PAN Europe

Pesticides Action Network Europe

Comments on the October 2004 Extended Impact Assessment entitled:

"Assessing *economic* impacts of the specific measures to be part of the Thematic Strategy on the Sustainable Use of Pesticides".

February 2005

The long awaited Thematic Strategy on the Sustainable Use of Pesticides, including the revision of the authorisation Directive 91/414/EEC, is a key instrument in order to reduce the increasingly documented and denounced negative impacts of pesticide use on health and environment.

Therefore PAN Europe appreciates the opportunity to give here its opinion on the EIA study covering the use part of this Thematic Strategy.

I AERIAL SPRAYING

GENERAL COMMENTS

The recommended option is *"legally binding minimum requirements"* to ensure *"a proper aerial spraying"*. The option *"legally binding ban with exceptions if there are no viable alternatives or when there are environmental benefits"* is considered less advantageous.

If this recommended option is chosen, aerial spraying will be allowed in Member States that are already banning it or allowing it only in exceptional cases.

The justification for this recommendation[1] is that *"proper aerial spraying"* will bring more advantages to the environment (reduced drift and water contamination) and to health of operators and bystanders than other options and that it is estimated that no major socio-economic consequences are to be expected. But, p.149, as far as socio-economic consequences are concerned, if the "ban with exceptions option" is considered to result in 20 Mioeuros/year additional costs for users, and in a cost of 50-60 MioEuros and in a loss of 600-800 jobs for aerial spraying companies, at the same time these losses are by far compensated by an economic gain of up to 80 Mio euros and up to 1000 jobs for ground

[1] See extended summary of final EIA BiPro report p.7

spraying companies as well as savings of up to 2Mio euros for public authorities due to reduced administrative efforts.

PAN Europe does not agree with the assumption that *"proper aerial spraying"* is better for economic as well as for environment and health reasons than *"a ban with exceptions"* and does not agree with the methodology used in this EIA to come to this conclusion.

PAN Europe continues to argue for a phased total ban of aerial spraying without exceptions (see PAN Europe position on aerial spraying June 04 at http://www.pan-europe.info) . The same position was adopted by the European Parliament in its Resolution[2] of March 2003 on the Commission Communication *"Towards a Thematic Strategy on the Sustainable Use of Pesticides"*. Indeed, if improvementss in aerial spraying can be technically achieved, in practice a lot of improper aerial spraying occurs. If a total ban is rejected by the Commission, Member States and the European Parliament, PAN Europe then proposes a ban with exceptions (complying with strong minimal requirements) for outstanding conditions, only after prior consent of public authorities and with, for each individual case, an independent control at the cost of the user. No case can be done closer than 500 meters from surface water, habitation areas, bee hives, aquacultures, organic farming, conservation areas… and without active advance warning to all concerned persons.

SPECIFIC COMMENTS

1) Environmental and health impact evaluations are key elements to consider. These evaluations in the EIA suffer from lack of reliable and comparative data and appear to be arbitrary.

For example, p 109, indirect impacts such as on health and environment are said to be *"analogous*" for option *"legally binding requirements"*(I-5) and for *"legally binding bans with exceptions "*(I-1) for countries with aerial spraying activities, but without specifying the minimum requirements for aerial spraying in option I-5 which can be weak or strong, as proposed p. 103.

In the case study of vineyards in France:

- p 111, elements of figure 6-5 (comparison of consequences of proper aerial spraying with helicopters with ground spraying) are in contradiction with those of table 6-14 (comparison aerial spraying (helicopters) with ground spraying) alternatives. For instance, in fig 6-5 (p 111), the percentage of pesticides in the air, in soil and water is considered to be less for ground spraying than for "proper aerial spraying" with helicopters but in fig 6-14 (p 117), drift , soil and water contamination are considered to be the same for both ground and helicopter spraying (weak or with strong minimal requirements not specified).

- P.111 in fig 6-5, the operator exposure is considered to be higher for ground spraying than for helicopter spraying but it is not said if the comparison was made or not with ground operators wearing protective clothes or working from a closed cabin on the tractor. It also must be reminded that the exposure duration is an important factor to consider. For each individual helicopter and ground operator, it will depend on their total spraying hours per month, for instance.

[2] Resolution A5-0061/2003, point 7

- p. 120-124, health effects of bystanders, ground and surface water and soil contamination are considered to be equal in case of a total ban of aerial spraying, a ban with 20% exceptions and a ban with 50% exceptions. We however do not find any reference to confirm this assumption. Therefore, the assumption (p.122) *"no significant advantages for environment and health will be realised as aerial spraying in most cases will be substituted by ground spraying techniques with similar environmental and health effects"* is not necessarily true.

- Drift data in tables 6-13 and 6-14 for aerial spraying with helicopters are based only on personal interviews with SNEH (Syndicat National des Exploitants d'Hélicoptères) in France. Independent data should be used in order to properly compare pesticide contamination potential.

In the case study of olives in Spain:

- p. 135, it is concluded for the options *"total ban"* and *"ban with exceptions"* that *"no significant advantages for environment and health will be realised as aerial spraying in most cases will be substituted by ground spraying techniques with similar environmental and health impacts"*. This assumption is totally in contradiction with table 6-18 p.131 where it is recognised that planes generate higher drift and higher environmental impacts than helicopters and ground spraying. We can also question why aerial spraying is no longer used on olive trees in Greece.

- P. 131, drift data in table 6-18 are based on personal interviews with SNEH (Syndicat National des Exploitants d'Hélicoptères). However, by ground spraying the application will stop near the border of the fields, but by helicopters it will be much more difficult to stop spraying exactly at these borders. In just 1 second a helicopter moves over 11-22 m, and therefore more pesticides will be sprayed outside the borders of the fields. Moreover, as stated p. 118, *"during the application under the rotor of the helicopter (and also plane) a zone of pressure arises which pushes the pesticide dust to the vegetation"*. Therefore the contamination of water, bystanders and non-target plants/wildlife will be much higher with helicopters spraying than with ground spraying.

In the case study of forests in Germany,:

- in fig 6-21 about comparison of aerial spraying versus alternatives, environmental effects are estimated to depend on *"proper"* or "*improper*" application and of the used pesticide in case of aerial spraying but are estimated to be ***"probably higher"*** in case of ground application. No arguments are given to consolidate this qualitative evaluation.

Therefore, the qualitative evaluation done in table 6-23 intended to compare different kinds of impacts for the various options can be questioned for occupational exposure, bystanders[3] exposure and environmental exposure. PAN Europe states that option I-1 is better than option I-5 to reduce environmental and health impacts. Moreover, the opportunities for farmers to reduce their ground spraying exposure by converting to low pesticide or pesticidefree cultivation practices is not considered.

[3] Bystanders including exposed inhabitants.

2) "Proper aerial spraying" defined as aerial spraying for which minimum requirements are fulfilled is an inappropriate wording .

- Minimum requirements can be weak or strong (p.103), depending on decisions of a Member States steering committee supported by experts (not specified if health professionals would be included) .
- No controls are forecasted for the implementation of minimal requirements, weak or strong and therefore cases where even weak minimum requirements are not fulfilled are likely to happen.

3) Weak minimum requirements as proposed p.103 (authorisation of aerial spraying with planes, no possibilities of restrictions of aerial spraying by public authorities, no register to be held by the farmer, no restrictions on pesticides to be sprayed , warning in advance of bystanders by adequate means but which are not defined, only a 20 m safety margin to listed vulnerable areas , no reporting) are totally unacceptable and unable to prevent, even if correctly applied, health and environmental impacts.

4) Wrong assumptions[4] are made concerning the case study of olives in Spain and *"proper aerial spraying in Spain"* can be questioned.

- P. 129: it is not true to say that aerial spraying of locust infested areas is common as locust infestations are rare in Spain.
- P. 129 the nature of the criteria for "proper aerial spraying in Spain" and their effective implementation can be questioned.

  * It is not true to say that GPS and use of available data bases are in place to reduce drift and contamination risk.
    - If GPS is an improvement that the regional government of Andalucia wants to introduce, its use is not common as the aerial companies warn that this is going to raise the cost of spraying.
    - Moreover, the database in use is mainly about the organic growers list but the transmission of the information from the organic growers control bodies to the spraying companies through the regional government (Delegaciones of Agriculture of Junta of Andalucia) was far from being optimal. In Seville mountains during summer 2002 , there was no warning given to organic farmers and they could not therefore put flags on their farms. The same is valid for a case in November 2001 at Encinasola (Huelva). Sometimes planes do not respect the organic growers' flags (e.g. well documented case of an organic farmer in Orgiva (Granada) who was sprayed together with his olives trees and other organic crops). In addition, much information is available about, for instance, incidents concerning contamination of bees, spraying of a camping site in Benaojan (Malaga), a school in Cortes Station (Malaga) . This shows that no database is sufficient to prevent incidents affecting the variety of activities in the countryside under aerial spraying.

  * It is not true to say that if weather conditions are not stable, aerial spraying will be suspended.
    - According to the Andalucian Regulation, no flight can be authorised for a wind velocity greater than 2 meters per second. But when asking the Regional government about the information concerning flights, it can be seen that only a few flights were suspended.

[4] Juan Carlos Pérez Montero, Ecologistas en Accion, Andalucia, Spain.

* It is not sufficient to warn the city councils in advance to prevent bystanders , farmers and other people fromentering the area or to protect their cattle and beehives.

- In practice, only paper information is displayed in the town hall but most people are not informed, especially bystanders. If the day is rainy, the spraying is postponed. Sometimes the day is changed. Sometimes no warning at all is done.
- The warning paper does not request the farmers to put their cattle away as this is a very unpopular and difficult operation.

* The theory says: *"to minimize the exposure of the men responsible for the signing on the ground of the area, the flights have to be carried out in the direction opposite to the wind. Any variation in the direction or the speed of the wind is enough reason to suspend the action"* but, in practice, things are different.

- Indeed, many sprayed areas are mountain areas. In these areas, it is very difficult for pilots to go in the optimal direction without taking risks. This obliges the pilots to spray from a higher altitude, increasing the drift.

* The theory says *"the entrance to the area will not be allowed until 24 or 72 hours later"*.

- In practice, this information is not given on the warning paper in the City Hall
- The exact extent of the spray zone is not indicated and a plane can spray 500-1000 ha a day.
- Many small houses are in the sprayed zone and there are complaints that planes do not comply with the Regulation requesting a buffer distance of 150-200 from habitation zones.

These examples show that even what is called *"proper aerial spraying in Spain"* described p. 130 , corresponding more or less to weak minimum requirements as described p 103-104, cannot be implemented effectively in the field. Therefore, a total ban (eventually with well controlled exceptions obeying strong minimum requirements) will be the only solution to prevent health and environmental impacts.

- The data on water consumption (p.132) for terrestrial spraying is wrong and consequently the dosis for ground spraying is then less than for aerial spraying, instead of being higher as stated in the BiPro report.

- The 600-800 l/ha in fig. p.132 accounts for terrestrial spraying where the whole surface is sprayed. This is in contradiction with the guidelines for ground spraying from the Regional government which are also valid for spraying dimethoate on olive tree against the olive fly . These guidelines advise to spray the pesticide plus an attractant substance like hydrolysed proteins on 1 olive tree every 4 trees in the row and on 1 row every 4 parallel rows and to spray only the southern part of the tree. This means that calculated values have to be divided by a factor of 16 because only 1 among 16 olive trees is sprayed and then by a factor of 2 as only half of the tree is sprayed. A recalculation of the dose, taking these guidelines into account, indicates that only about 16-25 l/ha of water will be used. As the pesticide dilution factor is about 0, 15% , the PPPdosis is 0,028-0,038 l/ha, so less than 0,125 l/ha in the case of aerial spraying.

5) There are no strong reasons for aerial spraying of vineyards in France since comparable vineyards in Italy are groundsprayed.

6) The *"essential use"* concept for aerial spraying leads to confusion.

- P 103, *"essential use "* for aerial spraying is defined as *"use where proper aerial spraying presents advantages compared to other application techniques"*. This wording can lead to confusion with the concept of *"essential use"* in the context of Directive 91/414/EEC. Moreover, the definition of *"advantages"* is not given but treatment of forests is deemed *"essential"*. One can question then why aircraft forest treatment is used in Germany but not in Austria.

7) There is a need to clarify the notion of bystander

- Does this notion include people living near aerially sprayed crops? At p. 145 bystander includes persons living near the treated areas but nowhere else in the report is this notion clearly defined. Persons living near treated crops are also not included in the bystander concept in Directive 91/414/EEC.

8) p 108, the option I-3 which could be *"Introduction of a tax on flight hours "* as a single measure is rejected as having negative impacts.

- But, the use of this option as a complement to option I-1 or I-5 is not considered. However, it could finance controls on aerial spraying operations if a total ban is not implemented as well as research for improving ground application alternatives and low or pesticide-free cultivation systems.

Conclusions:

PAN Europe rejects the conclusions for aerial spraying as one-sided and based on incorrect and insufficiently documented information.

PAN Europe states that option I-1 is much more effective in protecting environment and bystanders than option I-5 recommended in the BiPro report and is at least neutral as far as socio-economic consequences are concerned. Option I-1 would also allow countries to keep alternative techniques.

PAN Europe does not agree with BiPro evaluations and states clearly that the contamination of water, bystanders and non-target plants/wildlife will be much higher by *"proper aerial spraying"* with helicopters than with ground spraying.

PAN Europe asks for a ban of spraying with aeroplanes. Should the option of a total ban with exception be chosen instead of a total ban of aerial spraying, only helicopters spraying with strong minimum requirements should be accepted for exceptional cases.

PAN Europe estimates that *"proper aerial spraying"* is an inappropriate wording as, in practice, even weak minimum requirements cannot be guaranteed.

II REDUCED OR PPP-FREE ZONES

COMMENTS

The BiPro recommended options are II-1 *"legally binding designation and communication of zones of reduced or zero PPP use; development of guidance and best practice"* or II-2 *"recommendation to designate zones of reduced or zero PPP use and to develop guidance and best practice"*.

The justifications for these recommendations are for option II-1 (p. 352) that, as it will support a pesticide active substance use reduction of up to 8 000 t / year, it will have clear advantages for environment and health. It is also stipulated that this option will have clear social and economic advantages for consultants and no major impacts for pesticide users (p. 170). But, it is also stated (p. 354) that **–*" in principle"* –** option II-2 has the same impacts as option II-1 but that, as being a much weaker and less compulsory approach, the environmental benefits linked to a estimated 400 t /year pesticide use reduction, will be considerably lower.

It is then obvious that option II-1 is the only one to be recommended. But for this measure to be effective, controls and sanctions have to be forecast.

Just like the European Parliament in its Resolution on the Commission Communication *"Towards a Thematic Strategy on the sustainable use of pesticides"*[5], PAN Europe asks not only for Member States to designate pesticide vulnerable zones, where use of pesticides is banned or severely restricted due to ecological and human health vulnerability, but also for the Commission to propose objective criteria for determining those zones**.** Moreover, PAN Europe estimates, like the European Parliament, that pesticides must be banned in schools, kindergarten, playgrounds, parks and near inhabited areas in order to protect children, who are more sensitive and more exposed to pesticides.

Conclusions

From the data in the BiPro report, it is obvious for PAN Europe that option I-1 is the only measure to recommend. But, to be efficient, controls and sanctions must be forecast.

Moreover, the Commission must propose objective criteria for determining those zones and pesticides must be banned in schools, kindergarten, playgrounds, parks and near inhabited areas.

III SYSTEMATIC DATA COLLECTION ON USE

COMMENTS

PAN Europe generally agrees with the recommended option III-*2 "mandatory collection of data on sales , distribution and use" with a high level of data collection and additional*

[5] Resolution A5-0061/2003, points 7 and 8

mandatory participation of users. Even if some additional economic costs will result for various stakeholders from the recommended option, it is indeed an essential tool for a better evaluation of risk reductions related to pesticide exposure reductions and the use data can be cross checked with those of industry. It would be compatible with recent legal requirements related to record keeping on the use of PPPs and biocides under the Regulation on the hygiene of foodstuffs. It would also allow to identify for each crop and for similar climatic conditions, the best performance achieved in a Member State through what is called in this EIA study *"specific IPM requirements"* and provide for an update of the specific IPM requirements in the Thematic Strategy.

But, PAN Europe is worried about any kind of aggregation of data, such as proposed at p.355, which could go beyond the strict protection of proven commercial interests.
PAN Europe already proposed[6] a system to collect, evaluate, summarize, retain and report information on the production, import, export, sales, distribution and use of pesticides, which shall include a central pesticide label data base. As the right to know is essential for people exposed, physicians and epidemiologists, PAN Europe advocates for a report providing information on the amounts and kinds of PPP active ingredients per crop and non-agricultural use and by geographical area, without revealing the identity of the owner or lessee of the property where a pesticide has been applied.

Conclusions

PAN Europe agrees with the BiPro recommended option III- 2 with a high level of data collection and additional mandatory participation of users.

PAN Europe does not accept any kind of aggregation of data which goes beyond the strict protection of proven commercial interests.

PAN Europe already proposed a system to collect, evaluate, summarize, retain and report information on the production, import, export, sales, distribution and use of pesticides and advocates for publicly accessible geographical mapping for each active substance used .

IV TRAINING AND CERTIFICATION OF USERS

COMMENTS

The recommended options are IV-2 *"mandatory education and training of PPP retailers, farmers and other professional users and extension services"* or IV-6 *"combination of specific financial instruments with training and information schemes"*.

For option IV-2, it is said (p.215) that high quality training can be established on a European scale and (p.360) that this option is regarded as cost neutral for farmers if the frequency of training is 5 years even if they have to pay for their training and certification which is presently often the case. It is estimated that for countries presently without existing mandatory training and information schemes, cost for authorities will rise due to control tasks and in case

[6] PAN Europe 2002, Suggested text for a directive on pesticide use reduction in Europe (http://www.pan-europe.info), article 12.

of payment or financial support of the training measures. It is also estimated that the overall PPP use reduction is expected to be about 3% of the total used PPPs (p.215) with corresponding risk reduction for environment and health.

For voluntary option IV-6 (p.216), it is said that **– *"in principle"*-** it can have the same impacts as options IV-2 in terms of use reduction and environmental and health risk reduction. It is estimated that, depending on the type of financial instrument (fees or promotion), there might be a shift between costs / benefits with respect to users and authorities and (p. 208) that the costs for authorities will rise due to higher administrative efforts (administration costs for control and for fee or promotion, we guess) but that, at the same time, there will be additional income for authorities (in the hypothesis of a fee, we guess).

PAN Europe estimates that option IV-2 is the best option and that it is wrong to say that option IV-6 can have the same positive impacts. With voluntary option IV-2, not all farmers will undergo the training and no training is forecasted for retailers, professional users other than farmers and extension services. As a consequence, option IV-6 would be less efficient in terms of pesticide use reduction and environmental and health impact reduction. Moreover, in table 9-8 evaluating general impacts , it is also recognised that option IV-6 will have less positive economic and social impacts on training institutions than option IV-2.
However**,** in the context of option IV-2:

- PAN Europe advocates for mandatory training every 3 years instead instead of every 5 years.
- For PAN Europe, it is crucial for this training and educational programme to be managed independently, by the public authorities.
- PAN Europe already proposed items[7] that need to be considered in the training and educational programmes for pesticide operators including farmers and pesticide dealers, for crop protection advisors and agricultural extension officials. For farmers, for instance, these include environmental and health impacts of pesticides, hidden costs of using pesticides, benefits of reducing impacts from pesticides as well as alternative pest control methods, including ICM principles and elements.
- Certification must be granted only to those stakeholders which have successfully passed an examination to verify their knowledge after each training session.

<u>Conclusions</u>

PAN Europe states that option IV-2 is the best option and estimates that it is wrong to say in the EIA that option IV-6 can have the same positive impacts.

In the context of option IV-2, PAN Europe advocates for mandatory training every 3 years for farmers instead of every 5 years, to be managed independently by public authorities and for a verification of stakeholders knowledge as the only condition for a mandatory certification.

PAN Europe has already proposed items which should be considered by the Steering Committee in the training and eductional programmes.

[7] PAN Europe 2002, Suggested text for a directive on pesticide use reduction in Europe (http://www.pan-europe.info), article 11, Annex V.

V TECHNICAL CHECK OF SPRAYING EQUIPMENT

COMMENTS

The options recommended are V-1 *"Introduction of a mandatory certification scheme"*and V-2 *"Introduction of a mandatory control scheme"*.

PAN Europe agrees with the recommended options, in combination as they are complementary. Indeed, as stated in the EIA report at p. 363, *"the introduction of a mandatory control scheme is seen as one of the most important ones within the Thematic Strategy , as it represents approximately 1/3 of the estimated quantitative reduction among all recommended measures for the Strategy"* and at p.254 *"The certification of new sprayers would ensure that new purchased sprayers are in a good condition after their sale before the first time that they have to undergo an inspection"*.

Conclusions

PAN Europe agrees with both BiPro recommended options which are complementary .

VI COMMON FRAMEWORK FOR IPM

GENERAL COMMENTS

The recommended options are VI-3 *"Harmonisation of the minimum general requirements through an amendment of the definition of integrated control in Directive 91/414/EEC"* combined with option VI-4 *"Clearer and more specific definition of IPM in the Thematic Strategy"*.

PAN Europe generally agrees with the recommended options.

However, PAN Europe thinks that considerably more than 10% pesticide use reduction can be achieved by farmers complying with general IPM requirements. Of course, this pesticide use reduction potential will depend on (i) the level of ambition in the definition of these general IPM requirements, (ii) on the intention to include therein pesticide dependency reduction as an aim, and (iii) on the Member State's political will to include in the short term general IPM requirements in the national definition of *"proper use"* But, the general requirements according to the Extended Impact assessment (EIA) report are seriously lacking in ambition**.** EIA report states that they should be *"close to Good Farming Practices"* and to the EISA concept or to the similar *"Agriculture Raisonnée"* concept in France which are aimed at pesticide optimisation but not at pesticide dependency reduction. The EIA report considers that at least 50% of the farmers in Europe are already practicising corresponding measures which are in fact corresponding to IPM. The BiPro report further states that IPM relies on the optimised use of common PPPs which entails general prescriptions like the consideration of non-chemical plant protection strategies, strategies to determinate the right product and the appropriate dosage, technical and organisational drift minimisation strategies, training of users and certification of sprayers but no mention is made about pesticide precautionary dependency reduction of all pesticides including new low dose pesticides, nor about integrated production systems.

Moreover, PAN Europe thinks that, under the proposed scheme, the incentive for farmers to convert to general IPM requirements would be far too little (see specific comment 4). Therefore, there is a need for a higher control percentage and for a higher percentage of reduction of direct payments for non-compliance with general IPM requirements.

The argument about no common understanding of IPM in Europe is only partly true. For example, the IPM definition in the revised (2002) FAO Code of Conduct *"IPM means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agroecosystems and encourages natural pest control mechanisms"* has already been debated and agreed by FAO Member States, CropLife and NGOs.
PAN Europe welcomes the project of elaboration of *"crop specific IPM requirements"* in the Thematic Strategy. These crop specific requirements can then be updated regularly, by a steering committee, according to additional information and experiences. They could, in theory, also affect the cross compliance requirements if Member States decide to include them in the national definition of *"proper use"* and could , in the future, result in specific harmonised requirements at EU level. However, PAN Europe thinks that the 20% use reduction potential scenario is very conservative as presently an average of at least 50% pesticide use reduction can be achieved by farmers complying with specific IPM[8], [9].

Moreover, PAN Europe is concerned about the limitation of the budgetary envelope for the agri-environmental measures and thinks that agri-environment funds for crop-specific IPM should not be at the expense of agri-environmental funds for organic farming**.** This is even more worrying that no more resources are forecast to be allocated by the Commission to the European Action Plan for Organic Food and Farming[10]. Priority for specific IPM agri-environmental funding has also to be given here to small and medium farmers because very few of these are involved in some of the commercial initiatives on use and residue reduction and assurance schemes in general.

PAN Europe proposes to make clear what IPM means[11]**.** Without this clarification it will remain a dead letter which can be used by everyone to fill out in its own direction. We are concerned that the EIA focuses on the EISA approach to IPM, which is industry-led and promotes pesticide use under the name of optimisation. A careful look at the *"Agriculture Raisonnée"* protocols shows that there is no effort made to reduce risks or dependency on pesticides. In fact, the only stipulations are to use authorised products in the correct way!

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[8] As stated in the 2002 Agra CEAS consulting report entitled "Integrrated crop management systems in the EU", investigations on research and commercial IPM projects in Europe lead to the conclusions that : "an average mean of approximately 50% reduction in the use of PPP is realistic in Integrated Farming Systems compared to Conventional Farming"
[9] In chapter 3 of "the Pesticide Detox: Solution for Safe Agriculture" edited by Jules Pretty, Earthscan Publication Ltd, London, 2004 in association with the UN FAO, the study of 62 IPM programmes show a mean of 57 % pesticide use reduction potential for those systems.
[10] Commission Communication "European Action Plan for Organic Food and Farming 10-06-04 COM (2004) 415 final.
[11] See also presentations of Claude Aubert and Frank Wijnants in Proceedings of the PAN Europe policy conference "Reducing Pesticde Dependency in Europe to protect Health, Environment and Biodiversity", pp 42-43 and 44-48 respectively (http://www.pan-europe.info)

Following this approach will not deliver the results desired under the Thematic Strategy. Instead, the Strategy must make a much bolder commitment to IPM in the context of Integrated Crop Management, making use of the FAO Code definition and the International Organisation for Biological Control (IOBC) Integrated Production guidelines.

PAN Europe proposes that general principle should be the **No,unless principle**, meaning that pesticides will not be used unless the need for them is established. Non-chemical methods and systems of crop protection will be used in the first instance and chemicals only as a last resort and only with a proper justification (individual farm crop protection plan). This principle is the basis for IPM. For a practical implementation an **IPM-hierarchy** needs to be set as an official strategy. The hierarchy starts with prevention of crop problems via rotation of crops, soil improvement (no chemical soil treatment), and use of the best resistant varieties, then goes to non-chemical methods of crop protection (mechanical weeding, biological control), to pest-prediction systems (scouting, weather stations), to non-synthetic pesticides use and as a last resort chemicals (least harmful, low dose, etc.). The use of this hierarchy should be mandatory and implemented in the yearly farm crop protection plan.
Monitoring of progress should be done by collecting the use (kg/ha) of each synthetic pesticides and implementing minimum standards which will be strengthened gradually, year after year.

PAN Europe urges Member States and the Commission to promote further crop specific IPM , more linked to dependency reduction than general IPM requirements. Therefore, a tax should be considered. The general pesticide tax option VI-5, considered alone, was rejected in the EIA report. However, PAN Europe thinks , based on some Member States' experience, that this tax option has to be considered in combination with other options. Combined with options VI-3 and VI-4 , a tax would increase the motivation of farmers to convert to *"specific IPM"* which should be aimed at pesticide dependency and use reduction. The money raised by the tax could finance measures in the national reduction plans, especially training and advice on IPM and pesticide reduction, and be partly redistributed to reward farmers with the best performance in every crop.

SPECIFIC COMMENTS

1) p. 262: A big omission in the stakeholders list in the EIA report is the increasing role of food chain company assurance schemes , such as EUREPGAP aimed at pesticide minimisation , in influencing farmer practice, even in schemes that are not IPM labelled.

2) Contradiction in the estimation of the share of IPM in agriculture today: p. 263, it is stated that *"the average share of IPM in agriculture in MS today is around 3% of the utilisable agriculture area"*. This is in contradiction with what is stated p. 265 *"German extension services and Spanish authorities estimate that at least 50% of farmers are already practising measures which are in fact corresponding to IPM*". This contradiction is an example of the confusion about the basic concept of IPM. The 10% reduction in pesticide use for farmers complying with *"general IPM requirements"* is, in the EIA report, based on a scenario where only 50% farmers need to meet the *"general IPM requirements"*. This implies weak *"general IPM requirements"* not corresponding to an IPM concept based on dependency reduction but more conforming to the IPM concept of EISA than to the concept of IOBC or the one agreed in the FAO Code of Conduct.

3) The confusion in the EIA study about the IPM concept is maintained when it is said p. 267: *"…IPM relies on the optimised use of common PPPs and not on substitution of substances"* , p 267 that prescriptions in some IPM or IFS schemes contain requirements such as a restricted list of allowed PPPs and that this constitutes a risk of creating pesticide resistance in specific IPM requirements and p. 268 *"As IPM does not aim at the reduction of chemical PPPs but at an optimised use of chemical PPPs and optimised plant protection strategies taking also non-chemical measures into account, the general assumption is that a PPP use reduction as a consequence of IPM is also related to a risk reduction …*"

4) too weak incentive for farmers to convert to general IPM requirements: p. 270, it is acknowledged that only 1% of farmers in Europe are controlled for non-compliance with a sanction of only 5% reduction of direct payments for not complying with *"general IPM requirements"* . PAN Europe fears that, in these conditions, the economic risk for farmers not complying with general IPM requirements is low and therefore the incentive for a change towards lower pesticide consumption will not be sufficient. We think therefore that there is a need for a higher control percentage and for a higher percentage of reduction of direct payment for non-compliance with general IPM requirements. A higher control from Member States would be cost neutral as *"25% of the amount resulting from the application of cross compliance may be retained by Member States and may be used to finance the management of the amended 91/414/EEC Directive"* (see p.294) .

5) yield is not generally lower in IPM systems than in conventional farming systems: p 285, the assumption *"even if the yield in some IFS is comparable to CFS , it tends usually to be low"* has to be nuanced. In the Agra CEAS study, (see also p 271 of the EIA report), it is shown that the yield can be sometimes higher in IPM systems and that only in about half of the cases is the yield lower. It is also said in this Agra CEAS study (p.xii of the executive summary) that *"the yield in ICM systems tends to be lower* (or comparable) *at this point of time, however, further research could reduce this difference"*. In another study[12] 62 IPM programmes in 26 countries (North & South) were assessed. It was shown that pesticide use can be reduced without yield penalties. For 54 crop combinations, the programmes resulted in 35% yield increase with pesticide reduction of up to 72%. A further 16 saw small yield reductions (7%) with average 59% reduction in pesticide use, and 10 had 45% increase in yields with 24% increase in herbicides (mainly zero-tillage examples).

6) pesticide use reduction as a consequence of *"specific IPM"* has to be promoted further: p 304, it is estimated that the introduction of general and specific IPM requirements *"would result in the mid term in an expected use reduction between 8 to 11% per year, thereof a share of 0,2 to 1,5% is expected due to farmers going beyond the general definition and performing specific IPM"* . PAN Europe is concerned about the need to develop additional instruments for a stronger promotion of *"specific IPM"*, more linked to dependency reduction than *"general IPM"* , in order to reduce health and environmental impacts significantly and urges Commission and Member States to act towards this end.

[12] in "the Pesticide Detox: Solution for Safe Agriculture" edited by Jules Pretty, Earthscan Publication Ltd, London, 2004 in association with the UN FAO

Conclusions

PAN Europe generally agrees with the two recommended options combined with each other but considers that the tax option (VI-5) has also to be combined with these options VI-3 and VI-4 in order, among others, to increase the motivation of farmers to economise pesticides and therefore to convert to *"specific IPM"* . A pesticide tax is crucial for the success of the Thematic Strategy to finance national reduction plans measures, including training and advice on IPM and pesticide reduction. The money raised by the tax could be partly redistributed to farmers showing the best performance in each crop.

PAN Europe does not accept that the *"general IPM requirements"* are defined in the Bipro report as being *"close to Good Farming Practices"*and to the EISA concepts which are not aimed at pesticide dependency reduction and asks for stronger *"general IPM requirements"* aimed at pesticide dependency reduction.

PAN Europe estimates that the incentives for farmers to convert to *"general IPM requirements"* will be far too little as only 1% farmers are controlled for cross-compliance with a possible sanction of only 5% reduction of direct payements for *"general IPM"* non-compliance.

PAN Europe questions the BiPro evaluation of a volume use reduction potential of 7,8 % (8-0,2) to 9,5% (11-1,5) per year in the mid term as a result of the introduction of *"general IPM requirements"* as the maximal potential for use reduction for a farmer complying with *"general IPM requirements"* is estimated by BiPro to be 10%.

PAN Europe draws attention to the IPM definition in the FAO Code of Conduct (already agreed by key stakeholders) and the IOBC Integrated Production guidelines and proposes an IPM approach based on the "no, unless principle" and an IPM-hierarchy for a practical implementation to be established in a yearly farm crop protection plan.

PAN Europe welcomes the project of elaboration of *"crop specific IPM requirements"* in the Thematic Strategy but insists that much more than 20% pesticide use reduction can be achieved by farmers complying with *"specific IPM"*.

PAN Europe is concerned about the limitations of the budgetary envelope for agri-environmental measures and does not want agri-environmental funding for *"crop specific IPM"* to be spent at the expense of agri-environmental funds for organic farming.

PAN Europe is concerned by the need to develop additional instruments, including a pesticide tax, for a stronger incentive to convert to *"specific IPM"* aimed at pesticide dependency reduction.

VII ENHANCED PROTECTION OF WATER

COMMENTS

The options recommended are VII-1 *"Specific risk reduction measures will become mandatory parts of the river basin management"* and VII-3*"Introduction of appropriate financial instruments"*. The justifications are that the first option will bring significant benefits for environment and health in MS that have not yet established such a measure and for water treatment companies, as well as higher costs for authorities for administration and management of the compulsory parts of the river basin management and for farmers as a result from decreased support for agri-environmental measures aimed at water protection. The second option is said to favour environment and health (benefits not qualified as significant) and to benefit water companies, to provide benefits to those that invest on a voluntary basis in the enhanced protection of water. According to the EIA report, a tax system could foresee a lower tax burden to those users of PPPs who take care , on a voluntary basis, about water protection.

PAN Europe is not in favour of the introduction of financial instruments to encourage voluntary measures for water pollution prevention as it doubts the efficiency of such measures designed only for water protection purposes.

PAN Europe demands the installation of a no-spraying zone of 10 meters along watercourses and lakes as a mandatory part of the river basin management, as well as zones of no pesticide or low pesticide use in order to protect groundwater. A mandatory no-spraying zone was also requested by the European Parliament in its March 2003 Resolution[13] on the Commission Communication *"Towards a Thematic Strategy on the sustainable use of pesticides"* for drinking water abstraction zones.

Conclusions

PAN Europe states that option VII-1 is the most efficient for environment and health protection and water treatment companies and rejects the much less efficient voluntary option VII-3 also recommended in the BiPro report .

PAN Europe demands the installation of a no-spraying zone along surface water as well as zones of no-pesticide or low pesticide use in order to protect groundwater, as mandatory parts of river basin management.

VIII QUANTITATIVE USE REDUCTION

GENERAL COMMENTS

Dependency reduction means the reduction of dependency on all pesticides, including the new low dose ones which are not necessarily better for environment and health than the others but which are very difficult to trace in the environment due to the high cost of their analytical

[13] Resolution A5-0061/2003, point 7

methods. Use reduction in terms of volume is often the consequence of the replacement of high dose pesticides by low dose ones without parallel reduction of environmental and health risk. But dependency reduction will also result in use reduction in terms of volume.

Dependency / use reduction results in exposure reduction to all pesticides and hence in risk reduction. PAN Europe is not aware of any scientific study which can prove that significant pesticide dependency / use reduction and hence exposure reduction to all pesticides is not correlated with environment and health risk reduction .

Dependency reduction is the only way to cope with poor information related to combination effects, to low dose – long term effects, with the lack of information about several toxicological properties, especially for embryos, foetuses, infants and children, and the poor knowledge about total exposure. Consequently, it is the only way to cope with the difficulties in evaluating the real risk associated with pesticide use and hence with the difficulties in determining an acceptable level for consumption of pesticides .

The option VIII-4 *"introduction of general use reduction target"* is eliminated in the Bipro report on the basis of a superficial and defective evaluation of the efficiency of the Danish reduction plan - based on the Treatment Frequency index (TFI) reduction and a strict registration system - as far as risk reduction for health and environment is concerned. But use reduction, as a consequence of recommended measures for the Thematic Strategy which are aimed at *"reduction of unintended use of pesticides"* and not at *"reduction of intended use of pesticides"* (see p.90), are always associated, in the Bipro report, with environment and health risk reduction.

In addition to defective interpretation of the wrong data in the Danish case study, there is also a misinterpretation of the TFI. The report aims one-sidedly at describing what the TFI does not reflect, and does not describe what the TFI actually does reflect. The TFI is, in fact, a use indicator designed to measure pesticide dependency reduction in terms of spraying intensity. It is not a risk indicator but it has been shown that its reduction is correlated with risk reduction as measured by risk indicators and with the increase in biodiversity. Moreover, BiPro report conclusion that the TFI does not show the burden on environment and health correctly is based on the erroneous conception that the criteria used to evaluate the environment and health burden of the Danish action programme present a true measure of this burden , which is not the case.

There is no mention in the BiPro report of the need for a Bichel-like national study of reduction scenarios. Such a study would provide the basis for a national reduction programme and for a dependency reduction target: baseline information concerning how pesticides are used at present, evaluation of the benefits, including reduction in hidden costs as well as the costs of various dependency reduction scenarios, and recommendations for dependency reduction targets for specific crops.

PAN Europe continues to argue for a dependency /use reduction target. A quantitative use reduction target has to be considered as a tool to stimulate the swift implementation by stakeholders of various measures in an integrated reduction plan. It can give, for instance, incentives to Member States to stimulate conversion of a significant number of farmers to the most progressive integrated farming system and therefore to invest massively in research and educational programmes and towards an increase of the capacity of independent extension

services. It would also give incentives to Member States to optimally stimulate conversion towards organic farming.

PAN Europe reiterates the European Parliament Resolutions[14],[15] , asking , among others, for mandatory national dependency/use reduction programmes with specific objectives and targets dates and for a national Bichel-like study to be undertaken on a compulsory basis .

SPECIFIC COMMENTS

1) As far as data concerning the Danish reduction plan are concerned, many corrections have to be brought:
   - p. 331 , table 13-1: all data for Denmark are wrong except those for UAA 2001
   - p.337, table 13.4.1.: basic data for calculation of the TFI are not presented as mentioned in the text.
   - P. 337, table 13.4.2. : the quantity of substances used includes not only PPPs but also biocides
   - P. 340, the table are affected by the same errors as those in tables 13.4.1. and 13.4.2.

2) Lack of references for the data used:
   - p.336 it is said that the data used for analysis of the effects of the PPP use reduction are taken from Statistic 1997, Statistic 1999 and Statistic 2002 but no references are given for those statistics.

3) Erroneous evaluation of environmental and health impacts of the Danish use reduction programme:
   Comparison between years 1999 and 2002 as far as human toxicity and water toxicity are concerned are only based on:
   (i) toxicities of substances classified as such according to Directive 67/548/EEC . But this classification is far from including all potential toxicities of pesticides acting solely or in combination
   (ii) the slight volume increase of one very toxic (T+) substance, two irritant substances (XnR43 or Xn40 or Xn 48) without considering the simultaneous decrease in number and in volume of toxic substances (T), Xi R43 Xn as well as not classified substances
   (iii) a 36% increase in volume of nine substances classified as toxic for aquatic organisms (R51/53) without considering a decrease in number and a 48% decrease in volume of very toxic substances for aquatic organisms (R50/53) as well as a 19% decrease in volume of substances harmful for aquatic organisms (R52/53) and a decrease in number coupled with a 5% volume reduction of non classified substances.

   Therefore, it is not justified to conclude for the Danish reduction plan, p. 343: *"regarding the risks for human beings and the environment, there was no indication for a general increase found. Nevertheless, there are some indications that the tendencies are looking different depending on the chosen period which are compared. Furthermore, for specific applications , an increase of risks cannot be excluded"* and

[14] Resolution of 30 May 2002 on the Commission report entitled « Evaluation of the active substances of PPP (submitted in accordance with article 8 (2) of Council Directive 91/414/EEC on the placing of PPP on the market » (COM (2001) 444 – C5-0011/2002-2002/2015 (COS))
[15] Resolution A5-0061/2003 on rthe Commission Communication "Towards a Thematic strategy on the sustainable use of pesticides".

pps 344, 346 and 347 , for analysis of impacts of measures VIII-3 and VIII-4 that *"as shown in the case study, it is difficult to clearly identify benefits or disadvantages for environment and health"*.

4) A use reduction target of 40% is not necessarily linked to crop losses.
p. 346, for the scenario VIII-4 C *("quantitative use reduction target established stating a reduction of 40% within a mid/ long term"*), it is wrong to say that *"a use reduction target of 40% therefore is expected to cause crop losses in an unpredictable but significant way"*: see PAN Europe remarks under VI Common Framework for IPM, specific comments, pt 5.

5) dependency / use reduction is aimed at risk reduction
p. 376 it is stated that BiPro recommended measures aim at risk reduction and that they are associated to a certain PPP use reduction as a consequence but that they are not aimed at use reduction. This formulation suggests that dependency/use reduction is not aimed at risk reduction, which is wrong.

Conclusions

PAN Europe states that it is not enough, for health and environment protection reasons, to reduce just *"unintended use of pesticides"* as a result of the measures recommended in the BiPro report. Indeed, as it is extremely difficult to assess the real risk of pesticide use due to limitations of risk assessment and risk indicators and consequently impossible to determine an acceptable level for consumption of pesticides, it is necessary to reduce as much as possible the total exposure to pesticides by also reducing *"intended use of pesticide.* Therefore, like the European Parliament, PAN Europe urges Commission and Member States to adopt measures aimed at pesticide dependency reduction with targets (as measured by a dependency reduction indicator) and timetables.

A quantitative dependency/use reduction target has to be considered as a tool to stimulate the effective implementation by stakeholders of the various measures of an integrated reduction plan. The basis for a quantitative target determination should be provided by a mandatory Bichel-like national study, not mentioned in the BiPro report.

The option VIII-4 *"introduction of general use reduction target"* is eliminated in the BiPro report on the basis of a superficial and defective evaluation of the impacts on health and environment of the Danish dependency reduction plan.

In addition to defective interpretation of wrong data in the Danish case study, there is also, in the BiPro report, a misinterpretation of the Treatment Frequency Index (TFI). The TFI is, in fact, an indicator designed to measure pesticide dependency reduction in terms of spraying intensity reduction and not a risk indicator per se, even if its variations have been correlated with variations of risk indicators and of biodiversity.