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Report of the OECD Pesticide Risk Reduction Steering Group Workshop "Pesticide User Compliance"

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OECD Environment, Health and Safety Publications

Series on Pesticides

No. 37

**REPORT OF THE
OECD PESTICIDE RISK REDUCTION STEERING
GROUP WORKSHOP**

"PESTICIDE USER COMPLIANCE"

IOMC

**INTER-ORGANISATION PROGRAMME FOR THE
SOUND MANAGEMENT OF CHEMICALS**

**A cooperative agreement among
UNEP, ILO, FAO, WHO, UNIDO, UNITAR and OECD**

**Environment Directorate
ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT
Paris 2007**

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ABOUT THE OECD

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The Pesticide Programme was created in 1992 within the OECD's Environmental Health and Safety Division to help OECD countries:

- harmonise their pesticide review procedures,
- share the work of evaluating pesticides, and
- reduce risks associated with pesticide use.

The Pesticide Programme is directed by the Working Group on Pesticides, composed primarily of delegates from OECD Member countries, but also including representatives from the European Commission and other international organisations (*e.g.* United Nations Food and Agriculture Organization, United Nations Environment Programme, World Health Organization, Council of Europe), and observers from the pesticide industry and public interest organisations (NGOs).

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The Inter-Organization Programme for the Sound Management of Chemicals (IOMC) was established in 1995 by UNEP, ILO, FAO, WHO, UNIDO and the OECD (the Participating Organizations), following recommendations made by the 1992 UN Conference on Environment and Development to strengthen co-operation and increase international co-ordination in the field of chemical safety. UNITAR joined the IOMC in 1997 to become the seventh Participating Organization. The purpose of the IOMC is to promote co-ordination of the policies and activities pursued by the Participating Organizations, jointly or separately, to achieve the sound management of chemicals in relation to human health and the environment.

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or contact:

**OECD Environment Directorate,
Environment, Health and Safety Division**

**2 rue André-Pascal
75775 Paris Cedex 16
France**

Fax: (33-1) 44 30 61 80

E-mail: ehscont@oecd.org

TABLE OF CONTENTS

I. Introduction	10
II. Plenary Discussions	11
III. Final Breakout Group Report	17
Report on Breakout Group No.1	18
Report on Breakout Group No.2	25
Report on Breakout Group No.3	32
Report on Breakout Group No.4	37
IV. Conclusions and Recommendations	41
Annex I. Final Workshop Programme	45
Annex II. Participant List	49
Annex III. Plenary Session Presentations.....	58
Annex IV. List of Background Documents.....	83
Annex V. Survey Results	84

I. Introduction

Overview and background

1. This report presents a summary of the discussions at, and the outcomes from, the OECD workshop on Pesticide User Compliance Issues. The workshop was held in Ottawa, from 6-8 June 2006 and was hosted by Health Canada's Pest Management Regulatory Agency (PMRA). The focus of the workshop was on issues and impediments to compliance associated with pesticide use. Such issues were addressed in the context of reducing risks to human health and the environment as well as risks to the integrity of the regulatory process.

2. The objectives of the workshop were:

- To identify the most common types of non-compliance that occur during use of pesticides and to develop effective approaches and methods to manage various risks;
- To develop ways to enhance knowledge and understandings of pesticide users, with emphasis on achieving compliance with pesticide labels and terms and conditions of registration;
- To propose ways regulators and the user community can modify the regulatory process to avoid unrealistic or very difficult approval conditions in order to ensure users' ability to comply;
- To discuss and develop proposed approach(es) to measure the effectiveness of compliance programmes in achieving risk reduction objectives; and
- To identify areas of potential harmonisation or international collaboration among member countries and other stakeholders.

3. Forty people participated in the workshop, representing seven governments, industry, grower groups and the OECD Secretariat. The participant list is attached in Annex II.

4. A survey was conducted prior to the workshop to collect background information on what regulators do to promote compliance and how users perceive the current compliance mechanism in their country. The survey results are compiled in a template developed by the organising committee and the report, including the questionnaires sent to users and regulators, is attached in Annex V.

Structure of the workshop

5. The workshop was held over two and a half days. Day 1 of the workshop began in plenary with presentations and a panel discussion by speakers representing different perspectives on user compliance, including industry, government, user groups and non-governmental organisations (NGO). Following plenary discussions, four breakout groups met and discussed assigned topics relating to each workshop objective. Prior to the workshop, the workshop organising committee identified specific topics and prepared questions based on the plenary session presentations and questionnaire responses.

6. Day 2 focused on a review of the discussions from Day 1. During this plenary session, the rapporteurs of the four breakout groups presented summaries of their respective group discussions. Another breakout group session was held following the morning plenary in which breakout groups considered, discussed, and incorporated the comments made during the plenary discussions, and developed a list of conclusions.

7. During Day 3, participants reviewed the conclusions made the day before and identified recommendations for future work. The workshop concluded with a presentation on the overall summary of the workshop and next steps, provided by the chair of the OECD Risk Reduction Steering Group, Wolfgang Zornbach (Germany). The final workshop programme is attached in Annex I.

II. Plenary Discussions

Summary of presentations and comments

8. The plenary session began with a welcome message from Dr. Karen Dodds, Executive Director of the PMRA, and an introduction by Jeong-Won Park from the OECD Secretariat. This was followed by four presentations given by Allan Brown (CropLife), Bob Frissen (Canadian Federation of Agriculture), Anne Lindsay (US Environmental Protection Agency), and Michael Stahl (International Network for Environmental Compliance and Enforcement). All presentations are summarized below and slides are attached in Annex III.

Strategies to improve user compliance (industry's perspective)

9. The presentation by Allan Brown (CropLife) concerned the issue of counterfeit products. He noted that stewardship was at the heart of all CropLife's initiatives and the leading cause of non-compliance was due to the complexity of the label. His recommendations were to simplify the label instructions, provide training for the new Globally Harmonised System (GHS) for classification and labelling of chemicals, and implement the Food and Agriculture Organization (FAO)'s Code of Conduct to guide the appropriate distribution of industrial products in order to discourage the use of counterfeit products.

10. With respect to the use of the Internet as a tool for communication between industry and users, Mr. Brown said that the Internet is often being used as a tool to support illegal trafficking rather than to facilitate the compliant use of registered products. Regarding industry's effort to improve labeling systems, Mr. Brown mentioned that CropLife has been working on various projects, among them a project to prepare for the implementation of the GHS. Further work will be done on GHS in various regions.

11. To address crop damage caused by counterfeit products, Mr. Brown said that CropLife examines samples to respond to any complaints, and undertakes laboratory work if further verification is necessary. Another problem is that companies are often reluctant to post any public warnings about counterfeit products being offered for sale, for fear that doing so will adversely affect product registrations and sales when the difference between the product and its counterfeit is not easy to distinguish (e.g., consumers might choose an alternative product having no known counterfeits). Anne Lindsay commented that the US EPA has developed an enforcement action programme that is designed to provide warnings to a specific user group, and to show how to determine if a product is a counterfeit. It has been a success without any identified adverse consequences. Some suggested that this was an elusive subject as problems are not too visible unless actual damage occurs.

Users' perception of compliance (user's perspective)

12. Bob Friesen (CFA, Canadian Federation of Agriculture) highlighted major issues that growers are facing. He stressed the importance of a scientific approach when regulating user compliance issues. It becomes inefficient for the user to comply if there are too many regulations. Moreover, most of the regulations in place are to satisfy public perception, and do not necessarily lead to risk reduction. It was however stressed that the right balance should be found in order to have compliant use without compromising on human health and environmental risk. To increase the level of compliance, he suggested that more incentives be given within the regulatory framework. Examples of incentives may include a clear

demonstration of benefits to the users, their land and the public, and the benefits will in turn result in compliance and more effective communication about such benefits. Besides incentives, more communication is needed to educate the public on user practices and real risks to their health.

13. In reality, there are not enough tools available for users when they are faced with restrictions on the use of products. This is particularly obvious when products available across borders have different restrictions placed on them. This poses a great challenge and reiterates the fact that more harmonisation is needed. Mr. Friesen added that a better mechanism must be put in place to make the user aware of any changes to the labels and the products. Such a mechanism would significantly reduce non-compliance and decrease the risk posed to the public and the environment. The presentation ended with a wish list from the user community and re-emphasised the importance of equality of access to products, the trade-off between regulations and incentives, and the need for more science and research.

14. Key questions, which stimulated good discussion, focused on the communication tools used to find information on products. A concern was expressed about the fact that most users were turning towards the Internet for answers. The answers received may actually come from a range of so different websites that the quality and accuracy of information would be questionable. This could even result in non-compliance. Also, it was found difficult to know how often farmers actually turned to websites as a source of information. In the United States, for example, where a web-based database exists, the actual number of farmers relying on science-based knowledge/information is not known. However, it may also depend on accessibility to the web. Statistics show that in developing countries the accessibility to the Internet has increased and consequently, implementation of GAP (Good Agricultural Practices) has become feasible. This discussion led to the key resolution of creating a database of websites which users, regulators and industry could access and use for their benefit, e.g., finding and posting changes to labels, posting changes to product use.

15. The CFA furthermore mentioned the need for incentives that would motivate farmers to comply, not necessarily expressed in monetary terms. Rather, there should be science-based regulations leading to ultimate risk reduction. For example, in the case of labels, it is deemed important that regulators effectively communicate to users the ultimate benefits derived from complying with labels. With regards to training, programmes have been developed aiming at giving proper precaution about consequences on various public health aspects. In some regions of Canada, it was reported that farmers were not allowed to buy certain products unless users were properly certified.

16. Concerning the need for further (regional) harmonisation, e.g., in North America, in particular for mutual recognition of data and/or for the legal process of registration, the CFA is of the opinion that farmers should be kept well informed on any harmonised regulations with regards to application requirements. Discussions between industry and farmers are necessary. A larger scope of harmonisation efforts will be needed in the future to overcome problems of differences, e.g., in Canada, the market is rather small and registration is costly. It is true also that, in some countries, MRL regulations can be barriers. A product used in the US can be forbidden in Canada solely because of different MRL requirements. Thus, better harmonisation of MRLs is critical in order to avoid situations where some products are restricted in one country and not in its neighbour countries only because of different MRL standards.

A regulatory perspective on pesticide user compliance (regulator's perspective)

17. Anne Lindsay (US EPA) emphasised the need to develop a “culture of compliance”, which would facilitate and foster user compliance. On the one hand, identifying, developing and implementing incentives can create this culture of compliance. On the other hand, it can also be fostered through stewardship programmes and properly trained and certified users in best management practices. Taking the

perspective of a regulatory agency, Ms. Lindsay defined the function of a pesticide regulatory programme as one which “acts as a gateway to the marketplace by setting the terms and conditions of use, and approving label instructions”. She indicated that this culture of compliance would foster compliance with approved practices and help avoid misuse and solve trade barrier issues. With regard to the use of counterfeit products mentioned earlier, increased discussion should surround this topic to help determine the reasons for the use of such products and why users feel the need for non-compliance. Speculation about the reasons for counterfeit use revealed that the availability of products was one factor. Therefore in order to prevent such use, products must be easily available and highly accessible to users.

18. The US EPA furthermore acknowledged the difficult challenge posed when most of non-compliance occurred in areas outside the country’s jurisdiction. There is a need to develop a national model, which would describe how to manage a programme with finite resources and to illustrate the balance between initiatives and the promotion of compliance vs. maintenance of the compliance strategies. In the end, the regulators are accountable and must close the gap between knowledge, will, and ability for users to comply.

19. With respect to the promotion of best management practices, two current programmes have been introduced in the US. For pesticide programmes there are two sections, i.e. the PESP (Pesticide Environmental Stewardship Programme) and the Strategic Agriculture Initiative with ten regional offices in the US. PESP is a grower/user association that focuses on sustainable pest management. It encourages grower associations to be involved in safety directions for using pesticides. Advocates within the industry are also assigned. It is ultimately up to the State government to recognise the respective specific challenges and to determine the best management practice to implement.

20. Since the implementation of the grant programmes, a notable decrease in pesticide abuse has been achieved. This was accomplished by changing the cultural practices of pesticide use and by acknowledging the changes that needed to be made in the practices of pesticide use. Also, a focus on minor crops helped disseminate information strategies applying to business.

21. Concerning training and certification processes, US EPA sets the national standards while each State develops its own programmes.

22. Questions on Internet retailers were then raised. Although the Office of Enforcement and Compliance Assurance (OECA) has put together an Internet sales issue document, it was admitted that this remained a problem. This form of retail is very attractive to users as it allows for increased product availability. Regulators should think of strategies to solve these challenges.

23. With regards to the registrants’ duty to report adverse side effects to products, it was indicated that a process was in place at US EPA, i.e., registrants go through categories of risk, specify to the regulators the reporting requirements, and monitor literature of adverse effects, occupational problems, worker illness, and toxicology studies reporting animal and environmental effects with 30-day interval. New registration programme is applied for any pending products whenever it is necessary to go over new registration, and registrations are updated accordingly.

Measuring performance of compliance programmes (INECE)

24. Michael M. Stahl, representing both INECE (International Network for Environmental Compliance and Enforcement) and the US EPA, explained the increasing need for demonstrated results as part of policy planning, management, evaluation, public accountability and budgetary decisions. His presentation on performance indicators focused on the three following stages:

- (1) identifying potential indicators;
- (2) designing and developing indicators, and
- (3) using these indicators to measure performance.

25. In using performance indicators, the value of compliance and the actions for enforcement for non-compliance would be more clearly understood. Among all the tools available to users, it is crucial to utilise the most effective one in reducing risk or improving the effect on the environment. This will not only have an immediate impact and outcome, but will also have a multiplier effect, making the final outcome more achievable. Mr. Stahl suggested options for developing and using indicators for pesticide compliance and enforcement.

26. He also focused on the importance of the development of a baseline to help improve or maintain the final outcomes. Setting a baseline for performance measurement is an important start although adjusting the baseline may be unavoidable within several years depending on a period and situation. No fixed standard exists and each body should set its own standards. Also, the initial aim underpinning the baseline might also change as time goes by. Thus, it is not always easy to explain the meaning of the baseline, but it is necessary to decide whether the baseline is realistic to maintain or improve the target. In addition, it must be understood that success can be measured through maintenance and not just as an increase or decrease.

27. Additional challenges on “measuring performance” standards were identified, in particular, concerning:

- (1) having budget reduced resulting in a seemingly reduction in activities and therefore performance; and
- (2) the difficulty in measuring complex final outcomes.

28. Performance measures show production of value that the agency is undertaking. The use of a logic model may allow others to see what goals or values the programme or activities are producing (i.e., decreased pollution). With respect to criteria for evaluating success, or maintaining a certain ‘level’ of success, it was recognised that this takes a great deal of resources. Depending on the final outcome, improvement of the goal may not be realistic but maintaining the goal is. The frequency of inspections is less important. The final goal of measurement is not to detect problems but to show final production of value.

29. In general, measuring the “impacts of compliance” should be done differently than measuring the secondary impacts (i.e., farmer to farmer information exchange). It is important to figure out who gets the benefits and what are the biggest risks. There are double sides of measurements to consider. It is true that there are some factors that are difficult and even impossible to measure. For example, it is difficult to get information on inspection, as some users do not want to reveal their non-compliance experience. Also, it is very difficult to measure the results of training and assistance efforts to associations. A multiplier effect is also hard to measure. It was therefore recommended to focus on improvements of regulations, new management practices, and how these practices have decreased risks.

30. Many delegates raised the question about the difficulties of finding out the exact causal link between multiplier factors and outcomes in using the logic model since one outcome could be linked to many factors simultaneously or a combination of factors. Including a column for intermediate outcomes in the logic model will allow for a specific connection to be made between factors and outcomes. Plausible attribution to intermediate outcomes helps demonstrate work done and is more a reflection of the enforcement activities than the final outcome: in other words, the connection between activity and result. Intermediate outcomes can be understood as a bumper zone prior to reaching outcome. Plausible

attributions in the intermediate outcomes are very important ‘procedures’ to connect such intermediate factors with risk factors causing the final effects.

31. When encouraging users to attend information sessions, it is important to ensure anonymity of participants. Most users fear that, if they attend, they would be at increased risk of inspection and consequently may be given a penalty. Thus, guaranteed anonymity allows users to attend the information sessions and allows regulators to provide critical updated information.

32. Regarding the problem of different terminology and definitions used in different countries, Mr. Stahl explained that multi-national level efforts are required. Both INECE and the OECD have produced some general guidance on definitions and terms. They may not be applicable or helpful to all countries but this is a good starting point. For example, no word for ‘compliance’ exists in Portuguese. Harmonising effects and definitions to ensure identical goal/path to all parties therefore involves knowing “compliance” in other languages.

Summary of plenary panel discussion

33. The panel discussion further explored some of the ideas that were presented through a series of questions (1 to 4), providing a basis to stimulate discussions between the panel and the workshop participants (the representative from the user community was unfortunately unable to attend). Below are presented the outcomes of the discussions.

1. FROM YOUR PERSPECTIVE, AS A MEMBER OF A USER, INDUSTRY OR REGULATORY COMMUNITY, WHAT DO YOU THINK IS WORKING REASONABLY WELL AND WHY? WHAT EXAMPLE WOULD YOU LIKE TO BRING TO OUR ATTENTION?

- Products available to growers should be accessible at the same time regardless of the country in which they are needed. Work sharing was an effective initiative and product availability should now be a new international initiative. (CropLife)
- Different divisions within a regulatory agency should work together on a regular basis to continually provide guidance and information updates to all parties involved. In the US, agencies are de-centralised at the moment but need to implement some degree of centralised approach so that regular interactions are fulfilled. (US EPA)
- More and more compliance programmes adopt integrated approaches that use various policies simultaneously. In addition, more efforts should be made to develop measuring tools to solve specific problems. Finally, the reasons behind non-compliance would dictate what actions should be enforced. In deciding enforcement, a key question is whether the risk is real or perceived. It would then illustrate what tools are available and most effective. (INECE)

2 *WHAT IS ONE OF THE MOST SIGNIFICANT COMPLIANCE CHALLENGE(S) FACED BY:*

- PESTICIDE USERS***
- THE PESTICIDE INDUSTRY***
- PESTICIDE REGULATORS***

- Interactions between regulators and growers are very important, especially for labelling. Training is often not sufficient since companies do not always agree with the requirements set by the regulators. In such cases, it is difficult to persuade users/growers to comply. The product label is the only piece of information that binds all parties together; thus label development should be done in collaboration among all affected parties (i.e., user, regulator, industry). That is why growers should already be involved at the registration stage. With the full agreement of all parties, compliance becomes more realistic, full accountability can be obtained, and risks can be mitigated more effectively. (CropLife)
- From a regulatory perspective (focusing on performance measures), lack of resources hinders the collection of information to measure outcomes. Additionally, by creating incentives and workable performance measures, the compliance issue should automatically align itself. (US EPA)
- In the US, some statutes simply do not allow for strong enforcement, which implies that the problem of non-compliance is rooted in the legal system itself, and legislations are not designed to enforce compliance. (US EPA/INECE)
- If more tools were available to users, it would be more feasible for them to comply. Users have been making some progress in the field of compliance and more emphasis should be placed on the positive outcomes rather than on the negative ones. (PMRA, Canada)
- A forum needs to be created for users to share and discuss best practices. More incentives also need to be developed for users. This is directly linked to the issue of counterfeit product use and how both regulators and registrants should work together to stop counterfeit use. (Syngenta)
- From a grower's point of view, there is too much information available leading to a high level of complexity; each crop has many different restrictions that are almost impossible to comply with entirely. Standardisation of essential information across companies is crucial. In addition, appropriate information should be focused on risk factors corresponding to actual risks. (Grower Group)

3. *HOW COULD USERS, MANUFACTURERS AND REGULATORS COLLABORATE DIFFERENTLY WITH THE OBJECTIVE OF OBTAINING AND MAINTAINING COMPLIANCE? IN THE AREA OF COMMUNICATION AND INFORMATION EXCHANGE, WHAT COULD BE/NEEDS TO BE STRENGTHENED?*

- Collaboration opportunities should be created when developing labels so that agreement on compliance can be reached. Once users understand the reasons for compliance, complying should be easier to achieve. Including growers at an earlier stage in the label development is therefore very important. (CropLife)
- Regarding compliance, the number of changes that need to be made across each country and internationally, is overwhelming. However, a paradigm shift is needed to emphasise the safe use of pesticides. (US EPA)

- Regulators must have a better understanding of the motivations behind non-compliance. More dialogue is needed between groups to make compliance more understandable and manageable, especially with respect to enforcement. Not all user compliance issues are equivalent and therefore different tools must be used for different circumstances. Communication and better understanding among regulators and advisors will be an important step. (INECE)

4. *WHAT POSSIBILITIES DO YOU SEE REGARDING POTENTIAL INTERNATIONAL COLLABORATION FOR EITHER USERS OR INDUSTRY OR REGULATORS?*

- Harmonisation and collaboration are the common goals of all parties involved. Collaboration among regulators with respect to MRLs is very important because users are facing the challenge of meeting different MRL requirements for different countries. This poses a problem when users are trying to sell their products. As a suggestion, CODEX process should be faster and a better system should be established. (CropLife)
- Changes to the legislation and national boundaries should be made to match the needs of all parties. For example, if a NAFTA label for a product was created, it could result in price advantage to stakeholders in general but also in related problems. For example, some problems may deal with national legislation including intellectual property laws/regulations, which is an important underlying issue often overlooked. (US EPA)
- The international regulators may consider four steps:
 - (1) identifying a few patterns of non-compliance;
 - (2) creating tools or programmes based on these patterns;
 - (3) deciding which area should be developed further considering its feasibility; and
 - (4) collaborating with related users.
 In doing so, a more harmonised message would be delivered to users across nations, thus reducing confusion. (INECE)
- Users do not want to hear mixed messages from different agencies. Harmonising messages across organisations is crucial to ensure user compliance. (CropLife)

III. Final Breakout Group Report

34. On Day 2, each breakout group presented their preliminary reports to the workshop participants in plenary. To guide the discussion, each group had received a template of questions, which prompted ideas, and concepts. The groups had a chance to review and consider answers and suggestions they had received and discussed through the previous day. Participants had a chance to provide feedback and to add ideas and then incorporate this into their reports.

35. The final report from each breakout group was presented on Day 3. Each group went through the changes they had made from the previous day's suggestions, and presented to plenary any recommendations and conclusions developed in breakout. During the final plenary session, participants were able to provide final comments on recommendations allowing each group to finalise their reports.

REPORT ON BREAKOUT GROUP NO.1**1. Overall objective**

- Establish a list of common types of non-compliance.
- Develop key criteria and proposed approaches and methods to identify that are most important for risk reduction or leading to more effective risk management.
- Using these criteria and the list of common type of non-compliance, rank the types according to expected risk, e.g., high, medium, low, negligible.

2. Participants

36. Karen McCullagh (chair), Pierre Leblanc (rapporteur), Allan Brown, Stefan Lamprecht, Carsten Madsen, Judy Shaw, Mark Veitch.

3. Introduction

37. Stimulating and fruitful discussions took place regarding possible approaches to assess the risk from non-compliance. There was a good exchange of ideas and some agreement on the potential application of risk management principles.

38. This approach is consistent with the FAO Code of Conduct in that responses to violations should be fair, predictable, and proportional thereby encouraging a level playing field.

4. Summary of discussion**4.1 Common types of non-compliance**

Table 1: Common types of non-compliance identified during the March 2003 Compliance Seminar and the Results of the OECD Survey on Pesticides User Compliance (May 2006).

PLACEMENT	TYPES OF NON-COMPLIANCE: USERS	TYPES OF NONCOMPLIANCE: REGULATORS
1	Failure to adhere to label recommendations and restrictions: Failure to leave a required untreated buffer to protect water courses	Unregistered use of a registered product
2	Use of unregistered products	Stocking of obsolete products Drift
3	Personal protective equipment	Failure to adhere to label recommendations and restrictions: Failure to leave a required untreated buffer to protect water courses
4	Drift	Use of products imported directly from other countries that are not authorised or have labels in a foreign language
5	Failure to adhere to label recommendations and restrictions: Use of incorrect dose	Unlicensed / Improper licensed applicator
6	Wind speed	Unsafe storage (unlocked, contaminate food/feed, etc.) Personal protective equipment

7	Failure to adhere to label recommendations and restrictions: Use of pesticides on crops and other sites for which they are not authorised	Wind speed
8	Failure to adhere to label recommendations and restrictions: Incorrect timing of pre-harvest intervals Unsafe storage (unlocked, contaminate food/feed, etc.) Improper filling or cleaning of sprayer equipment	Use of unregistered products
9	Improper disposal of product and/or containers Soil type/depth to ground water Other label directions	Improper disposal of product and/or containers
10	Failure to adhere to label recommendations and restrictions: Exceeding the number of applications allowed per season	Failure to adhere to label recommendations and restrictions: Use of pesticides on crops and other sites for which they are not authorised
11		Permit violation (extra conditions not met aside from on the label)
12		Failure to adhere to label recommendations and restrictions: Incorrect timing of pre-harvest intervals Improper filling or cleaning of sprayer equipment
13		Failure to adhere to label recommendations and restrictions: - Use of incorrect dose - Exceeding the number of applications allowed per season
14		Unsafe transport (unlocked, contaminate food/feed, etc.)
15		Soil type/depth to ground water Other label directions

¹ The ranking assigned to each type of non-compliance was determined from results of the May 2006 Survey on Pesticides User Compliance.

High = Ranked 1st – 3rd

Medium = Ranked 4th – 6th

Low = Ranked 7th – 9th

Negligible = Ranked 10th or higher

² N/A: type of non-compliance not included in the questionnaire

39. The group agreed that the lists of non-compliance identified during the March 2003 Compliance Seminar and those identified in the May 2006 Survey covered most types of non-compliance. Some modifications to Table 1 were suggested and are described below:

- For the following type of non-compliance “Failure to adhere to label recommendations and restrictions: Use of pesticides on crops and other sites for which they are not authorized”, it was suggested to separate ‘use on crop’ and ‘non-agricultural site’.
- Ambiguity of the term “Obsolete products”. A clear distinction should be made between products that are never expected to return to the marketplace versus those that may temporarily have this status.
- “Unlicensed / Improper licensed applicator” can be misleading. Some may refer to an apparatus as opposed to an individual worker. A better term should be “certified user”.
- Redefining the ranking terminology. Reference to ‘negligible’ should be replaced with ‘very low’.
- Types of non-compliance to be added:
 - counterfeit products,
 - failure to comply with spray technology requirements

40. It was noted that some of the listed types of non-compliance may further lead to secondary non-compliance e.g., use of unapproved product can lead to non-compliance with MRLs. It was also noted that deliberate decisions to not comply are made based on a ‘calculated risk’.

41. During the discussion, the issue of buffer zone was raised. According to the May 2006 survey results, this issue was ranked 1st and 3rd by users and regulators respectively. It remains unclear the exact nature of the challenge and therefore how best to address it. It was agreed that this is a highly technical subject for users and regulators since many factors can affect the level of compliance e.g., can be a result of technology, knowledge, etc... Some incentives may be available e.g., specific criteria that permit reduced buffer zones. In some countries, industry sponsors sprayer calibration clinics to help growers/farmers accurately apply their product. Moreover, Germany has programme for certification of applicator equipment that must be renewed every two years.

4.2 Key criteria to assess risk of the non-compliance incident

42. As a result of the plenary discussions that were held after the group reported out to the workshop participants, it became evident that clarifications were needed in the following three areas: i) Probability of non-compliance, ii) Risk from known or suspected non-compliance, and iii) reacting to situations of non-compliance. These areas are addressed in sections 4.2, 4.3, and 4.4.

43. The document published by the OECD in 2000 entitled the Reducing the Risk of Policy Failure, identified factors that contributed to the probability or likelihood of non-compliance occurring. These factors were narrowed down into three categories:

- Willingness e.g., economic priorities/habits
- Ability/capacity e.g., absence of needed pesticide products, unrealistic label requirements
- Knowledge e.g., level of outreach and training

44. The impact resulting from an incident of non-compliance is characterized by taking into account the effects on:

- Human Health
- Environment
- Regulatory Integrity (respect for the rule of law)
 - Public confidence in the regulation of pesticides
 - Respect for compliance and of the regulatory framework in which pesticides are regulated
 - Policy failure e.g. increase in the number of repeat violators

4.3 Approach to assess the risk from non-compliance

45. The level of risk from known or suspected non-compliance is commonly defined as follows:

$$\begin{aligned} \text{Risk} &= \text{Hazard} \times \text{Exposure} \\ &\text{or} \\ \text{Risk} &= \text{Impact} \times \text{Probability or Likelihood of Impact} \end{aligned}$$

46. Please refer to Figure 1 for a depiction the various levels of risk.

4.4 Responses to situations of non-compliance

47. When reacting to situations of non-compliance, one must consider the whole spectrum of available tools or types of responses (i.e. soft to more punitive) and choose the most appropriate action.

48. The response should:

- be based on the level of risk,
- be the most cost effective for the situation, and
- achieve the desired outcome e.g. change of user attitude or behavior.

49. There was agreement among regulators within the group that discretion and judgment are frequently used during inspections resulting from situations of known or suspected non-compliance.

50. Although the May 2006 survey results indicated that standard models were not available, it was generally accepted that other compliance and enforcement practitioners use risk management principles e.g., traffic police officers. Monitoring and enforcing automobile speeding violations under different situations such as the location of infraction (school zone or highway), the time of day, and road conditions. Guidance from a risk management model could provide some transparency on how compliance & enforcement decisions are taken and an approach for consistency thereby establishing a level playing field.

4.5 Application of approach in test scenario

51. The group chose the following scenario to run through the proposed risk management approach to assess the associated level of risk.

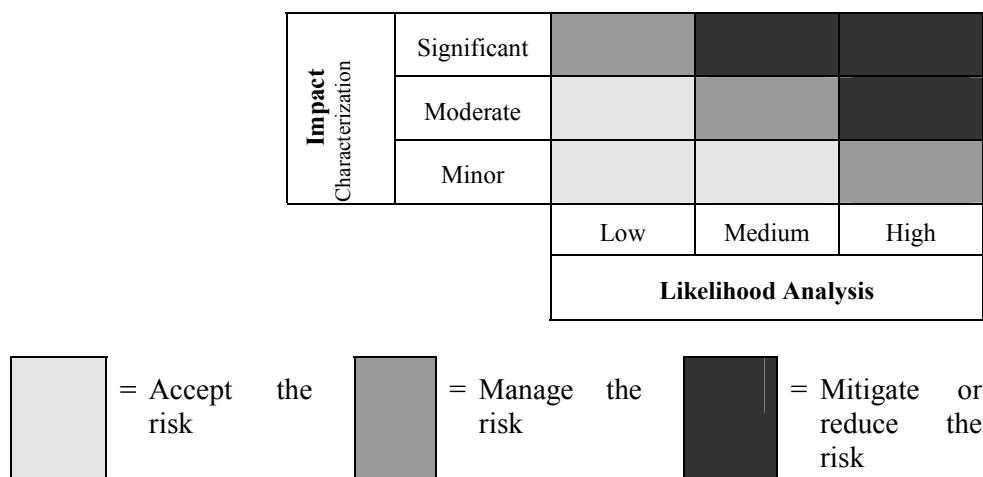
Scenario: A specific pesticide is no longer available for use by farmers and there is the potential that another product is being used that is not labeled for this use.

- Assumptions:
 - product is registered under the same legislation
 - same general category of uses
 - both pesticide products are herbicides (Broad Leaf Weed)
 - active ingredient does not the same chemistry
 - crops: registered for use on wheat , used on barley

Table 2: Risk Analysis

What could go wrong?	The likelihood of an impact if the event occurred (low, medium, high)	Impact if the event occurred (minor, moderate, significant)
Crop damaged	low	moderate
Illegal residues	medium	moderate-significant
Possible user exposure	low	minor
Adverse effects on the environment	low - med: (depends on the nature of the chemical)	minor
Use at an incorrect application rate (dose, frequency, interval, etc...)	low (crops are similar)	uncertain
Resistance management	low	minor
Impact/compromise of public confidence (regulatory integrity)	medium	minor

Figure 1: Level of Risk and Corresponding Risk Tolerance



52. The group reviewed the described situation and determined that a risk management approach seemed to have validity in conducting a rudimentary assessment of risk and in selecting from a broad category, what risk management options would be appropriate. Figure 1 was distributed as a visual aid during breakout discussions

5. Comments from plenary session

- If the risk is low then why does the legislation exist in the first place?
- It would helpful for users to know the relative importance of label information e.g., strong requirements versus weak requirements.
- Current labels are relatively rigid with respect to the use of a product often restricting growers. Labels should be more flexible to meet the needs growers. E.g. growers can often achieve the same results with a reduced dosage thereby conserving financial resources.
- Some action is always required in response to violations. For a number of reasons some participants, considered “no action” as not being an acceptable approach.
- Intelligence gathering is important part of informing decisions
- Table 1 ranks common types of non-compliance by frequency of occurrence. This does not necessarily reflect the severity of such non-compliant incidents.
- Benefits of having a Compliance Policy:
 - Transparency
 - Provides a basis for consistency
 - Creates a level playing field
 - Helps in focusing efforts and resources

6. Conclusions

- In all cases, an action should be taken in response to situations where non compliance is detected.
- Risk based principles can be helpful in determining the level of risk associated with the incident and how to manage the risk.
- In order to use risk-based principles, it is important to have sufficient information, but that does not mean that there is a need for complete information.
- The use of risk management principles can further lead to a list of possible options for response.
- The nature of the response should take into consideration the level of risk.

7. Recommendation

- Further collaboration among OECD member states (includes rule makers and inspectors) to develop a risk management approach to situations of non-compliance, including consultation with user groups and pesticide industry, third party inspectors.

8. References

OECD, Reducing the Risk of Policy Failure: Challenges for Regulatory Compliance, 2000, p.11

OECD, Series on Pesticides Number 24. Report of the OECD Pesticide Risk Reduction Steering Group Seminar on Compliance and Risk Reduction, Paris March 2003, p. 10-11

OECD, Survey Results on Pesticides User Compliance, preliminary report May 2006, p.14

FAO Code of Conduct, June 2006, p.10 Sections 2.6 and 2.7

REPORT ON BREAKOUT GROUP NO.2

1. Overall objective

53. Using the list of common types of non-compliance (from Objective 1), develop ideas on how acceptable levels of knowledge and understanding can be achieved for pesticide users. Particular emphasis should be given to achieving compliance with information on pesticide labels and terms and conditions of registration.

2. Participants

54. Karin Corsten (chair), Shawn Fancy (rapporteur), Birte Evers-Mersch, Lorna Poff, Marit Skuterud, Andy Hawkins, John Overgaard.

3. Summary of discussions

Part A

Provision of information to users, how to achieve compliance

- The answers of the users and regulators questionnaire provided information about existing approaches to help ensure pesticide users receive necessary information related to compliance. Which of the communication strategies and approaches listed in Table A are useful to achieve an acceptable level of knowledge and understanding for users? Rank the strategies based on their effectiveness of reaching a broad target audience.

Table A: Communication strategies to provide knowledge and understanding to users

No	Communication strategy/approach	Useful to achieve user compliance?	Rank
1	Newsletters	If part of association, what is the source of information? Useful for automatic regular updates. Must come out at right time, speaking in terms of the grower for their specific situation/commodity, on the point, coming through the association.	7
2	Meetings	Grower meetings are good in the off season, face to face, but time consuming. Chance to ask questions and interact. More likely to have various groups attending a meeting (industry, growers, regulators). Rely on notes taken. Could require several meetings throughout the country.	
3	Mailing (post)	Difficult to obtain list of growers. Can consult certified grower lists. Could be sent by vendor at point of sale. Good reference material.	
4	Newspaper, radio, magazines	Expensive, but good when farmers are in the field (busy). Target local newspapers. Could reach a large audience.	
5	Trade shows, vendors, demos	Good for those who attend. Can be costly. Relevant to the user. May not be timely.	

6	<i>Step-wise approach (Training/ education, inspection/ control, warning, prosecution)</i>	Important to show grower a stepwise approach if don't comply with registered product use. Can easily spread by word of mouth. Posting of violation details in paper is a big deterrent. Costly. Inspection control programmes based on risk assessment.	2
7	Regularly Education/Training	Focus on training and education to make growers aware of their responsibilities, going back every few years to maintain user expertise. Proactive. Some countries require that growers to be trained.	3
8	Farm visits during application	Useful for extension staff/crop specialists/farm advisory workers.	
9	End-market knowledge – creating awareness on potential risks of misusing (outcome)	Explaining risks to promote compliance. Need to identify how to communicate this message. (Linked to 7)	3
10	Clear information on the label (different languages)	Most important as reaches all users. Issues with English as a Second Language (ESL). If information is clear, concise and understood compliance will be improved.	1
11a	Website (government)	Good for making labels available, list of registered products and appropriate uses/restrictions available.	
11b	Website (other)	Valuable, but can be unreliable depending on the source of the information, knowledge, date, biases (may not get complete picture).	
12	Maintain records	Inspection of spray records that can be reviewed with the farmer. Needed for buffer zone discussions.	6
13	Stewardship programme	Very important. Costly for industry, but useful in dealing with a specific challenge.	5
14	Farm advisory system (newsletters, visits)	Farmers pay for the service and trust the system. 90% of farmers use this system in Denmark. Advice generally makes economic sense in addition to encourage safe practices. Establishes farm plans with regular farm visits. Privately run. Provides similar advice to crop specialists/extension staff. Would require records to be kept.	4
15	Computer Programmes (Maps, GIS, Modelling)	Additional assistance that can be provided to assist compliance, safety economics.	
16	Telephone	Very specific, time consuming. Good for smaller groups.	
17	Info sheets, Bulletins	Beneficial in providing key facts. Short and easy to read.	
18	TV	Very specific, would have to be a serious problem.	
19	Professional speaker (Doctor)	Useful for when training or advice on health and safety is being given	
20	Call line	Interactive and deals directly with the farmers issue, but costly	

* derived from the answers of the user and regulators questionnaire (see "Survey results on pesticides user compliance", May 2006, page 11-16)

55. Table A lists different mediums to provide information to users. Communication strategies in italics are more complex approaches using a variety of elements listed in Table A.

56. Regular communication is needed because user requirements/practices are not static. There are many parties involved in the communication process (very complex). Therefore, there is a need to use a communication network to ensure as many users as possible get the required information (regulatory authorities, grower groups, advisory services, industry, educators). Dialogue must be a two way process between users/regulators/industry. A feedback mechanism is important to avoid lack of information. It is important for the authorities to know how products are being used or how users would like to use them. (Regulation should be consistent with best management practices).

57. Different communication strategies should be combined, the selection depending on the situation. It should be noted that information is not always reliable and current depending on the source. Table A provides an overview of some of the most useful strategies. Ranking was attempted based on the ability to reach the target audience, the cost of the strategy and the reliability of the information.

2. *Do you know further communication strategies and approaches to help ensure pesticide users receive necessary information related to compliance?*
3. *Before the workshop several types of non compliance were identified from the answers of the user and regulator questionnaires. A list is given in Table B. Do you have suggestions, what communication strategies and approaches should be used to improve knowledge and understanding for the different types of non-compliance?*

Table B: Specific communication strategies for different types of non compliance

Type of non-compliance	Communication strategy/approach (question 3)	Provision by (question 4, 5 and 6)		
		regulators	regulators in partnership with others	others independent* from regulators
Most frequent problems identified by users and/or regulators**:				
		should be	should be	should be
Failure to use only approved products	6,7, 10,14 Communication is not sufficient, e.g. linked to availability of pesticides for minor crop use	6,7,10	6, 7, 14	14
Unregistered use of a registered product	6,7, 10,14 Communication is not sufficient, e.g. linked to availability of pesticides for minor crop use	6,7,10	6, 7, 14	14
Use of imported products that are not authorised	6,7, 10,14 Communication is not sufficient, e.g. linked to availability of pesticides for minor crop use	6,7,10	6, 7, 14	14
Label - buffer (water...)	6,7, 10, 12, 14 Communication is not enough, availability to pesticides, giving incentives (no residues, no env/health risks) Considering payment for lands not used near waterways (Incentive) Promotion of sustainable environmental practice, farm concepts. Computer programmes inputting nozzle and product info	6,7,10, 12	6, 7, 12, 14	1214

	to give buffer zone (purchase).			
- personal protective equipment	5, 6,7, 10,13, giving scientific basis for using personal protective equipment.	6,7,10	6,7,13	5
- drift	6,7, 10,14 Communication is not enough			
- rate of application (dose)	6,7, 10,14 Communication is not enough,			
Stocking of obsolete pesticides	6,7, 13			
Unlicensed/improper licensed applicator	6,8			

*independent meaning have the information already provided by regulators and can implement without further regulatory consultation.

**derived from the answers of the regulator and user questionnaires (see "Survey results on pesticides user compliance", May 2006, page 13)

4.
 - a) Which strategies in Table B are provided by regulators? **Only dealt with "should be"**.
 - b) Which strategies in Table B should be provided by regulators?

5.
 - a) Which strategies in Table B are provided by regulators in partnership with private and voluntary sectors? **Only dealt with "should be"**
 - b) Which strategies in Table B should be provided by regulators in partnership with private and voluntary sectors?

6.
 - a) Which strategies in Table B are provided by the private and voluntary sectors independently from regulators? **Only dealt with "should be"**
 - b) Which strategies in Table B should be provided by the private and voluntary sectors independently from regulators? Be sure to consider how satisfactory and objective the information provided would be if proposed independently from regulators?

Cannot be sure info from industry is objective, but will have specific product related info.

58. From Table B it can be seen a combination of communication strategies is necessary in improving users understanding and knowledge of compliance problems. Information should originate from the authorities to guarantee reliability. Additionally other parties should be involved who have direct contact with the user on a regular/timely basis and consider specific user needs.

59. Farmer incentives are useful in communication strategies as ways to achieve awareness/compliance.

PART B*Examples of knowledge transfer mechanisms to encourage compliance*

7. *In order to determine if the information provided is understood by the intended audience, what mechanisms are in place to verify this? In the questionnaire a list about the power of authorities was given, comprised mainly of transfer mechanisms on how to encourage user compliance. Please add to the list in Table C, any additional mechanisms to encourage user compliance. Which mechanisms are helpful to increase compliance?*

Table C: Examples of knowledge transfer mechanisms to encourage user compliance

Mechanism to encourage compliance	Helpful to increase compliance? (○, +, ++)	Comments
Authorities/Regulators		
Compliance promotion ++*#	++	(Education) To tell why to do something and how. Proactive, one part of a stepwise approach.
Warning ++*	+	Used where the user is not aware of non-compliance. Useful for individuals.
Inspection ++*	++	Creates awareness, shows regulators are looking
Investigation (suspect wrongdoing) ++*	+	Creates awareness, shows regulators are looking, or others informing on, wrongdoing.
Compliance agreement ++*	+	Explanation.
Reduce/recall of financial grants ○*	++	European situation.
Detention/seizure ○*	+	
Fines ++*	+	Depends on the dollar value
Prosecution ○*	+	Resource intensive, may be only way to get compliance from unwilling users
Revoke permit/licence/certification ++*#	++	Effective if grower needs certification to apply pesticides. Must hire someone to apply products instead.
Re-certification /license renewal	+	Every 5 years eg.
Stop advertising ○*	0	Not relevant
Stop import ○*	0	Not feasible
Stop use ○*	+	Can be a measure used by authorities and be very effective if the entire product is removed from availability (based on risk assessment)

* derived from the answers of the user questionnaire (see "Survey results on pesticides user compliance", May 2006, page 9)

derived from the answers of the user and regulators questionnaire (see "Survey results on pesticides user compliance", May 2006, page 15-16)

60. A stepwise approach should be used by the authorities to encourage user compliance. This starts with training progresses into inspections and can end in prosecutions. Table D gives an overview of the available mechanisms. In addition to the governmental actions the group has noted additional third party effective mechanisms.

9. *What knowledge transfer mechanisms can be used by organisations other than regulators, e. g. self-control (inspections) by grower organisations, analysis of residues in food?*

Table D: Examples of knowledge transfer mechanisms to encourage user compliance (others)

<i>Mechanism to encourage compliance</i>	<i>Helpful to increase compliance? (O, +, ++)</i>	<i>Comments</i>
<i>Others - please specify</i>		
<i>Self monitoring</i>	++	
<i>Duty to maintain records</i>	+	
<i>Contracts (users and retailers or industry)</i>	++	<i>Economic benefit</i>
<i>Farm management decision support systems</i>	++	<i>buffer zone advice, selection of pesticides.....</i>
<i>Stewardship and other programmes</i>	++	<i>Various groups working with growers to promote best practices.</i>

4. Additional issues raised during the session

61. Breakout group No 2 went through the current FAO Code of Conduct and discussed the Ten Core Principles of Compliance and Enforcement and the Eight Building Blocks for Programme Implementation. The group fully agreed with all the steps suggested by FAO. They are very helpful in achieving user compliance and should be considered within the OECD activities.

Ten core principles of compliance and enforcement

1. Full and Continuous Compliance as the Goal
2. Culture of Compliance
3. Clear and Well understood Requirements
4. Expectation of Self-initiated Compliance
5. Likelihood of Detection of Violations (some violations hard to detect)
6. Fair and Predictable Government Response
7. Level Playing Field
8. Message Sending and Deterrence
9. Comparable Treatment for Public and Private Sectors
10. Transparency and Accountability

Eight building blocks for programme implementation:

1. Clarifying roles and responsibilities
2. Creating enforceable requirements
3. Knowing and understanding regulated entities
4. Planning and setting priorities
5. Promoting and setting priorities
6. Monitoring compliance
7. Responding to violations
8. Evaluating programme success

62. Need extension services (govt paid) advisory groups (often private).

5. Conclusions:

- Need a variety of communication strategies
- There are a number of parties involved in the communication process.
- All parties must deliver clear and reliable information.
- To achieve this aim a communication network must be established.
- Regulators must be the source of information being fed to other parties.
- Need interactive communication between all parties involved.
- Different types of non-compliance need different communication strategies.
- Useful to have a 2 prong Compliance and Enforcement System- Mandatory system (stepwise approach) and Voluntary system (stewardship programmes). Stepwise approach is best for governmental system.
- Support core principles and building blocks of the Guideline on compliance and enforcement of a pesticide regulatory programme based on the FAO Code of Conduct.

6. Recommendations:

- OECD should consider compiling and analysing Compliance and Enforcement systems of the OECD countries should develop an effective practice that can be applied in different countries
- OECD member countries should establish and improve communication networks (regulatory authorities, grower groups, advisory services, industry, educators) in their country

REPORT ON BREAKOUT GROUP NO.3

1. Overall objective

63. To develop proposals on how regulators and the user community could modify the regulatory process to avoid unrealistic or very difficult approval conditions

- to help to ensure that users have the ability to comply
- seeking to improve regulatory processes and infrastructure

64. The main focus of the Breakout group was compliance with label instructions of registered products. However, the break-out group raised concerns over the larger issues of user compliance with non-label requirements and this was discussed during the break-out group.

2. Expected results from consideration of the objective

65. A proposal for possible modifications to the regulatory process that would take into adequate consideration pesticides users' **ability** to comply

3. Participants

66. Keith Jones (chair); Tim Dyke (rapporteur); Barbara Delorme (rapporteur); Lene Gravesen, Warren Hughes, Carmen Dwyer, Nielda Sterkenberg, Anne Lindsay

4. Introductory comments

67. Regulators may not always be fully aware of user habits and economic priorities that create impediments to compliance with legislation or regulatory decisions. In addition, pesticide approval conditions may not be realistic, in that they may include conservative instructions for unusual but worst-case scenarios. Effective communication is fundamentally important between regulators and regulated community to obtain expected results ie safe and proper use of pesticides. Questions were raised about what feedback mechanisms exist to assist in evaluation of feasibility of complying, what can be improved, how and by whom?

68. In order to comply, users need to know how to comply, be able to comply and be willing to comply (OECD 2000).

69. Issues related to these basic compliance principles are:

- Know how to comply
 - Users must understand how to follow a label instruction
- Able to comply
 - Label instructions must be practical, not ambiguous, and as simple as possible
- Willing to comply
 - Users will not simply comply because labels are easy to read and interpret.
 - Compliance may be assisted if users understand why legislation is in place and what is behind it and understand data assessment behind a label
 - Users should see benefits of complying
 - Noted that deliberate or conscious non-compliance can occur eg use for an unapproved pest (that may be driven by farm economics when no approvals are available)

70. Relevant to this objective, participants in the introductory plenary session to the workshop raised the issues of

- developing mechanisms to encourage a culture of compliance amongst users of pesticides
- the need for a balance between encouraging compliance and using enforcement
- the need for regulation versus incentives or voluntary actions in order to encourage compliance

5. Summary of Discussions

71. The break-out group addressed the objective by answering a set of questions.

1. How can regulators and users communicate better as to what is or should be on a label?

72. Regulators and users can better communicate during the label approval process, and when changes are being proposed or made to approved labels. In addition regulators and users can interact more in consideration of general label issues that may include label format and content. During the label approval process, regulators could liaise with users on the practical application of proposed label instructions and the options that may exist, should proposed label instructions be seen to be impractical or not consistent with good agricultural practice (GAP). Registrants could also involve users in initial label development. When changes are made to approved labels, users should be provided with obvious, clear advice on what changes have occurred.

When legislation regarding user compliance is being developed

- early front-end involvement of users in development of legislation
- not only through user associations
- users need to see benefits of legislation including the ability to sell crops at the same times as reducing worker danger; also aspects of social responsibility
- greater chance of buy-in by users if involved early

For legislation already in place

- training should focus on reasons behind legislation and benefits of legislation (and compliance) as well as ‘what’ to comply with
- possible role for user certification after successful training
- standardised competencies – linked to training and testing packages

1.1. What improvements can be made to general label format for ease of reading, understanding and pesticide use according to label instructions?

73. A standardized label format could be developed, preferably at an international level and involving regulators, registrant and user associations and other non-government organisations, in order to ensure that mandatory user requirements are clearly and consistently placed on certain parts of a label and that discretionary statements are identified as such or separated. It was noted that the implementation of

74. Globally Harmonized System for Classification and Labelling would enable application of hazard symbols to labels.

1.2. *What improvements can be made to labels for specific product groups or user groups?*

75. It was considered that certain types of information could be moved off product labels and available by other means. Further, regulators could recognise the distinction between labels available for professional users, compared to amateur users. This would allow different labels to be developed for different user groups.

2. *How can regulators (or user groups, registrants or others) better educate users on labels and the important user information contained on labels?*

76. This was also addressed under Objective 2 of the workshop. Education should be a multi-stakeholder approach with input from regulators, registrants and user groups.

77. Whilst specific mechanisms were not discussed under this objective, training and certification was seen to be a useful avenue to increase the knowledge and commitment of users to comply with labels.

3. *What factors need to be considered in order for important instructions on labels to be clear to a user without instructions being too simple, or too prescriptive?*

3.1. *Should different labels be developed for different user groups (e.g. professionals vs. occasional or amateur users)?*

78. See 1.1. To avoid or reduce inadvertent use in inappropriate situations, uses should be separated as much as possible on labels and consideration be given for specific products to be registered for specific uses by different groups of users.

3.2. *How can a regulator balance the need for warnings for safe use with a desire to not complicate the label with warnings for many different and possibly unlikely use scenarios?*

79. Regulators could consult with registrants and users to develop alternatives to the label attached to a product being the only tool by which users are provided essential product information. Whilst an essential amount of information would be required on the label attached to product, it should be possible for regulators to develop alternative means of providing information to users on important information. Such information may indeed include mandatory requirements but may more appropriately be on specific details only relevant to distinct regions or advisory information that users may find helpful in achieving compliance.

4. *Are there alternatives to labels (or supplementary activities) that would still achieve safe and effective pesticide use? If yes, what are the alternatives?*

4.1. *What is the role for user documents such as codes of practice that supplement legal instruments such as labels?*

80. There is a role for documents available to users that supplement legal instruments such as labels. The role is somewhat related to 3.2, and should be a focus for further consideration by regulators.

4.2. What role should accreditation or licensing of users play to supplement use according to label directions?

81. More often than not, label instructions on pesticide products are written in such a way that assumes certain levels of knowledge, depending on the product. (i.e. the ability to calibrate machinery to ensure adequate distribution of pesticides). Given this, pesticide users should have a level of training that is appropriate to the product and its use pattern. It is common practice for professionals using potentially dangerous chemicals to be trained and licensed in some form. While *ad hoc* training may provide such training, regulators should consider assessing the feasibility of training programmes that lead to some form of licensing, accreditation or certification of pesticide users – so that only accredited users can use certain products. This would be most effective if competencies were developed and training and testing was based on such competencies.

4.3. How would such alternatives alter the way labels are formatted or used as a legal instrument?

82. See 3.2. The Workshop felt that various information systems could provide mechanisms by which pesticide users could have immediate and up-to-date information on instructions to use specific pesticides, thereby reducing the need for complex labels. Whilst the web provides a ready-to-use mechanism, there was concern that accessibility issues by all pesticide users would need to be addressed. Any such mechanisms that were developed would need to be referenced on the label in an appropriate form.

6. Summary of conclusions

83. All groups should try and create a culture of compliance and proposals from this workshop are aimed to facilitate this.

84. In order to help to ensure that users have the ability to, and are willing to, comply, the Workshop developed proposals on how regulators, registrants and the user community could modify the processes to avoid unrealistic or very difficult approval conditions. The main focus was compliance with label instructions of registered products however the Workshop considered other non-label user requirements. Processes to improve include training and education, label approval, and user consultation.

85. These aim to improve dialogue between regulators, registrants and users to aid understanding of the basis behind the regulation/ legislation, how to comply and the benefits of compliance.

86. The development of clear, easy-to-understand labels coupled to access and reference to additional non-label information was regarded as a useful tool to help enable the user to be informed of, and comply with, regulatory requirements.

7. Recommendations addressing to governments, to industry, to general users, and to the OECD

87. As an over-arching recommendation - Regulators and registrants should try to create a culture of compliance amongst pesticide users so that it is simple to understand how to use pesticides ‘the right way’

1. Mechanisms should be established to facilitate better communication between regulators and users
2. Governments should ensure that legislation should enable the regulator to make appropriate risk management decisions
3. Regulators should consider not approving uses that have a high risk of non-compliance or if use does not follow good agricultural practice; consider alternative regulatory approaches that may be person-limited or time-limited

4. Regulators should explore behavioural reasons behind non-compliance; tools to promote compliance should be appropriate for the behaviour.
5. Regulators, registrants and user groups should communicate the benefits of compliance (economic e.g. reduced environmental subsidies if a violation of certain regulations, market access, as well as environmental and social benefits)
6. Regulators, registrants and user groups should ensure that any documents separate to the label and used by growers are consistent with the registered/approved label
7. Regulators, registrants and user groups should explore the feasibility of user training and certification to ensure certain level of knowledge appropriate for the use conditions
8. Regulators should explore mechanisms to involve users/stakeholders in the development of non-label user requirements. These may include regulations, legislation etc.
9. OECD should explore standardisation of labels and engage in a co-ordinated approach with other organisations such as FAO
10. Regulators, registrants and user groups should explore the use of website links, 1-800 phone numbers and other resources as source of supplementary information to the label. Supplementary information may include mandatory requirements, local restrictions or additional guidance
11. Regulators, registrants and user groups should explore mechanisms to simply communicate major use changes to compliance requirements and/or labels
12. Regulators and registrants should explore the need for separate major use requirements (e.g. domestic vs agricultural) on the label, into two separate labels or as different registered products
13. Regulators and registrants need to consider label updates over time to adapt to current agricultural practices and technology.

8. References

OECD Survey Results on Pesticides User Compliance, preliminary report, May 2006.

OECD Second Risk Reduction Survey: Draft final report 18th Meeting of the Working Group on Pesticides, June 2005

OECD Report of Seminar on Risk Reduction through Good Pesticide Labelling, June 2005

OECD Series on Pesticides Number 24. Report of the OECD Pesticide Risk Reduction Steering Group Seminar on Compliance and Risk Reduction, March 2003

Health and Safety Executive, Contract Research Report 390/2001. The Effectiveness of Labelling of Pesticides, http://www.hse.gov.uk/research/crr_pdf/2001/crr01390.pdf

Reducing the risk of policy failure: Challenges for Regulatory Compliance, OECD 2000

REPORT ON BREAKOUT GROUP NO.4

1. Overall objective

88. To discuss and develop approaches to measure the effectiveness of compliance programmes in achieving risk reduction objectives using a logic model. The product of the break out group will be 1-2 logic models. The logic model developed by this group can be used as an example for OECD member countries.

2. Participants

89. Peter MacLeod (chair), David Stangel (rapporteur), Daniel Helfgott (rapporteur), Samia Hirani (rapporteur), Julie Marcil (rapporteur), Craig Hunter, Kate Perry, Michael Stahl, Kim Kennedy, Jeff Parsons, Wolfgang Zornbach, Jeong Won Park, Anne Lindsay

3. Introduction

90. A logic model graphically depicts the relationships between the resources invested, activities undertaken, and the results of those activities. For purposes of identifying meaningful measures, the logic model can help determine which programme and outcomes need to be measured.

91. During the breakout group discussions, an example of a logic model was developed.

Part A: Guidance for creating a logic model

Part B: Example of a logic model

Part C: Assumptions and Limitations in creating a logic model

Part D: Discussion

Part E: Recommendations/Conclusions

4. Guidance for creating a logic model:

1. Clarify key terms within logic model (i.e. outcomes, output, input, etc...)
2. Develop a list of assumptions surrounding the final outcomes and measures as you create the logic model
3. Start from a blank model and work right to left, filling in the fields in the following order:
 - a. Final outcomes (i.e. desirable result)
 - b. Intermediate outcomes (i.e. behavioral change)
 - c. Immediate/short-term outcomes (optional)
 - d. Output (i.e. activities)
 - e. Inputs (i.e. resources)
4. Use a facilitator with experience in developing logic models
5. Brainstorm ideas within a group of stake holders (ie regulator, compliance practitioner, user, industry) with a working knowledge of the issue
6. Receive buy-in from the parties involved
7. Populate the template with key outputs, intermediate and final outcomes, then add measurement criteria last.
 - a. Link outputs to outcomes
8. Evaluate potential measures developed for the logic model through a selection criteria to see if they can be feasibly implemented
 - a. Selection Criteria (See Table A, Selection Criteria).

9. Determine whether or not the selected activity is feasible:
 - a. Determine whether sufficient resources are available to accomplish the goal or whether a lower target is preferable
10. Acknowledge the limitations of the logic model (See Part C)
11. Leave room for progressive behavior target improvements. This can be addressed by keeping the outcome goal consistent over time and using graduated targets, as determined by the measures selected.
12. Logic models are a management tool to evaluate whether expected outcomes are being achieved over time. Therefore, logic models need to be reviewed and revalidated on an ongoing basis to determine if the expected outcomes are continually being achieved (based on measures). If these outcomes are not or no longer being achieved, then a decision needs to be made whether to increase the level of outputs or change/add new outputs.

Table A, Selection Criteria

Relevant	Is relevant to goals, objectives, priorities of programme and external stakeholders
Transparent	Promotes understanding, enlightens users about programme performance
Credible	Is based on complete and accurate data
Functional	Encourages programmes and personnel to engage in effective, constructive behavior, activities
Feasible	The cost of implementing and maintaining the measure does not outweigh its value to programme
Comprehensive	Addresses the important operational aspects of programme performance

5. Logic Model Example

<u>INPUTS</u>	<u>OUTPUTS</u>	<u>INTERMEDIATE OUTCOMES</u>	<u>FINAL OUTCOMES</u>
Resources	Activities	Behavior Change	Environmental Impact
Staff	9. Training and certification of users (as measured by number trained and certified).	Users comply with label requirements for: buffer zones, reduced application rates, application technology, storage technology, storage and disposal requirements. As Measured By: - compliance rate- ?numerator/ ?denominator, - reduction in number and severity of violations, - % of inspections that ID violations of WQ protection label statements, Recidivism.	Maintain or improve water quality in order to protect the aquatic environment and human health. As measured by: - Systematic water monitoring. - Reduction in fishkills. - Increase of aquatic species population. - Reduction in residue levels in fish or other aquatic species. - Reduction in watershed exceedences.

<u>INPUTS</u> Resources	<u>OUTPUTS</u> Activities	<u>INTERMEDIATE OUTCOMES</u> Behavior Change	<u>FINAL OUTCOMES</u> Environmental Impact
Budget	<p>10. Targeted user and field inspections/compliance monitoring.</p> <p>11.</p> <p>12. - As Measured By: (# of inspections over x period of time by inspection type)</p> <p>13. Enforcement actions (# of enforcement actions over x period of time by type)</p> <p>14. Training of inspectors and other assistance providers (extension offices, state/tribal/provincial). (number or percentage of inspectors/providers trained or # of workshops)</p> <p>15. User support systems (compliance assistance/promotion: info sessions, public outreach, extension. Stewardship) As measured by hits on website, user training sessions, # of people attending sessions, # brochures distributed,</p> <p>16. Water monitoring (#sites monitored, stream miles monitored, # of samples taken).</p> <p>17. Formulation of BMPs (# of multi-stakeholder workshops, # BMPs developed, storage and disposal).</p> <p>18. Surveys of use practices.</p> <p>19. Either monetary or gold star incentive programmes for following BMPs.</p> <p>20. Early or continued access to new tools for high compliance.</p> <p>21. Programme of self-audits by the regulated entity to</p>	<p>Reduce use of unregistered products or uses, or canceled products.</p> <ul style="list-style-type: none"> - As measured by above measures, PLUS - reduced number of incidents involving unregistered products (data may be difficult to get). <p>Use of more water friendly registered alternatives.</p> <ul style="list-style-type: none"> - As measured by sales statistics, and imports, monitoring of residues on food (e.g., PDP data in US). <p>Reduction in Stop Sales due to WQ concerns.</p> <p>Reduction in use (sales?) of unregistered pesticides.</p> <ul style="list-style-type: none"> - As measured by ???? <p>Implementation of bmeps.</p> <ul style="list-style-type: none"> - As measured by # of survey response indicating adoption of BMPs. <p>THEREFORE: Reduce risk of water contamination from use of pesticide (ground water). Reduce risk of water contamination from use of pesticide (surface water).</p>	<ul style="list-style-type: none"> - Reduction in water/fish advisories.

<u>INPUTS</u>	<u>OUTPUTS</u>	<u>INTERMEDIATE OUTCOMES</u>	<u>FINAL OUTCOMES</u>
Resources	Activities	Behavior Change	Environmental Impact
	identify problems areas of noncompliance and allow establishment of a prioritized compliance plan within a finite period of time. (# of audits performed and # of compliance plans)		

6. Assumptions and Limitations

1. People will comply given knowledge and ability if the consequences are sufficient to deter noncompliance.
 - a. knowledge understood by all
2. Data is accessible and available
3. Regulations and requirements should be clear and understandable
4. Ensure tools (i.e., BMP's, training programmes, surveys) are developed and available to parties
5. A completed logic model may not be transferable from:
 - a. one outcome to another
 - b. one geographic location to another
 - c. one political framework or legislative mandate
6. There may be other factors that influence the final outcome

7. Discussion

1. Communication

Explain the process of the logic model, deliver the results and then propose an implementation plan.
2. Other Models for Measurement

There are other models which can be used to develop measures. The BOG was not able to evaluate these alternatives.

92. The logic model was found to be a good communication tool to describe and outline regulatory activities. Not only is it very visual, but it also outlines both the input and output section of activities description and their associated outcomes. The latter, which are too often poorly described or understood, are a very important part in determining if the chosen activities or outputs produce the appropriate results or should be modified. With the limited resources and the increase transparency of government organizations, they are held accountable for their actions which must be justifiable to their directors, stakeholders or the general public. The logic model makes a direct link between input, output, intermediate outcomes, and eventually final outcomes and can be use to justify budget requirement and how the different resources will be use to create the expected outcomes. By measuring and reporting the intermediate and final outcomes, the logic model can also be use to communicate the results and impacts of regulatory activities to the stakeholders and the public. Other model or modifications of the current logic model could also be use to outline and measure the outcome of regulatory activities. Alternative to the current model could be as simple as adding an "immediate" or "short term outcomes" column. This may help to directly link output to outcomes. In the short period of time that our breakout group had to develop the logic model, we were not able to evaluate other alternatives to the logic model.

8. Recommendations/ Conclusions

93. The group concluded that the logic model was a useful management tool in assessing whether the outputs are directly linked to the intended final outcome or if adjustments need to be made.

94. The logic model:

- Is simple to understand and use;
- Sets clear assumptions and expectations about how and why a programme will solve a particular problem.
- Explains how a programme is linked to intended results
- Provides budget justification and explains the need for a programme.
- Helps to identify what to measure.
- Is a good communication tool.

95. The group recommends that OECD member countries consider using logic models as a tool to develop measures to evaluate various programmes and their effectiveness. While this particular logic model was used, there may be other models and/or tools available, which may more closely suit a country's needs. Those countries that have used logic models, or other models are encouraged to share their models and experiences with other OECD member countries. The group also recommends that OECD WGP consider accessing International Network for Environmental Compliance and Enforcement (INECE) as a resource on this issue.

IV. CONCLUSIONS AND RECOMMENDATIONS

Summary of main conclusions

96. In order for users to comply, notably with label instructions, they must have understandings on the instructions and ability and willingness to comply with the instructions. The Workshop identified the most common types of compliance, mechanisms to communicate risks associated with non-compliance, better regulatory mechanisms to ensure user compliance and ways in which the effectiveness of compliance programs can be measured.

97. In all cases brought to the attention of a regulator, an action should be taken in response to situations where non compliance is detected. Risk based principles can be helpful in determining the level of risk associated with the incident and how to manage the non-compliance and the anticipated risk. In order to use risk-based principles, it is important to have sufficient information, but that does not mean that there is a need for complete information. The use of risk management principles can further lead to a list of possible options for response. The nature of the response should take into consideration the level of risk.

98. There is a need of a variety of communication strategies to communicate to users the risks associated with non-compliance and the benefits of compliance. There are a number of parties involved in the communication process. All parties must deliver clear and reliable information. To achieve this goal a communication network must be established. Regulators must be the source of information being fed to other parties. Interactive communication is needed between all parties involved. Different types of non-compliance need different communication strategies. It is useful to have a two pronged approach for compliance and enforcement systems – a mandatory system (step-wise approach) and a voluntary system (stewardship programmes). The workshop supported core principles and the building blocks in the

Guideline on compliance and enforcement of a pesticide regulatory programme contained within the FAO Code of Conduct.

99. All groups (regulators, registrants, users, non-governmental organizations and international organizations) should try and create a culture of compliance – proposals from this workshop aim to facilitate this. In order to help ensure that users have the ability to, and are willing to, comply, the Workshop developed proposals on how regulators, registrants and the user community could modify regulatory processes to avoid unrealistic or very difficult approval conditions. Processes to be improved include training and education, label approval, and user consultation. These aim at improving dialogue between regulators, registrants and users, to aid at understanding the basis behind the regulation/legislation, how to comply and the benefits of compliance. The development of clear and easy-to-understand labels coupled to access and reference to additional non-label information was regarded as a useful tool to help enable the user to be informed of, and comply with regulatory requirements.

100. The logic model was a useful management tool in developing and assessing compliance programs and whether the outputs are directly linked to the intended final outcome or if adjustments need to be made. The logic model is simple to understand and use; sets clear assumptions and expectations about how and why a programme will solve a particular problem; Explains how a programme is linked to intended results; provides budget justification and explains the need for a programme; helps to identify what to measure; and is a good communication tool.

Summary of recommendations

Recommendations to all bodies involved

- All groups (regulators, registrants, users, non-governmental organisations and international organisations) should try and create a culture of compliance – proposals from this workshop aim to facilitate this.
- Regulators, registrants and user groups should communicate the benefits of compliance (economic e.g. reduced environmental subsidies if a violation of certain regulations, market access, as well as environmental and social benefits)
- All groups should create mechanisms to promote a need for collaboration of various groups for users to have the necessary tools for them to comply with rules and regulations.
- Regulators and users should strengthen mechanisms to facilitate better communication between regulators and users. This may include user focus groups before label approval and during re-considerations.
- Regulators, registrants and user groups should communicate the benefits of compliance (economic e.g. reduced environmental subsidies if a violation of certain regulations, market access, as well as environmental and social benefits)
- Regulators, registrants and user groups should ensure that any documents separate to the label and used by growers needs to be consistent with the registered/approved label
- Regulators, registrants and user groups should explore the feasibility of user training and certification to ensure certain level of knowledge appropriate for the use conditions
- Regulators, registrants and user groups explore use of website links, 1-800 phone numbers and other resources as source of supplementary information to the label. Supplementary information may include mandatory requirements, local restrictions or additional guidance

- Regulators, registrants and user groups should explore mechanisms to simply communicate major use changes to compliance requirements and/or labels

Recommendations to the governments (regulators)

- No uses on label of high risk of non-compliance (not practical or unrealistic instructions for users). In such cases there is a need for collaboration between users, registrants and regulators to facilitate the availability of a suitable alternative
 - a) regulators should not be making decisions that may place users in a non-compliant position
 - b) regulators should not be creating impediments to compliance
- Regulators need to engage and consult more effectively with industry and user groups over label compliance.
- Governments should ensure that legislation should enable the regulator to make appropriate risk management decisions
- Regulators should explore behavioural reasons behind non-compliance; tools to promote compliance should be appropriate for the behaviour
- Regulators should explore mechanisms to involve users/stakeholders in the development of non-label user requirements. These may include regulations, legislation etc.
- Further collaboration among OECD member states (includes rule makers and inspectors) to develop a risk management approach to situations of non compliance
 - Including consultation with user groups and pesticide industry, and third party inspectors
- OECD member countries should establish or improve communication networks (regulatory authorities, grower groups, advisory services, industry, educators) in their country.
- OECD member countries should consider using logic models as a tool to develop measures to evaluate various programmes and their effectiveness. While this particular logic model was used, there may be other models and/or tools available, which may more closely suit a country's needs.
- Those countries that have used logic models, or other models are encouraged to share their models and experiences with other OECD member countries.

Recommendations to regulators and registrants

- Regulators and registrants should explore the need for separate major use requirements (e.g. domestic vs. agricultural) on the label, into two separate labels or as different registered products
- Regulators and registrants need to consider label updates over time to adapt to current agricultural practices and technology

Recommendations to industry

- Label design/information in such a way that users can comply with rules and regulations

Recommendations to OECD

- OECD should explore standardization of label format and ensure that this is done in a coordinated way with other organizations such as FAO
- OECD should compile Compliance and Enforcement systems of the OECD countries and analyse them to develop effective practices that can be applied in different countries.
- OECD WGP should consider accessing International Network for Environmental Compliance and Enforcement (INECE) as a resource on this issue.

CONCLUDING REMARK

101. The chair of the OECD pesticides risk reduction steering group, Dr Wolfgang Zornbach, presented highlights from the two and a half day workshop, and further steps to be taken once the workshop had ended. He also took the time to thank the hosts, organising committee and participants for an engaging and insightful workshop, which had developed strong conclusions and recommendations.

ANNEX I. FINAL WORKSHOP PROGRAMME

OECD WORKSHOP ON PESTICIDE
USER COMPLIANCE ISSUES

Workshop Programme

6-8 June 2006
Crowne Plaza, Ottawa, Ontario
Joliet & Frontenac Rooms

DAY 1 (Tuesday, 6 June 2006)

Time	Item	Topic	Duration
07:30		REGISTRATION & BREAKFAST *	
08:30	1a	WELCOME Karen McCullagh, Workshop Chair, Director, Regional Operations & Lab Services Division, Pest Management Regulatory Agency, Health Canada Karen Dodds, PMRA's Executive Director	15 minutes
08:45	1b	INTRODUCTION OECD Secretariat Overview of OECD programmes on pesticides; Outcomes of Compliance and Labelling Seminar	15 minutes
	2	OPENING PLENARY PRESENTATIONS	
09:00	2a	Allan Brown, E. I. du Pont Canada Company Subject: Strategies to improve user compliance, manufacturers' point of view.	30 minutes
09:35	2b	Bob Friesen, Canadian Federation of Agriculture (CFA) Subject: Users' perception of compliance. Suggestions on how to improve user compliance	30 minutes
10:10		BREAK	
10:25	2c	Anne Lindsay, United States Environmental Protection Agency (US EPA) Subject: Strategies to improve user compliance, regulators' point of view.	30 minutes
10:55	2e	Michael Stahl, US EPA	

		Member of the International Network for Environmental Compliance and Enforcement (INECE) Expert Working Group Subject: Performance Measurement: Enforcement and Compliance Indicators	30 minutes
11:30	3	PANEL DISCUSSION Question and answer session	60 minutes
12:30	<i>LUNCH **</i>		
14:00	4	INSTRUCTIONS FOR BREAK-OUT GROUP DISCUSSION Workshop Chair: Karen McCullagh	15 minutes
14:15	5a	<p>FIRST BREAK-OUT GROUP DISCUSSION</p> <p>Session I : Criteria to identify and manage types of non-compliance Group Facilitator – Karen McCullagh, PMRA Rapporteur – Pierre Leblanc, PMRA and Julie Marcil, PMRA</p> <p>Session II : Achieving compliance with labels and terms/conditions of registration Group Facilitator – Karin Corsten, Federal Office of Consumer Protection and Food Safety, Germany Rapporteur – Shawn Fancy, PMRA</p> <p>Session III : Modifying regulatory process to ensure user's ability to comply Group Facilitator – Keith Jones, CropLife International Rapporteur – Timothy Dyke, Pesticides & Veterinary Medicines Authority, Australia (APVMA) and Barbara Delorme, PMRA</p> <p>Session IV : Measuring effectiveness of compliance programmes Group Facilitator – Peter MacLeod, CropLife Canada Rapporteur – Daniel Helfgott, US EPA, David Stangel, US EPA and Samia Hirani, PMRA</p>	75 minutes
15:30	BREAK		
15:45	5b	FIRST BREAK-OUT GROUP DISCUSSION (<i>Continued...</i>) (preparation for the plenary summary presentations on Day 2)	75 minutes
17:00	<i>END OF DAY 1</i>		
Reception for all workshop participants (17:00-19:00)			

DAY 2 (Wednesday, 7 June, 2006)

Time	Item	Topic	Duration
07:30		BREAKFAST *	
08:30	6a	PLENARY SUMMARY PRESENTATION OF OBJECTIVE #4 Rapporteur of group 4	20 minutes
08:50	6b	PLENARY DISCUSSION OF OBJECTIVE #4	55 minutes
09:45	7a	PLENARY SUMMARY PRESENTATION OF OBJECTIVE #3 Rapporteur of group 3	20 minutes
10:05	<i>BREAK</i>		
10:20	7b	PLENARY DISCUSSION OF OBJECTIVE #3	55 minutes
11:15	8a	PLENARY SUMMARY PRESENTATION OF OBJECTIVE #2 Rapporteur of group 2	20 minutes
11:35	8b	PLENARY DISCUSSION OF OBJECTIVE #2	55 minutes
12:30	LUNCH **		
14:00	9a	PLENARY SUMMARY PRESENTATION OF OBJECTIVE #1 Rapporteur of group 1	20 minutes
14:20	9b	PLENARY DISCUSSION OF OBJECTIVE #1	55 minutes
15:15	BREAK		
15:30	10	SECOND BREAK-OUT GROUP DISCUSSIONS Incorporate feedback from the plenary discussion and consolidate conclusions for all four objectives	75 minutes
16:45	11	CLOSING COMMENTS Workshop Chair: Karen McCullagh	15 minutes
17:00	END OF DAY 2		

DAY 3 (Thursday, 8 June 2006)

Time	Item	Topic	Duration
08:00		BREAKFAST *	
09:30	13a	CLOSING DISCUSSION All participants (finalising conclusions; identifying recommendations; identifying possible areas of harmonisation)	60 minutes
10:30	BREAK		
10:45	13b	CLOSING DISCUSSION (Continued...)	60 minutes
11:45	14	CONCLUSIONS AND RECOMMENDATIONS Karen McCullagh, Workshop Chair Richard Aucoin, Canadian delegate to OECD's WGP	30 minutes
12:15	15	NEXT STEPS Wolfgang Zornbach, Chair of OECD Pesticide Risk Reduction Steering Group Ministry of Food, Agriculture and Consumer Protection, Germany	15 minutes
12:30	END OF WORKSHOP		

* **Continental Breakfast includes:** Chilled Orange and Grapefruit Juice, Fresh Fruit Salad, Bakers Basket of Traditional Croissants, Danish Pastries, Muffins, Toast, Bagels, Fruit Bread or Scones (choice of 3), Butter and Preserves, Coffee and Tea (Regular and Herbal).

** Please note that lunches and dinners are not provided.

ANNEX II. PARTICIPANT LIST

PARTICIPANTS LIST FOR OECD WORKSHOP ON USER COMPLIANCE ISSUES

6 - 8 June 2006

Australia / Australie

Tim DYKE

Program Manager, Quality Assurance and Compliance
Australian Pesticides & Veterinary Medicines Authority
(APVMA)
PO Box E240
Kingston, ACT 2604
Australia

Tel : 61 2 6272 5412
Fax : 61 2 6271 6442
Email : timothy.dyke@apvma.gov.au

Carmen DWYER

Head Pesticides Operations and Planning
New South Wales Department of Environment and
Conservation
Environment Protection and Regulation Branch
PO Box 2111
Dubbo, NSW 2830
Australia

Tel : +612 6841 9801
Fax : +612 6882 9217
Email : carmen.dwyer@environment.nsw.gov.au

Andy HAWKINS

Manager
New South Wales Department of Environment and
Conservation
Chemicals Technical Policy
PO Box A290
Sydney South, NSW 1232
Australia

Tel : +612 9995 5793
Fax : +612 9995 5936
Email : andrew.hawkins@environment.nsw.gov.au

Canada / Canada

Richard AUCOIN

Acting Chief Registrar
Pest Management Regulatory Agency
Sir Charles Tupper Building, 7th fl.
2720 Riverside Drive
Ottawa
Ontario K1A 0K9
Canada

Tel : +1 613 736 3705
Fax : +1 613 736 3707
Email : Richard_Aucoin@hc-sc.gc.ca

Karen DODDS

Executive Director
Pest Management Regulatory Agency
2720 Riverside Drive
Sir Charles Tupper Building, 7th Floor
Ottawa, Ontario K1A 0K9
Canada

Tel : +1 613 736 3708
Fax : +1 613 736 3707
Email : karen_dodds@hc-sc.gc.ca

Barbara DELORME

Senior Compliance Officer
Compliance, Laboratory Services and Regional Operations
Division
Pest Management Regulatory Agency
2720 Riverside Drive, Sir Charles Tupper Building
Ottawa Ontario

Tel: +1 613 736 3588
Fax: +1 613 736 3870
Email : barbara_delorme@hc-sc.gc.ca

Shawn FANCY

Senior Compliance Officer Compliance
Compliance, Laboratory Services and Regional Operations
Division
Pest Management Regulatory Agency
2720 Riverside Drive, Sir Charles Tupper Building
Ottawa, Ontario, K1A 0K9
Canada

Tel : +1613-736-3555
Fax : +1-613-736-3870
Email : shawn_fancy@hc-sc.gc.ca

Julie MARCIL

Compliance Officer
Compliance, Laboratory Services and Regional Operations
Division
Pest Management Regulatory Agency
Sir Charles Tupper Building
2720 Riverside Drive
Ottawa, Ontario
Canada

Tel : +1-613-736-3890
Fax: +1 613 736 3870
Email : julie_marcil@hc-sc.gc.ca

Kim KENNEDY

Environmental Protection and Operations Division
Environment Canada
45, Alderney Drive
B2Y 2N6 Dartmouth Nova Scotia
Canada

Pierre LEBLANC

Compliance Officer
Compliance, Laboratory Services and Regional Operations
Division
Pest Management Regulatory Agency
2720, Riverside Drive, Sir Charles Tupper Building
Ottawa, Ontario, K1A 0K9
Canada

Tel : +16137363552
Fax: +1 613 736 3870
Email : pierre_j_leblanc@hc-sc.gc.ca

Karen MCCULLAGH

Director
Compliance, Laboratory Services and Regional Operations
Division
Pest Management Regulatory Agency
Sir Charles Tupper Building
2250 Riverside Drive, Room 735E (6607E)
Ottawa, Ontario K1A 0K9
Canada

Tel : +1 613 736 3486
Fax : +1 613 736 3870
Email : karen_mccullagh@hc-sc.gc.ca

Lorna POFF

co-Manager
Ontario Ministry of the Environment
Pesticides Management Section
40st Clair Avenue West, 7th floor
M4V 1M2 Toronto Ontario

Tel : 416 327 4138
Fax: 416 327 2936
Email : Lorna.Poff@ene.gov.on.ca

Neilda STERKENBURG

Project Manager
Submission Coordination Division
Pest Management Regulatory Agency
2720 Riverside Drive
Sir Charles Tupper Building
Ottawa, Ontario K1A 0K9
Canada

Tel: 613 736 3622
Fax: 613 736 3666
Email : neilda_sterkenburg@hc-sc.gc.ca

Mark VEITCH

Compliance Specialists
Consumer Product Safety
Health Canada
123 Slater Street, A.L.: 3504D
MacDonald Building, 4th Floor
Ottawa, ON, K1A 0K9

Tel: 613 952 5656
Fax: 613 952 3039
Email: mark_veitch@hc-sc.gc.ca

Denmark / Danemark

Lene GRAVESEN

Pesticide Division
Danish Environmental Protection Agency
Strandgade 29
DK-1401 Copenhagen K
Denmark

Tel : +45-32 66 0573
Fax : +45-32 66 0479
Email : lgr@mst.dk

Carsten MADSEN

Ministry for Food, Agriculture and Fisheries
Danish Plant Directorate
Department of Environment
Skovbrynet 20
DK-2800 Kgs Lyngby
Denmark

Tel : +45 4526 3595
Email : cma@pdir.dk

Johan OVERGAARD

Ministry for Food, Agriculture and Fisheries
Danish Plant Directorate
Department of Environment
Skovbrynet 20
2800 Kgs Lyngby

Tel : +45 45 26 38 50
Email : jko@pdir.dk

Germany / Allemagne

Wolfgang ZORNBACH

Federal Ministry for Food, Agriculture and Consumer
Protection (BMELV)
Plant Protection Division
Rochusstr. 1
53123 Bonn
Germany

Tel : +49-228-529-4317
Fax : +49-228-529-55-3595
Email : Wolfgang.Zornbach@bmelv.bund.de

Karin CORSTEN

Bundesamt für Verbraucherschutz und Lebensmittelsicherheit
(Federal Office for Consumer Protection and Food Safety)
Messeweg 11/12
38104 Braunschweig
Germany

Tel : +49-531-299-3505
Fax : +49-531-299-3002
Email : Karin.Corsten@bvl.bund.de

Birte EVERS-MERSCH

Lebensmittelüberwachungs-, Tierschutz- und Veterinärdienst
des Landes Bremen
Findorfstr. 101
28215
Germany

Tel : +49-421-361-89204
Fax : +49-421-361-16644
Email : Birte.Mersch@veterinaer.bremen.de

Stefan LAMPRECHT

Plant Protection Office of the Chamber of Agriculture of Lower
Saxony
Control, Expert Knowledge and Applications Engineering
Wunstorfer Landstr. 9
30453 Hannover
Germany

Tel : +49-511-4005-2178
Fax: +49-511-4005-2120
Email : stefan.lamprecht@lwk-niedersachsen.de

New Zealand / Nouvelle-Zélande

Warren HUGHES

Programme Manager (ACVM and Non-Food Assessment)
New Zealand Food Safety Authority
Approvals and ACVM Group
PO Box 2835
Level 7, South Tower, 68-86 Jervois Quay
New Zealand

Tel : +64 (4) 463 2560
Fax : +64 (4) 463 2566
Email : warren.hughes@nzfsa.govt.nz

Norway / Norvège

Marit SKUTERND

Adviser
Norwegian Food Safety Authority
P.O. Box 3
Oslo N-1431 AAS
Norway

Tel : +47 64 94 4400
Fax : +47 64 94 4410
Email : marit.skuternd@mattilsynet.no

United States / Etats-Unis

Daniel HELFGOTT

Chief, Government and International Services Branch,
Office of Pesticide Programs (7506P)
US Environmental Protection Agency
1200 Pennsylvania Avenue
Washington DC 20460
United States

Tel : 1 702 308 8054
Fax : 1 702 308 1850
Email : helfgott.daniel@epa.gov

Anne LINDSAY

Deputy Director
Office of Pesticide Programs
US Environmental Protection Agency
1200 Pennsylvania Ave., NW
7501C, Washington DC 20460
United States

Tel : +1 703-305-5265
Fax : +1 703-305-6244
Email : lindsay.anne@epa.gov

Michael STAHL

Director
Office of Enforcement and Compliance Assurance
US Environmental Protection Agency
1200 Pennsylvania Ave NW
Washington DC 20460
Mail Code: 2225A

Fax : 202 501 0069
Email : stahl.michael@epa.gov

Kate PERRY

Associate Director
U.S. Environmental Protection Agency
Agriculture Division
1200 Pennsylvania Ave NW
Washington DC 20460
Mail Code: 2225A
USA

Tel : 202 564 4059
Fax : 202 564 0028
Email : perry.kate@epa.gov

David STANGEL

Agriculture Branch, Agriculture Division
U.S. Environmental Protection Agency
1200 Pennsylvania Ave
NW
Washington DC 20460
USA

Tel: 202 564 4162
Fax: 202 564 0085
Email : stangel.david@epa.gov

**Business and Industry Advisory
Committee (BIAC) / Comité consultatif
économique et industriel (BIAC)**

Allan BROWN
Regulatory Affairs
E. I. du Pont Canada Company
P.O. box 2200, Streetsville
L5M 2H3 Mississauga Ontario
Tel : +1-519-763-6160
Fax : +1-519-763-6604
Email : allan.j.brown@can.dupont.com

Keith JONES
CROPLIFE International
143 Avenue Louise
Brussels 1050
Belgium

Tel: +32 2 542 0410
Fax: +32 2 542 0419
Email : keith@croplife.org

Peter MACLEOD
Executive Director
CropLife Canada
Crop Protection Chemistry
21 Four Seasons Place
Suite 627
Etobicoke Ontario M9B 6J8
Canada

Tel: 416 622 9771
Fax: 416 622 6764
Email : macleodp@croplife.ca

Jeff PARSONS
Bayer CropScience Inc
#3800, 1120 Coronel By Drive
Ottawa, ON
Canada

Tel : 613 722 8111 (ext 234)
Email: jeff.parsons@bayercropscience.com

Judy SHAW
Government Affairs Director
Syngenta Crop Protection, Inc.
140 Research Lane, Research Park
Guelph, Ontario, N1G 4Z3

Tel : +1-519-837-5328
Fax: +1 519 836 1032
Email : judy.shaw@syngenta.com

Grower Group Representatives /
Représentants des Producteurs

Bob FRIESEN
President
The Canadian Federation of Agriculture
P.O. Box 179
Wawanese
Manitoba R0K 2G0
Canada

Tel : 204 824 2388
Fax : 204 824 2175
Email : cfaadmin@fox.nstn.ca

Craig HUNTER
Ontario Fruit and Vegetable Growers' Association
105-355 Elmira Road North
Guelph
Ontario N1K 1S5
Canada

Tel: 519-763-6160
Fax: 519-763-6604
Email : research@ofvga.org

Shannon WATT
Environmental Policy Analyst
Canadian Federation of Agriculture
1101 - 75 albert Street
K1P 5E7 Ottawa Ontario

Email : shannon@cfafca.ca

OBSERVERS

Jacques DROLET
Section Head
Alternative Strategies Section
Efficacy and Sustainability Assessment Division
Pest Management Regulatory Agency
2720 Riverside Drive
6605-D, Ottawa, ON, K1A 0K9
Canada

Tel: +1 613 736 3700
Fax: +1 613 736 3489
Email: Jacques_drolet@hc-sc.gc.ca

Imme GERKE
Minor Use Advisor
Efficacy and Sustainability Assessment Division
Pest Management Regulatory Agency
2720 Riverside Drive
Ottawa, ON, K1A 0K9
Canada

Tel: 613 736 37 94
Fax: +1 613 736 3659
Email: imme_gerke@hc-sc.gc.ca

OECD / OCDE


Jeong-Won PARK
OECD
Environment Directorate
2, rue André Pascal
75016 Paris
France

Tel : +33 (1) 45 24 89 45
Email : Jeong-Won.PARK@oecd.org

ANNEX III. PLENARY SESSION PRESENTATIONS

Strategies to Improve User Compliance (Allan Brown, E. I. DuPont Canada)


Slide 1



Representing the Plant Science Industry

**Strategies to Improve User
Compliance
Allan Brown
E.I. DuPont Canada**


Slide 2



FAO Code of Conduct

- **Globally accepted standards**
- **Implemented by industry and governments**
- **Promote practices for safe use**
- **CropLife members are signatories**


Slide 3



Farmers

- **Stewards of the Land**
- **Conservationists – preserve the farm for future generations**
- **Operating a business**
- **Pesticides – a business cost**
- **Judicious use is good business**


Slide 4



User Compliance Issues

- **Crops not on the label**
- **Inadequate PPE – Exposure concerns**
- **Inadvertent Misuse – Counterfeit Products**

Slide 5



Use on Crops Not on the Label

- **Pest problem not controlled with available REGISTERED products**
- **Food residues – illegal**
- **Application errors**
- **Unsafe PHI or re-entry**
- **Internet search of foreign labels**


Slide 6



Strategies

- **Minor Crop Registration Programs**
- **Cooperative efforts – Growers, Manufacturers, Regulators**
- **Examples: IR-4
Pest Management Centre**


Slide 7



Personal Protection – applicators & bystanders


- **Reading and Understanding Labels**
- **Training in proper use**
- **Availability of PPE**

Slide 8




Outcomes of previous seminar on Compliance

- **“Labels need to be simpler, clearer and better adapted to farmer’s needs”**
- **“Raising awareness through training”**



How do we simplify labels?

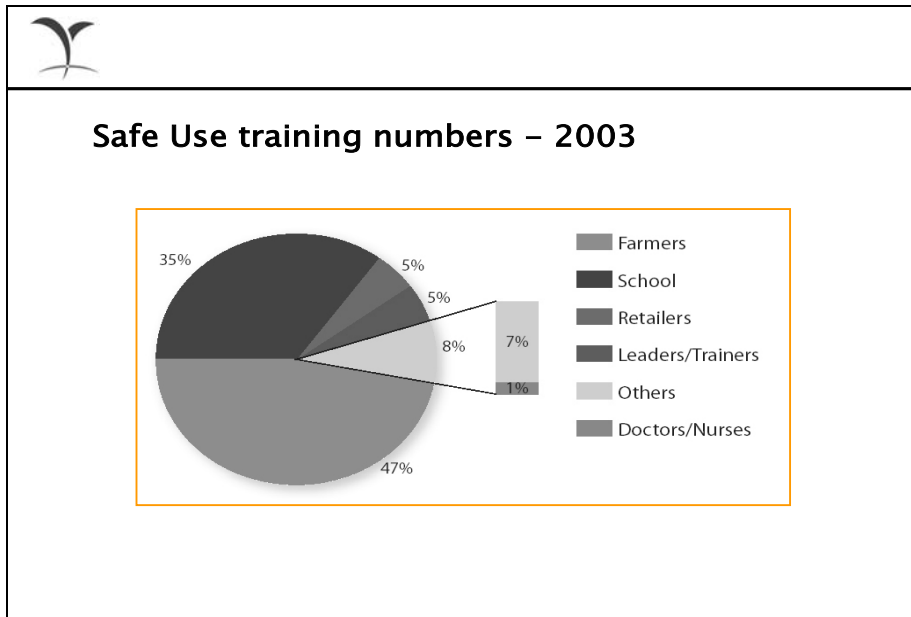
- **Highlight what is most important**
- **Use recognizable symbols**
- **Avoid GHS Confusion**
- **Make mitigation measures practical**



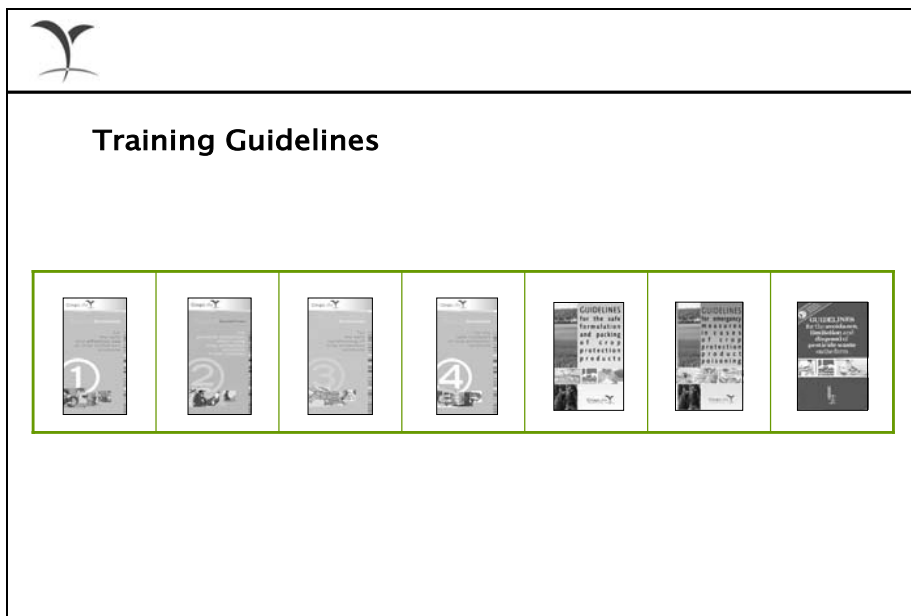
IPM & Safe Use training: Change in behaviour

Lecture
↓
Training & Visit
↓
Participatory Training
↓
Combination: Radio, literature,
Participatory etc.


Slide 11



Slide 12




Slide 13



Personal Protective Equipment

- Recommendations appropriate to climate
- Available and affordable

Slide 14



Strategies for PPE Compliance

- Simplify Critical Warnings and Requirements
- Continue Training of Users
- Ensure Recommendations are Practical

Slide 15



Inadvertent Misuse of Products – Counterfeit

- **Grower uses wrong product – accidentally**
- **Product is high in impurities**
- **Enforcement is Needed to Protect Growers**


Slide 16



**Counterfeit product with the wrong
sulfonyleurea killed Maize crops in several
countries in Europe in 2004**


**DuPont Titus®
Herbicide**

**Corn near Asti, Italy,
2004, counterfeit
Titus® Herbicide**



Titus 100g Italy- Inner Box

DuPont Original	Italian Counterfeit
® : 2 mm Diameter ↙	® : 1 mm Diameter ↙



Summary of Compliance Strategies

- **Strong Minor Use Programs**
- **Clear Labels**
- **Training on Safe Use**
- **Enforcement of Counterfeit Products**

Users' Perception of Compliance (Bob Friesen, Canadian Federation of Agriculture)

Slide 1

Users' Perception of Compliance

Bob Friesen
Canadian Federation of Agriculture
June 6th 2006

Slide 2

Current Situation

Farm Debt in 2004: \$48.9 billion

- In the decade of 1995-2004 Farm Debt has grown a total of 90% (Statistics Canada)
- Realised Net Income in the last 4 years the worst in Canadian History.
- Farmers are increasingly leveraging their farms to survive.

June 6 2006CFA2

Slide 3

Grower Realities

- Growers need to make a living!
- Pesticide costs up to 30% of variable costs
- Growers hate to apply pesticides, and will avoid doing so by using the most effective choices for best results
- Growers and their families live on the farm, and have NO wish to contaminate or be contaminated
- Growers take courses, go to training sessions, and get updated on new products annually

June 6 2006

CFA

3

Slide 4

PEI Experience

- Farmers feel over regulated
- The regulations are not farmer friendly, instead they satisfy public perception
- Cumbersome, expensive, difficult
 - Certification required for transport of treated seed
- Regulation vs. Incentive
 - Need to recognise farmers for the good they do and provide incentive to have them go above and beyond the call of duty.
 - Due diligence

June 6 2006

CFA

4

Slide 5

Horticultural Perspective

- Lack of availability of safe, low impact, effective and acceptable pest control products
- Forced to use older, higher rate, longer residual, and less effective products
- Restrictions that arise from long PHIs, excessive PPE, and reduced efficacy leading to increased rates and frequency of use
- International trade restrictions from no-longer allowed residues of old products

June 6 2006

CFA

5

Slide 6

What Growers Need

- Clear label instructions: overprint colour warning symbols onto rate tables for impact
- Reasonable PPE requirements: overkill leads to disdain, and avoidance
- Labeled rates for maximum safe dose: growers will reduce rates from there, but NOT exceed
- Maximum seasonal crop dose for multiple use products (Insecticides & Fungicides)
- MRLs that cover GAP under all use conditions

June 6 2006

CFA

6

Slide 7

Wish List

- Make universal pesticide product availability across borders to level trade, MRL, and use pattern issues
- Develop lighter, breathable fabrics for PPE to enhance use thereof
- Improve charcoal filtration systems for tractor cabs to reduce PPE needs
- Develop battery operated AC units that plug into PPE suits for mixing/loading etc.
- Enhance research programs to find better pest management solutions to reduce spray needs

June 6 2006

CFA

7

Slide 8

Conclusion

- **Equality of Access with our competitors**
 - Availability of products, Similar range of uses
 - Are differences with competitors backed by science?
- **Regulations vs. Incentives**
 - Farmer Friendly vs. Public Perception
- **More Science and research**

The more tools, the more likely to have the right tool, resulting in overall less spray.

June 6 2006

CFA

8

Slide 9

Thank You

The CFA is a farmer-funded, national umbrella organization representing provincial general farm organization and national commodity groups. Through its members, it represents over 200,000 Canadian farm families across Canada

June 6 2006

CFA

9

A Regulatory Perspective on Pesticide User Compliance (Anne Lindsay, US EPA)

Slide 1

A Regulatory Perspective on Pesticide User Compliance

**Anne E. Lindsay,
Deputy Director
Office of Pesticide Programs
U.S. Environmental Protection
Agency**

Slide 2

Overview of EPA Pesticide Regulation

- o Office of Pesticide Programs (OPP)**
- o Office of Enforcement & Compliance Assurance (OECA)**
- o State/Tribal "lead" Agencies --
"primacy" for enforcement in field**

Slide 3

EPA Overview (continued)

- o Label is enforceable since 1970's
- o Use directions, personal protection instructions, risk mitigation measures
- o Slogan of enforcement "The label is the law"

Slide 4

Identify types of non-compliance

- o Use for unregistered purpose
- o Not comply with label directions
- o Not comply with other regulations:
 - o Worker Protection Regulations (Ag. Employers)
 - o Adverse effects reporting (registrants)

Slide 5

Achieve compliance with label

- o Certification and training
 - o Some limitations in current scope
- o Outreach on policies/decisions
- o The label itself

Slide 6

Label language factors

- o Ambiguity
- o Complexity
- o Obsolescence
- o Practicality

Slide 7

Ensure ability to comply

- Consult during decision process
- Reality checks with users/enforcers
- Provide others opportunity to initiate issue discussions

Slide 8

Measure effectiveness of compliance to reduce risk

- OPP and OECA measure different things, but for same outcome goals
- Example – reduce adverse incidents for 6 pesticides with highest rate
 - Both compliance and enforcement aspects

Opportunities to collaborate/harmonize

- GHS will harmonize some labeling
 - Continue to move forward
- Standardize more label elements
- Communicate compliance problems,
e.g., internet sales; new technologies

**Measuring Performance of Compliance Programmes
(Michael M. Stahl, US EPA and member of INECE)**

Slide 1

**Measuring Performance
of Compliance Programs**

**OECD Workshop on User Compliance Issues
June 6, 2006**

Michael M. Stahl, Director
Office of Compliance
U.S. Environmental Protection Agency

Member, INECE Expert Working Group on Compliance and
Enforcement Indicators

Slide 2

Presentation Outline

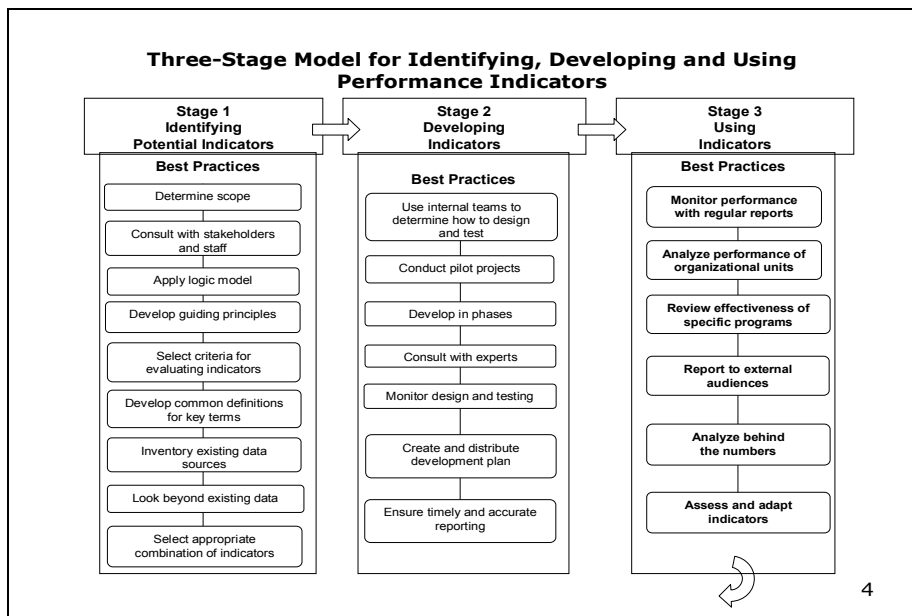
- Introduction
- Key Terms in Performance Measurement
- Identifying, Designing and Using Measures
- Additional Suggestions

2

Key Terms

- **Inputs** – staff, time, funding, materials, equipment
- **Outputs** – activities, events, services and products that reach a regulatee (number of inspections)
- **Outcomes** – results of outputs
 - **Intermediate outcomes** – progress toward a final outcome (change in behavior)
 - **Final outcomes** – ultimate result the program is designed to achieve (air quality)

3



Slide 5

Sample Logic Model

Inputs	Outputs	Intermediate Outcomes	Final Outcomes
<i>resources</i>	<i>activities</i>	<i>behavior change</i>	<i>environmental impact</i>
Personnel	Inspections conducted	Greater understanding of how to comply	Reduced pollution emissions
Funds for salaries, contracts, etc.	Enforcement actions taken	Improved environmental management practices	Improved ambient water quality
	Fines assessed and collected	Increased compliance	Reduced contaminant burden in wildlife species

5

Slide 6

Selection Criteria

Relevant	Is relevant to goals, objectives, priorities of program and external stakeholders
Transparent	Promotes understanding, enlightens users about program performance
Credible	Is based on complete and accurate data
Functional	Encourages programs and personnel to engage in effective, constructive behavior, activities
Feasible	The cost of implementing and maintaining the measure does not outweigh its value to program
Comprehensive	Addresses the important operational aspects of program performance

6

Slide 7

Sample Output Measures

- Number of inspections and investigations conducted
- Number of civil and criminal enforcement actions
- Number of facilities/entities reached through compliance assistance efforts
- Number of training courses and other capacity-building efforts provided to programs at sub-national levels

7

Slide 8

Sample Outcome Measures

- Amount of pollutants reduced through enforcement actions
- Amount of soil removed, gallons of groundwater treated via enforcement actions
- Monetary value of pollution control projects required by enforcement actions
- Number of entities seeking compliance assistance from program
- Actions taken as a result of assistance from program
- Rate of recidivism among significant violators and average time to return to compliance
- Statistically valid compliance rates for key regulated populations

8

Slide 9

Problem-Oriented Measures

- Tailored to the particular type(s) of non-compliance being targeted
- Challenges: differences in definitions of non-compliance and legal authorities of each country, inherent obstacles in developing meaningful compliance rates
- Addresses question: how are we performing in reducing or eliminating the specific problem(s)?

9

Slide 10

Program-Oriented Measures

- Focused on the effort (i.e. outputs) and results (i.e. outcomes) achieved with respect to broad categories of non-compliance
- Challenges: varying types of data used by different nations, lack of measurable outcomes regarding pesticide use
- Addresses question: how are we performing in producing outputs and outcomes designed to generally reduce non-compliance

10

Slide 11

Additional Suggestions

- Logic models are a useful tool in sorting out activities, results and their relationships.
- Selection criteria are very valuable for identifying which potential measures should be advanced to implementation.
- The contribution and value of intermediate outcomes should not be overlooked in developing measures.

11

Slide 12

Contact Information

Michael M. Stahl, Director
Office of Compliance
U.S. Environmental Protection Agency

stahl.michael@epa.gov
202/564-2280

12

ANNEX IV. LIST OF BACKGROUND DOCUMENTS

Objective I

Integrated Risk Management Framework
Treasury Board of Canada Secretariat

Pesticide Risk Indicators at National Level and Farm Level
Swedish Chemicals Inspectorate

Workshop on pesticide risk indicators for man and the environment
EU sponsored HAIR project

Environmental Risk from European Agriculture
European Centre for Nature Conservation

Prevention of Illegal International Traffic
In Toxic and Dangerous Products
Third Session of the Intergovernmental Forum of Chemical Safety (IFCS)

Objective II

Final Report – Executive Summary
Fourth Session of the Intergovernmental Forum of Chemical Safety (IFCS)
(Also relevant to objective#1)

Guidance elements for the detection, prevention and control of illegal traffic in hazardous wastes: draft training manual for the enforcement of laws implementing the Basel Convention
United Nations Environmental Programme (UNEP)
(Also relevant to objective#1)

Code of Practice for Using Plant Protection Products
United Kingdom's Pesticides Safety Directorate

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
United Nations Institute for Training and Research (UNITAR)

Code of Conduct on the Distribution and Use of Pesticides
Food and Agriculture Organisation (FAO)

Guide for Industry on the Implementation of the FAO Code of Conduct on the Distribution and Use of Pesticides
CropLife

Objective III

Guidelines on Personal Protection when using crop protection products in hot climates
CropLife
(Also relevant to objective #2)

Objective IV

Performance Measurement Guidance for Compliance and Enforcement Practitioners
INECE

ANNEX V. SURVEY RESULTS

**SURVEY RESULTS ON
PESTICIDES USER COMPLIANCE**

**BACKGROUND DOCUMENT FOR
OECD USER COMPLIANCE WORKSHOP**

I. Survey on the national and international practices of pesticides user compliance

102. The main focus of the questionnaire is on the regulatory compliance with the use of pesticides products in OECD member countries. It includes current and major compliance issues which are directly relevant to the workshop objectives. The questionnaire responses are collated as background information to provide participants guidance for their breakout group discussions.

103. As of 2 May, 2006, fifteen countries returned their completed questionnaires, including fourteen member countries and Slovenia. The fourteen member countries include Australia, Belgium, Canada, Denmark, Finland, Germany, Ireland, Japan, New Zealand, Norway, Slovak Republic, Sweden, Switzerland, and the United States. A template per country summarising the results based on completed questionnaires is attached as ANNEX.

The status of collecting responses

	Regulator Questionnaire	User Questionnaire
Australia	9	3
Belgium	1	2
Canada	1	13
Denmark	2	-
Finland	1	1
Germany	9	2
Ireland	1	-
Japan	1	1
New Zealand	1	2
Norway	1	-
Slovak Republic	1	-
Slovenia*	1	1
Sweden	1	-
Switzerland	1	-
United States	1	-
<i>Total</i>	<i>32</i>	<i>25</i>

* Note that Slovenia is not an OECD member country.

II. Summary of the results

104. This summary follows the structure of the template corresponding to each workshop objective.

1. General Information*Pesticide regulators*

Country	Regulators
Australia	<p>Regulation of pesticides up to and including the point of retail sale Australian Pesticides and Veterinary Medicines Authority Regulation of pesticide use Australian Capital Territory - Environment A.C.T. Northern Territory - Department of Primary Industry, Fisheries and Mines Western Australia - Department of Agriculture; Department of Health South Australia - Primary Industries and Resources Victoria - Department of Primary Industries; Department of Human Services New South Wales - Department of Environment and Conservation Queensland - Department of Primary Industries and Fisheries Tasmania - Department of Primary Industries, Water and Environment</p>
Belgium	<p>Name of National Regulator and Country: Belgian Food Agency Name of Contact: Schmit Jean-François Phone: +32 (0)2 208 47 69 Facsimile Number: +32 (0)2 208 47 43 E-mail: jean-francois.schmit@afsca.be Address: WTC III, boulevard S. Bolivar, 30 1000 Bruxelles</p>
Canada	<p>All Provinces and Health Canada's Pest Management Regulatory Agency Website: www.ppra-arla.gc.ca</p>
Denmark	<p>Ministry of Food, Agriculture & Fisheries, Danish Plant Directorate Name of Contact: Carsten S. Madsen Phone: +45 45 26 35 95 Facsimile Number: +45 45 26 36 10 E-mail: smj@pdir.dk Address: Skovbrynet 20, DK-2800 Kgs. Lyngby</p> <p>Danish Environmental Agency Address: Strandgade 29, DK-1401 Copenhagen K, Denmark</p>
Finland	<p>Name of National Regulator and Country: Plant Production Inspection Centre, Finland Name of Contact: Deputy Director Eija-Leena Hynninen Phone: +358 2077 25180 Facsimile Number: +358 2077 25195 E-mail: eija-leena.hynninen@kttk.fi Address: Vilhonvuorenkatu 11C, P.O. Box 42, FI-00501 Helsinki, Finland</p>
Germany	<p>Federal Office of Consumer Protection and Food Safety (BVL) Contact: Dr. Karin Corsten Phone: ++49 531-299-3505 Facsimile Number: ++49 531-299-3002 E-mail: karin.corsten@bvl.bund.de Address: Messeweg 11/12, 38104 Braunschweig, Germany</p>
Ireland	<p>Pesticide Control Service, Ireland. Gordon Rennick Phone: +353 1 6157618 Facsimile Number: +353 1 6157575 E-mail: gordon.rennick@agriculture.gov.ie Address: Department of Agriculture and Food Laboratories, Backweston Campus, Young's Cross, Celbridge, Co. Kildare.</p>

Japan	<p>Ministry of Agriculture, Forestry and Fisheries JAPAN Name of Contact: Katsuya Sato (Mr.) Phone: +81-3-3501-3965 Facsimile Number: +81-3-3501-3774 E-mail: katsuya_sato@nm.maff.go.jp Address: 1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8950</p> <p>Ministry of the Environment JAPAN Name of Contact: Masanobu Kimura (Mr.) Phone: +81-3-5521-8311 Facsimile Number: +81-3-3501-2717 E-mail: masanobu_kimura@env.go.jp Address: 1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8975</p>
New Zealand	<p>Environmental Risk Management Authority of New Zealand, New Zealand (http://www.ermanz.govt.nz) Name of Contact: Peter Dawson Phone: 64 4 916 2426 Facsimile Number: 64 4 914 0433 E-mail: peter.dawson@ermanz.govt.nz Address: PO Box 131, Wellington, New Zealand</p> <p>New Zealand Food Safety Authority, New Zealand Name of Contact: Warren Hughes (NZFSA) Phone: +64 4 463 2560 Facsimile Number: +64 4 463 2566 E-mail: warren.hughes@nzfsa.govt.nz Address: PO Box 2835, Wellington, New Zealand</p>
Norway	<p>Name of National Regulator and Country: Norwegian Food Safety Authority, Norway</p> <p>Name of Contact: Ellen Mari Grande Phone: 47 23 21 68 75 Facsimile Number: E-mail: ellen.mari.grande@mattilsynet.no Address: Mattilsynet, Felles postmottak, postboks 383, N-2381 Brumunddal, Norway.</p>
Slovak Republic	<p>Central Controlling and Testing Institute in Agriculture (UKSUP), Slovak Republic Name of Contact: Mrs. Zanita Scobakova, Mr. Stanislav Barok Department of registration Department of plant protection of pesticides Phone: 00421 2 59 880 325 / 00421 2 69 204 443 Facsimile Number: E-mail: zaneta.scobakova@uksup.sk s.barok@uksup.sk Address: Matuskova 21, Hanulova, 833 16 Bratislava, 844 29 Bratislava</p>
Slovenia	<p>MAFF. Phytosanitary Administration of the Republic of Slovenia Name of Contact: Milena KOPRIVNIKAR B. Phone: 00 386 1 30 94 377 Facsimile Number: 00 386 1 30 94 335 E-mail: milena.koprivnikar@gov.si Address: 6 Einspielerjeva, SI – 1000, Ljubljana</p>
Sweden	<p>Name of National Regulator and Country: Swedish Chemicals Inspectorate Phone: +46-8-51941100 Facsimile Number: +46-8-7357698 E-mail: kemi@kemi.se Address: Box 2, 17213 Sundbyberg, Sweden</p>
Switzerland	<p>Federal Office for Agriculture, Principal Division for Special Services and Means of Production,</p>

	Plant Protection Section, Switzerland Name of Contact: Elisabeth Bosshard Phone: 0041-31-324 90 80 Facsimile Number: 0041-31-322 70 80 E-mail: elisabeth.bosshard@blw.admin.ch Address: Mattenhofstrasse 5, 3003 Bern, Switzerland
US	U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance Name of Contact: Kate Perry Phone: 202-564-4059 Facsimile Number: 202-564-0028 E-mail: perry.kate@epa.gov

Legislation(s) governing pesticide users

Country	Pesticides legislations
Australia	Agricultural and Veterinary Chemicals (Administration) Act 1992 Agricultural and Veterinary Chemicals (Administration) Regulations 1995 Agricultural and Veterinary Chemicals Code Act 1994 Agricultural and Veterinary Chemicals Code Regulations 1995 http://www.apvma.gov.au <i>In addition to national legislation regulating pesticides up to and including the point of retail sale, each State and Territory has its own legislation for pesticide users</i>
Belgium	Royal Decree of 28 February 1994 on conservation, marketing and use of agricultural pesticides (enforced by state)
Canada	Each Province has own regulations for users, as well as Federal Pest Control Products Act and Regulations
Denmark	Law 1996-01-16 nr. 21 on chemical substances and products. Act on chemical products and substances of 9 July 1993, last amended on 20 December 2004 The Statutory Order on Pesticides of 9 July 1993, last amended 16 March 2006. Enforced by: National: Chemical Inspection Service inspect stockings and use, the Plant Directorate inspect the account on the use of pesticides and the spraying equipment. Country: The local authorities inspect stockings and use.
Finland	Torjunta-ainelaki 1969/327 (National Law on Pesticides 1969/327) Torjunta-aineasetus 1995/792 (National Regulation on Pesticides 1995/792) Regulation 328/2005 given by the Ministry of Agriculture and Forestry related to testing sprayer equipment. It is connected to EU's Common Agricultural Policy (CAP).
Germany	German Plant Protection Act (Gesetz zum Schutz der Kulturpflanzen) and related regulations: <ul style="list-style-type: none"> - Ordinance for Banned Uses of Plant Protection Products (Pflanzenschutz-Anwendungsverordnung) - Code of Good Agricultural Practice in Plant Protection (Grundsätze für die gute fachliche Praxis im Pflanzenschutz) - Governing Specialist Qualifications in Plant Protection (Pflanzenschutz-Sachkundeverordnung) - Plant Protection Product Ordinance (Pflanzenschutzmittelverordnung) - Ordinance concerning the use of Plant Protection Products hazardous to bees - Bee Protection Ordinance (Bienenschutzverordnung)

	<i>Additionally, in some Federal States special legislation is enforced, regulating special buffer stripes to surface water or the use of PPPs in non-agricultural areas, e.g. the use on hard surfaces. (The mentioned areas are regulated by a German Federal law, however, some Federal States have stricter regulations.)</i>
Ireland	Statutory Instrument 83 of 2003 (as amended) http://www.pcs.agriculture.gov.ie
Japan	Agricultural Chemicals Regulation Law Mandatory standard for users of agricultural chemicals (Ministerial ordinance) http://www.maff.go.jp/nouyaku/
New Zealand	Hazardous Substances and New Organisms Act (HSNO) 1996 http://www.legislation.govt.nz Agricultural Compounds and Veterinary Medicines Act 1997 http://www.nzfsa.govt.nz/acvm/index.htm Food Act 1981 http://www.nzfsa.govt.nz/policy-law/legislation/food-standards/index.htm#mrl
Norway	Regulation related to pesticides of 26. July 2004
Slovak Republic	I. Act No. 193/2005 Col. on plant health care II. Ordinance No. 225/2005 laying down requirements concerning placing on the market of plant protection products III. Decree No. 3357/2004-100 amending Decree No. 3322/3/2001-100 laying down details concerning plant protection products and Decree No. 1968/2004-100
Slovenia	Act on plant protection products (OJ RS No 98/04) Rules on obligations of operators for application of plant protection products (OJ RS No 62/2003)
Sweden	(SNFS 1997:2 Statens Naturvårdsverks föreskrifter om spridning av kemiska bekämpningsmedel) http://www.internat.naturvardsverket.se/
Switzerland	- Ordonnance sur les paiements directs OPD 910.13 ; http://www.admin.ch/ch/f/rs/910_13 - Ordonnance sur la réduction des risques liés aux produits chimiques, ORRChim, http://www.admin.ch/ch/f/rs/c814_81.html (languages available: German, French, Italian)
US	FIFRA (Federal Insecticide, Fungicide and Rodenticide Act) (see http://www.epa.gov/compliance) State laws (see AAPCO website for citations)

Surveyed user group

Country	Surveyed user group(s)
Australia	Cotton Australia Ltd (www.cottonaustralia.com.au) Aerial Agricultural Association of Australia (www.aerialag.com.au) Horticulture Australia Limited (www.horticulture.com.au)
Belgium	Agricultural user group http://www.fwa.be/
Canada	Provincial Government Extension Workers, Agricultural Research Company, Agricultural Crop Consultants, Crop Life, Aerial Spray Company, Pulse Growers, Potato Growers
Finland	Agricultural and horticultural producers and forest owners, www.mtk.fi
Germany	Agricultural and horticultural group Horticulture group: www.g-net.de
Japan	National Federation of Agricultural Co-operative Associations http://www.zennoh.or.jp/

New Zealand	Horticulture, www.hortnz.co.nz Federation of Farmers (e-mail: hughrit@xtra.co.nz)
Slovenia	Chamber of agriculture and forestry of Slovenia, www.kgzs.si agricultural, landscape, horticultural

2. Activities to Encourage Compliance (*relevant to Objective 1*)¹

105. Below are the responses to the questions on enforcement tools which are currently used by regulators and are found helpful by the user groups.

(Number of countries)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • compliance promotion (15) • inspection (15) • written/verbal warning (12) • revoke permit/license/certification (10) • investigation (suspect wrongdoing) (9) • compliance agreement (9) • fines (7) • reduce or recall of financial grants (4) • detention/seizure (4) • prosecution (4) • stop advertising (3) • stop import (2) • stop use(2) • other – educate users why compliance is a benefit (<i>Canada</i>); strong support / recognition / licensing on basis of industry programmes (<i>Australia</i>); 	<ul style="list-style-type: none"> • written/verbal warning (15) • inspection (15) • prosecution (15) • investigation (suspect wrongdoing) (15) • stop use (14) • fines (14) • revoke permit/license/certification (13) • compliance promotion (11) • detention/seizure (11) • stop advertising (11) • stop import (11) • compliance agreement (10) • reduce or recall of financial grants (8) • other activity – some States can issue control orders, compliance notices and defective spray notices (<i>Australia</i>) ; prohibition of sale, disposal of non-authorized plant protection products (<i>Germany</i>); Press releases with enforcement results (<i>US</i>).

3. Assessing effectiveness of compliance programmes/activities

Summary of responses

106. Australian States and Territories do not conduct formal assessments of the effectiveness of compliance programmes or activities. Informal surveillance is conducted via programmes such as agricultural produce residues or water monitoring. Some States conduct targeted or random auditing of licensed operators, user activities or facilities.

¹ Note that the workshop objectives are as follows.

Objective I: Developing criteria to identify and manage common types of non-compliance

Objective II : Achieving compliance with information on labels and terms/conditions of registration

Objective III : Modifying regulatory process to ensure the ability to comply

Objective IV : Discussing approaches to measure the effectiveness of compliance programmes

107. Denmark records the number of offenders in different user groups and takes it into account during inspection campaign in the following year. Denmark noted that it was very difficult to enforce the use of pesticides. Until now three authorities have inspected the use of pesticides: the Chemical Inspection Service, the local authorities and the Plant Directorate. From 2007, only one authority the Plant Directorate will take care of the inspections at farmer's level. Denmark expects that this will make the compliance programme/activities more effective.

108. In Finland, supervision on use of pesticides is based on an annual control plan. Plant Production Inspection Centre affirms the annual control plan for the use and marketing of pesticides. The plan is carried out and reported by determined authorities. Plant Production Inspection Centre summarises these reports in an annual summary with conclusions and recommendations. Such annual reports are delivered to the Ministry of Agriculture and Forestry, Employment and Economic Development Centres and EU. In addition, because of the need to develop, the national law on pesticides related to supervision, the law is currently under renewal. The main aim is to get the new legislation on plant protection products to be accepted during 2007.

109. Germany carries out inspections every year, covering all the important user compliance problems. This may help to indicate the effectiveness of information and compliance promotion regarding users. The results of the inspections are compiled once a year before the start of a new vegetation period (individually in the Federal States and in a national expert group chaired by the BVL). According to the evaluation of the inspections, it is possible to identify main problems. These problems are selected to be subject for information and compliance promotion regarding users of Plant Protection Products. The annual control plan considers specific regional conditions (risk based controls) and the results of the inspections of previous years. If there are objections against a user, this user will be inspected within one year or less for a second time to see if the objections are still valid or not. The Federal States use a step-by-step approach to increase user compliance, that is, (1) enforce compliance promotion, (2) written warning, (3) fines, and (4) higher fines or detentions.

110. In Ireland, a new programme is currently being implemented. After a period of operation the effectiveness of this programme will be assessed. Ireland conducts a Plant Protection Product "Usage Surveys" on a cyclical basis and keeps annual records of import, export and manufacture of Plant Protection Products.

111. The Environmental Risk Management Authority (ERMA) in New Zealand produces an Annual Monitoring Report as a statutory obligation. ERMA monitors and reviews the extent to which the HSNO Act reduces adverse effects on the environment and people by analysing relevant data sources such as key statistics, reported incidents and indicators. ERMA also attends enforcement agency liaison meetings to gather information on compliance and enforcement and to ensure that agencies are reporting appropriately. The ACVM Group undertakes regular slice of life audits to monitor a range of activities, including user compliance.

112. Norway stated that there are no particular compliance programmes or activities but Norway has performed a number of surveys among users where questions on user compliance are included. For professional users, spray journals are mandatory.

113. In Switzerland, an extensive Evaluation Programme has been initiated in 1997 to study the impact of new risk reduction measures, for which the legal base has been put into force in 1998. Parameters studied were e.g. biodiversity, nitrogen, phosphorus, use of plant protection products. The evaluations in the various areas have been conducted in the last few years and the summary reports are now available. With respect to the use of plant protection products, the use data were collected in four different lake areas in Switzerland. The evaluation of the data has shown that the quantitative goal of a 30 percent

reduction in the use of plant protection products compared to the reference value of 1992 has been achieved. The results however also show that in addition to the implementation of more ecological production methods also other factors have contributed to the reduction observed. The reports are available under: www.blw.admin.ch/news/01325.

Assessments of compliance

114. There are very few formal assessments of individual practices in most countries that responded to this survey. Exceptions include Germany where there are annual inspections, and Denmark where three different agencies appear to have responsibilities, but this is not that effective as 'enforcement is very difficult'.

115. Ireland is putting in place a new programme of inspections and in the UK certain aspects of compliance with pesticide regulations will be part of the conditions for receiving the major 'single farm payment' from 2006. The most common approach to considering levels of compliance are through the use of environmental measures as surrogates, although some countries are still trying to formulate how pesticides use should be monitored.

116. It is also worth noting that the widest range of activities from detailed inspections to formulating an approach is happening within the EU, which is, theoretically, taking a more integrated approach to PPP issues than has been the case.

Possible avenues for assessing compliance that are not commonly mentioned

117. Only responses from Australia mentioned the possible role of quality assurance schemes in assessing compliance with regulation. However, even this fails to draw obvious conclusions between 'market' assurance requirements and the consequences of failing these assessments for future improvements in practice.

118. There is also no attempt being made to make an overall risk assessment of farming businesses ability to comply with PPP and other regulations. This is an essential part of any process as it will target assessments and inspections where they are needed and provide a clear incentive to complying with requirements if you can indicate that your business is 'low risk' and therefore fails to get a government inspection for many years.

119. The value of promoting the right practice is clear in users responses as is the value of targeted inspections, investigations and action. This need for overall risk assessment which is then linked to further action is clearly an area that needs to be considered as it brings benefits both to compliant users, who are left alone, and regulators, who can target their resources more effectively.

4. Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • phone (18) • in person (14) • e-mail (13) • letter (7) • trade show / seminar (3) • do not provide (1) • other: membership of advisory committee (<i>Australia</i>); conferences (<i>Germany</i>); Fed farmers (<i>New Zealand</i>) 	<ul style="list-style-type: none"> • phone (17) • e-mail (16) • in person (15) • trade show / seminar (9) • letter (5) • do not provide (0) • other: minor use, changes to label (<i>Canada</i>); fed farmers rep on other committees 	<ul style="list-style-type: none"> • Government (15) • Manufacturers Mailings (14) • Associations/User Groups Newsletters/Meetings (14) • Trade shows/Vendors (6) • Media (e.g. Newspaper, Radio, etc) (6) • Other pesticide users: informal network (<i>Australia</i>); grower organizations, website, farm advisors, agronomists, consultants, on-staff agronomists that notify all staff and clients on changing label/regulatory requirements via a published report on a semi-frequent basis (<i>Canada</i>); government website (<i>Belgium</i>) http://www.phytoweb.fgov.be/indexFr.asp; Pesticide users (<i>Japan</i>); Farm advisors (<i>Slovenia</i>);

5. Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State Organizations	National Organizations	Public
<ul style="list-style-type: none"> • Reports (12) • website (7) • e-mail (5) • Not provided (1) • other – joint pesticide advisory committees (<i>Australia</i>); internal presentations (<i>Canada</i>); Annual education events are organised for persons who have made supervision visits, and results of annual supervision are discussed during the lectures (<i>Finland</i>) 	<ul style="list-style-type: none"> • reports (9) • e-mail (7) • website (3) • Not provided (1) • other – APVMA / State advisory committee (<i>Australia</i>) 	<ul style="list-style-type: none"> • website (eg successful prosecutions) (10) • Reports (6) • e-mail (2) • other – press releases (<i>Australia</i>); press release of summary record (<i>Germany</i>):
Criteria by which data can be searched for trends		
<ul style="list-style-type: none"> - Violation type (10) - Enforcement action taken (7) - Not capable of trends from data (3) - User group (3) - Others: <p><u>Additional remarks</u></p> <p>Australia: Some States did not have the capacity to search data for trends. For those that did, violation type, enforcement action taken and in one case user group could be searched. Other searching capacity included active constituent name, registered product name and locality.</p> <p>Germany: The Federal States use different ways for data interpretation. Some States have complex databases while other States use simpler ones. Therefore, the interpretation of data varies in the States (marked with (X)). The type of violation can be evaluated by each Federal State because these results must be reported to the BVL. Because the compilation of an annual German Plant Protection Control Report began in 2004, it is difficult to identify national-wide trends up to now.</p> <p>Switzerland : collection of pesticide sales data and monitoring programme of use data; case studies</p> <p>US: Worker Protection Standard elements; efficiency measure (number of enforcement actions taken per million dollars of costs). (This efficiency measure is alternatively stated as cost of conducting inspections that identify violators.)</p>		

6. Compliance Challenges (relevant to Objectives 1 and 2)

Most Frequent Compliance Challenges (Country's ranking in brackets)			
Rank	ACCORDING TO USERS	Rank	According to Regulators
1	· Buffer (to water, wells, sensitive habitat, etc.)	1	· Unregistered use of a registered product
2	· Use of only approved products	2	· Drift · Stocking of obsolete products
3	· Personal protective equipment	3	· Buffer (to water, wells, sensitive habitat, etc.)
4	· Drift	4	· Use of imported products that are not authorised
5	· Rate of application (Dose)	5	· Unlicensed/Improper licensed applicator
6	· Wind speed	6	· Personal protective equipment · Unsafe storage of products (unlocked, contaminate food/feed, etc.)
7	· Labelled Crop / Site	7	· Wind speed
8	· Timing of pre-harvest intervals · Meeting product storage requirements · Thorough cleaning of sprayer equipment	8	· Use of banned product
9	· Soil Type / Depth to ground water · Proper disposal of pesticides and/or pesticide containers · Obtaining the required permits / licence · Other label directions	9	· Improper disposal of pesticides and/or pesticide containers
10	· Exceeding number of applications allowed per season	10	· Labelled Crop / Site
Other major Compliance challenge: lack of consistency between state legislation; lack of compliance oversight on ground based applications (<i>Australia</i>)		11	· Permit Violation (extra conditions not met aside from on the label e.g. buffer zones, unauthorized transfer, inappropriate amount used, unapproved area treated, etc.)
		12	· Timing of pre-harvest intervals · Improper filling or cleaning of sprayer equipment
		13	· Rate of application (Dose) · Exceeding number of applications allowed per season
		14	· Unsafe transport (unlocked, contaminate food/feed, etc.)
		15	· Other label directions · Soil Type / Depth to ground water

Rankings given to each type of non-compliance was calculated based on the 2006 Users or Regulators Survey results provided by each country.

Highest ranked type of non-compliance was given 1st place with a point value of 5, then the rest were placed in descending order of importance all the way to the lowest ranked type of non-compliance, which was given a point value of 1.

120. From regulators' perspective, Australia noted "providing false and misleading information" as for other user compliance problems whereas Belgium mentioned "use of uncertified sprayers". In Finland, Plant protection products have withdrawn lately from the register of pesticides (mainly withdrawn by requests presented by a register holder for marketing reasons) but these products may still be available and in use. The frequency of control visits is found to affect the results of inspection. In the near future the number of supervision visits will increase to meet the requirements of Commission Regulation (EC) No 796/2004 and Council Regulation (EC) 1782/2003.

121. Germany noted that the differing answers to the question can be explained by specific regional conditions which influence farmers' actions. Some examples are given below:

- In coastal regions - near the North Sea or the Baltic Sea – there are often strong winds. This increases the probability that applications take place at wind speeds which are not in accordance with the Code of Good Agricultural Practice in Plant Protection
- The distribution of the seizure of farms and the qualification of users (farming on a regular/sideline basis) in a certain region is often reflected in the willingness/ability to work according to the label.
- The availability of authorised Plant Protection Products (number of products) can vary considerably depending on the cultivated crops (example: a farmer who cultivates wheat has access to more PPPs in comparison to a farmer who cultivates vegetables).

Challenges to compliance for users

122. The biggest problems indicated are health and safety requirements and environmental conditions such as buffer zones. There are also indications that labelling is not clear in terms of actual approvals as 'labelled crop/site' issues also rate highly. This suggests that there is a need for clarity in terms of how approvals are considered. This has been a major issue in the UK for some sectors, such as in propagation, where depending on the phrases used by different companies it is not clear what can be used on what plant species.

Challenges to compliance for regulators

123. The most common issue seems to be the use of the registered product on the wrong crop. This is consistent with issues raised by users and suggests that there is an urgent need to consider how to ensure clear communication of which crops are and are not included in certain approvals. One suggestion that is conspicuous by its absence is the use of internationally accepted extrapolations to ensure simplicity of registration and understanding. The Lindane guidelines in Europe and work currently being done on the value of extrapolations for MRL setting could be valuable in this context.

124. The next issues are health and safety and environmental requirements. In the survey results, there appears to be consistency between users and regulators. This suggests that there may be common problems in label design and signposting which means these important bits of information are hard to find.

125. This is an issue highlighted elsewhere and summarised by the idea that the labels have to communicate information relevant to the user, not relevant to the shape of the regulations governing use. This type of approach is attempted by documents such as the UK Code of Practice for the use of pesticides, which aims to summarise regulatory information from over 30 instruments into information that is pertinent for users.

7. Records on Pesticide Use (relevant to Objective 2)

126. The specific information to be required for record is as the table below;

Responses from regulators

Specific information required for record
<ul style="list-style-type: none"> - pesticides used (14) - application area (14) - application timing (13) - crop/stock yield (11) - pest identified (10) - other : records on weather conditions were frequently required as was names and addresses and authorisation numbers (<i>Australia</i>); doses (<i>Denmark</i>); application rate, amount of water used per hectare, comments (<i>Germany</i>); product name and registration number, place of purchase, package size, quantity purchased, date of application, crop and area treated, amount applied to crop, records of returns, products in stock and disposal (<i>Ireland</i>); purchase of pesticides, storage and disposal (<i>Slovak Republic</i>); dosage, temp, wind, other safety measures regarding filing and cleaning of equipment (<i>Sweden</i>); climatic conditions applicator information (<i>US</i>)

Responses from users

Record on data	Information recorded (number of respondent)
Maintaining records on what pesticide and the quantity of pesticide used	<ul style="list-style-type: none"> • application timing (23) • application area (20) • pesticides used (18) • crop/stock yield (17) • pest identified (5) • others : weather conditions and as per industry QA programmes (<i>Australia</i>); pesticide dose and applicators (<i>Belgium</i>); cost/effectiveness (<i>Canada</i>); application dose and time (<i>Japan</i>)
Records on data	Countries of user groups who replied YES
Comparing the data from year to year to help target pests (life cycles, trends, etc.)	Australia, Canada, Finland, Germany, New Zealand, Slovenia
Analysing the data to change the amount of pesticides used from year to year, but amount and approach taken also determined by current crop / pest situation and may not be dictated by previous activities	Australia, Canada, Finland, Germany, New Zealand, Slovenia
Analysing the data to change the type of pesticides used from year to year (resistance management) e.g. cotton industry runs comprehensive programmes targeting insect resistance, integrated pest management and management of GMO technology	Australia, Canada, Finland, Germany, New Zealand, Slovenia

8. Additional Information (relevant to Objectives 1, 2, and 3)

Q: Suggestions that could be helpful to regulatory authorities on which activities can improve/increase user compliance

Responses from users

127. Australia responded that greater use of negotiated compliance programmes will be helpful between regulators and industry groups eg memorandums of understanding. It is important to ensure regulation and acts are consistent / identical across and between jurisdictions; competence of applicator to manage relevant risks is key to risk management eg aerial applicators in Australia are highly trained and training offsets any perceived and misplaced concerns with aerial application. It is necessary to ensure that pesticide labels are written to communicate relevant information to users to enable appropriate risk mitigation steps to be implemented – there is a tendency for labels to be hazard-based and written from a regulatory compliance perspective rather than aiming to inform users.

128. Belgium remarked that introducing a kind of license for which pesticide users are obliged to follow a minimum of information sessions. Finland noted that more advice and information should be available to pesticide users. Germany suggested improvements in consultations and services. New Zealand suggested more education.

129. Canada enlists the following suggestions:

- Come and see us in action
- Personal visits with users
- Education
- End market knowledge - creating awareness on potential risks of misusing
- Need to show all levels are working together (growers, agriculture retailers, processors)
- Difficulty is with large commodity crops as they (the growers) are not in contact directly with processors and those that market their crop. There is a general lack of trust towards government and agri-business.
- All enforcement tools are helpful if conducted in an appropriate manner, i.e. don't prosecute unless other options are first implemented.
- Register better active ingredients, better choices
- Scouting, monitoring support money availability
- Training sessions on regular basis
- Review and remove label requirements/restrictions so that we don't unnecessarily throw growers into technical default of labelling e.g. pre-harvest intervals that are too long, restrictions on regions of use not based on environment (Pursuit east vs west)
- Timely product registrations for effective solutions to new pests on new crops
- Regulators need to understand what drives on-farm decisions - economics (rates based on weed spectrum, economic agronomic decisions)
- Making labelling information more legible and major precaution more perceptible.

Q. Process or model to identify and select user compliance problems causing the greatest risk***Responses from regulators***

130. In Australia, the States and Territory regulators did not have a specific process or model to identify and select user compliance problems that represent the greatest risk. All had informal processes that monitored compliance and could be used to identify issues of greatest risk. One State (New South Wales) noted the recent introduction of a Compliance Audit Handbook consistent with international standards adopted in Australia for environmental auditing (AS/NZS ISO 14010:1996, AS/NZS ISO 14011:1996; AS/NZS ISO 14012:1996) that could assist auditors in identifying and selecting issues for audit focus.

131. Canada noted that PMRA proceeds compliance work planning through Risk Model. For non-conforming samples, a risk analysis is performed (solely on human health risks). More concern has been given to organophosphates and carbonates.

132. Denmark responded that the Chemical Inspection Service inspects the farms controlling the stocking of pesticides. The Danish Veterinary and Food Administration take samples of Danish fruits and vegetables. In case of infringements the case are forwarded to the Chemical Inspection Service for further investigation.

133. In Finland, no particular model is used. The highlighted problems have been noticed during annual supervision visits in the case of “use of imported products that are not authorised”, “use contrary to label directions especially on labelled crop/site”, “improper disposal of pesticides and pesticides containers, and other major problems, whereas the problems related to the “use contrary to label directions especially on drift due to wind” are dealt with through complaints from the public.

134. In Germany, after registration, the BVL collects reports from environmental monitoring programmes (groundwater, surface water), vertebrate poisonings, and results of the Plant Protection Control Programme about unwanted effects of PPPs, analyses them and takes appropriate measures. The following is an example of how groundwater findings of PPPs are evaluated: If concentrations of active substances $\geq 0.1 \mu\text{g/l}$ are found in the context of groundwater monitoring performed by the environmental authorities in the Federal States or water suppliers, the authorisation holders of the pertinent PPP are required to trace such findings and explain them to the BVL (description of the source, way of sampling, labelling, transport and storage of samples, analysis). The results of the explanation of findings could lead to a modification of the authorisation of a PPP or supplemental studies are required from the authorisation holder. Federal States take care of promotion and inspections. More details on their activities are summarised in the template attached. Norway remarked that there is no particular process or model for these matters but the monitoring programme for pesticides residues can identify exceedency of MRL's and use of an unauthorized pesticide.

135. Japan responded that they regularly monitored the residue of agricultural chemicals in crops and aquatic environment. When the residue is over the tolerance limit for pesticide residue for crops, regulators make efforts to find out the reasons.

COUNTRY REPORT IN TEMPLATE

National Survey Results for Australia

Table 1: General Information

<i>Pesticide Regulators</i>	<p><i>Regulation of pesticides up to and including the point of retail sale</i></p> <p><i>Australian Pesticides and Veterinary Medicines Authority</i></p> <p style="text-align: center;">REGULATION OF PESTICIDE USE</p> <p>Australian Capital Territory - Environment A.C.T. Northern Territory - Department of Primary Industry, Fisheries and Mines Western Australia - Department of Agriculture; Department of Health South Australia - Primary Industries and Resources Victoria - Department of Primary Industries; Department of Human Services New South Wales - Department of Environment and Conservation Queensland - Department of Primary Industries and Fisheries Tasmania - Department of Primary Industries, Water and Environment</p>
Legislation(s) Governing Pesticide Users	See Attachment 1
Jurisdiction of Enforcement	<i>By State or Territory</i>
Surveyed User Groups	Cotton Australia Ltd (www.cottonaustralia.com.au), Aerial Agricultural Association of Australia (www.aerialag.com.au), Horticulture Australia Limited (www.horticulture.com.au)

Table 2: Activities to Encourage Compliance (*relevant to Objective 1*)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • ✓✓ compliance promotion • ✓ written/verbal warning • ✓✓ inspection • ✓✓ investigation (suspect wrongdoing) • ✓ compliance agreement • ✓ detention/seizure • ✓ fines • ✓ stop advertising • ✓ prosecution • ✓✓ revoke permit/license/certification • other – strong support / recognition / licensing on basis of industry programmes 	<ul style="list-style-type: none"> • Most - compliance promotion • Most - written/verbal warning • All - inspection • All - investigation (suspect wrongdoing) • Most - compliance agreement • None - reduce or recall of financial grants • Most - detention/seizure • Most - fines • None - stop advertising • All - prosecution • None - stop import • Most - stop use • All - revoke permit/license/certification • other activity – some States can issue control orders, compliance notices and defective spray notices
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed

Australian States and Territories do not conduct formal assessments of the effectiveness of compliance programs or activities. Informal surveillance is conducted via programmes such as agricultural produce residues or water monitoring. Some States conduct targeted or random auditing of licensed operators, user activities or facilities

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • ✓✓✓ in person • ✓✓✓ phone • ✓✓✓ e-mail • ✓✓ letter • ✓ trade show / seminar • other – membership of advisory committee 	<ul style="list-style-type: none"> • ✓✓✓ in person • ✓✓✓ phone • ✓✓✓ e-mail • ✓✓ letter • ✓✓ trade show / seminar 	<ul style="list-style-type: none"> • ✓✓ Manufacturers Mailings • ✓✓ Government including regulator gazette and website • ✓ Associations/User Groups Newsletters/Meetings • ✓ Media (e.g. Newspaper, Radio, etc) • Other pesticide users – informal network

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State Organizations	National Organization	Public
<ul style="list-style-type: none"> • ✓✓ reports • ✓✓ e-mail • ✓ website • other – joint pesticide advisory committees 	<ul style="list-style-type: none"> • ✓✓ reports • ✓✓ e-mail • other – APVMA / State advisory committee 	<ul style="list-style-type: none"> • ✓ Reports on request • ✓ e-mail • ✓ website (eg successful prosecutions) • other – press releases
Criteria by which data can be searched for trends		
Some States did not have the capacity to search data for trends. For those that did, violation type, enforcement action taken and in one case user group could be searched. Other searching capacity included active constituent name, registered product name and locality.		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<p>Different users prioritised compliance challenges differently. Priorities in the compilation of responses were</p> <ul style="list-style-type: none"> • 1. Following label directions – drift • 2. Use of only approved products • 3. Obtaining the required permits / licence • 3. Other label directions 	<p>States and Territories listed various ‘most frequent’ user compliance problems.</p> <ul style="list-style-type: none"> • 1. Use contrary to/inconsistent with label directions: <ul style="list-style-type: none"> - Drift was the highest challenge. One State noted that this issue can occur even when label directions are followed. • 2. Unregistered use of a registered product • 2. Unlicensed/Improper licensed applicator

<ul style="list-style-type: none"> • 4. Following label directions - personal protective equipment • 5. Following label directions - buffer • 5. Following label directions – wind speed • 5. Proper disposal of pesticides and/or pesticide containers • 5. Other major Compliance challenge:- lack of consistency between State legislation; lack of compliance oversight on ground based applications 	<ul style="list-style-type: none"> • 3. Improper disposal of pesticides and/or pesticide containers • 3. Use contrary to/inconsistent with label directions: <ul style="list-style-type: none"> - Personal protective equipment • 4. Use contrary to/inconsistent with label directions: <ul style="list-style-type: none"> - Timing of pre-harvest intervals • 5. Use contrary to/inconsistent with label directions, including: <ul style="list-style-type: none"> - Rate of application (Dose) - Wind speed - Buffer (to water, wells, sensitive habitat, etc.) - Exceeding number of applications allowed per season - Labelled Crop / Site • 5. Other issues raised included permit violation, unsafe transport, unsafe storage of products, stocking of obsolete products, providing false and misleading information
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Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
<i>Do maintain records on what pesticide and the quantity of pesticide used</i>	Some State and Territory regulators require users to maintain records on pesticide use. The requirement varies between States and Territories based on the type of user – eg in some only commercial or licensed operators are required to keep records
Information recorded	Information required:
<ul style="list-style-type: none"> - ✓✓ crop/stock yield - ✓✓✓ pest identified - ✓✓✓ pesticides used - ✓✓✓ application timing - ✓✓✓ application area - other – weather conditions and as per industry QA programmes 	This varied between States and Territories but usually included <ul style="list-style-type: none"> - crop/stock yield - pest identified - pesticides used - application timing - application area - other – records on weather conditions were frequently required as was names and addresses and authorisation numbers.
<i>Do compare the data from year to year to help target pests (life cycles, trends, etc.)</i>	
Do analyse the data to change the amount of pesticides used from year to year, but amount and approach taken also determined by current crop / pest situation and may not dictated by previous activities	
Do analyse the data to change the type of pesticides used from year to year (resistance management) eg cotton industry runs comprehensive programmes targeting insect resistance, integrated pest management and management of GMO technology	

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
<ul style="list-style-type: none"> greater use of negotiated compliance programmes between regulators and industry groups e.g. memorandums of understanding ensure regulation and acts are consistent / identical across and between jurisdictions; competence of applicator to manage relevant risks is key to risk management eg aerial applicators in Australia are highly trained and training offsets any perceived and misplaced concerns with aerial application ensure that pesticide labels are written to communicate relevant information to users to enable appropriate risk mitigation steps to be implemented – there is a tendency for labels to be hazard-based and written from a regulatory compliance perspective rather than aiming to inform users 	<p>In general the States and Territory regulators did not have a specific process or model to identify and select user compliance problems that represent the greatest risk. All had informal processes that monitored compliance and could be used to identify issues of greatest risk. One State (New South Wales) noted the recent introduction of a Compliance Audit Handbook consistent with international standards adopted in Australia for environmental auditing (AS/NZS ISO 14010:1996, AS/NZS ISO 14011:1996; AS/NZS ISO 14012:1996) that could assist auditors in identifying and selecting issues for audit focus.</p>

Attachment 1

Regulator	Relevant legislation	Website link
National – Australian Pesticides and Veterinary Medicines Authority	Agricultural and Veterinary Chemicals (Administration) Act 1992 Agricultural and Veterinary Chemicals (Administration) Regulations 1995 Agricultural and Veterinary Chemicals Code Act 1994 Agricultural and Veterinary Chemicals Code Regulations 1995	www.apvma.gov.au
Australian Capital Territory - Environment ACT	Environment Protection Act 1997 Environmental Protection Regulations 2005	www.legislation.act.gov.au
Northern Territory - Department of Primary Industry, Fisheries and Mines	Agricultural and Veterinary Chemicals (Control of Use) Act 2004 Agricultural and Veterinary Chemicals (Control of Use) Regulations 2004	www.nt.gov.au/dcm/parliamentary_counsel/current_legislation.shtml
Western Australia - Department of Agriculture; Department of Health	WA Department of Agriculture Aerial Spraying Control Act 1966 Agriculture and Related Resources (Spraying Restrictions) Regulations 1979 Agricultural Produce (Chemical Residues) Act 1983 WA Department of Health Health (Pesticides) Regulations 1956 Poisons Act 1964	
South Australia -	Agricultural and Veterinary Products (Control of Use) Act 2002	www.pir.sa.gov.au/r

Primary Industries and Resources	Controlled Substances Act 1984	uralchem www.parliament.sa.gov.au
Victoria - Department of Human Services; Department of Primary Industries	Health Act 1958 Health (Pest Control) Regulations 2002 Agricultural and Veterinary Chemicals (Control of Use) Act 1992 Agricultural and Veterinary Chemicals (Control of Use) Regulations 1996	
New South Wales - Department of Environment and Conservation	Pesticides Act 1999 Pesticides Regulation 1995	www.environment.nsw.gov.au/pesticides/
Queensland - Department of Primary Industries and Fisheries	Agricultural and Veterinary Chemicals (Queensland) Act 1994 Agricultural Chemicals Distribution Control Act 1966 Agricultural Chemicals Distribution Control Regulation 1998 Chemical Usage (Agricultural and Veterinary) Control Act 1988 Chemical Usage (Agricultural and Veterinary) Control Regulation 1999	www.legislation.qld
Tasmania - Department of Primary Industries, Water and Environment	Agricultural and Veterinary Chemicals (Control of Use) Act 1995	www.thelaw.tas.gov.au

National Survey Results for Belgium

Table 1: General Information

Pesticide Regulator(s)	Name of National Regulator and Country: Belgian Food Agency Name of Contact: Schmit Jean-François Phone: +32 (0)2 208 47 69 Facsimile Number: +32 (0)2 208 47 43 E-mail: jean-francois.schmit@afsca.be Address: WTC III, boulevard S. Bolivar, 30 1000 Bruxelles
Legislation(s) Governing Pesticide Users	Royal Decree of 28 februari 1994 relatif à la conservation, la mise sur le marché et l'utilisation des pesticides à usage agricole. Enforced by State.
Jurisdiction of Enforcement	<i>Country</i>
Surveyed User Groups	Agricultural http://www.fwa.be/

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • compliance promotion (O) • written/verbal warning (O) • inspection (O) • compliance agreement (O) • other activity (specify): revoke license after introduction of the license 	<ul style="list-style-type: none"> • written/verbal warning • inspection • investigation (suspect wrongdoing) • detention/seizure • fines • stop advertising • prosecution • stop import • stop use
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed
	N/A

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • phone • e-mail • trade show / seminar 	<ul style="list-style-type: none"> • phone • e-mail • trade show / seminar 	<ul style="list-style-type: none"> • Manufacturers Mailings • Government • Associations/User Groups • Newsletters/Meetings • Other (specify): fytoweb, website of the government

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • e-mail 	<ul style="list-style-type: none"> • Reports • e-mail 	N/A
<i>Criteria by which data can be searched for trends</i>		
<ul style="list-style-type: none"> • violation type • enforcement action taken 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Use of only approved products (4) (3) • Following label directions: <ul style="list-style-type: none"> - Personal protective equipment (1) - Buffer (to water, wells, sensitive habitat, etc.) (1) (2) - Rate of application (Dose) (2) - Timing of pre-harvest intervals (3) - Exceeding number of applications allowed per season (5) • Meeting product storage requirements (4) • Thorough cleaning of sprayer equipment (5) 	<ul style="list-style-type: none"> • Use of banned product (1) • Unregistered use of a registered product (3) • Other major USER Compliance problem: Sprayers not certified (2)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
<i>Do maintain records on what pesticide and the quantity of pesticide used</i>	<i>Do</i> require users to maintain records on pesticide use
Information recorded <i>Mainly for horticulture and potatoes</i> :	Information required :
<ul style="list-style-type: none"> - crop/stock yield (2) - pesticides used (2) - application timing (2) - application area (2) - other : pesticide dose and person who does the application (1) 	<ul style="list-style-type: none"> - crop/stock yield - pesticides used - application timing - application area
<i>Do not compare the data from year to year to help target pests (life cycles, trends, etc.)</i>	

Do not analyse the data to change the amount of pesticides used from year to year

Do not analyse the data to change the type of pesticides used from year to year (resistance management)

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	<i>From Regulators</i>
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Introducing a kind of license for which pesticide users are obliged to follow a minimum of information sessions.	N/A
Best formation and information for users	

National Survey Results for Canada**Table 1: General Information**

Pesticide Regulator(s)	All Provinces and Health Canada's Pest Management Regulatory Agency
Legislation(s) Governing Pesticide Users	Each Province has own regulations for users, as well as Federal Pest Control Products Act and Regulations
Jurisdiction of Enforcement	By the Provinces and Country
Surveyed User Groups	Provincial Government Extension Workers, Agricultural Research Company, Agricultural Crop Consultants, Crop Life, Aerial Spray Company, Pulse Growers, Potato Growers

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
8/13 (62 %) compliance promotion	YES compliance promotion
7/13 (54%) written/verbal warning	YES written/verbal warning
9/13 (69%) inspection	YES inspection
6/13 (46%) investigation (suspect wrongdoing)	YES investigation (suspect wrongdoing)
3/13 (23%) compliance agreement	YES compliance agreement
3/13 (23%) reduce or recall of financial grants	NO reduce or recall of financial grants
3/13 (23%) detention/seizure	YES detention/seizure
5/13 (38) fines	YES fines
2/13 (15%) stop advertising	YES stop advertising
3/13 (23%) prosecution	YES prosecution
2/13 (15%) stop import	YES stop import
2/13 (15%) stop use	YES stop use
5/13 (38%) revoke permit/license/certification	YES revoke permit/license/certification
1/13 (8%) other activity (specify): <u>educate users why compliance is a benefit</u>	NO other activity (specify): _____
	Description of how the effectiveness of compliance programmes/activities are assessed (if applicable)

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
1/13 (8%) do not provide 5/13 (38%) in person 8/13 (62%) phone 3/13 (23%) e-mail 1/13 (8%) letter 0 trade show / seminar 0 other (specify) : _____	0 do not provide 7/13 (54%) in person 7/13 (54%) phone 6/13 (46%) e-mail 1/13 (8%) letter 4/13 (31%) trade show /seminar other (specify) : 1/13 (8%) <u>minor use</u> 1/13 (8%) <u>changes to label</u>	9/ 13 (69%) Manufacturers Mailings 9/13 (69%) Government 6/13 (46%) Trade shows/Vendors 10/13 (77%) Associations/User Groups Newsletters/Meetings 5/13 (38%) Media (e.g. Newspaper, Radio, etc) 2/13 (15%) Other pesticide users other (specify): 1/13 (8%) <u>grower organizations</u> 2/13 (15%) <u>web sites</u> 1/13 (8%) <u>farm advisors, agronomists, consultants</u> 1/13 (8%) <u>on-staff agronomists that notify all staff and clients on changing label/regulatory requirements via a published report on a semi-frequent basis</u>

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
YES Reports YES e-mail YES website YES other (specify): <u>internal presentations</u>	YES Reports YES e-mail NO website NO other (specify): _____	YES Reports YES e-mail YES website NO other (specify): _____
Criteria by which data can be searched for trends :		
not capable of trends from data YES violation type YES enforcement action taken YES user group NO other (specify):		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
#1 - Wind speed #2 - Rate of application (Dose) #3 - Personal protective equipment #4 - Buffer (to water, wells, sensitive habitat, etc.) - Soil Type / Depth to ground water #5 - Drift	#1 - Drift <ul style="list-style-type: none"> - Rate of application (Dose) - Timing of pre-harvest intervals - Exceeding number of applications allowed per season - Labelled Crop / Site #2 - Buffer (to water, wells, sensitive habitat, etc.) - Soil Type / Depth to ground water #3 - Unlicensed/Improper licensed applicator #4 - Wind speed #5 - Permit Violation (extra conditions not met aside from on the label e.g. buffer zones, unauthorized transfer, inappropriate amount used, unapproved area treated, etc.)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
13/13 (100 % Do) maintain records on what pesticide and the quantity of pesticide used Information recorded :	One province does require users to maintain records on pesticide use Information required:
8/13 (62%) - crop/stock yield 9/13 (69%) - pest identified 12/13 (92%) - pesticides used 10/13 (77%) – application timing 11/13 (85%) - application area 1/13 (8%) - other (specify): <u>cost/effectiveness</u>	- crop/stock yield - pest identified - pesticides used - application timing - application area - other (specify):

ENV/JM/MONO(2007)9

11/13 (85% Do) compare the data from year to year to help target pests (life cycles, trends, etc.)

8/13 (62% Do) analyse the data to change the amount of pesticides used from year to year

12/13 (92% Do) analyse the data to change the type of pesticides used from year to year (resistance management)

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	From Regulators The name of the process or model to identify and select user compliance problems that represent the greatest risk.
<ul style="list-style-type: none"> - Come and see us in action - personal visits with users - education - end market knowledge - creating awareness on potential risks of misusing - need to show all levels are working together (growers, agriculture retailers, processors) - difficulty is with large commodity corps as they (the growers) are not in contact directly with processors and those that market their corp. There is a general lack of trust towards government and agri-business. - all enforcement tools are helpful if conducted in an appropriate manner, i.e. don't prosecute unless other options are first implemented. - register better active ingredients, better choices - scouting, monitoring support money availability - training sessions on regular basis - review and remove label requirements/restrictions so that we don't unnecessarily throw growers into technical default of labelling e.g. pre-harvest intervals that are too long, restrictions on regions of use not based on environment (Pursuit east vs west) - timely product registrations for effective solutions to new pests on new crops - regulators need to understand what drives on-farm decisions - economics (rates based on weed spectrum, economic agronomic decisions) - making labelling information more legible and major precaution more perceptible. 	<ul style="list-style-type: none"> - PMRA Compliance work planning through Risk Model. - Yes, for non-conforming samples, a risk analysis is performed (solely on human health risks). - More concern given to organophosphates and carbamates. - Risk is based on personal experience and knowledge of the employees.

National Survey Results for Denmark

Table 1: General Information

Pesticide Regulator(s)	Ministry of Food, Agriculture & Fisheries, Danish Plant Directorate Name of Contact: Carsten S. Madsen Phone: +45 45 26 35 95 Facsimile Number: +45 45 26 36 10 E-mail: smj@pdir.dk Address: Skovbrynet 20, DK-2800 Kgs. Lyngby Danish Environmental Agency Address: Strandgade 29, DK-1401 Copenhagen K, Denmark
Legislation(s) Governing Pesticide Users	Law 1996-01-16 nr. 21 on chemical substances and products. Act on chemical products and substances of 9 July 1993, last amended on 20 Decembre 2004 The Statutory Order on Pesticides of 9 July 1993, last amended 16 Mars 2006. Enforced by: National: Chemical Inspection Service inspect stockings and use, the Plant Directorate inspect the account on the use of pesticides and the spraying equipment. Country: The local authorities inspect stockings and use.
Jurisdiction of Enforcement	By the State/Province and/or Country
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (*relevant to Objective 1*)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • compliance promotion (O) • written/verbal warning (O) (O) • inspection (O) • investigation (suspect wrongdoing) (X) (O) • compliance agreement (O) • reduce or recall of financial grants (X) • detention/seizure (X) • fines (O) (X) • stop advertising (O) • prosecution (X) (X) • stop import (O) • stop use (O)
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed :

	<p>We take a look at the number of offenders in different groups of users and take this into account in the next year's inspection campaign.</p> <p>It is very difficult to enforce the use of pesticides. Until now three authorities have inspected the use of pesticides: the Chemical Inspection Service, the local authorities and the Plant Directorate. From 2007 only one authority the Plant Directorate will take care of the inspections at farmer level. Denmark expects that this will make the compliance programme/activities more effective.</p>
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Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
Users Not Surveyed	Users Not Surveyed	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s) (Danish Ministry of the Environment)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • Not provided 	<ul style="list-style-type: none"> • Reports 	<ul style="list-style-type: none"> • website
<i>Criteria by which data can be searched for trends :</i>		
<ul style="list-style-type: none"> • violation type (2) • enforcement action taken (1) • user group (2) 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
Users Not Surveyed	<ul style="list-style-type: none"> • Use of banned product (3) • Use of imported products that are not authorised (2) • Unregistered use of a registered product (2) (1) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) (4) • Stocking of obsolete products (5) • Other major USER Compliance problem: (1)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
(Do or Do not) maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use (Yes, by the Plant Directorate)
Information recorded :	Information required:
<ul style="list-style-type: none"> - crop/stock yield pest identified - pesticides used - application timing - application area - other (specify): 	<ul style="list-style-type: none"> - crop/stock yield - pesticides used - application timing - application area - other (specify): Doses

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Users Not Surveyed	The Chemical Inspection Service inspects the farms controlling the stocking of pesticides. The Danish Veterinary and Food Administration take samples of Danish fruits and vegetables. In case of infringements the case are forwarded to the Chemical Inspection Service for further investigation.

National Survey Results for Finland

Table 1: General Information

Pesticide Regulator(s)	Name of National Regulator and Country: Plant Production Inspection Centre, Finland Name of Contact: Deputy Director Eija-Leena Hynninen Phone: +358 2077 25180 Facsimile Number: +358 2077 25195 E-mail: eija-leena.hynninen@kttk.fi Address: Vilhonvuorenkatu 11C, P.O. Box 42, FI-00501 Helsinki, Finland
Legislation(s) Governing Pesticide Users	- Torjunta-ainelaki 1969/327 (National Law on Pesticides 1969/327) - Torjunta-aineasetus 1995/792 (National Regulation on Pesticides 1995/792) - Regulation 328/2005 given by the Ministry of Agriculture and Forestry related to testing sprayer equipment. It is connected to EU's Common Agricultural Policy (CAP).
Jurisdiction of Enforcement	By the State/Province and/or Country
Surveyed User Groups	Agricultural and horticultural producers and forest owners www.mtk.fi

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
N/A	<ul style="list-style-type: none"> • compliance promotion (O) • inspection (O) • stop advertising (O) • compliance agreement (O) • written/verbal warning (X) • investigation (suspect wrongdoing) (X) • reduce or recall of financial grants (X) • detention/seizure (X) • fines (X) • prosecution (X) • stop import (O/X) • stop use (O/X) • revoke permit/license/certification (O/X)
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed :

	<p>Supervision on use of pesticides is based on an annual control plan. Plant Production Inspection Centre affirms the annual control plan for the use and marketing of pesticides in Finland. The plan is carried out and reported by determined authorities. Plant Production Inspection Centre summarises these reports in an annual summary with conclusions and possible needs for further actions.</p> <p>Annual reports are delivered to the Ministry of Agriculture and Forestry, Employment and Economic Development Centres and EU.</p> <p>Because of needs to develop the national law on pesticides related to supervision, the law is under renewal at the moment. The main aim is to get the new legislation on plant protection products to be accepted during 2007.</p>
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Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

<i>Users provide information regarding compliance issues</i>		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • in person • phone • e-mail • trade show / seminar 	<ul style="list-style-type: none"> • phone • e-mail • trade show / seminar 	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • other (specify): We organise annually education events for persons who have made supervision visits. Results of annual supervision are discussed during the lectures. 	N/A	N/A
<ul style="list-style-type: none"> • not capable of trends from data 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Following label directions: <ul style="list-style-type: none"> - Buffer (to water, wells, sensitive habitat, etc.)(1) - Soil Type / Depth to ground water (2) - Labelled Crop / Site (3) • Other label directions: (4) • Proper disposal of pesticides and/or pesticide containers (5) 	<ul style="list-style-type: none"> • Use of imported products that are not authorised (5) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Wind speed (drift due to wind) (3) - Labelled Crop / Site (4) • Improper disposal of pesticides and/or pesticide containers (2) • Other major USER Compliance problem: (1) <p>-Plant protection products that have withdrawn lately from the register of pesticides (mainly withdrawn by requests presented by a register holder for marketing reasons). These products may still be available and in use.</p> <p>- In supervision minor human resources have had an effect on the number of control visits. In the very near future the number of supervision visits will increase because of aims related to supervision needs under Commission Regulation (EC) No 796/2004 and Council Regulation (EC) 1782/2003.</p>

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
Do maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded :	Information required :
<ul style="list-style-type: none"> - crop/stock yield pest identified - pesticides used - application timing - application area - other (specify): 	<ul style="list-style-type: none"> - crop/stock yield - pest identified - pesticides used - application timing - application area
Do compare the data from year to year to help target pests (life cycles, trends, etc.)	
<i>Do</i> analyse the data to change the amount of pesticides used from year to year	

Do analyse the data to change the type of pesticides used from year to year (resistance management)

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	<i>From Regulators</i>
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
More advice and information to pesticide users	No model is used. Ref: see answers in the question number The highlighted problems have been noticed during annual supervision visits in the case of numbers 1, 2, 4 and 5, whereas in the case of number 3 through complaints by citizens.

National Survey Results for Germany

Table 1: General Information

Pesticide Regulator(s)	Federal Office of Consumer Protection and Food Safety (BVL) Contact: Dr. Karin Corsten Phone:++49 531-299-3505 Facsimile Number:++49 531-299-3002 E-mail: karin.aden@bvl.bund.de Address: Messeweg 11/12, 38104 Braunschweig, Germany
Legislation(s) Governing Pesticide Users	German Plant Protection Act (Gesetz zum Schutz der Kulturpflanzen) and related regulations: <ul style="list-style-type: none"> - Ordinance for Banned Uses of Plant Protection Products (Pflanzenschutz-Anwendungsverordnung) - Code of Good Agricultural Practice in Plant Protection (Grundsätze für die gute fachliche Praxis im Pflanzenschutz) - Governing Specialist Qualifications in Plant Protection (Pflanzenschutz-Sachkundeverordnung) - Plant Protection Product Ordinance (Pflanzenschutzmittelverordnung) - Ordinance concerning the use of Plant Protection Products hazardous to bees - Bee Protection Ordinance (Bienenschutzverordnung) <i>Additionally, in some Federal States special legislation is in force, regulating special buffer stripes to surface water or the use of PPPs in non-agricultural areas, e.g. the use on hard surfaces. (The mentioned areas are regulated by a German Federal law, however, some Federal States have stricter regulations.)</i>
Jurisdiction of Enforcement	<i>Federal state</i>
Surveyed User Groups	Agricultural and horticultural group Horticulture group: www.g-net.de

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • compliance promotion (2) • compliance agreement (2) 	<p><u>Not all authorities in the Federal States have made use of this possibility up to now :</u></p> <ul style="list-style-type: none"> • compliance agreement • stop advertising • stop import <p><u>Authorities in the Federal States who are responsible for promotion and controls, according to the German Plant Protection Act :</u></p> <ul style="list-style-type: none"> • compliance promotion • written/verbal warning • inspection • investigation (suspect wrongdoing) • detention/seizure • fines • stop use • revoke permit/license/certification

	<p><u>Related authorities in the Federal States</u></p> <ul style="list-style-type: none"> • reduce or recall of financial grants • other activity : prohibition of sale • disposal of non-authorised plant protection products
<p>* Most popular responses</p>	<p>Description of how the effectiveness of compliance programmes/activities are assessed:</p> <p>Inspections which are carried out every year, covering all important user compliance problems may indicate the effectiveness of information and compliance promotion regarding users.</p> <ul style="list-style-type: none"> - The results of the inspections are compiled once a year before the start of a new vegetation period (individually in the Federal States and in a national expert group chaired by the BVL). According to the evaluation of the inspections it is possible to identify main problems. These problems are selected to be subject for information and compliance promotion regarding users of Plant Protection Products. - The annual control plan considers specific regional conditions (risk based controls) and the results of the inspections of previous years. - If there are objections against a user, this user will be inspected within one year or less for a second time to see if the objections are still valid or not. <p>The Federal States use a step-by-step approach to increase user compliance:</p> <ol style="list-style-type: none"> 1. enforce compliance promotion 2. written warning 3. fines 4. higher fines or detentions

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • in person (2) • phone (2) • e-mail (2) • letter (2) • other (specify) : Conferences 	<ul style="list-style-type: none"> • in person (2) • phone (2) • e-mail (2) • letter (2) • other (specify) : _____ 	<ul style="list-style-type: none"> • Manufacturers Mailings • Government

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • e-mail 	<ul style="list-style-type: none"> • Reports • e-mail 	<ul style="list-style-type: none"> • Reports • Website • Other : press release (summary results)
Criteria by which data can be searched for trends:		
violation type * The Federal States use different ways for data interpretation. Some States have complex databases while other States use more simple ones, therefore the interpretation of data varies in the States (marked with (X)). The type of violation can be evaluated by each Federal State because these results must be reported to the BVL. Because the compilation of an annual German Plant Protection Control Report began in 2004, it is difficult to identify national-wide trends up to now.		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Following label directions: <ul style="list-style-type: none"> - Personal protective equipment (2) (2) - Buffer (to water, wells, sensitive habitat, etc.) (1) (1) - Rate of application (Dose) (3) - Labelled Crop / Site (5) (5) • Meeting product storage requirements (4) (4) • Thorough cleaning of sprayer equipment (3) 	<ul style="list-style-type: none"> • Use of banned product (5, 5, 2, 4) • Use of imported products that are not authorised (4, 3, 4, 5, 4) • Unregistered use of a registered product (1, 4, 1, 5, 5, 4) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment (5) - Wind speed (2, 1, 5, 3) - Buffer (to water, wells, sensitive habitat, etc.) (2, 5, 5, 3, 2, 3, 2) - Soil Type / Depth to ground water (5) - Drift (3, 3) - Rate of application (Dose) (3) - Timing of pre-harvest intervals (5) - Exceeding number of applications allowed per season (4, 5) - Labelled Crop / Site (5) • Other label directions: (5) • Unlicensed/Improper licensed applicator (4, 3, 2) • Permit Violation (extra conditions not met aside from on the label e.g. buffer zones, unauthorized transfer, inappropriate amount used, unapproved area treated, etc.) (1, 4, 5, 5) • Unsafe transport (unlocked, contaminate food/feed, etc.) (5) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) (2, 3) • Stocking of obsolete products (3, 3, 1, 3, 4, 3) • Improper filling or cleaning of sprayer equipment (2) • Improper disposal of pesticides and/or pesticide containers (2) <p>Other major USER Compliance problem:</p>

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
Do maintain records on what pesticide and the quantity of pesticide used	Do require users to maintain records on pesticide use
Information recorded	User are required to maintain records. This duty couldn't directly derived from the German Plant Protection Act, but from other regulations. Therefore, some Federal States haven't started to control these records until now. It is planed to amend the German Plant Protection Act in the near future.
- crop (not stock yield) (Y) (Y) - pesticides used (Y) (Y) - application timing (Y) (Y) - application area (Y) (Y)	- crop/stock yield (Y) - pest identified (Y) - pesticides used (Y) - application timing (Y) - application area (Y) - other (specify): application rate, amount of water used per hectare, comments
Do compare the data from year to year to help target pests (life cycles, trends, etc.)	
Do analyse the data to change the amount of pesticides used from year to year	
Do analyse the data to change the type of pesticides used from year to year (resistance management)	

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Improve consultations and services	BVL (registration) After registration, the BVL collects reports from environmental monitoring programmes (groundwater, surface water), vertebrate poisonings, and results of the Plant Protection Control Programme about unwanted effects of PPPs, analyses them and takes appropriate measures. The following is an example of how groundwater findings of PPPs are evaluated: If concentrations of active substances $\geq 0.1 \mu\text{g/l}$ are found in the context of groundwater monitoring performed by the environmental authorities in the Federal States or water suppliers, the authorisation holders of the pertinent PPP are required to trace such findings and explain them to the BVL (description of the source, way of sampling,

	<p>labelling, transport and storage of samples, analysis). The results of the explanation of findings could lead to a modification of the authorisation of a PPP or supplemental studies are required from the authorisation holder.</p> <p>Federal States (promotion and inspections)</p> <ul style="list-style-type: none"> - Environmental monitoring programmes (Ministries of Environment): Analyses of water samples in ground and surface water (streams in agricultural areas, effluent of sewage treatment plants) → compliance promotion, non-recommendation of special products in some critical areas. Geographic Information Systems (GIS) are used in some States to support identification, e.g. of fields situated close to water. These fields are more frequently objects of inspection than low risk areas. - Co-operation with the Food Safety Authorities (residues in food) → In case of infringements (residues of non-authorised products), controls will take place directly at the producer's location (farm). If infringements are identified frequently in one crop, promotion and inspections will be focused mainly on the use of PPPs in these crops. - Controls at user level, according to the German Plant Protection Control Programme, plus inspections, if wrong doing (misuse or abuse) is suspected <p>Research programmes showed that improper cleaning and filling of sprayer equipment lead to significant amounts of PPPs found in surface waters. Therefore, use instructions are given on the label and the industry and the competent authorities in the Federal States take care of promotion.</p> <p>Organisation of expert meetings (nation-wide or within the Federal States) to discuss specific problems and find solutions for, e.g. unwanted bleaching effects caused by Clomazone, poisoning cases of bees, vertebrate poisonings caused by incorrect applications of rodenticides.</p>
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Remarks on and further information about the answer of the questionnaire for regulators from Germany

GENERAL REMARKS ON THE ANSWERS

136. The regulators' questionnaire was sent to the Federal Office for Consumer Protection and Food Safety (BVL) which is responsible for issuing authorisations for Plant Protection Products (PPP). Additionally, the questionnaire was sent to the competent authorities for control measures concerning marketing and use in 16 Federal States. Authorities of nine Federal States sent their answers of the questionnaire. The results were compiled because only slight differences could be identified. Different answers were given only to question 6. Therefore, an overview of the nine answers is given in the appendix.

137. The differing answers to question 6 can mainly be explained by specific regional conditions which influence farmers' actions. Some examples are given below:

- In coastal regions - near the North Sea or the Baltic Sea – there are often strong winds. This increases the probability that applications take place at wind speeds which are not in accordance with the Code of Good Agricultural Practice in Plant Protection
- The distribution of the seizure of farms and the qualification of users (farming on a regular/sideline basis) in a certain region is often reflected in the willingness/ability to work according to the label.
- The availability of authorised Plant Protection Products (number of products) can vary considerably depending on the cultivated crops (example: a farmer who cultivates wheat has access to more PPPs in comparison to a farmer who cultivates vegetables).

Information on the German legislation, organisational structure and control systems at user level

Legislation

138. The German Plant Protection Act ("Gesetz zum Schutz der Kulturpflanzen") is the basic law for the authorisation of Plant Protection Products (PPP) and it monitors user compliance. Users and inspectors have to consider the following related legislation:

- Ordinance for Banned Uses of Plant Protection Products ("Pflanzenschutz-Anwendungsverordnung")
- Code of Good Agricultural Practice in Plant Protection ("Grundsätze für die gute fachliche Praxis im Pflanzenschutz")
- Governing Specialist Qualifications in Plant Protection ("Pflanzenschutz-Sachkundeverordnung")
- Plant Protection Product Ordinance ("Pflanzenschutzmittelverordnung")
- Ordinance Concerning the Use of Plant Protection Products Hazardous to Bees - Bee Protection Ordinance ("Bienenschutzverordnung")

Authorisation

139. In Germany the Federal Office for Consumer Protection and Food Safety (BVL) is the competent national authority for the authorisation of PPPs.

Controls at user level

140. Germany is a Federal Republic with 16 Federal States (Bundesländer). According to the German Plant Protection Act, the control of placing on the market and practical use of PPPs is task of the plant protection services or related authorities of the Federal States. Depending on the structure of each Federal State, the competence for promotion, planning, implementation, and evaluation of control at user level can be divided between different authorities. For example, the Ministries of Agriculture, State Offices or Plant Protection Services may be involved.

141. The inspectors of the plant protection services or comparable authorities conduct the controls. The Federal States have created standards for the co-ordination of the control programme. They are compiled in the German Plant Protection Control Manual. The inspections take place within the German Plant Protection Control Programme.

142. At user level three different areas are subject to control:

During a farm visit stored PPPs, sprayer equipment (valid test badge), qualification of the applicator and the documentation is checked. The correct use of PPPs (use of an authorised product in compliance with use instructions, e.g. buffer zones to surface water) is controlled **during or after an application on the field**. During these controls, soil, plant or spraying liquid samples can be taken which will be analysed in laboratories owned by the Federal States or in private laboratories. Additionally, sprayer equipment and the qualification of the applicator are be checked.

Competence of the Authorities

143. The Federal States are also responsible for punishment in case of violation against the German Plant Protection Act or related laws. Controls are conducted at market and at user level.

144. The Federal States follow a step-wise approach to increase user compliance under the German Plant Protection law:

1. compliance promotion
2. written warnings
3. fines
4. in case of repeated wrong-doing: higher fines or detentions

145. Additionally, a second procedure was established to increase user compliance. This system is not regulated under the German Plant Protection Act, but related authorities in the Federal States are responsible for its implementation. Based on EU-regulations, financial grants are reduced if users are found to be non-compliant. The results of two different control systems are considered:

1. A special control system was established to control farmers who receive grants (“Cross Compliance” controls).
2. The results of the inspections within the Control Programme described above, according to the German Plant Protection Act, are taken into account for the evaluation of user compliance (“Cross Checks”), and can also lead to a reduction of grants.

Annual reports

146. The results of the controls at market and user level are summarised and published annually by the BVL on its homepage. The data are also used by the Federal Ministry of Food, Agriculture and Consumer

Protection (BMELV) to compile an annual report about the inspections conducted in Germany for the EU-Commission, according to Article 17 of Directive 91/414/EEC.

Assessment of the results of the control programmes and generation of control plans

147. The responsible authorities in the Federal States consider the results of user controls of previous years, the results of environmental monitoring programmes, the results of food residue controls, and specific regional conditions for the preparation of annual control plans. The results of the controls and the annual control plans are discussed in a national expert group (chaired by the BVL).

Post-registration monitoring

148. After the registration, the BVL collects reports (of environmental monitoring programmes and results of the control programme) about unwanted effects of PPPs, analyses them, and takes the appropriate measures within the authorisation of PPPs (e.g. withdrawal of applications or imposing additional restrictions of use).

National Survey Results for Ireland

Table 1: General Information

Pesticide Regulator(s)	Pesticide Control Service, Ireland. Gordon Rennick Phone: +353 1 6157618 Facsimile Number: +353 1 6157575 E-mail: gordon.rennick@agriculture.gov.ie Address: Department of Agriculture and Food Laboratories, Backweston Campus, Young's Cross, Celbridge, Co. Kildare.
Legislation(s) Governing Pesticide Users	Statutory Instrument 83 of 2003 (as amended) www.pcs.agriculture.gov.ie
Jurisdiction of Enforcement	By the State/Province and/or Country
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • written/verbal warning (O) • inspection (O) • investigation (suspect wrongdoing) (O) • reduce or recall of financial grants (O) • detention/seizure (O) • fines (O) • prosecution (O) • stop import (X) • stop use (X)
	Description of how the effectiveness of compliance programmes/activities are assessed :
* Most popular responses	A new programme is currently being implemented. After a period of operation the effectiveness of this programme will be assessed. We conduct a Plant Protection Product "Usage Surveys" on a cyclical basis and we keep annual records of import, export and manufacture of Plant Protection Products.

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
Users Not Surveyed	Users Not Surveyed	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • Website 	<ul style="list-style-type: none"> • Not provided 	<ul style="list-style-type: none"> • Reports • website
Criteria by which data can be searched for trends :		
<ul style="list-style-type: none"> • not capable of trends from data 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
Users Not Surveyed	<ul style="list-style-type: none"> • Use of banned product (5) • Use of imported products that are not authorised (2) • Unregistered use of a registered product (4) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Timing of pre-harvest intervals (3) • Stocking of obsolete products (1)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
(Do or Do not) maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded <i>(if applicable)</i> :	Information required :
Users Not Surveyed	- pesticides used - application area - other (specify): Product name and registration number, Place of purchase, Package size, Quantity purchased, Date of application, Crop and area treated, Amount applied to crop. Records of returns, products in stock and disposals.

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
	No.

National Survey Results for Japan

Table 1: General Information

Pesticide Regulator(s)	<p>Ministry of Agriculture, Forestry and Fisheries JAPAN Name of Contact: Katsuya Sato (Mr.) Phone: +81-3-3501-3965 Facsimile Number: +81-3-3501-3774 E-mail: katsuya_sato@nm.maff.go.jp Address: 1-2-1 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8950</p> <p>Name of National Regulator and Country: Ministry of the Environment JAPAN Name of Contact: Masanobu Kimura (Mr.) Phone: +81-3-5521-8311 Facsimile Number: +81-3-3501-2717 E-mail: masanobu_kimura@env.go.jp Address: 1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo, 100-8975</p>
Legislation(s) Governing Pesticide Users	<p>Agricultural Chemicals Regulation Law Mandatory standard for users of agricultural chemicals (Ministerial ordinance) http://www.maff.go.jp/nouyaku/ (in Japanese)</p>
Jurisdiction of Enforcement	<p>By the State/Province and/or Country</p>
SURVEYED USER GROUPS	<p>National Federation of Agricultural Co-operative Associations http://www.zennoh.or.jp/ Name of Country: Japan Name of Contact: Makoto NISHIO (Mr.) Phone: +81-3-3245-7281 Facsimile Number: +81-3-3245-7444 E-mail: nishio@zk.zennoh.or.jp Address: 3-3-4 Uchikanda, Chiyoda-ku, Tokyo, 101-0047 (a representative of a farmhouse)</p>

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance		Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • compliance promotion O • written/verbal warning O • inspection • investigation (suspect wrongdoing) • compliance agreement O • reduce or recall of financial grants • detention/seizure • fines O • stop advertising • prosecution • stop import • stop use • revoke permit/license/certification • other activity (specify): _____ 		<ul style="list-style-type: none"> • compliance promotion O • written/verbal warning O • inspection O • investigation (suspect wrongdoing) X • compliance agreement X • reduce or recall of financial grants O • detention/seizure X • fines O • stop advertising O • prosecution O • stop import O • stop use O • revoke permit/license/certification O • other activity (specify): _____
* Most popular responses		Description of how the effectiveness of compliance programmes/activities are assessed (if applicable)
		No.

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • do not provide • in person O • phone O • e-mail O • letter • trade show / seminar • other (specify) : 	<ul style="list-style-type: none"> • do not provide • in person O • phone O • e-mail O • letter • trade show / seminar • other (specify) : 	<ul style="list-style-type: none"> • Manufacturers Mailings (O) • Government (O) • Trade shows/Vendors • Associations/User Groups Newsletters/Meetings (O) • Media (e.g. Newspaper, Radio, etc) • Other pesticide users

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports (O) • e-mail (O) • website (O) • other (specify): _____ 	<ul style="list-style-type: none"> • Reports • e-mail • website (O) • other (specify): _____ 	<ul style="list-style-type: none"> • Reports • e-mail • website (O) • other (specify): _____

Criteria by which data can be searched for trends :
<ul style="list-style-type: none"> • not capable of trends from data • violation type (O) • enforcement action taken • user group • other (specify):

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Use of only approved products • Following label directions: <ul style="list-style-type: none"> - Personal protective equipment - Wind speed - Buffer (to water, wells, sensitive habitat, etc.) - Soil Type / Depth to ground water - Drift (2) - Rate of application (Dose) (5) - Timing of pre-harvest intervals - Exceeding number of applications allowed per season (4) - Labelled Crop / Site (1) • Other label directions: • Obtaining the required permits / licence • Meeting product storage requirements • Thorough cleaning of sprayer equipment • Proper disposal of pesticides and/or pesticide containers (3) • Other major Compliance challenge: 	<ul style="list-style-type: none"> • Use of banned product • Use of imported products that are not authorised • Unregistered use of a registered product (1) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment - Wind speed - Buffer (to water, wells, sensitive habitat, etc.) - Soil Type / Depth to ground water - Drift - Rate of application (Dose) (5) - Timing of pre-harvest intervals (4) - Exceeding number of applications allowed per season (3) - Labelled Crop / Site (2) • Other label directions: • Unlicensed/Improper licensed applicator • Permit Violation (extra conditions not met aside from on the label e.g. buffer zones, unauthorized transfer, inappropriate amount used, unapproved area treated, etc.) • Unsafe transport (unlocked, contaminate food/feed, etc.) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) • Stocking of obsolete products • Improper filling or cleaning of sprayer equipment • Improper disposal of pesticides and/or pesticide containers • Other major USER Compliance problem:

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
Do maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded :	Information required :
- crop/stock yield (O) - pest identified - pesticides used (O) - application timing (O) - application area - other (specify): application dose and time	- crop/stock yield (O) - pest identified - pesticides used (O) - application timing (O) - application area (O) - other (specify):
Do not compare the data from year to year to help target pests (life cycles, trends, etc.)	
<i>Do not</i> analyse the data to change the amount of pesticides used from year to year	
<i>Do not</i> analyse the data to change the type of pesticides used from year to year (resistance management)	

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
N/A	No. there is not such process and model in Japan. But, we have regularly monitored the residue of agricultural chemicals in crops and aquatic environment. If the residue is over the tolerance for pesticide residue for crops etc, we will find out the reason.

National Survey Results for New Zealand

Table 1: General Information

Pesticide Regulator(s)	<p>Environmental Risk Management Authority of New Zealand, New Zealand (http://www.ermanz.govt.nz)</p> <p>Name of Contact: Peter Dawson Phone: 64 4 916 2426 Facsimile Number: 64 4 914 0433 E-mail: peter.dawson@ermanz.govt.nz Address: PO Box 131, Wellington, New Zealand</p> <p>New Zealand Food Safety Authority, New Zealand Name of Contact: Warren Hughes (NZFSA)/ Phone: +64 4 463 2560 Facsimile Number: +64 4 463 2566 E-mail: warren.hughes@nzfsa.govt.nz Address: PO Box 2835, Wellington. New Zealand</p>
Legislation(s) Governing Pesticide Users	<ul style="list-style-type: none"> - Hazardous Substances and New Organisms Act (HSNO) 1996 (http://www.legislation.govt.nz) - Agricultural Compounds and Veterinary Medicines Act 1997 (http://www.nzfsa.govt.nz/acvm/index.htm) - Food Act 1981 (http://www.nzfsa.govt.nz/policy-law/legislation/food-standards/index.htm#mrl)
Jurisdiction of Enforcement	<i>By country</i>
Surveyed User Groups	<p>Horticulture, www.hortnz.co.nz</p> <p>Federation of Farmers Name of Contact: Hugh Ritchie Phone: 068568279 Facsimile Number: 068568056 E-mail: hughrit@xtra.co.nz Address: RD 1 Otane</p>

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • Inspection (2) • compliance promotion (X) • written/verbal warning (X) • revoke permit/license/certification (X) • compliance agreement (X) 	<ul style="list-style-type: none"> • inspection (O) • investigation (suspect wrongdoing) (O) • detention/seizure (O) • fines (O) • stop advertising (O) • prosecution (O) • stop import (O) • stop use (O) • revoke permit/license/certification (O) • compliance agreement (X) • written/verbal warning (X) • compliance promotion (X)
<p>* Most popular responses</p>	<p>Description of how the effectiveness of compliance programmes/activities are assessed :</p> <p>The Environmental Risk Management Authority (ERMA) produces an Annual Monitoring Report as a statutory obligation. ERMA monitor and review the extent to which the HSNO Act reduces adverse effects on the environment and people by analysing relevant data sources such as key statistics, reported incidents and indicators. ERMA also attend enforcement agency liaison meetings to gather information on compliance and enforcement and to ensure that agencies are reporting appropriately.</p> <p>- The ACVM Group undertakes regular slice of life audits to monitor a range of activities, including user compliance.</p>

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • in person • phone • e-mail • letter • other : Fed farmers 	<ul style="list-style-type: none"> • in person • phone • e-mail • other : Fed farmers rep on other committes 	<ul style="list-style-type: none"> • Government • Associations/User Groups Newsletters/Meetings • Other: FAR or HORT NZ ag chem. manuals

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • website 	<ul style="list-style-type: none"> • Reports • Website 	<ul style="list-style-type: none"> • Reports • website
Criteria by which data can be searched for trends :		
<ul style="list-style-type: none"> • violation type • enforcement action taken 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Use of only approved products (1)(3) • Following label directions: <ul style="list-style-type: none"> - Personal protective equipment (5) - Wind speed (4) (2) - Buffer (to water, wells, sensitive habitat, etc.) (5) - Soil Type / Depth to ground water (5) - Drift (4) (1) - Rate of application (Dose) (5) - Timing of pre-harvest intervals (5) - Exceeding number of applications allowed per season (5) - Labelled Crop / Site (5) - Other label directions: (5) <ul style="list-style-type: none"> ▪ Obtaining the required permits / licence (4) • Meeting product storage requirements (5) (5) • Thorough cleaning of sprayer equipment (5) • Proper disposal of pesticides and/or pesticide containers (5) 	<ul style="list-style-type: none"> • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment (2) - Drift (1) • Unlicensed/Improper licensed applicator (4) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) (3) • Improper disposal of pesticides and/or pesticide containers (5)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
Do maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded :	Information required: No requirement under the ACVM Act to maintain records of use. However, may be required by exporter to comply with importing country's requirements.
- crop/stock yield (1) - pest identified (1) - pesticides used (2) - application timing (2) - application area (2)	- crop/stock yield - pest identified
Do compare the data from year to year to help target pests (life cycles, trends, etc.) Do(1)	
Do not (1)	
<i>Do</i> analyse the data to change the amount of pesticides used from year to year Do (2)	
<i>Do</i> analyse the data to change the type of pesticides used from year to year (resistance management) Do (2)	

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
(1) More education, less compliance!! (2) System should be outcome based not prescriptive legislative in nature. Ie breach should be due to causing an off target effect not a technical brief of lack of a certain piece of paper.	- Please see the NZFSA policy on the website at http://www.nzfsa.govt.nz/acvm/publications/policies-procedures/compliance/index.htm .

National Survey Results for Norway

Table 1: General Information

Pesticide Regulator(s)	Name of National Regulator and Country: Norwegian Food Safety Authority, Norway Name of Contact: Ellen Mari Grande Phone: 47 23 21 68 75 Facsimile Number: E-mail: ellen.mari.grande@mattilsynet.no Address: Mattilsynet, Felles postmottak, postboks 383, N-2381 Brumunddal, Norway.
Legislation(s) Governing Pesticide Users	Regulation related to pesticides of 26. July 2004.
Jurisdiction of Enforcement	<i>N/A</i>
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (*relevant to Objective 1*)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • written/verbal warning • inspection • investigation (suspect wrongdoing) • prosecution • revoke permit/license/certification
* Most popular responses	<p style="background-color: #e0e0e0; margin: 0;">Description of how the effectiveness of compliance programmes/activities are assessed :</p> <p>We don't have special compliance programmes or activities. But we have performed a number of surveys among users where questions on user compliance are included. For professional users spray journals are mandatory.</p>

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • do not provide • in person • phone • e-mail • letter • trade show / seminar • other (specify) : 	<ul style="list-style-type: none"> • do not provide • in person • phone • e-mail • letter • trade show / seminar • other (specify) : 	<ul style="list-style-type: none"> • Manufacturers Mailings • Government • Trade shows/Vendors • Associations/User Groups Newsletters/Meetings • Media (e.g. Newspaper, Radio, etc) • Other pesticide users

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
Criteria by which data can be searched for trends :		
<ul style="list-style-type: none"> • violation type • enforcement action taken 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
	<ul style="list-style-type: none"> • Use of imported products that are not authorised (5) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment (1) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) (3) • Stocking of obsolete products (4) • Improper disposal of pesticides and/or pesticide containers (2)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
(Do or Do not) maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded <i>(if applicable)</i> :	Information required :
Users Not Surveyed	<ul style="list-style-type: none"> - crop/stock yield - pest identified - pesticides used - application timing - application area

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
	<p>We have no special process or model for these matters. But the monitoring programme for pesticides residues shows if MRL's are exceeded or if an unauthorized pesticide for the actual crop has been used. And in the surveys mentioned before, questions on use of personal protective equipment, procedures for filling/cleaning spraying equipment, storage and disposal of products/containers and other matters relating to risks for health and environment, are included.</p>

National Survey Results for Slovak Republic

Table 1: General Information

Pesticide Regulator(s)	Central Controlling and Testing Institute in Agriculture (UKSUP), Slovak Republic Name of Contact: Mrs. Zaneta Scobakova, Mr. Stanislav Barok Department of registration Department of plant protection of pesticides Phone: 00421 2 59 880 325 / 00421 2 69 204 443 Facsimile Number: E-mail: zaneta.scobakova@uksup.sk s.barok@uksup.sk Address: Matuskova 21, Hanulova, 833 16 Bratislava, 844 29 Bratislava
Legislation(s) Governing Pesticide Users	I. Act No. 193/2005 Col. on plant health care II. Ordinance No. 225/2005 laying down requirements concerning placing on the market of plant protection products III. DECREE No. 3357/2004-100 amending Decree No. 3322/3/2001-100 laying down details concerning plant protection products AND Decree No. 1968/2004-100
Jurisdiction of Enforcement	N/A
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (*relevant to Objective 1*)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • written/verbal warning (O) • inspection (O) • fines (O) • stop advertising (O) • stop import (O) • stop use (O) • revoke permit/license/certification (X)
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed:
	All our activities are given in legislation (Act No. 193/2005 Col. on plant health care).

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
Users Not Surveyed	Users Not Surveyed	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
Ministry of Agriculture <ul style="list-style-type: none"> • Reports 	Organisations which share with UKSUP registration process <ul style="list-style-type: none"> • Reports • e-mail 	In bulletin of Ministry of Agriculture <ul style="list-style-type: none"> • Reports • Website
Criteria by which data can be searched for trends (if applicable)		
N/A		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
Users Not Surveyed	<ul style="list-style-type: none"> • Unregistered use of a registered product (5) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Timing of pre-harvest intervals (4) • Unlicensed/Improper licensed applicator (3) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) (2) • Stocking of obsolete products (1)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
(Do or Do not) maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded <i>(if applicable)</i> :	Information required :
Users Not Surveyed	<ul style="list-style-type: none"> - pest identified - pesticides used - application timing - application area - other (specify): purchase of ppp, storage and disposal of ppp

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Users Not Surveyed	N/A

National Survey Results for Slovenia

Table 1: General Information

Pesticide Regulator(s)	MAFF. Phytosanitary Administration of the Republic of Slovenia Name of Contact: Milena KOPRIVNIKAR B. Phone: 00 386 1 30 94 377 Facsimile Number: 00 386 1 30 94 335 E-mail: milena.koprivnikar@gov.si Address: 6 Einspielerjeva, SI – 1000, Ljubljana
Legislation(s) Governing Pesticide Users	Act on plant protection products (OJ RS No 98/04) Rules on obligations of operators for application of plant protection products (OJ RS No 62/2003)
Jurisdiction of Enforcement	By the State/Province and/or Country
Surveyed User Groups	Chamber of agriculture and forestry of Slovenia, www.kgzs.si agricultural, landscape, horticultural

Table 2: Activities to Encourage Compliance (*relevant to Objective 1*)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
<ul style="list-style-type: none"> • written/verbal warning (O) • inspection (O) • investigation (suspect wrongdoing) (O) • reduce or recall of financial grants (O) • revoke permit/license/certification (O) 	<ul style="list-style-type: none"> • compliance agreement (O) • revoke permit/license/certification (O) • compliance promotion (X) • written/verbal warning (X) • inspection (X) • investigation (suspect wrongdoing) (X) • reduce or recall of financial grants (X) • detention/seizure (X) • fines (X) • stop advertising (X) • prosecution (X) • stop import (X) • stop use (X)
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed (<i>if applicable</i>)

	<p>Phytosanitary Administration RS and Inspectorate of the Republic of Slovenia for Agriculture, Forestry and Food (IRSAFF) agree on annual inspection plan in the field of plant protection products (PPP).</p> <p>IRSAFF control the placing of PPP on the market, the label, use and illegal use of PPP.</p> <p>IRSAFF send the cumulative report on activities to PARS for the previous year.</p>
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Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
<ul style="list-style-type: none"> • in person • phone call • e-mail • letter 	<ul style="list-style-type: none"> • in person • phone call • e-mail • trade show / seminar 	<ul style="list-style-type: none"> • Manufacturers Mailings • Government • Other pesticide users : Farm advisors

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
N/A	<ul style="list-style-type: none"> • Reports • e-mail 	<ul style="list-style-type: none"> • website
Criteria by which data can be searched for trends:		
<ul style="list-style-type: none"> • violation type • enforcement action taken 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Use of only approved products (1) • Following label directions: <ul style="list-style-type: none"> - Rate of application (Dose) (5) - Timing of pre-harvest intervals (2) • Thorough cleaning of sprayer equipment (3) • Proper disposal of pesticides and/or pesticide containers (4) 	<ul style="list-style-type: none"> • Use of imported products that are not authorised (1) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment (3) - Buffer (to water, wells, sensitive habitat, etc.) (5) - Drift (2) -Rate of application (Dose) (4)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
Do maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded :	Information required :
<ul style="list-style-type: none"> - crop/stock yield pest identified - pesticides used - application timing - application area 	<ul style="list-style-type: none"> - crop/stock yield - pest identified - pesticides used - application timing - application area
Do compare the data from year to year to help target pests (life cycles, trends, etc.)	
<i>Do</i> analyse the data to change the amount of pesticides used from year to year	
<i>Do</i> analyse the data to change the type of pesticides used from year to year (resistance management)	

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	<i>From Regulators</i>
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
N/A	N/A

National Survey Results for Sweden

Table 1: General Information

Pesticide Regulator(s)	Name of National Regulator and Country: Swedish Chemicals Inspectorate Phone:+46-8-51941100 Facsimile Number:+46-8-7357698 E-mail: kemi@kemi.se Address: Box 2, 17213 Sundbyberg, Sweden
Legislation(s) Governing Pesticide Users	(SNFS 1997:2 Statens Naturvårdsverks föreskrifter om spridning av kemiska bekämpningsmedel) http://www.internat.naturvardsverket.se/
Jurisdiction of Enforcement	<i>Enforced by local authorities.</i>
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • compliance promotion (X) • inspection (X) • investigation (suspect wrongdoing) (X) • stop advertising (X O) • prosecution (X) • stop use (X) • revoke permit/license/certification (X)
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed (if applicable)
	N/A

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
Users Not Surveyed	Users Not Surveyed	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • website 	<ul style="list-style-type: none"> • website 	<ul style="list-style-type: none"> • website
Criteria by which data can be searched for trends :		
<ul style="list-style-type: none"> • not capable of trends from data 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
<ul style="list-style-type: none"> • Use of only approved products • Following label directions: <ul style="list-style-type: none"> - Personal protective equipment - Wind speed - Buffer (to water, wells, sensitive habitat, etc.) - Soil Type / Depth to ground water - Drift - Rate of application (Dose) - Timing of pre-harvest intervals - Exceeding number of applications allowed per season - Labelled Crop / Site • Other label directions: • Obtaining the required permits / licence • Meeting product storage requirements • Thorough cleaning of sprayer equipment • Proper disposal of pesticides and/or pesticide containers • Other major Compliance challenge: 	<ul style="list-style-type: none"> • Use of banned product • Use of imported products that are not authorised • Unregistered use of a registered product • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment - Wind speed - Buffer (to water, wells, sensitive habitat, etc.) - Soil Type / Depth to ground water - Drift - Rate of application (Dose) - Timing of pre-harvest intervals - Exceeding number of applications allowed per season - Labelled Crop / Site • Other label directions: • Unlicensed/Improper licensed applicator • Permit Violation (extra conditions not met aside from on the label e.g. buffer zones, unauthorized transfer, inappropriate amount used, unapproved area treated, etc.) • Unsafe transport (unlocked, contaminate food/feed, etc.) • Unsafe storage of products (unlocked, contaminate food/feed, etc.) • Stocking of obsolete products • Improper filling or cleaning of sprayer equipment • Improper disposal of pesticides and/or pesticide containers • Other major USER Compliance problem:

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	<i>Regulators</i>
(Do or Do not) maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded :	Information required :
<ul style="list-style-type: none"> - crop/stock yield pest identified - pesticides used - application timing - application area - other (specify): 	<ul style="list-style-type: none"> - pesticides used (Y) - application timing (Y) - application area (Y) - other (specify): dosage, temp, wind, other safety measures regarding filing and cleaning of equipment
(Do or Do not) compare the data from year to year to help target pests (life cycles, trends, etc.)	
<i>(Do or Do not)</i> analyse the data to change the amount of pesticides used from year to year	
<i>(Do or Do not)</i> analyse the data to change the type of pesticides used from year to year (resistance management)	

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	<i>From Regulators</i>
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Users Not Surveyed	N/A

National Survey Results for Switzerland

Table 1: General Information

Pesticide Regulator(s)	Federal Office for Agriculture, Principal Division for Special Services and Means of Production, Plant Protection Section, Switzerland Name of Contact: Elisabeth Bosshard Phone: 0041-31-324 90 80 Facsimile Number: 0041-31-322 70 80 E-mail: elisabeth.bosshard@blw.admin.ch Address: Mattenhofstrasse 5, 3003 Bern, Switzerland
Legislation(s) Governing Pesticide Users	- Ordonnance sur les paiements directs OPD 910.13 ; http://www.admin.ch/ch/fr/rs/910_13 - Ordonnance sur la réduction des risques liés aux produits chimiques, ORRChim, http://www.admin.ch/ch/fr/rs/c814_81.html (languages available: German, French, Italian)
Jurisdiction of Enforcement	<i>By the State</i>
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (*relevant to Objective 1*)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • compliance promotion (O) • inspection (O) • compliance agreement (O) • reduce or recall of financial grants (O) • prosecution (O) • written/verbal warning (X) • investigation (suspect wrongdoing) (X) • fines (X) • revoke permit/license/certification (X)
* Most popular responses	Description of how the effectiveness of compliance programmes/activities are assessed

	<p>An extensive Evaluation Programme has been initiated in 1997 to study the impact of new risk reduction measures, for which the legal base has been put into force in 1998. Parameters studied were e.g. biodiversity, nitrogen, phosphorus, use of plant protection products. The evaluations in the various areas have been conducted in the last few years and the summary reports are now available (German version). With respect to the use of plant protection products, the use data were collected in four different lake areas in Switzerland. The evaluation of the data has shown that the quantitative goal of a 30% reduction in the use of plant protection products compared to the reference value of 1992 has been achieved. The results however also show that in addition to the implementation of more ecological production methods also other factors have contributed to the reduction observed. The reports are available under: www.blw.admin.ch/news/01325</p>
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Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
Users Not Surveyed	Users Not Surveyed	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • Web site 	N/A	N/A
Criteria by which data can be searched for trends:		
Other : collection of pesticide sales data and monitoring programmes of use data; case studies		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
Users Not Surveyed	<ul style="list-style-type: none"> • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Buffer (to water, wells, sensitive habitat, etc.) (2) - Drift (3) - Labelled Crop / Site (1) • Improper filling or cleaning of sprayer equipment (4) • Improper disposal of pesticides and/or pesticide containers (5)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
(Do or Do not) maintain records on what pesticide and the quantity of pesticide used	<i>Do</i> require users to maintain records on pesticide use
Information recorded	Information required
Users Not Surveyed	<ul style="list-style-type: none"> - crop/stock yield - pest identified - pesticides used - application timing - application area

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	From Regulators
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Users Not Surveyed	No, there is no model used. The identification of the most relevant user compliance problems is rather a puzzle that is put together by the results of the various monitoring programmes going on in the different areas (residues, groundwater, controlling of field applications etc.)

National Survey Results for United States

Table 1: General Information

Pesticide Regulator(s)	U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance Name of Contact: Kate Perry Phone: 202-564-4059 Facsimile Number: 202-564-0028 E-mail: perry.kate@epa.gov
Legislation(s) Governing Pesticide Users	FIFRA (Federal Insecticide, Fungicide and Rodenticide Act) (see http://www.epa.gov/compliance) State laws (see AAPCO website for citations)
Jurisdiction of Enforcement	<i>By the State</i>
Surveyed User Groups	Users Not Surveyed

Table 2: Activities to Encourage Compliance (relevant to Objective 1)

Enforcement Activities that USERS find helpful in encouraging USER Compliance	Authorities/powers REGULATORS can use to encourage USER compliance
Users Not Surveyed	<ul style="list-style-type: none"> • compliance promotion (O) • written/verbal warning (O) • inspection (O) • investigation (suspect wrongdoing) (O) • compliance agreement (O) • reduce or recall of financial grants (O) • detention/seizure (O) • fines (O) • stop advertising (O) • prosecution (O) • stop import (O) • stop use (O) • revoke permit/license/certification (O) • other activity (specify): press releases with enforcement results
* Most popular responses	<p>Description of how the effectiveness of compliance programmes/activities are assessed</p> <p>Yes, via oversight of State compliance and enforcement programmes</p>

Table 3: Feedback Mechanisms (relevant to Objectives 2 and 3)

Users provide information regarding compliance issues		Users receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc..., from:
to Regulator:	to Manufacturer:	
Users Not Surveyed	Users Not Surveyed	N/A

Table 4: Reporting and Use Data (relevant to Objectives 4)

Medium used by regulators when reporting on compliance and enforcement activities to:		
State/Province Organization(s)	National Organization(s)	Public
<ul style="list-style-type: none"> • Reports • website 	<ul style="list-style-type: none"> • website 	<ul style="list-style-type: none"> • website
<i>Criteria by which data can be searched for trends</i>		
<ul style="list-style-type: none"> • violation type • enforcement action taken • other (specify): Worker Protection Standard elements; efficiency measure (Number of enforcement actions taken (Federal and State) per million dollars of costs (Federal and State). This efficiency measure is alternatively stated as cost of conducting inspections that identify violators. 		

Table 5: Compliance Challenges (relevant to Objectives 1 and 2)

Most frequent compliance challenges (in rank order)	
According to Users	According to Regulators
Users Not Surveyed	<ul style="list-style-type: none"> • Unregistered use of a registered product (3) • Use contrary to/inconsistent with label directions (please indicate below): <ul style="list-style-type: none"> - Personal protective equipment (2) - Drift (1) • Unlicensed/Improper licensed applicator (4) • Improper disposal of pesticides and/or pesticide containers (5)

Table 6: Records on Pesticide Use (relevant to Objective 2)

Users	Regulators
<i>(Do or Do not) maintain records on what pesticide and the quantity of pesticide used</i>	<i>Do</i> require users to maintain records on pesticide use
Information recorded	Information required: These are required by the States.
<ul style="list-style-type: none"> - crop/stock yield pest identified - pesticides used - application timing - application area - other (specify): 	<ul style="list-style-type: none"> - pest identified - pesticides used - application timing - application area - other (specify): climactic conditions; applicator information

Table 7: Additional Information (relevant to Objectives 1, 2, and 3)

From Users	<i>From Regulators</i>
Suggestions that could be helpful to regulatory authorities on which activities can improve/increase users compliance	The name of the process or model to identify and select user compliance problems that represent the greatest risk.
Users Not Surveyed	N/A

OECD SURVEY ON USER COMPLIANCE

QUESTIONNAIRE FOR USERS

149. The following survey is being undertaken by the OECD Pesticide Risk Reduction Steering Group (RRSG) during February to March 2006. The information gathered will inform governments and stakeholders of pesticide user compliance related issues. The survey results will benefit the participants at an international workshop being held in Ottawa, June 2006, by the RRSG. The workshop's primary focus will be compliance with the use of pesticide products in agricultural settings. Your participation would be greatly appreciated.

1 Name of Country:

Name of Contact:

Phone:

Facsimile Number:

E-mail:

Address:

2 Please provide the name of any user group(s)* you belong to (agricultural, landscape, horticultural, forestry, etc.) and their web site address if available.

3 Please mark all of the enforcement activities you find are helpful in encouraging USER compliance.

- | | |
|--|---|
| <input type="checkbox"/> inspection | <input type="checkbox"/> compliance agreement |
| <input type="checkbox"/> investigation (suspect wrongdoing) | <input type="checkbox"/> reduce or recall of financial grants |
| <input type="checkbox"/> compliance promotion | <input type="checkbox"/> detention/seizure |
| <input type="checkbox"/> fines | <input type="checkbox"/> stop advertising |
| <input type="checkbox"/> prosecution | <input type="checkbox"/> stop import |
| <input type="checkbox"/> written/verbal warning | <input type="checkbox"/> stop use |
| <input type="checkbox"/> revoke permit/license/certification | <input type="checkbox"/> other activity(specify): _____ |

4. Indicate below how you provide information and/or feed back to regulators and manufacturers regarding compliance questions or issues, eg. the clarity of pesticide labels.

Feed back to Who?	Do Not Provide (Explain why?)	Do Provide Feedback (How?)					Other (Specify):
		In Person	Phone Call	E-mail	Letter	Trade Show/Seminar	
Regulator							
Manufacturer							

5. How do you receive information regarding unregistered pesticide products and pesticide uses, withdrawal of products, changes to pesticide labels, etc.? (Check all that apply.)

- Manufacturers Mailings
- Government
- Trade shows/Vendors
- Associations/User Groups Newsletters/Meetings
- Media (e.g. Newspaper, Radio, etc)
- Other pesticide users
- Other (specify): _____

* includes Farm Advisors, Agronomists, Consultants, etc.

6. Users face many compliance challenges. Please indicate the top FIVE, by placing the number 1 next to the most frequent through to the number 5 for the least frequent.

USER Compliance Challenge	Top 1 - 5 Only
Use of only approved products	
Following label directions:	
- Personal protective equipment	
- Wind speed	
- Buffer (to water, wells, sensitive habitat, etc.)	
- Soil Type / Depth to ground water	
- Drift	
- Rate of application (Dose)	
- Timing of pre-harvest intervals	
- Exceeding number of applications allowed per season	
- Labelled Crop / Site	
Other label directions:	
Obtaining the required permits / licence	
Meeting product storage requirements	
Thorough cleaning of sprayer equipment	
Proper disposal of pesticides and/or pesticide containers	
Other major Compliance challenge:	

7. a) Do you maintain records on what and the quantity of pesticide used? **Y/N** If YES, please check all the information you record.

- crop/stock yield
- pest identified
- pesticides used
- application timing
- application area
- other (specify): _____

b) Do you compare the data ~~from year to year to help target pests~~ (life cycles, trends, etc.)? **Y/N**

c) Do you use the data to change the amount of pesticides used from year to year? **Y/N**

d) Do you use the data to change the type of pesticides used from year to year (resistance management)? Y/N

8. Do you have suggestions that could be helpful to regulatory or control authorities or others on which activities can improve/increase USER compliance?

OECD SURVEY ON USER COMPLIANCE

QUESTIONNAIRE FOR REGULATORS

150. The following survey is being undertaken by the OECD Pesticide Risk Reduction Steering Group (RRSG) during February to March 2006. The information gathered will inform governments and stakeholders of pesticide user compliance related issues. The survey results will benefit the participants at an international workshop being held in Ottawa, June 2006, by the RRSG. The workshop's primary focus will be compliance with the use of pesticide products in agricultural settings. Your participation would be greatly appreciated.

1. Name of National Regulator and Country:

Name of Contact:
 Phone:
 Facsimile Number:
 E-mail:
 Address:

2. Name of the legislation that governs pesticide USER compliance (specify if enforced by State/Province and/or Country) and web site address(es) if available).

3. Please indicate all of the authorities/powers you can use (mark with "O"), or related authorities (mark with "X") to encourage USER compliance.

- | | |
|--|--|
| <input type="checkbox"/> inspection | <input type="checkbox"/> compliance agreement |
| <input type="checkbox"/> investigation (suspect wrongdoing) | <input type="checkbox"/> reduction or recall of financial grants |
| <input type="checkbox"/> compliance promotion | <input type="checkbox"/> detention/seizure |
| <input type="checkbox"/> fines | <input type="checkbox"/> stop advertising |
| <input type="checkbox"/> prosecution | <input type="checkbox"/> stop import |
| <input type="checkbox"/> written/verbal warning | <input type="checkbox"/> stop use |
| <input type="checkbox"/> revoke permit/licence/certification | <input type="checkbox"/> other activity (specify): _____ |

4. Do you assess the effectiveness of compliance programmes/activities? Please describe how this is done.

5. a) If you track data on USER compliance and enforcement activities, please indicate how the results are reported to other organizations?

Results Provided to Who?	Not Provided	How are the results provided?			
		Reports	E-mail	Web Site	Other (Specify)
State/Province Organization(s) (specify):					
National Organization(s) (specify):					
Public (specify):					

b) By what criteria, can the data be searched for trends?

- not capable of trends from data
- violation type
- enforcement action taken
- user group
- other (specify):

6. Please indicate, in rank order, the FIVE most frequent USER compliance problems in your jurisdiction, putting 1 next to the most frequent through to 5 for the less frequent.

USER Compliance Problem	Top 1 - 5 Only
Use of banned product	
Use of imported products that are not authorised	
Unregistered use of a registered product	
Use contrary to/inconsistent with label directions (please indicate below):	
- Personal protective equipment	
- Wind speed	
- Buffer (to water, wells, sensitive habitat, etc.)	
- Soil Type / Depth to ground water	
- Drift	
- Rate of application (Dose)	
- Timing of pre-harvest intervals	
- Exceeding number of applications allowed per season	
- Labelled Crop / Site	
Other label directions:	
Unlicensed/Improper licensed applicator	
Permit Violation (extra conditions not met aside from on the label e.g. buffer zones, unauthorized transfer, inappropriate amount used, unapproved area treated, etc.)	
Unsafe transport (unlocked, contaminate food/feed, etc.)	
Unsafe storage of products (unlocked, contaminate food/feed, etc.)	
Stocking of obsolete products	
Improper filling or cleaning of sprayer equipment	
Improper disposal of pesticides and/or pesticide containers	
Other major USER Compliance problem:	

7. Are users required to maintain records on pesticide use? **Y/N** If YES, please check all required information.

- crop/stock yield
- pest identified
- pesticides used
- application timing
- application area
- other (specify):

8. Name the process used in your country to identify and select those USER compliance problems that represent the greatest risk to humans, the environment and/or to the integrity of the regulatory process? Is there a model that is used?