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**ENVIRONMENT DIRECTORATE**
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**THE WORKING PARTY ON CHEMICALS, PESTICIDES AND BIOTECHNOLOGY**

# REPORT OF AN OECD SURVEY ON THE ASSESSMENT OF THE RISKS FROM OBSOLETE PESTICIDES IN OECD COUNTRIES

**Series on Pesticides**
**No.79**

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OECD Environment, Health and Safety Publications
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# REPORT OF AN OECD SURVEY ON THE ASSESSMENT OF THE RISKS FROM OBSOLETE PESTICIDES IN OECD COUNTRIES

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INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS

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Paris 2014

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## FOREWORD

In March 2011, the OECD Working Group on Pesticides approved a project under the Risk Reduction Steering Group (RRSG) to gain a better overview of the mechanisms in place in countries for assessing and managing the risks of obsolete pesticides and to document their stock levels in OECD countries. This document reports the results of a survey of OECD member countries undertaken to this end.

This document is published under the responsibility of the Joint Meeting of the Chemicals Committee and the Working Party on Chemicals, Pesticides and Biotechnology.

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**Executive Summary**

In March 2011, the OECD Working Group on Pesticides approved a project to gain a better overview of the mechanisms in place in countries for assessing and managing the risks of obsolete pesticides and to document their stock levels in OECD countries. To this end, a survey of authorities in OECD member countries was undertaken towards the end of September 2011. Responses were supplemented by information available through a network of national trade associations. This report documents the analysis, conclusions and recommendations stemming from all of the submitted information.

Obsolete pesticides are those that are no longer fit for purpose for some reason, be it product deterioration, de-registration or a revision of use conditions. The survey questionnaire (available in annex 1) posed a number of questions around the scale of the problem in member countries (including size of stocks and ownership), whether there are regulations in place governing the disposal of obsolete pesticides and their packaging and how disposal is implemented and coordinated.

Responses to the survey were received from 11 OECD member countries, with input from a further country received through a trade association national network. Supplementary information to the member country responses was also acquired through this route.

The findings of the report were that:

- in the majority of countries stocks were held by the private sector;
- none of the responding countries undertook proactive assessments of stocks, but many did document quantities collected;
- most responding countries had voluntary collection services in place rather than specific regulations governing collection (in some responding countries collection and disposal would be according to hazardous waste legislation), but there was information to suggest a large number of countries that did not respond to the survey did not have a collection scheme in place;
- collection services were mainly implemented and run by the private sector or private sector/regional or local authority partnerships;
- the likelihood of accumulated stocks seemed to be lower where dedicated collection and disposal schemes were in place (either funded or part-funded by pesticide owners).

Further reduction of obsolete pesticide stocks can be achieved through:

- more effective enforcement of hazardous waste legislation by authorities or the establishment of voluntary collection programmes;
- the implementation of suitable use times for stocks of pesticides that are to be de-registered;
- further training of pesticide purchasers and users to improve purchasing practices, planning and rotation of pesticide stocks in storage and use.

**Background**

1. Obsolete pesticides are those that are no longer fit for purpose. Obsolete pesticides arise for a number of reasons including product deterioration with age beyond the legally permitted chemical decomposition, deterioration of the packaging and label, de-registration of the product or revised product use recommendations. In practice, the category includes pesticide products no longer required by the owner of the stock, due to economic or practical reasons and would therefore be left unused until reaching one of the states described above. Obsolete pesticides are frequently classified as hazardous waste and their transport and disposal are subject to national and international regulations requiring professional handling by specialised contractors. This effectively raises cost and organisational barriers to disposal.

2. The owners of obsolete stocks are normally governments (for example products procured but not used for control of migratory pests), private farms, especially where their customers have required the suspension of products, and to a lesser extent home gardeners and the pesticide distribution chain. In some cases, such as state farms in the former Soviet Union, the entities that purchased the pesticides no longer exist.

3. Understanding of the global situation with obsolete pesticides has progressed in the last decade particularly in Africa, Eastern Europe and Central Asia (1). For example, there have been regional assessments of the amounts of obsolete pesticides and disposal activities undertaken in Africa under the African Stockpiles Programme (2) (3) (4) and in Eastern Europe and former Soviet Union by the International HCH and Pesticides Association (5), and the UN Food and Agricultural Organization (6).

4. However, no systematic study of the amounts and distribution of obsolete pesticides in the OECD region has been made. A 'global' baseline study (7) carried out for the OECD-FAO-UNEP Workshop in Virginia, September 2000 (8) did not cover OECD countries. The Workshop recommended that the OECD give higher priority to the issue of obsolete pesticides and their prevention.

5. In a number of OECD member countries, e.g. Australia, Canada, France, Germany, New Zealand and Poland, government and private sector schemes have been established to assess, recover and safely dispose of obsolete pesticides and associated wastes, primarily empty pesticide containers. However, the overall situation in OECD countries with obsolete pesticides remains poorly understood.

6. Work that has been undertaken in the above OECD countries indicates that the problem can be significant (e.g. 10,300 tonnes collected to date in France (9)). Unlike the situation in less developed countries, much of the obsolete stock burden in OECD member countries is likely to be privately owned and not easily accessible. The methods being used to address the issue across OECD countries is also not well documented regarding the size of the problem, the collection / disposal process and the prevention of future build-up of obsolete stocks.

7. Given the situation described above, in 2010 representatives of a trade association through the Business and Industry Advisory Committee to the OECD (BIAC) proposed that the OECD should support a project to assess the situation regarding obsolete pesticide stocks in OECD member countries. The OECD Working Group on Pesticides and Risk Reduction Steering Group (RRSG) agreed that it could be valuable to have a better overview of the mechanisms in place in countries for assessing and managing the risks of obsolete pesticides; and to document the levels of stocks in OECD countries. In March 2011, the OECD Working Group on Pesticides formally approved this project.

8. The assessment took the form of a survey of the responsible authorities in OECD Member countries (see survey questionnaire in Annex 1). The survey was distributed in September 2011 and responses collected by the OECD RRSG secretariat. BIAC, on behalf of the RRSG, analysed the survey

responses and drafted a report of the results. It was also agreed that this analysis would include cross-reference to information available from an international trade association's network of national associations.

***Objectives and scope of the project***

9. While much work continues to evaluate the risks attributable to the use of pesticides, and the management of those risks, as demonstrated by the work of the RRSG, little attention has been given to the risks arising from obsolete and unwanted pesticides. In situations where these old stocks of pesticides have been neglected or abandoned, as is often the case in Africa and Eastern Europe, contamination of the environment from leaking containers and low grade packaging has frequently been encountered leading to costly remediation measures for the affected sites.

10. The current assessment seeks to gather information on the situation with obsolete and unwanted pesticides across OECD member countries. Specifically:

- the national regulatory framework applicable to obsolete stocks;
- national methods for assessing obsolete and unwanted pesticides, including quantities, location and risk assessment;
- the existence of national / private sector programmes for the retrieval, disposal and prevention of obsolete and unwanted pesticides (implementation, disposal routes, organisation, funding);
- national infrastructural arrangements in the absence of specific programmes.

11. The outcomes should benefit participating countries in the following areas:

- document the known levels and estimates of obsolete pesticides in OECD member countries and the arrangements for the management of these products;
- document the methods being employed to assess the risks arising from obsolete pesticides and the activities being undertaken to mitigate these risks;
- bring together best practice activities for the management of obsolete pesticides and associated wastes;
- identify areas for international co-operation between OECD member countries and others that will prevent accumulation of obsolete stocks (e.g. joint collections, funding mechanisms).

***Final Product***

12. This final report brings together all relevant information on the situation with obsolete and unwanted pesticides in OECD countries into one document. The report compiles and compares the information collected in text, tabulated and graphic data formats, as appropriate.

13. The RRSG also noted that the 63rd World Health Assembly on 21 May 2010 adopted a resolution on the "improvement of health through sound management of obsolete pesticides and other obsolete

chemicals". The RRSG agreed that this new project and its outcomes could be part of the OECD's efforts to support this resolution.

### *Distribution of the survey and responses*

14. The survey was distributed to members and observers of the RRSG, which includes government regulatory authorities from OECD countries and from some non-members countries active in enhanced engagement programmes with OECD, industry trade bodies representing pesticide manufacturers, environmental groups and international organisations such as FAO, UNEP and WHO.

15. The RRSG delegate(s) in each country/organisation consulted, where necessary, with the relevant stakeholders in his/her country/organisation before the survey was completed and transmitted to the OECD Secretariat.

### *References*

(1) Obsolete Pesticides - Where are the stocks? FAO website http://www.fao.org/agriculture/crops/obsolete-pesticides/where-stocks/en/

(2) http://www.worldbank.org/projects/P103189/africa-stockpiles-programme-project-1-mali-morocco-tanzania?lang=en&tab=overview;

(3) http://www.worldbank.org/projects/P105711/africa-stockpiles-programme-p1-ethiopia?lang=en&tab=overview;

(4) http://www.croplife.org/case-study-africa-stockpiles-programme

(5) http://www.ihpa.info/

(6) http://www.fao.org/news/story/en/item/134629/icode/

(7) Baseline study on the problem of obsolete pesticide stocks. FAO pesticide disposal series – 9, FAO, Rome, 2001. http://www.fao.org/DOCREP/003/X8639E/X8639E00.HTM

(8) Report of the OECD-FAO-UNEP Workshop on Obsolete Pesticides, Alexandria, Virginia 13-15 September 2000. OECD website http://www.oecd.org/dataoecd/23/35/2076941.pdf

(9) Agriculteurs, Distributeurs, Industriels pour la Valorisation des Dechets Agricoles (ADIVALOR) – www.adivalor.fr

### *Survey form*

16. The survey form that was reviewed by the RRSG and distributed is shown in Annex 1.

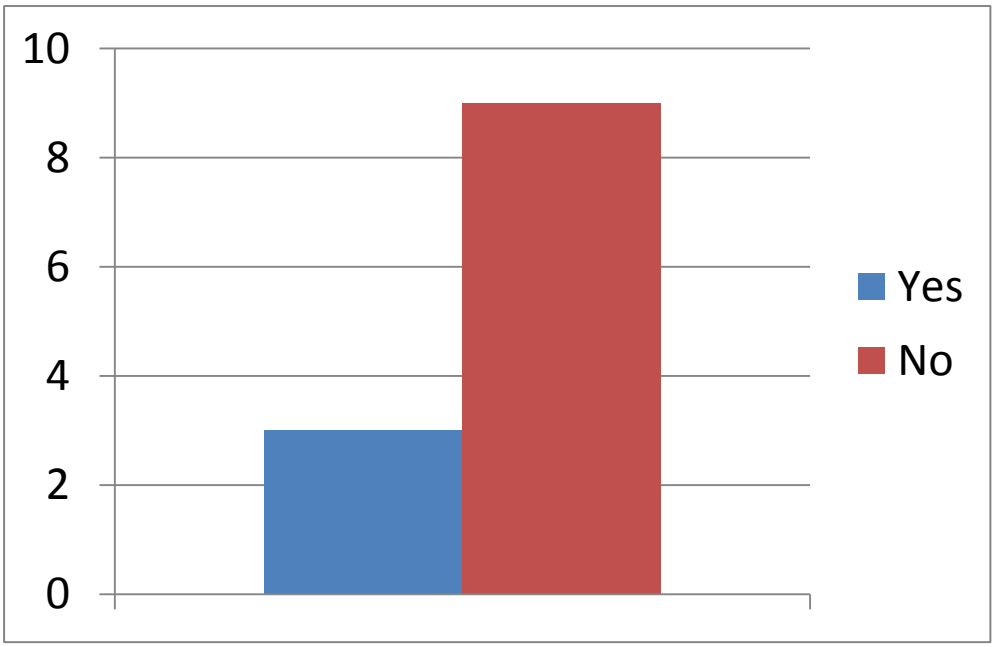
**Results**

17. Survey responses were received from 11 OECD Member countries: Australia, Belgium, Canada, Finland, France, Ireland, Japan, New Zealand, Switzerland, UK and USA. Input from Brazil was obtained from the Brazilian National Institute for Processing Empty Containers (INPEV), who are a member of CropLife Latin America. The survey responses are shown in Annex 2. A tabular summary of the responses to the main questions is given in Annex 3.

18. Additionally, BIAC received input from an international trade association's national associations/collection schemes in Australia, Belgium/Luxembourg, Canada, China, France, Germany, Mexico, New Zealand (two programmes), Poland, Portugal, Slovak Republic, South Africa, Spain, UK and USA, which provided further information and confirmation of results. FAO confirmed that they had not collected information for OECD countries as a group.

19. With regard to specific regulation for collection and disposal of obsolete pesticide stocks, the results from the 12 countries responding to the survey are shown in Figure 1. For those countries that do not have specific regulations, obsolete pesticides are covered by general hazardous waste regulations. This is the case for the European Union countries that did not respond to the survey.

**Figure 1: Number of countries with specific regulations for the collection and disposal of obsolete pesticides**




20. None of the countries that responded undertook surveys for obsolete pesticide stocks (proactive assessment). However, six out of 12 assessed the amount of obsolete stocks that were reported by owners as needing collection under a collection scheme. This is done by a (on-line) booking form where owners register their obsolete stocks for collection. One country simply recorded the amount collected.

21. Table 1 gives estimates of obsolete pesticides in some OECD countries and partner countries from three different sources – the current OECD survey, the International HCH and Pesticides Association

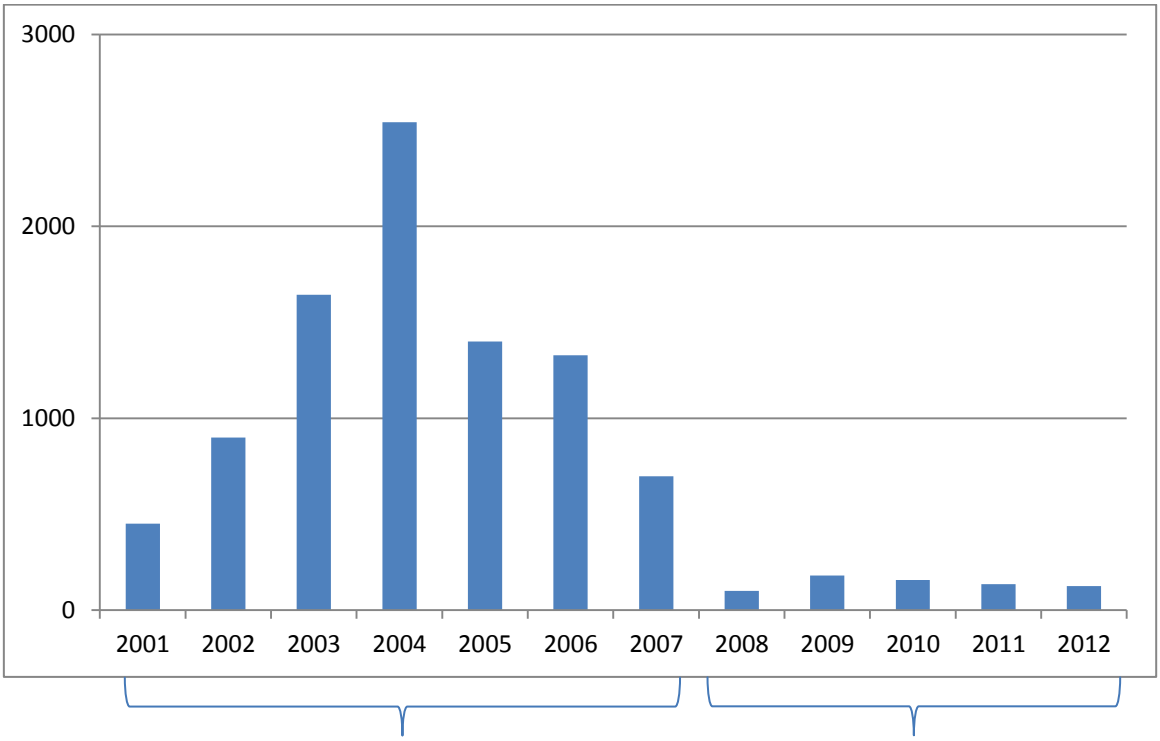
and from an international trade association's network of national associations. This indicates that for most countries where there are data after an initial collection of legacy stocks (accumulated over several years), the yearly amount that is identified/collected is less than 200 tonnes. This is illustrated by the collection pattern for France (see Figure 2). Large amounts of legacy stocks are believed to remain in some Eastern European countries and the Russian Federation.

**Table 1: Estimated amounts (tonnes) of obsolete pesticide stocks. Unless otherwise stated, these are the amounts actually collected/identified for collection**

| Country | OECD Survey (2011/12) | IHPA (2008) [1] | CropLife National Assoc. | Collection Scheme |
|---|---|---|---|---|
| Australia | 263 (2003 – 2012) | | 36 (2012/2013)[2] | Yes |
| Belgium | | | 176 (2011)[3] | Yes |
| Canada | | | 124 (average/yr 2010 – 2012)[4] | Yes |
| Czech Republic | | 400[5] | | No |
| Finland | 90 (2011) | | | No |
| France | 2000 (2011) [5] | | 137 (2012) | Yes |
| Germany | | | 560 (prior 2006) | Yes |
| Hungary | | 200[5] | | No |
| Luxembourg | | | 2.5 (2011)[3] | Yes |
| Mexico | | | 290 (2008) | No |
| New Zealand | 300 (2011) [5] | | 22.2 (2012) | Yes |
| Poland | | 5000 – 7000[5] | | No |
| Slovak Republic | | 300[5] | | No |
| Turkey | | 3000 – 3300[5] | | No |
| United States | 942 (2008) [6] | | | Yes |
| Brazil | | | 1300 (2005 - 2013)[7]<br>800 (2010 – 2013)[7]<br>420 (2013)[7,8] | No |
| Russian Federation | | >100,000[5] | | No |
| South Africa | | | 200[9] | No[10] |

[1] IHPA: International HCH and Pesticides Association (http://www.ihpa.info/)
[2]Three territories
[3]Collections every two years
[4]All relevant states covered every three years, 1838 tonnes collected between 1989 – ?
[5]Estimated total stocks in country
[6]28 States
[7]One State
[8]Estimated Stocks
[9]Remaining centralised stocks collected under the African Stockpiles programme; additional 100 tonnes were incinerated under the programme
[10]A collection scheme was in operation under the African Stockpiles Programme, but is now defunct

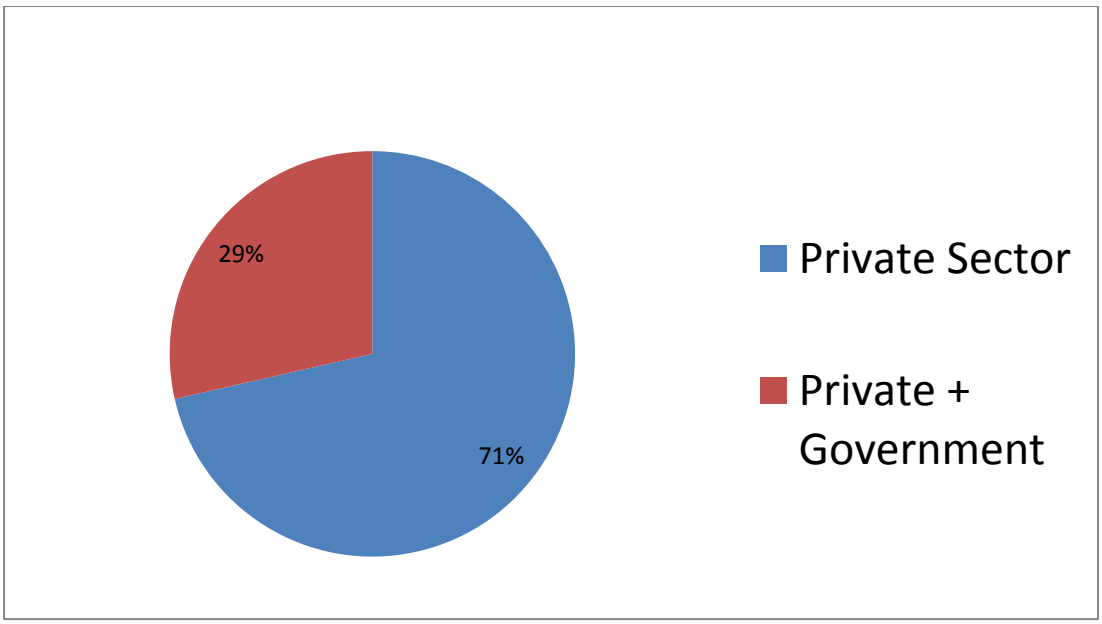
**Figure 2: Amount (tonnes) of obsolete pesticides collected by Agriculteurs, Distributeurs, Industriels pour la Valorisation des Dechets Agricoles (ADIVALOR) in France**




Source: ADIVALOR, reproduced with permission

22. In five out of the seven countries that have undertaken assessments, these assessments were undertaken by the private sector, with the remaining two being a joint government and private sector assessment (Figure 3). This basically reflects who is the main implementing partner in the collection schemes.

**Figure 3: Stakeholder group undertaking assessment of obsolete stocks**



23. Nine out of the 12 countries that responded to the OECD survey (including Brazil) had a collection programme in place: Australia, Belgium, Brazil, Canada, France, Japan, New Zealand, USA and UK, additionally from an international trade association's associations/programmes two additional countries were reported to have collections (Germany, the last being in 2006 and one being planned for 2013, and Luxembourg), giving a total of 11 countries with programmes in place. All programmes are voluntary[1]. China, Czech Republic, Finland, Hungary, Ireland, Mexico, Poland, Slovak Republic, Switzerland[2], Turkey, Russian Federation and South Africa (now the African Stockpiles Programme has been completed) do not have dedicated collection programmes (Figure 4). In the 12 countries where there is no specific collection for obsolete pesticides, they are treated as hazardous waste and owners should dispose of products through the local authority (municipality) hazardous waste collection sites; in Poland the private company that runs the container management programme, also offers a commercial hazardous chemical disposal service. In Mexico US EPA has occasionally collected some obsolete pesticides.

23. However, it is also believed that those OECD countries (including key partner countries) that are not listed above do not have collection programmes. Thus a realistic view is that out of the 44 member and non-member countries, 11 countries (10 out of 34 member countries and one out of 10 non-member countries) had programmes. This is equivalent 25% of countries overall, or 29.4% of member countries and 10% of non-member countries.

24. Private enterprise implements the programmes in five countries, users (agricultural co-operatives) with regional or local authorities in one country and partnerships mainly consisting of the private sector and regional/local authorities in five countries (Figure 5). In the nine countries where private enterprise is involved in implementation of the programmes, these enterprises were established, with support of the CropLife National Association, to collect empty pesticide containers. In Japan the agricultural co-operatives undertake collection, these also undertake container collections. In the UK, local authorities and private waste management contractors collect (currently this is focused on home and garden products, farmers generally dispose through hazardous waste sites).

25. The most common methodology for collection schemes is that owners, who in most countries are private sector users (e.g. farmers), can register their obsolete products via a booking form, during a defined period of time. These are then collected, normally at a central collection point, by the organization implementing the programme. The products are then destroyed or disposed of by an approved route (see below). An essential element of the process is that an amnesty is put in place for those declaring possession of obsolete pesticides, as local (waste) laws prohibit their possession.

[1] New Zealand indicates that the programme may become mandatory in the near future.

[2] In Switzerland, although no dedicated collection scheme, the pesticide vendors are obliged to take stocks back from the user.

**Figure 4: Percent of countries that responded to the surveys with an obsolete pesticide collection scheme in place.**

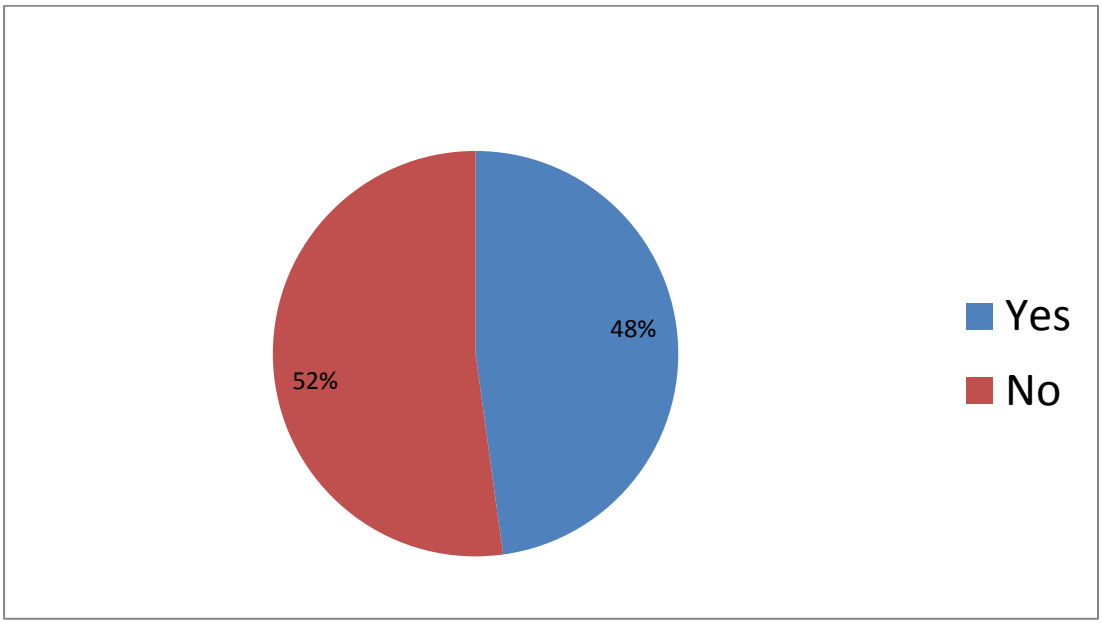
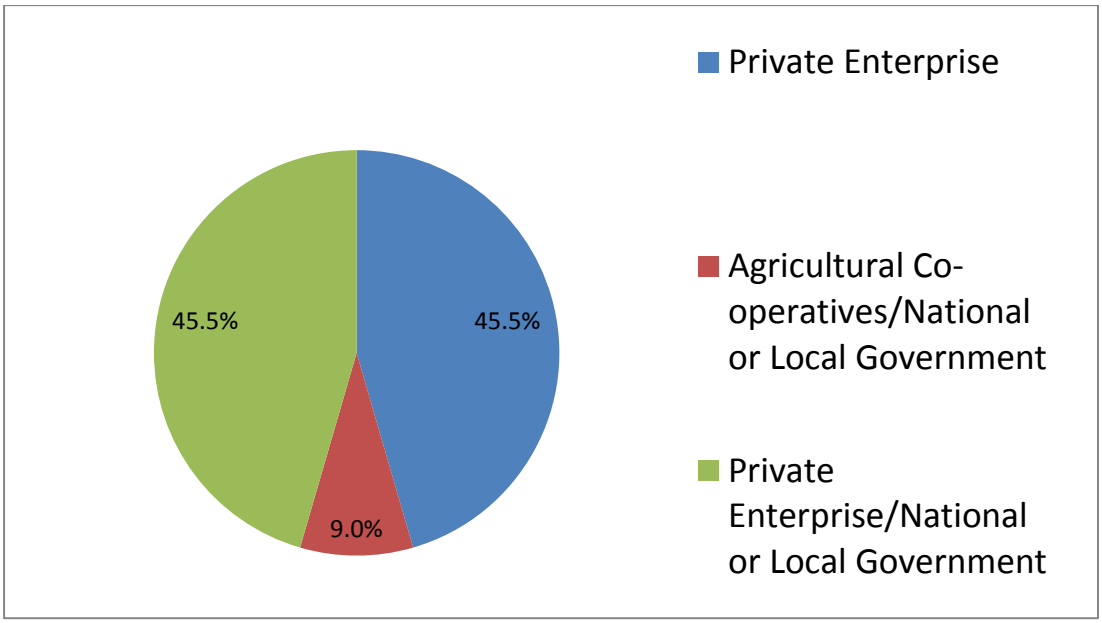
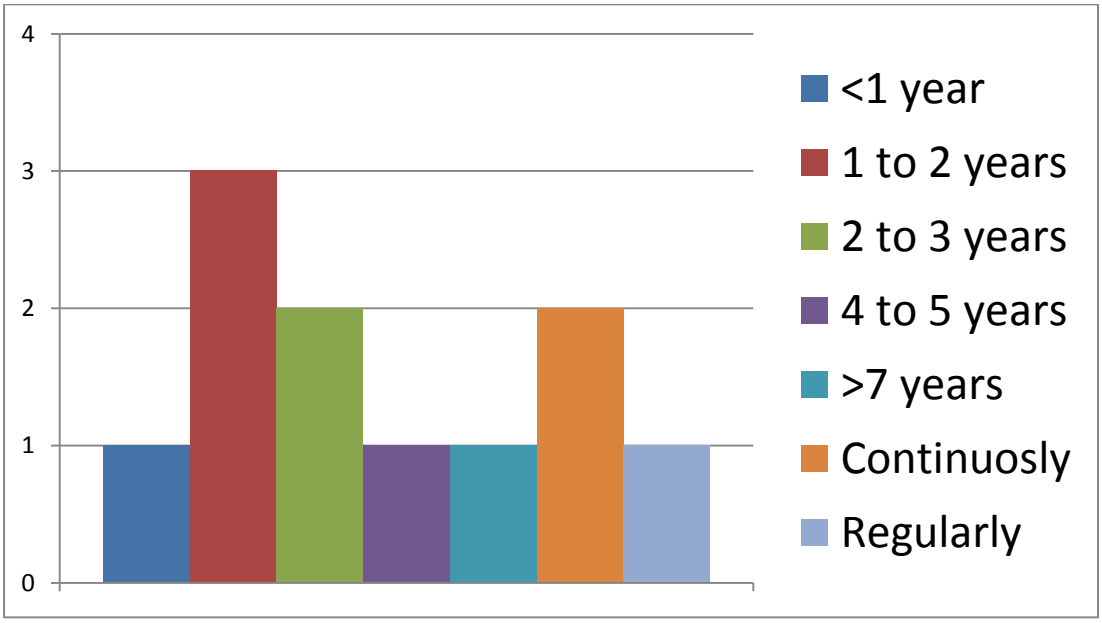



**Figure 5: Entity undertaking obsolete pesticide collection scheme**




26. The frequency of collection is shown in Figure 6. The wide-spread reflects costs and funding/partnership availability. The collections are not normally country-wide but occur in different regions/states on each occasion.

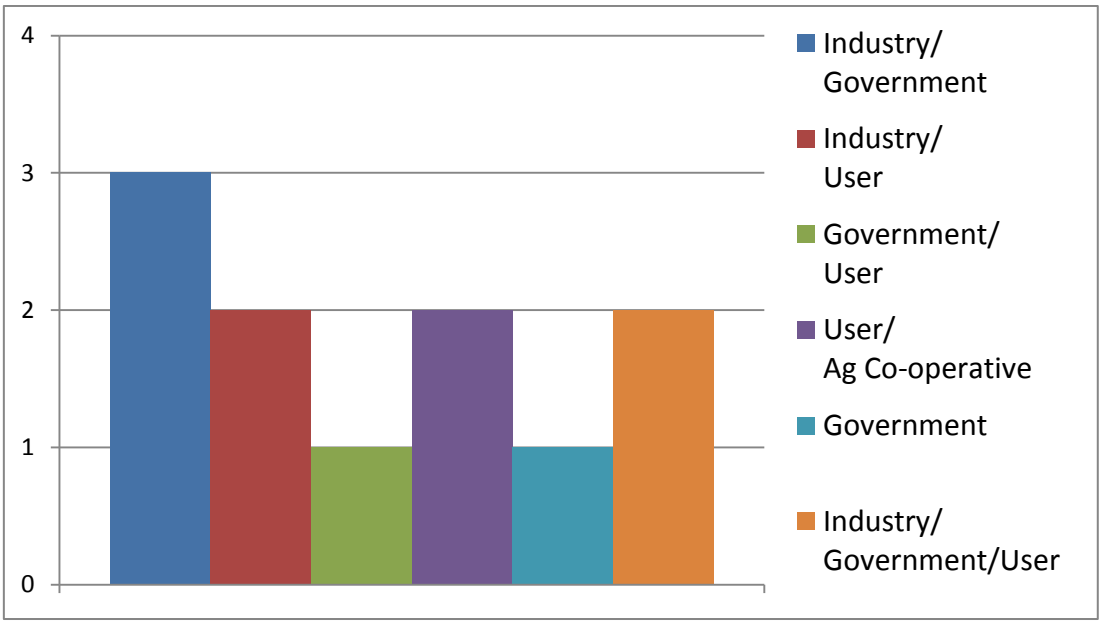
**Figure 6: Frequency of obsolete pesticide stock collection**




27. In all countries the collected pesticides are destroyed by high temperature incineration (this should be carried out in UN approved facilities or their equivalent). One country specifically mentioned that mercury-based pesticides are not incinerated but sent to hazardous landfill sites.

28. Programmes are funded by a range of sources. The majority of programmes are funded jointly by the industry and national/regional/local government (for one of these programmes the collection was initiated with the help of public funds, but developed into an industry-funded scheme). Other funders include users, with or without industry or government as a partner (Figure 7). Where no programme is in place the users normally would pay for the hazardous material to be accepted at a hazardous waste collection site or would need to pay for collection by a specialized hazardous waste contractor.

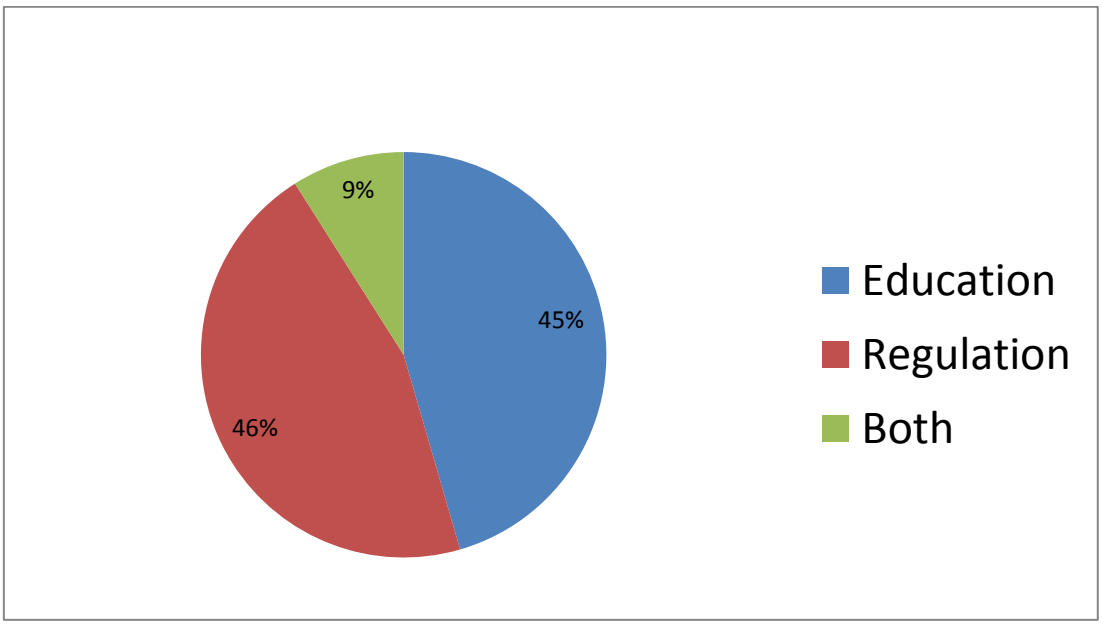
**Figure 7: Source of funding for obsolete pesticide collections.**



29. Barriers to establishing programmes were primarily said to be cost/funding: specifically mentioned were cost of transport, cost of disposal and non-contribution of some pesticide producers ('free-riders'). Provision of collection information to users, as well as ease of handling versus accessibility of collection sites was also mentioned.

30. With regard to prevention programmes, nine countries said they were in place while one said there was no programme. INPEV, Brazil stated that this was the remit of the Government. Education activities were the most common prevention activity (five countries), followed by regulation (four countries). One country said it was a mixture of education and regulation (Figure 8).

**Figure 8: Type of obsolete pesticide prevention programme**



**Conclusions**

31. Various estimates have been made of the level of obsolete pesticide stocks in OECD member countries and non-member countries and information is available from 18 out of 44 countries. This ranges from actual amounts that are collected in obsolete pesticide collection programmes, and (mainly for Eastern Europe and the Russian Federation) estimates of what might be there.

32. In the majority of countries the stocks are held by private sector farms and distributors. In contrast those of Eastern Europe and the Russian Federation are likely to be legacy stocks from former collective farms and purchased under centralized government schemes. The ownership of these may be unclear.

33. Generally, products become obsolete because of progressive bans or the owner no longer needs to use them.

34. Twenty-five per cent of the countries (11 out of 44)[3] have collection schemes in place, 90% of the countries being OECD member countries rather than non-member countries. Most of the collection programmes in operation are jointly implemented by private entities, in partnership with national or local government, that were established to regularly collect and recycle empty pesticide containers. Funding for the programmes is from a mixture of sources, usually the pesticide industry and government or the pesticide industry and users.

35. The majority of collection programmes are voluntary, but local hazardous waste laws generally make it illegal to store obsolete pesticide and, in theory, oblige the owner to safely dispose through a hazardous waste contractor or municipal site. The fact that, in the absence of a dedicated collection programme, stocks accumulate indicate that reliance on owners to voluntary dispose of obsolete products, for which they will have to pay the full cost, is not always effective. In contrast, a voluntary dedicated scheme, for which obsolete pesticide owners may or may not have to pay the cost, does not result in accumulation of stocks, as illustrated by the collection system in France. This indicates that a major factor with the successful collection/management of obsolete pesticides is ease of participation.

36. All collected stocks are destroyed by high temperature incineration, with the exception of mercury-based compounds.

37. When a collection programme is established, generally large amounts of legacy stocks are collected at the beginning. This drops to manageable levels that can be collected on a regular basis.

38. Further reduction of obsolete pesticide stocks could be achieved if countries either enforce more effectively local hazardous waste laws or, where this does not effectively work, assist to establish a voluntary collection programme. This should ideally be done in co-operation with a (private) entity that is also collecting empty pesticide containers. Users benefit from having a route to dispose of their hazardous waste, which not only is required under applicable laws, but also required for food chain certification. Cost structures that include government, private industry and users should be considered. Examples of how this is achieved are given by the established programmes that this survey/report has highlighted.

39. The programmes in Belgium and Luxembourg are implemented by a single private enterprise. In contrast in New Zealand two different enterprises compete. In the remaining countries a single enterprise

[3] In addition it is believed that there may be periodic collections in Chile and that Government and donor-led collections are planned in China.

implements the programme. All of these options should be considered by countries that do not have a programme.

40. The large amount of stocks in Eastern Europe and the Russian Federation are likely to have no owner and originate from state-owned companies that no longer exist. This needs to be dealt with by specialized hazardous waste contractors in association with governments and donors.

41. To prevent pesticides becoming obsolete, suitable times should be allowed for use of stocks in the value chain when they are de-registered. Further education and training of users should be undertaken to avoid excessive amounts being purchased. The latter should be done by (regulatory) authorities and those producing, marketing and selling pesticides as part of their normal responsible business approach. Normal practice should also include the 'first in – first out' approach so that older stocks are used before newer stocks.

**Annex 1: Survey Form**

| **Name of country/delegation:** |
|---|

***Scale of the problem***

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

   b) If there are specific regulations, what are they?

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

   If yes,

   a) What is the estimated amount?

   b) When was the last assessment made?

   c) Who undertakes the assessment and how often?

   d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

   e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

   f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

***National programme***

3. Is there a programme to collect obsolete stocks in your country? (yes/no)

   If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme

b) Is the programme mandatory or voluntary?

c) How often are stocks collected?

d) What happens to the collected stocks?

e) How is the programme funded?

f) Is obsolete stock collection coordinated with an empty container collection programme?

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

***Contact details***

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers.

Please provide the name, title, institution/organisation, phone number and E-mail address.

**Annex 2: Survey Responses**

*Note: Individual respondents' details have been removed, but their affiliations retained under "contact details"*

**a). OECD Countries**

# 1. Australia

## *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

Within Australia there is no single, specific regulation governing obsolete pesticide stocks or empty pesticide containers. Stocks of obsolete pesticides and empty pesticide containers are managed by state, territory and local governments, rather than the Australian (federal) government. Under this arrangement, obsolete pesticide stocks and empty pesticide containers are regulated within a suite of legislation that differs among states and territories but is primarily concerned with chemical storage and disposal practices.

The Australian Government recently enacted the Product Stewardship Act 2011 that provides the framework to manage the environmental, health and safety impacts of products, and in particular those impacts associated with the disposal of products. The framework includes voluntary, co-regulatory and mandatory product stewardship. A list will be published each year of products being considered for coverage by the legislation. A list is yet to be released.

The Australian Government is a party to the Stockholm Convention on Persistent Organic Pollutants and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. These conventions describe obligations for the disposal of listed chemicals and hazardous wastes.

1. b) If there are specific regulations, what are they?

Each of the eight state and territory jurisdictions has its own environmental protection regulations as summarised below.

| Australian State/Territory Environmental Legislation | |
|---|---|
| Victoria | EPA Act 1970 |
| | Environmental Protection (Scheduled Premises & Exemptions) Regulations 2007 |
| NSW | Protection of the Environment Operations Act 1997 |
| | Waste Avoidance & Resource Recovery Act 2001 |
| | Protection of the Environment Operations (Waste) Regulations 2005 |
| South Australia | EPA Act 1993 |
| Western Australia | Environmental Protection (Controlled Waste) Regulations |
| Northern Territory | EPA Act 2007 |
| Tasmania | Environmental Management & Pollution Control Amendment (EPA) Act 2007 |
| ACT | EPA Act 1997 |

| | |
|---|---|
| Queensland | EPA Act 1994 |
| | |

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? No

If yes,

a) What is the estimated amount?

b) When was the last assessment made?

c) Who undertakes the assessment and how often?

d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

### *National programme*

3. Is there a programme to collect obsolete stocks in your country?

Yes.

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme?

AgStewardship Australia Limited oversees ChemClear, the agricultural industry's national extended producer responsibility (EPR) program for agricultural and veterinary chemicals. It collects eligible, unregistered, unwanted and unused chemicals from around Australia and disposes of them in an environmentally safe way.

Since its inception in 2003, the ChemClear program has collected over 263,000 litres or kg of unwanted and unregistered chemical products from Australian rural and regional communities. Approximately 143,000 litres or kg of these have been collected at no additional cost to the user, as it is funded by the industry's EPR. The remaining collected chemicals have either been supported by state government subsidies or funded by the user in relation to unidentifiable, mixed, persistent organic pollutants or non-participating agricultural chemical manufacturers registered for collection.

ChemClear was established by industry after an earlier government-funded program *ChemCollect*, which was a one-off free service focused on collecting and destroying historical farm chemical wastes, to ensure an ongoing, reliable and safe disposal patch was available to Australian primary producers.

AgStewardship Australia Limited comprises the following member organisations: Croplife Australia Ltd, Animal Health Alliance Australia, Veterinary Manufacturers Distributors Association, the National Farmers' Federation and the Australian Local Government Association. AgStewardship Australia sub-contracts to Agsafe Limited to operate the program on its behalf.

b) Is the programme mandatory or voluntary?

Participation in the ChemClear programme is voluntary. It currently represents over 90% of agricultural chemical produced and marketed in Australia.

c) How often are stocks collected?

The program undertakes state-wide collections and regional collections as primary producers register their obsolete chemicals for disposal. On average, state-wide collections occur every two to three years. Regional collections, which focus on the eastern seaboard due to the regional population densities and availability of collection services, happen more frequently at approximately once a year.

d) What happens to the collected stocks?

98% of the collected stocks are used as an alternative fuel source. The remaining chemicals (organochlorines, cyanides and arsenics) are disposed of in accordance with local regulations.

e) How is the programme funded?

A pre-paid fee is applied by the participating manufacturers, which is then passed on to the consumer. AgStewardship Australia collects and manages the fee, which is four cents per litre or kilogram, and is applied to eligible single-trip plastic and steel containers of 1 litre to 250 litres. This fee funds the collection of both the empty containers and obsolete agricultural chemicals.

f) Is obsolete stock collection coordinated with an empty container collection programme?

Collection of empty containers is run as a separate program. However, containers received in the chemical collection are cleaned and recycled through the container collection program, *drumMUSTER.*

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

In Australia, collecting chemicals and empty containers in remote areas incurs high transport costs. Also, some chemical companies (known as free-riders) do not offer a disposal path by participating in this voluntary scheme to pre-pay the fee.

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

The states and territories offer accreditation and training program to educate chemical resellers and distributors to enable them to manage compliance in the workplace, workplace safety and to navigate the health and environmental risks involved with farm chemicals. Suppliers and distributor locations are regularly assessed against the Agsafe Code of Practice – a comprehensive document detailing industry regulations, Australian Standards and industry best practice.

Voluntary farm chemical training programs such as ChemCert, Smart-train, etc., advise participants/users on proper chemical handling and disposal, to only purchase the quantity of chemicals they intend to use, use what they are storing and recycle the plastic/metal container through the drumMUSTER recycling program. More information is available at http://www.chemcert.com.au/home.html.

Also, the national regulator, the Australian Pesticides and Veterinary Medicines Authority (APVMA), may allow phase out times to allow chemical stocks to be used when the registrations of products and active ingredients are cancelled.

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers

Please provide the name, title, institution/organisation, phone number and E-mail address

Agricultural and Veterinary Chemicals Section
Agvet Chemicals and Farm Leadership Programs Branch
Australian Government Department of Agriculture, Fisheries and Forestry
GPO Box 858
Canberra, ACT, Australia
2601

## 2. Belgium

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

   No specific regulation in place, considered as hazardous waste.

   b) If there are specific regulations, what are they?

   /

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no) NO

   If yes,

   a) What is the estimated amount?

   b) When was the last assessment made?

   c) Who undertakes the assessment and how often?

   d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

   e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

   f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

### *National programme*

3. Is there a programme to collect obsolete stocks in your country? (yes/no) YES

   If yes,

   a) Who implements the programme? Is it a national or regional (state, local government) programme

A private programme called “Phytofar-Recover”, on initiative of the pesticide industry (assembled on national level as “Phytofar”), was launched in order to avoid an announced state levy on packagings of

pesticides. The announced levy was that heigh, that it would come cheaper for industry to collect the packagings themselves. When collecting empy packagings, also obsolete stocks are also collected. Packagings and obsolete stocks are collecting by making collecting containers available to individual farmers as in a "container park" for household waste.

b) Is the programme mandatory or voluntary? See above : VOLUNTARY

c) How often are stocks collected? Continuously and spread allover the year, but at least once a year at farmer level

d) What happens to the collected stocks? Destruction (incineration)

e) How is the programme funded? Industry funded (contributions by partners / farmer associations)

f) Is obsolete stock collection coordinated with an empty container collection programme? YES

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme? FUNDING, organization, awareness…. Main issue is to create an easy possibility for farmers to hand over their obsolete stocks = at low cost, without all to much effort.

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible? YES: enforcement of respect of the peremption date. The agency responsible for enforcement has made several campaigns to check preemption date of the packagings present at distributors and farmers, implying high fines, resulting in a high awareness to get rid of the obsolete stocks in due time and to prevent accumulation.

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers

Please provide the name, title, institution/organisation, phone number and E-mail address

DG Animals, Plants and Feed

Eurostation, Bureau 07D315

Place Victor Horta, 40/10

1060 Brussels

Belgium

## 3. Canada

### *Scale of the problem*

1 a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

Pesticides are regulated in Canada by the Pest Management Regulatory Agency (PMRA) under the *Pest Control Products Act* (PCPA). The legislation provides authority to specify conditions relating to a product's manufacture, handling, storage, transport, import, export, packaging, distribution, use, disposal, composition and label.

b) If there are specific regulations, what are they?

Obsolete pesticides arise because of prohibition of use due to regulatory action and other changes in product registration and approval or international bans. Section 6(1) of the PCPA prohibits the manufacture, distribution, possession, transport, handling, storage, import, export and use of any pest control product that is not registered under the Act.

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

No.

If yes,

a) What is the estimated amount?

b) When was the last assessment made?

c) Who undertakes the assessment and how often?

d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

***National programme***

3. Is there a programme to collect obsolete stocks in your country? (yes/no)

Yes.

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme?

- Industry-based stewardship organization (CleanFARMS(TM))
- National

b) Is the programme mandatory or voluntary?

- voluntary

c) How often are stocks collected?

- CleanFARMS(TM) delivers obsolete pesticide collection programs in every Canadian province typically on a three year rotation

d) What happens to the collected stocks?

- They are taken to a licensed disposal facility where it is disposed of through high temperature incineration.

e) How is the programme funded?

- Canada's crop protection industry and various governments co-fund the program.

f) Is obsolete stock collection coordinated with an empty container collection programme?

- Yes.

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

## Challenges:
## Accessibility of Collection Sites:

Market research in Canada demonstrates farmer/grower reluctance to transport obsolete pesticides to collection sites if the distance is greater than 75 km. Combined with the variable geographic distribution of farming operations in Canada in several growing regions, it has been a challenge to establish collection points to meet the disposal needs of farmers in non-predominantly agricultural production regions. This challenge is being met by coordinating with pesticide vendors in predominantly agricultural regions and municipal landfill operations/waste management centres in regions where agricultural prediction is less prevalent, but exists allowing the vast majority of farmer/growers have viable pesticide disposal options.

**Transportation Costs:**

Transportation costs related to the collection and destruction of obsolete pesticides represents one of the greatest costs to the program (up to 50%). Geographic distribution of farming operations in Canada, combined with rising fuel prices, increase transport costs, particularly in more remote locations. This challenge is being met through strategic scheduling of collection program across the country while meeting the program objective of collections in each province every three years.

**Destruction Costs:**

In Canada, the industry-led stewardship program makes exclusive use of incineration for destruction of obsolete pesticides. Despite the increased cost associated with incineration, the program has determined that it is the preferred approach given environmental liability considerations.

## Jurisdiction Issues:

The industry-led stewardship program operates with fees levied to industry manufacturers (i.e. Syngenta, Bayer CropScience, Dupont, etc) combined with co-funding from provincial government (50% / 50% ratio). Reductions in provincial funding levels are anticipated in the current fiscal climate, likely leading to an entirely industry funded initiative to ensure sustainability of the program.

In Canada, certain regulatory requirements respecting the program differ from province to province (e.g., Transport of Dangerous Goods regulations and Waste Generator Documentation requirements) may require separate authorizations for transportation over a provincial border.) These requirements represent additional administrative burden on the operation of the program.

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

Canada follows a systematic risk management strategy for dealing with existing stocks of pesticides before they are de-registered or following adoption of regulatory actions through a short phase-out period. Under such approach, the PMRA and the registrant involved undertake inventory of the stocks at hand to establish the cut-off dates for sale by the registrants and use of remaining stocks. This has been the lowest risk option for disposing of existing stocks without creating any obsolete pesticide stocks. If there happens to be any waste, a private-sector based organization, CleanFARMS™ Inc., offers obsolete pesticide collection and container disposal programs in Canada for disposal in an environmentally responsible way, at no charge to the user.

Compliance and enforcement programs are also in place to monitor stockpiles of banned and obsolete pesticides, if any, at farms and other general public settings. Programs are also in place to educate farmers, growers and the general public about the risks posed by obsolete pesticides and what their respective roles are.

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers

Please provide the name, title, institution/organisation, phone number and E-mail address

Pest Management Regulatory Agency / Agence de réglementation de la lutte antiparasitaire
Health Canada / Santé Canada

# 4. Finland

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

In Finland the obsolete pesticides are regulated as hazardous waste according to the waste management legislation (Waste Act 1993/1072).

1. b) If there are specific regulations, what are they?

see above

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

Not regularly, but a few surveys have been done as a part of certain campaigns.

If yes,

a) What is the estimated amount?

In 2002 a total of 740 tons of hazardous wastes from agriculture were collected and transported to Ekokem Oy (Nationwide plant for disposal of hazardous waste). This figure may include the wastes from production of plant protection products as well as transport from other countries. The domestic production of PPP has finished since then. In 2008-2011 the amount has been ca. 90 tons per year.

b) When was the last assessment made?

Ekokem Oy keeps yearly records of the amounts of hazardous wastes submitted for disposal, but stocks in farms and retailers are not recorded.

c) Who undertakes the assessment and how often?

For certain awareness raising campaigns the PPP authorities together with the environmental authorities have made some surveys, but there is no legal obligation for it.

d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

Private farmers won the stocks on their farms. Retailers own the stocks in shops and stores. The municipal waste authorities are responsible for organizing a collection site for hazardous waste open for private households and enterprises, and transporting to Ekokem Oy.

e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

Usually the authorization of the product has expired.

f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

The risks of plant protection products are assessed prior to authorization and release into market. Tukes is the competent authority for authorization of PPP. The decisions of Tukes are always submitted to regional environmental and waste management authorities for information. Usually a period of grace will be granted when the authorization of PPP expires. In the labeling of each PPP instructions are given how the product shall be disposed safely.

In the PPP legislation there is no obligation to submit the stocks of obsolete pesticides to disposal, but only use is forbidden. In the waste legislation the infringement penalty provisions are not comprehensive.

### *National programme*

3. Is there a programme to collect obsolete stocks in your country? (yes/no)

Not a formal programme, but certain awareness raising campaigns have taken place.

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme

The municipal waste management authorities are obliged to organize a collection site where the farmers, retailers and other citizens can bring their obsolete pesticides and other hazardous wastes.

b) Is the programme mandatory or voluntary?

It is obligatory for the municipalities to organize the collection site and transport to Ekokem Oy, but it is voluntary for farmers to bring their stocks to the collection site. The amounts or time limits of storing of obsolete pesticides in farms are not regulated at the moment.

c) How often are stocks collected?

There are local differences depending on the amounts collected at each site.

d) What happens to the collected stocks?

The local municipal waste management authorities transport them to Ekokem Oy.

e) How is the programme funded?

By waste management fees.

f) Is obsolete stock collection coordinated with an empty container collection programme?

Yes.

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

The waste management is decentralized and the resources of the authorities are variable in different parts of the country. The infringement penalty provisions are not comprehensive. The problem of obsolete pesticides has been considered as minor in Finland so far.

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

Information campaigns have taken place to raise awareness of the farmers and retailers on how and where to submit their stocks regularly.

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers

Please provide the name, title, institution/organisation, phone number and E-mail address

Finnish Safety and Chemicals Agency Tukes, PO Box 66, 00521 Helsinki, Finland.

# 5. France

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

   **Today , there is no specific regulation for obsolete pesticides. Those are classed as hazardous waste falling within waste management legislation.**

   **However, for professional products, there is an agreement between the Ministry of Ecology and ADIVALOR, private society managing the collect of obsolets pesticides. http://www.adivalor.fr/**

   b) If there are specific regulations, what are they?

   **In the Grenelle agreement, an obligation for PPP industry to manage hazardous waste is planned. This measure is supposed to strengthen the voluntary program of ADIVALOR.**

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

   If yes,

   a) What is the estimated amount? **The estimated amount is about 2000 tons, include historical stock and renewal stock. Since 2001, 9500 tons of historical stock were destroyed. The historical stocks to eliminate between 2002 and 2006 was estimated at 8000 tons.**

   b) When was the last assessment made? **2011**

   c) Who undertakes the assessment and how often? **ADIVALOR does the Assessment every year.**

   d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known? **The stocks of professional products are owned first by farmers and others users. Distibutors of products, which are collectors for ADIVALOR , hold the stocks collected.**

   e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)? **The reason of obsolescence is withdrawing of authorization for placing on the market, mainly because of implementation of new EU or national regulation or for commercial reason or because of commercial abandonment by firms.**

   f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

**The government department responsible is the Ministry of Ecology, General Directorate for Risk Prevention. An agreement is concluded every year between the Ministry of Ecology and ADIVALOR. For the assessment and mitigation of risks, ADIVALOR is responsible.**

***National programme***

3. Is there a programme to collect obsolete stocks in your country? (yes/no) **Yes**

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme **For professional products ADIVALOR implements the programme for collection of obsolete stocks and empty container. For gardening products, the obsolete and unwanted products are supported by household waste collection center.**

b) Is the programme mandatory or voluntary? **Today, the program is voluntary and will be mandatory next.**

c) How often are stocks collected? **Collects are done by distributors according to their work plan.**

d) What happens to the collected stocks? **The stocks collected are destroyed in specific installations when a critical amount is reached.**

e) How is the programme funded? **The program is funded by firms contribution.** For the starting of programme, public fundings were brought.

f) Is obsolete stock collection coordinated with an empty container collection programme? **Yes. ADIVALORS has collected 5300tons of empty container in 2009.**

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme? According to ADIVALOR, there is two challenge for succeeding in his program : **1/ distributors motivation for organizing collects 2/ good informations of PPP users**

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible? **The recent legal obligation to collect and destroy obsolete pesticids two years after market withdrawal is going to reduce the accumulation.**

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers.

Please provide the name, title, institution/organisation, phone number and E-mail address.

**Ministère de l'écologie, du développement durable, des transports et du logement**
**DGPR/SPNQE/DPCPDA**
**Bureau des substances et préparations chimiques**
**Grande Arche Paroi Nord**
**92055 LA DEFENSE Cedex**
**FRANCE**

## 6. Ireland

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

   **Obsolete pesticides are categorized as hazardous waste.**

   **Empty pesticide containers are considered hazardous waste. There are activities ongoing between the Department of Agriculture, Fisheries and Food and the Environmental Protection Agency to designate triple rinsed containers as non hazardous material.**

   b) If there are specific regulations, what are they?

   **Commission Decision 200/532/EC as amended.**

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/**no**)

   If yes,

   a) What is the estimated amount? **Not applicable**
   b) When was the last assessment made? **Not applicable**
   c) Who undertakes the assessment and how often? **Not applicable**
   d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known? **Not applicable**
   e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)? **Not applicable**
   f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?
   **The Department of Agriculture, Fisheries and Food is responsible for legal framework controlling the marketing and use of pesticides. The area of waste management is controlled by Local Municipal Authorities, the Environmental Protection Agency and the Department of the Environment and Local Government.**
   **However, the Department of Agriculture, Fisheries and Food through its comprehensive enforcement program both at end user level and retail and wholesale level ensure that stock rotation is rigidly practiced to ensure the occurrence of obsolete pesticides is kept to a minimum. During the course of wholesale and retail inspections, inspecting officers always indicate "use up" and "sell out" periods and where obsolete stock is found, destruction of the material as hazardous waste is frequently required.**
   **As a result the amount of obsolete pesticides at retail or wholesale level is minimal. A similar situation exists at end user level.**

### *National programme*

3. Is there a programme to collect obsolete stocks in your country? (yes/**no**)

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme
b) Is the programme mandatory or voluntary?
c) How often are stocks collected?
d) What happens to the collected stocks?
e) How is the programme funded?
f) Is obsolete stock collection coordinated with an empty container collection programme?
g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

**See above.**

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers.

Please provide the name, title, institution/organisation, phone number and E-mail address.

Pesticide Control Service,
Department of Agriculture, Fisheries and Food,
Backweston Campus,
Youngs Cross,
Celbridge,
Co. Kildare.
Ireland

# 7. Japan

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

   There is no specific regulation for managing obsolete stocks of pesticides or empty pesticide containers in Japan. Obsolete pesticides and empty pesticide containers are classified as industrial wastes and regulated by the "Waste Management and Public Cleansing Law" enacted for the purpose of "preserving the living environment and improving public health through the restriction of waste discharge, appropriate sorting, storage, collection, transport, recycling, disposal and conservation of a clean living environment."

   b) If there are specific regulations, what are they?

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

   No.

   If yes,

   a) What is the estimated amount?

   b) When was the last assessment made?

   c) Who undertakes the assessment and how often?

   d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

   e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

   f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

### *National programme*

3. Is there a programme to collect obsolete stocks in your country? (yes/no) Yes.

   If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme

The Japan Agricultural Cooperatives (JA), alone or in collaboration with some city governments, conduct the regional programmes to collect obsolete pesticides for, in most cases, farmers who are the member of JA. These programmes are similar in general but may vary from region to region.

b) Is the programme mandatory or voluntary?

All of the programmes for collecting obsolete pesticides are implemented voluntarily in Japan.

c) How often are stocks collected?

Frequency of collection depends on the programme but it usually ranges from once a year to once every two years.

d) What happens to the collected stocks?

They are handed over to industrial waste disposal contractors for disposal under the "Waste Management and Public Cleansing Law."

e) How is the programme funded?

Transport and disposal of obsolete pesticides are paid for by farmers. In some regions, the Japan Agricultural Cooperatives partly subsidize the transport costs.

f) Is obsolete stock collection coordinated with an empty container collection programme?

Yes, empty containers as well as obsolete pesticides are collected in the programme.

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

There are following barriers:

– Difference among farmers' awareness of the necessity to dispose obsolete pesticides ; and

– High costs of disposing obsolete pesticides without label or unknown pesticides

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

The MAFF instructs farmers to avoid accumulating obsolete stocks by using up all the pesticides they purchased. In addition, the MAFF has established a nationwide system in which manufacturers and the Japan Agricultural Cooperatives jointly collect those obsolete pesticides recently included in the Annex A of the Stockholm Convention such as endosulfan.

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers.

Please provide the name, title, institution/organisation, phone number and E-mail address.

Institution/Organization: Agricultural Chemicals Office, Plant Products Safety Division,
Food Safety and Consumer Affairs Bureau, Ministry of Agriculture, Forestry and Fisheries

## 8. New Zealand

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

**Obsolete pesticides fall into two categories:**

- **Pesticides which are approved for use in New Zealand where the pesticide is now past its use by/expiry date; and**
- **Pesticides that are not approved for use in New Zealand. This falls into two further subclasses:**
  - **Substances that had been approved under HSNO and are no longer approved due to reassessment programme or implementation of an international agreement (e.g. POPs)**
  - **Substances that were banned before the HSNO Act where stocks may still exist. For these, their use is illegal but having the substance is not.**

b) If there are specific regulations, what are they?

**Disposal regulations: http://www.legislation.govt.nz/regulation/public/2001/0119/latest/DLM41657.html?search=ts_regulation_Hazardous+Substances+(Disposal)+Regulations+2001_resel&p=1&sr=1**

**Storage and disposal of POPs: http://www.epa.govt.nz/Publications/Transfer-Notice-174-2004.pdf**

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

**Yes**

**http://www.mfe.govt.nz/issues/waste/special/agrichemicals/index.html**

If yes,

a) What is the estimated amount?

**The current best estimate (August 2011) from two expert collectors (who do most of the work for regional councils or Agrecovery) is 300 tonnes.**

b) When was the last assessment made?

**See above.**

c) Who undertakes the assessment and how often?

**See above**

d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

**Mostly held by those in agriculture/horticulture industry.**

e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

**POPs, deregistered and out of date are all relevant (see question 1).**

f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

**MfE**

### *National programme*

3. Is there a programme to collect obsolete stocks in your country? (yes/no)

**Yes**

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme

**There have been national programmes carried out at a regional level by participating regional councils which have had involvement from MfE.**

**Also, Agrecovery provide a programme for the collection of unwanted chemicals through a product stewardship programme supported by a product levy.**

b) Is the programme mandatory or voluntary?

**Voluntary**

c) How often are stocks collected?

**Agrecovery collect every 6-12 months based on volume by region.**

d) What happens to the collected stocks?

**Depends on available resources how they are disposed of. For example, substances that require high temperature incineration are done offshore because there aren't the facilities in New Zealand.**

e) How is the programme funded?

**Current funding is from Agrecovery brand owners & user pays, with some from Vote: Environment for intractibles shipment & destruction only ($13.10 a kg - a contribution, not full cost).**

f) Is obsolete stock collection coordinated with an empty container collection programme?

**Agrecovery's programme also includes container recycling, as well as other waste disposal and recycling.**

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

**The current situation has a problem with "free riders" (brand owners not members of Agrecovery or any other collection programme) and farmers being unwilling to foot the bill under user-pays. Currently about 50% of the obsolete chemicals brought to the attention of Agrecovery for potential collection (including POPs such as DDT) are NOT being offered up for collection once the farmer is made aware of the price.**

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

## *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers.

Please provide the name, title, institution/organisation, phone number and E-mail address.

**Strategy Division**
**Environmental Protection Authority**

## 9. Switzerland

### *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

   **In Switzerland, there are specific regulations for obsolete pesticides which oblige the owner of such material to give it back to the vendor or to hand it over to an official dangerous waste collection facility. On the other hand, the vendor of those products is obliged to take back those products and to dispose properly.**

   b) If there are specific regulations, what are they?

   **The duty to take back obsolete pesticides is written down in article 70 of the Plant Protection Ordinance (http://www.admin.ch/ch/d/sr/9/916.161.de.pdf) and in article 44 of the Biocidal Products Ordinance (http://www.admin.ch/ch/d/sr/8/813.12.de.pdf ) while the duty of the owner is written down in the annexes 2.4 and 2.5 of the Ordinance for Risk Reduction (http://www.admin.ch/ch/d/sr/8/814.81.de.pdf)**

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no) **No**

   If yes,

   a) What is the estimated amount?

   b) When was the last assessment made?

   c) Who undertakes the assessment and how often?

   d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

   e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

   f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

### *National programme*

**3.** Is there a programme to collect obsolete stocks in your country? (yes/no) **No. However, many local authorities organize regular collection actions (for all dangerous goods). The prescription for the handling of dangerous waste is written down in the ordinance on the handling of dangerous waste (http://www.admin.ch/ch/d/sr/8/814.610.de.pdf)**

If yes,

a) Who implements the programme? Is it a national or regional (state, local government) programme

b) Is the programme mandatory or voluntary?

c) How often are stocks collected?

d) What happens to the collected stocks?

e) How is the programme funded?

f) Is obsolete stock collection coordinated with an empty container collection programme?

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

**The ordinance for the protection against major accidents (http://www.admin.ch/ch/d/sr/8/814.012.de.pdf) fixes amounts of stocked dangerous goods (not only pesticides). If these amounts are exceeded, the owner shall announce these amounts to the designed cantonal authorities which will then fix the appropriate measures to be taken**

### *Contact details*

Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers.

Please provide the name, title, institution/organisation, phone number and E-mail address.

Swiss Federal Office for Agriculture
Plant Protection Products Unit
Mattenhofstrasse 5
CH -3003 Bern
Switzerland

# 10. United Kingdom

## Scale of the problem

**1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.**

*The Waste Management (England & Wales) Regulations 2011) govern the storage, movement and disposal of waste including obsolete stocks of pesticides. In addition, the Plant Protection Products Regulations 2011 allow the Government to remove a product from the 'Approved List' and to set a period for both sales to cease and for the product to be stored and used. It is illegal to use such a product after this period. In these cases it is the responsibility of the owner of the 'obsolete' product to arrange for its disposal either with the manufacturer/distributor or with a properly licensed waste disposal contractor.*

*The UK's Pesticides Forum (a stakeholder engagement group supported by Government) has recently completed a report on the routes for disposing and recycling of pesticide containers. The Forum continues to work with relevant organisations to implement the recommendations from that report.*

**b) If there are specific regulations, what are they?**

*Waste Management (England & Wales) Regulations 2011*
*Plant Protection Products Regulations 2011 (PPPR)*
*Environmental Protection Act 1990 (as amended)*
*Environmental Protection (Duty of Care) Regulations 1991*

**2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (~~yes~~/no)**

**If yes,**

**a) What is the estimated amount?**

*Not applicable*

**b) When was the last assessment made?**

*Not applicable*

**c) Who undertakes the assessment and how often?**

*Not applicable*

**d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?**

*Obsolete stocks of pesticides should not be held by anyone other than the manufacturer or approved waste disposal contractors.*

**e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?**

*All obsolete stocks are likely to be either deregistered (approval withdrawn) or out of date stock.*

**f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?**

*As the pesticides regulatory authority in the UK, the Chemicals Regulation Directorate of the Health and Safety Executive is responsible for the assessment of the risk through the EU review process which will revoke any substance thought to be unsuitable for authorisation. Any product deemed obsolete as a result of this process will need to be disposed of. The Department for Environment Food and Rural affairs (DEFRA) is responsible for mitigating that risk on farms through Cross Compliance checks of farms and their stores under the Single Payments Scheme. Any farm found to be holding deregistered or out of date stocks risks breaching conditions of the Statutory Management Requirements (SMR9 – Expired Products) and a resultant reduction of the Single Farm Payment of up to 15%. Non-compliance identified on farms or anywhere else through case by case investigation could also result in legal action being taken under the Plant Protection Products Regulation 2011.*

## National programme

**3. Is there a programme to collect obsolete stocks in your country? (yes/~~no~~)**

**If yes,**

**a) Who implements the programme? Is it a national or regional (state, local government) programme**

*Recently, the UK Home Office Department, working with an approved private waste contractor, funded a scheme to encourage notification of unwanted or out-of-date pesticides.*

*There are also schemes run by local authorities which allow home and garden users of pesticides to either have their obsolete pesticides collected or taken to local waste disposal sites which have chemical safe facilities.*

**b) Is the programme mandatory or voluntary?**

*All schemes are voluntary.*

**c) How often are stocks collected?**

*Either:*

1. *upon notification by the owner of the stock; or*
2. *stock can be taken to nominated waste disposal sites.*

**d) What happens to the collected stocks?**

*Removed to approved waste disposal site and dealt with as hazardous waste.*

**e) How is the programme funded?**

*The Home Office scheme was initially funded from public funds. This has now ceased but the private disposal scheme continues at favourable commercial rates.*

**f) Is obsolete stock collection coordinated with an empty container collection programme?**

*No. There is a separate disposal system for waste pesticide containers. The cost falls directly to the user.*

**g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?**

*The Government applies the 'polluter pays principle' recognising that those that pollute should pay for the damage/impact their actions have on the environment and this extends to the waste produced. However, budgetary allocations for introducing schemes to remove deregistered or out of date stocks of pesticides are limited.*

*There are issues relating to the organisation of a collection system for home and garden pesticide containers as it is difficult to police the correct rinsing of the containers.*

**4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?**

*Yes. The Government is responsible for ensuring that early notifications are given of pesticide stocks that are to be phased out or due to be deregistered. This is normally done in co-operation with the relevant manufacturers through publicity campaigns and supported by notifications on Government websites. This central information is backed-up by relevant industry training making clear the need for good stock management to avoid pesticides becoming obsolete. Finally, this is supported by regular up-to-date advice from manufacturers, distributors, retailers, agricultural advisors (agronomists) and industry organisations.*

## Contact details

**Please indicate the name(s) of the main persons in charge of responding to the questionnaire for your country/delegation, in case we need to contact him/her/them back for clarifying some answers**
**Please provide the name, title, institution/organisation, phone number and E-mail address:**

*Policy Implementation Team*
*Chemicals Regulation Directorate*
*Health and Safety Executive*
*Mallard House, Kings Pool*
*3 Peasholme Green*
*York  YO1 7PX*
*Great Britain*

## 11. United States of America

### *Scale of the problem*

**1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.**

The disposal of obsolete stocks of pesticides and empty pesticide containers is regulated by the federal waste law (the Resource Conservation and Recovery Act or RCRA) and the federal regulations issued under it. Some, but not all, pesticides must be disposed of as hazardous waste because they are specifically included on a list in the RCRA regulations (40 CFR 261.30-261.33) or because they exhibit one of the hazardous waste characteristics (40 CFR 261.20 – 261.24). Other pesticides can be disposed of as non-hazardous – or "solid"- waste.

If pesticide containers have less than a certain amount of residue specified in 40 CFR 261.7, they are regulated as non-hazardous ("solid") waste. Regardless of what pesticide is in the container, the container is "empty" and therefore not hazardous if the container has been triple rinsed.

To find the specific regulations cited above, go to electronic version of the U.S. Code of Federal Regulations (eCFR) at www.gpoaccess.gov/ecfr/ Then select title 40, parts 260-265 and then part 261.

State waste regulations can be more stringent than the federal regulations.

**b) If there are specific regulations, what are they?**

Not applicable.

**2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)**

Yes, there are organizations that periodically assess the amount of obsolete pesticide stocks that have been collected and disposed of through organized pesticide disposal programs. However, there is no national effort to estimate the amount of obsolete and unwanted pesticide stocks that are sitting in storage areas across the country and that needs to be collected and disposed.

**If yes,**

a) **What is the estimated amount?**

Over 53 million pounds of pesticides have been disposed of in organized pesticide disposal programs in the U.S. from the mid-1980's through 2008. The current amount is larger than that because more pesticides have been collected and disposed of during the past three years but the data have not been collected. See the attached table, which shows the quantity of pesticides collected and disposed by each state per year.

**b) When was the last assessment made?**

The last assessment was made in February 2009.

**c) Who undertakes the assessment and how often?**

Most often, the national assessment is done by The Pesticide Stewardship Alliance (TPSA; see http://www.tpsalliance.org/), which is a collaborative partnership of federal, state and local government agencies; educational and research institutions; public organizations; private corporations; and individuals actively involved in ensuring good stewardship of pesticides throughout their life cycle. TPSA collected data nationally in 2004 and 2009.

In addition, the U.S. EPA collected and organized pesticide disposal data from all 50 states in 2000 and published a report on the results. That report provides information about all aspects of the state-run pesticide disposal programs, including a lot more detail about the answers on this questionnaire:

http://www.epa.gov/pesticides/regulating/clean_summ.htm.

Finally, some EPA regional offices collect the data on pesticide disposal programs for the states in their region on an annual basis.

**d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?**

The unwanted pesticides are generally held/owned by farmers and growers as well as other pesticide users, including golf courses, pest control operators, government agencies (county, state and federal), greenhouse and nursery operators, schools, and parks. Pesticide retailers and distributors often have stocks of obsolete pesticides and are allowed participate in the pesticide disposal programs in some states. Also, many households/residences have small amounts of unwanted pesticides, which might be eligible for collection through these state-run pesticide disposal programs. However, household pesticides are more likely to be disposed of through locally run household hazardous waste collection programs and therefore would not be included in the national assessments of pesticide disposal programs.

The locations of the unwanted pesticide stocks are not known at this point. Some states require disposal program participants to register and provide a list of the pesticides that will be disposed, but that happens a few months before the collection occurs.

**e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?**

There is not one single reason for the pesticides to be obsolete or unwanted. The pesticides may be disposed of because: they are damaged from weather events or temperature extremes; cropping patterns have changed so the pesticides are not needed; the pesticide cannot be used legally because its registration and/or tolerances have been cancelled; the farmer switches to a different pesticide because the pest changes or becomes resistant; there was leftover pesticide because the user bought too much or the need was less because of drought; etc. Also, there are usually a couple of situations each year where the pesticide stocks lie forgotten in barns until the owner dies and the land and barn are bought or inherited by someone who finds hundreds or thousands of pounds of pesticides that have accumulated over years. In some of these cases, the pesticide may still be in usuable condition; it's just that the owner no longer wants or needs it.

**f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?**

There is not a government department responsible for identifying the risks for obsolete pesticides across the country. However, many state governments (generally the state department of agriculture) have done some level of assessment and determined that conducting a pesticide disposal program is beneficial to

the environment and human health because they invest state money and personnel in running these programs. Several states have programs to clean up pesticide spills and a look at the high cost of remediating a pesticide spill makes it clear that proper disposal of pesticides is more cost-effective than cleaning up spills after the fact.

### *National programme*

**3. Is there a programme to collect obsolete stocks in your country? (yes/no)**

Yes, there is a program to collect obsolete stocks of pesticides in the U.S.

**If yes,**

**a) Who implements the programme? Is it a national or regional (state, local government) programme?**

Pesticide collection and disposal programs are generally run by state governments (usually the department of agriculture). In a few states, the state department of agriculture provides grants to county governments who actually collect the unwanted pesticides. As mentioned earlier, there are national organizations (the U.S. Environmental Protection Agency and The Pesticide Stewardship Alliance) that periodically collect the information from all of the state programs to provide a national summary/assessment.

**b) Is the programme mandatory or voluntary?**

Participation in the state-run pesticide disposal programs is voluntary. Even though farmers can generally participate in these pesticide disposal programs at no cost, the barriers to participation include: advertising the disposal program so everyone hears about it; overcoming a distrust of government agencies; finding collection sites that are convenient to users yet cost-effective; and scheduling the collection events when people are available.

Whether or not a state runs a pesticide disposal program is voluntary and generally depends on whether funding is available. As state budgets have decreased over the past decade, fewer states are running pesticide disposal programs. In 2000, 35 of the 50 states ran pesticide disposal programs. That number decreased to 28 states in 2008 and is probably closer to 20 states now.

**c) How often are stocks collected?**

It varies from state to state. For the states that run pesticide disposal programs annually, some states target a specific region of the state and hold special collection events on certain days in a given year and then change their focus to a different region the following year, covering the entire state every 4-5 years. A few other states collect pesticides year-round at permanent county buildings. Other states run pesticide disposal programs every few years, whenever they have the funds available.

**d) What happens to the collected stocks?**

The vast majority of the pesticides collected through these disposal programs are disposed of in high temperature hazardous waste incinerators. The small amount of pesticides that are not allowed to be incinerated (such as pesticides containing mercury) is disposed of in permitted hazardous waste landfills.

**e) How is the programme funded?**

Again, it varies from state to state and many states use several sources of funding. The most common sources include: (1) pesticide registration fees, which states routinely collect from pesticide companies for each pesticide sold in the state; (2) fee-based funds, such as funds created from fees (taxes) on hazardous waste generators, disposal facilities, or retailers of hazardous materials or tonnage fees at landfills; (3) state funds provided by the state legislature; (4) grants from the U.S. EPA; (5) participant fees, where participants might have to pay a certain amount for each pound of pesticide disposed; and (6) county funds. For more details see section 2.2 on pages 10-15 of the report EPA published in 2000:

http://www.epa.gov/pesticides/regulating/clean_summ.htm.

**f) Is obsolete stock collection coordinated with an empty container collection programme?**

In all but a few states, the pesticide disposal programs are run separately from the empty container collection programs. These programs may be coordinated by the same person in the state government, but pesticides and empty containers are generally collected at different locations and at different times and are collected and managed by different organizations.

**g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?**

The main barrier to implementing pesticide disposal programs in every state each year is a lack of funds. Inconsistent funding for collections due to state and federal budget cuts has decreased the number of states that run disposal programs over the past decade. This is because some of the funding sources that were used to fund disposal programs – such as pesticide registration fees and fee-based funds – have been shifted to cover the day-to-day costs of the state pesticide regulatory program itself (personnel, inspections, registration, etc.) rather than "extra" programs and other sources of funding (e.g., EPA grants or state funds) are no longer available.

**4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?**

A number of organizations, including the U.S. EPA, state governments, state and county extension services and The Pesticide Stewardship Alliance try to prevent the future accumulation of waste pesticides by providing training and outreach for good management practices and promoting integrated pest management. These organizations may provide comprehensive guidance on good management practices, either on their websites or in published documents, for storing and disposing of unwanted pesticides, managing empty containers, and avoiding the accumulation of unwanted pesticides. For example, a group of extension educators created a pesticide stewardship web site:

http://pesticidestewardship.org/Pages/default.aspx.

When the U.S. EPA cancels the registration of a pesticide or specific uses of a pesticide, there is generally a phase-out period of at least 12-18 months to allow existing stocks of the pesticide to be used. While this is not possible in situations where there is a significant risk, including a phase-out period allows the pesticides to be used as intended to minimize the potential for them to accumulate.

### *Contact details*

U.S. Environmental Protection Agency, Office of Pesticide Programs

**Total Amount of Pesticides Collected by Clean Sweep Programs by Year (in Pounds) as of February 26, 2008**

| State | Pre 86 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | Total | State |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | | | | | | | | | | 71,154 | 55,246 | | | | 50,344 | 12,649 | 146,303 | | 158,128 | 32,748 | 48,448 | 27,222 | 73,494 | 18,880 | 694,616 | AL |
| Alaska | | | | | | | | | | | | | | | | | | | | | | | | | 0 | AK |
| Arizona | | | | | | | | | | | | | | | | | | | | | | 5,500 | DNA | DNA | 5,500 | AZ |
| Arkansas | | | | | | | | 5,000 | | | | | | | | 30,689 | 0 | 0 | 0 | 0 | 106,959 | 59,061 | 72,766 | 275,926 | 550,401 | AR |
| California | | | | | 87,820 | 128,000 | 188,380 | 336,668 | 157,514 | 1,082 | 137,384 | 110,502 | | 20,135 | 19,343 | 4,242,000 | 629,400 | 4,482,000 | 610,800 | DNA | | | | | 11,151,028 | CA |
| Colorado | | | | | | | | | | | 17,000 | | 33,910 | | 17,755 | 15,833 | 13,486 | 8,762 | 2,254 | 8,520 | 5,023 | DNA | 4,600 | 3,109 | 130,252 | CO |
| Connecticut | | | | | | 16,200 | | | | | 6,900 | 23,000 | | | | | | | DNA | DNA | | | | | 46,100 | CT |
| Delaware | | | | | | | | 30,423 | | | | | | | | | | | | | 10,800 | 7,408 | 13,800 | 14,850 | 77,281 | DE |
| Florida | | | | | | | | | | | 70,000 | 18,600 | 6,400 | 27,000 | | 170,929 | 111,591 | 184,456 | 126,235 | 250,984 | 78,887 | 91,359 | 68,994 | 82,895 | 1,288,330 | FL |
| Georgia | | | | | | | | | | | 5,000 | 36,800 | 25,600 | 128,876 | 373,851 | 207,905 | 247,033 | 270,671 | 55,658 | 197,030 | 142,221 | 118,099 | 144,755 | 190,897 | 2,144,396 | GA |
| Hawaii | | | 12,471 | | 5,000 | | | | | | | | | | | | | | | | | | | | 17,471 | HI |
| Idaho | | | | | | | | | 30,861 | 13,090 | 43,668 | 40,474 | 43,760 | 35,855 | 36,436 | 78,460 | 95,351 | 87,981 | 61,775 | 70,453 | 68,501 | 50,116 | 77,189 | 72,924 | 906,894 | ID |
| Illinois | | | | | | 13,000 | 6,550 | | | 27,263 | 107,727 | | | 26,610 | 55,586 | 15,580 | 14,450 | 35,009 | 30,016 | 24,542 | 26,609 | 20,429 | 26,527 | 16,631 | 446,529 | IL |
| Indiana | | | | | | 8,800 | | 4,300 | 6,000 | 9,000 | 8,064 | 1,900 | 5,164 | 8,078 | | 16,841 | 10,293 | | 11,055 | 9,514 | 5,102 | 4,624 | 18,663 | 12,944 | 140,342 | IN |
| Iowa | 10,835 | | | 33,305 | 77,480 | 18,810 | 49,772 | 180,574 | 230,923 | 66,486 | 51,912 | 58,218 | 83,320 | 84,240 | 103,709 | 80,971 | DNA | DNA | DNA | DNA | | | | | 1,130,555 | IA |
| Kansas | | | | | | | | | | | | 96,942 | 46,197 | 19,235 | 40,975 | 134,106 | 134,106 | 90,883 | 48,779 | | | | | | 611,223 | KS |
| Kentucky | | | | | | | 50,600 | | | | 8,700 | 52,500 | 43,800 | 37,460 | 50,836 | 34,471 | 59,198 | 38,834 | 25,416 | 24,100 | | | | | 425,915 | KY |
| Louisiana | | | | | | 5,000 | | | | | | 403,200 | | | | | | | | | | | | | 408,200 | LA |
| Maine | 30,000 | 12,000 | | | 44,000 | | | | | | | 6,900 | 9,025 | 8,000 | 7,062 | 3,222 | 6,679 | 4,196 | 6,966 | 6,500 | 0 | 0 | 7,507 | 3,367 | 155,424 | ME |
| Maryland | | | | | | | | | | | 33,368 | 14,889 | 13,433 | 20,846 | 4,454 | | 13,457 | 8,515 | 0 | 0 | 11,612 | 9,094 | 20,030 | 20,500 | 170,198 | MD |
| Massachusetts | | | | | | 86,300 | | | | | | | | 38,975 | 21,840 | 11,874 | 5,800 | | | | | | | | 164,789 | MA |
| Michigan | | | | | | 84,000 | 84,000 | 64,000 | 84,000 | 84,000 | 60,000 | 120,000 | 63,940 | 52,682 | 59,281 | 96,215 | 114,480 | 185,000 | 156,260 | 197,332 | 139,000 | DNA | DNA | DNA | 1,644,190 | MI |
| Minnesota | | | | | 32,400 | 34,100 | 35,800 | 53,800 | 135,300 | 183,300 | 236,500 | 208,500 | 283,800 | 298,800 | 410,718 | 123,362 | 307,124 | 56,484 | 103,633 | 220,179 | 269,267 | DNA | DNA | DNA | 2,993,067 | MN |
| Mississippi | | | | | | | | | | 22,970 | 257,621 | 167,617 | 153,463 | 214,433 | 23,623 | 150,159 | | 58,260 | 45,946 | 37,800 | 39,685 | 34,304 | 188,533 | 200,176 | 1,594,590 | MS |
| Missouri | | | | | | 800 | | | | | | 6,000 | 3,000 | | | | | | | | | | | | 9,800 | MO |
| Montana | | | | | | | | | | 13,197 | 14,506 | 64,224 | 26,335 | 21,774 | | 39,150 | 10,014 | 8,873 | 14,468 | 9,007 | 13,765 | 19,504 | | | 254,817 | MT |
| Nebraska | | | | | | | | | | | 595,541 | | | 297,706 | 249,068 | 193,726 | 178,683 | 203,202 | 238,373 | | 149,884 | 168,625 | 120,628 | | 2,395,436 | NE |
| Nevada | | | | | | | | | | | 14,647 | 10,653 | 17,058 | 18,418 | 4,986 | 8,802 | 1,926 | 4,309 | 9,110 | 3,745 | | | | | 93,654 | NV |
| New Hampshire | | | | | | 20,000 | | | | | | | | | | | | | | | | | | | 20,000 | NH |
| New Jersey | | | | | 10,535 | 19,850 | 15,841 | 22,014 | 39,741 | 109,915 | 88,798 | 115,159 | 137,648 | 95,362 | 52,459 | 15,425 | DNA | DNA | DNA | DNA | | | | | 722,747 | NJ |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New Mexico | | | | | | | | | | | | | | | | | | | | | | | DNA | DNA | DNA | NM |
| New York | | | | | | | | | 13,860 | | 59,300 | 120,724 | | | 24,610 | 960 | | 120,000 | 151,691 | 41,830 | | | | | 532,975 | NY |
| North Carolina | 39,809 | 1,400 | 132,729 | 31,890 | 29,120 | 51,055 | 32,708 | 70,444 | 26,467 | 51,403 | 100,980 | 59,825 | 81,045 | 123,211 | 133,313 | 151,078 | 112,405 | 148,756 | 109,020 | 145,786 | 148,361 | 145,988 | 159,644 | 144,382 | 2,230,819 | NC |
| North Dakota | 17,800 | | | 10,460 | 13,740 | | | 80,910 | | 131,838 | 48,222 | 94,389 | 174,275 | 131,709 | 158,938 | 166,949 | 147,857 | 190,759 | 155,158 | 129,994 | 172,791 | 170,817 | 186,946 | 215,521 | 2,399,073 | ND |
| Ohio | | | | | | | | | 9,000 | 113,000 | 126,000 | 251,250 | 214,600 | 142,374 | 123,390 | 109,099 | 89,805 | 128,365 | 0 | 0 | 0 | 32,902 | 35,068 | 23,930 | 1,398,783 | OH |
| Oklahoma | | | | | | | | | | | | | | | | | | | | | | 61,920 | 145,506 | 147,680 | 355,106 | OK |
| Oregon | | | | | | | 59,776 | 58,742 | 95,773 | 22,072 | 56,096 | 25,906 | 69,206 | 30,056 | 67,017 | 12,799 | 12,595 | 2,072 | 1,266 | 1,889 | 206 | | | | 515,471 | OR |
| Pennsylvania | | | | | | | | | 29,700 | 60,133 | 82,084 | 300,293 | 174,048 | 188,110 | 86,189 | 81,040 | 102,477 | 117,118 | 90,910 | 86,986 | 125,129 | 99,087 | 87,760 | 103,043 | 1,814,107 | PA |
| Rhode Island | | | | | | DNA | | | | | | | | | | | | | | | | | | | 0 | RI |
| South Carolina | | | | 6,743 | 400 | | | | | | | | | | | | | | | | | | | DNA | 7,143 | SC |
| South Dakota | | | | | | | | | 31,059 | 43,757 | 23,867 | 31,086 | 50,282 | 28,283 | 23,069 | 32,260 | 28,447 | 26,312 | 33,676 | 30,290 | 26,421 | 31,000 | | | 439,809 | SD |
| Tennessee | | | | | | | | | | | | | | 100,000 | 100,000 | 100,000 | 76,000 | 36,500 | 87,878 | 79,688 | 85,577 | 130,896 | 68,201 | 113,876 | 978,616 | TN |
| Texas | | | | | | | | 394,560 | 678,460 | 276,720 | 133,040 | 469,200 | 277,960 | 264,840 | 551,380 | 103,660 | 383,152 | 219,532 | 239,924 | 171,760 | 219,020 | 198,840 | 245,960 | 266,680 | 5,094,688 | TX |
| Utah | | | | | | | | | 11,453 | 17,487 | 14,095 | 13,334 | 18,903 | 26,244 | 17,145 | 26,600 | 7,324 | | | | | 30,000 | | | 182,585 | UT |
| Vermont | | | | | | | 17,900 | | | | | 4,363 | 3,640 | 3,125 | 8,925 | 28,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 20,000 | 20,000 | 20,000 | 250,953 | VT |
| Virginia | | | | | | 31,797 | | 57,237 | 68,146 | 222,374 | 62,156 | 75,931 | 74,271 | 47,918 | 97,618 | 81,357 | 97,931 | 31,998 | | 210,423 | 87,000 | 85,315 | 76,249 | DNA | 1,407,721 | VA |
| Washington | | | | 48,850 | 36,903 | 63,284 | 88,495 | 82,668 | 62,083 | 84,581 | 51,243 | 82,064 | 102,688 | 94,561 | 152,237 | 139,453 | 130,556 | 171,692 | 118,105 | 153,857 | 136,467 | 162,609 | 84,886 | 127,470 | 2,174,752 | WA |
| West Virginia | | | | | | | | | | 112,000 | 60,000 | 18,688 | 17,500 | 31,242 | | | | | | | | | | | 239,430 | WV |
| Wisconsin | | | | | | 39,100 | 9,622 | 84,170 | 143,558 | 107,526 | 158,087 | 172,034 | 240,499 | 165,011 | 150,388 | 254,000 | 220,961 | 279,714 | 282,746 | 289,231 | 151,733 | DNA | DNA | DNA | 2,748,380 | WI |
| Wyoming | | | | | | | | 16,000 | | | | | | | | | | DNA | DNA | DNA | | | | | 16,000 | WY |
| TOTAL | 98,444 | 13,400 | 145,200 | 131,248 | 337,398 | 620,096 | 639,444 | 1,541,510 | 1,853,898 | 1,844,348 | 2,787,752 | 3,275,165 | 2,494,770 | 2,831,169 | 3,276,545 | 6,969,624 | 3,533,884 | 7,225,253 | 3,000,246 | 2,459,188 | 2,293,468 | 1,784,719 | 1,947,706 | 2,075,681 | 53,180,156 | |
| # active states | 4 | 2 | 2 | 5 | 10 | 17 | 12 | 16 | 18 | 23 | 32 | 33 | 30 | 33 | 32 | 35 | 33 | 32 | 32 | 31 | 26 | 29 | 28 | 28 | 48 | |

Notes: DNA = Pesticides were collected, but quantity Data are Not Available.

Pre-1986 information: Iowa: 10,835 lbs some time before 1986; Maine: 12,000 lbs in 1982 and 18,000 lbs in 1984; North Carolina: 16,500 lbs in 1980, 20,500 lbs in 1982 and 2,809 lbs in 1983; North Dakota: 6,300 lbs in 1980 and 11,500 lbs in 1984.

Unconfirmed/assumed info for 2001-2004 for Arkansas, Hawaii, Mississippi, New Hampshire and South Carolina and for 2001 for Utah.

***Supplemental input from a further country via the CropLife International National Association***

# 12. Brazil

## *Scale of the problem*

1. a) Are there specific regulations governing obsolete stocks of pesticides or empty pesticide containers in your country, or are they classed as hazardous waste falling within waste management legislation? Please describe briefly the situation in your country.

**Empty containers**

There is a specific regulation (Federal Law No. 9.974/2000 and Federal Decree No. 4.074/2002) that imposes a discipline of shared responsibility for the disposal of empty packaging in the sector, among the various agents in the agricultural production chain: farmers, distribution channels and industry, with the support of the public authorities.

In December, 2001 the crop protection product manufacturing industry founded inpEV: a non-profit organization based in São Paulo (SP) that manages the disposal of empty containers, post-consumption meeting the requirements of the law. This program (Campo Limpo System) provides a reverse logistics system for all crop protection product containers. It consists of a network of 421 collection units across 25 states, consisting of 307 collection posts and 114 collection centers managed by distributor associations and cooperatives, in certain cases co-managed by inpEV. Returned containers are recycled (92% - non hazardous) or incinerated (8% - hazardous). This classification is made when the collection units receive the containers based on ABNT NBR 13968.

By the end of 2011 the Campo Limpo system had 89 agrochemical manufacturing member companies, over 260 distributors and cooperative associations, 14 recycling and incineration partners, as well as the involvement of thousands of farmers throughout the Country and the support of the government.

For more information: http://www.inpev.org.br/in/index.asp

**Obsolete stocks of pesticides**

The prohibition of the manufacturing, sales, distribution and use of organochlorine pesticides occurred in 1985 nationwide by "Portaria do Ministério da Agricultura nº 329 de 2 de setembro de 1985".

b) If there are specific regulations, what are they?

Mentioned above (1.a).

2. Does your country assess the amount of obsolete and unwanted pesticide stocks? (yes/no)

If yes,

a) What is the estimated amount?

b) When was the last assessment made?

c) Who undertakes the assessment and how often?

d) Who holds/owns the stocks (farmers and growers, government departments including defense, municipalities, other organizations, the general public/amateur use)? Are locations known?

e) Is the reason for obsolescence known (e.g. POPs, deregistered, out of date)?

f) Is there a government department responsible for identifying the risks for obsolete pesticides? How are these risks assessed? How are risks mitigated?

This question is not applicable for inpEV. We suggest the following contacts for Brazil´s obsolete amount assessment:

- **Regional Center of Stockholm Convention for the Latin America and the Caribbean region:** http://www.cetesb.sp.gov.br/institucional/stockholm-convention/118-os-pops-da-convencao. Lady Virginia Traldi Meneses (ladyr@cetesbnet.sp.gov.br)/ Manager of Environmental Management Tools, Conventions and Multilateral Agreements Sector/ Coordinator of the Regional Centre of SC for Latin America and the Caribbean Region
- **Ministry of Agriculture:** http://www.agricultura.gov.br/
- **Ministry of Environment:** http://www.mma.gov.br/

### *National programme*

3. Is there a programme to collect obsolete stocks in your country? (**yes**/no)

If yes **(complete answers below)**

a) Who implements the programme? Is it a national or regional (state, local government) programme

b) Is the programme mandatory or voluntary?

c) How often are stocks collected?

d) What happens to the collected stocks?

e) How is the programme funded?

f) Is obsolete stock collection coordinated with an empty container collection programme?

g) What are the barriers/challenges to country-wide implementation of an obsolete stock management programme?

InpEV, representing its members, has been participating in the actions taken by the States of São Paulo and Paraná that aim to identify and allocate, in accordance with the principles of shared responsibility, the quantities of obsolete pesticides remaining in the field.

The 2 working groups of these states – that work separately and are at different stages of their projects – put together representatives of the State Government, industry manufacturers, distributors, cooperatives, associations and end users.

In Paraná State, the project began in 2005 with the creation of the working group, and in 2009, was created State Law 16.082/09. In compliance with this law, between 2009 and 2010, there was the identification of about 2,000 farms that stored more than 1,000 tons of obsolete pesticides in this state. In December 2010, it has been signed a technical cooperation agreement between the partners involved (government, FAEP System, Ocepar System and inpEV), dividing responsibilities for carrying out the work of receipt and disposal of waste among farmers, traders, manufacturers and government. Currently, the products are being returned to the 20 warehouses temporary state, then being sent to permitted incinerators. Packaging and transport of products is carried out by the State Government and disposal (incineration) at inpEV. To date, more than 800 tons have already been incinerated by the program, which will end the activities of this stage in 2013 and the total amount to be collected/disposed may reach 1200 tons.

In May 28, 2009, by Joint Resolution SMA/SAA No. 002, the "Interdisciplinary Final Disposal of Pesticides Working Group" was established in São Paulo State in order to eliminate stocks of obsolete pesticides, especially POPs (persistent organic pollutants). The group is composed of representatives of various organizations and institutions in the production chain and the government. As a result of the work of the group, it was issued the Decision of the Board "Cetesb No. 365" in November 2010, which allowed farmers to declare the goods stored in the properties of the state through amnesty. Until the deadline July 24, 2012 (deadline for declaration farmers and rural) over 300 growers have declared to have obsolete products, providing a total of 350 tonnes of obsolete pesticides detected in the state. With the information obtained, the group is developing the next steps for the proper disposal of these wastes. The information of some activities of this group are available online at: http://www.agrotoxicosobsoletos.org.br

For more detailed information on the quantities and work in the states of Parana and Sao Paulo, we indicate the contact with "INSTITUTO DAS ÁGUAS PARANÁ" (www.aguasparana.pr.gov.br/) and "SECRETARIA DE AGRICULTURA DO ESTADO DE SÃO PAULO" (www.agricultura.sp.gov.br/) respectively. These entities hold and are responsible for all data about the inventory of obsolete pesticides mentioned above.

Regarding other Brazilian States we have no information on its POPs stockpiles.

4. Are there programmes in place in your country to prevent accumulation of obsolete stocks (i.e. prevent pesticide stocks becoming obsolete through, for example, distributor training stock management, phased withdrawals etc.)? If so, what are they and who is responsible?

This question is not applicable for inpEV. We suggest the same contacts as in question # 2.

# Annex 3: Survey Summary

| | Specific regs | Assess amount | last assess | Who assess | type of stocks | Resp dept | Collection prgm | Who collects | How often | Fate | How funded | Prevention prgm | What |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Australia** | No federal<br>but state waste | No | | | | | Yes<br>voluntary | AgStewardship<br>2003:263000 | 2 - 3 yrs | fuel source | Industry, user | Yes | Training, Agsafe etc |
| **Belgium** | No<br>Hazardous waste | No | | | | | Yes<br>voluntary | Phytophar | continuously | incineration | industry, user orgs | Yes | State awareness, fines |
| **Canada** | Yes<br>PCPA | No | | | | | Yes<br>voluntary | CleanFarms | 3 years | incineration | industry, gov | yes | Education, phase-out planning |
| **Finland** | No<br>Hazardous waste | yes<br>irreg - 2002:740t, 90t/yr | 2011 | private waste co | farmers, retailers | PPP authority | No | general haz waste<br>Municipalities | | incineration | waste management<br>fee | yes | education prgm, where to submit |
| **France** | No<br>Hazardous waste | yes<br>2001 - 2011: 9500t | 2011 | Adivalor | farmers, users | Min Ecology | Yes | Adivalor - proff<br>gardening - waste<br>centre | regularly | incineration | industry<br>public to initiate | yes | legislation (destroy within 2 years) |
| **Ireland** | No<br>EC waste directive | no | | | | | no | | | | | yes | enforcement by Dept AFF |
| **Japan** | No<br>Industrial waste/POPs | no | | | | | Yes<br>voluntary | JP Ag Coop | | waste management co<br>co | Farmers/JP Ag Coop | yes | MAFF education |
| **New Zealand** | No<br>Haz waste/POPs | Yes | 2011 | Private collectors | Ag/hort industry | MfEnvir | Yes<br>voluntary | Reg Council<br>AgRecovery | 6- 12 months | incineration | levy<br>contribution | no | |

| | Specific regs | Assess amount | last assess | Who assess | type of stocks | Resp dept | Collection prgm | Who collects | How often | Fate | How funded | Prevention prgm | What |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Switzerland** | **Yes** | No | | | | | No | local authority | | | | yes all haz waste | all haz waste owner |
| | | | | | | | General Haz waste | | | | | | |
| **UK** | **Yes** | No | | | | | Yes | local authority | regularly | incineration | gov | yes | law gov/owner |
| | **Plant Prot Prod** | | | | | | home & garden | Private contractor | | | now owner | | |
| | **Haz waste** | | | | | | voluntary | | | | | | |
| **USA** | **No** | No | 2009 | TPSA/EPA | Farmers/rec courses | TPSA/EPA | Yes | EPA/TPSA | 4-5 yrs | incineration | levt/gov | Yes | education |
| | **Federal waste law** | Amount collected | 53million lbs total | | Gov agencies | | voluntary | | | mercury landfill | | | TPSA/EPA |