post registration activities available to the registration authority when reviewing registration?

YES. These data are fully available during the registration process and especially during reregistration every three years.