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Biocides
Proposal for a concerted European approach towards a sustainable use

For our Environment

Umwelt Bundesamt

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1 Preface

The intended use of biocides is to kill, to destroy or to deter living organisms. Undesirable effects on environment and health are thus likely to occur. This is true even if products are authorised, because the aim of the authorisation procedure is for every single product to keep these effects below an unacceptable level, not to eliminate the effects as a whole. The same rationale underlies the Directive 2009/128/EC on the sustainable use of pesticides. Therefore this Directive provides a frame for sustainable overall use of pesticides, complementing the authorisation of individual products according to the Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market. From our point of view, a comparable approach aiming at reducing risks from the use of biocides is appropriate for biocides, too.

The Federal Environment Agency of Germany (UBA) conducted two research projects for further elaborating the approach[1]. This position paper contains the conclusions which UBA draws from these research projects and the corresponding discussions over the last six years.

The objective of this paper is to provide the European Commission with our conclusions and to encourage their consideration in the context of the upcoming report required according to Article 18 of regulation (EU) No 528/2012. Corresponding to the competence of the Federal Environment Agency, the proposals focus on the environmental aspects of the use of biocides.

1 Gartiser, S., Lüskow, H., Groß, R. (2012): Thematic Strategy on Sustainable Use of Plant Protection Products - Prospects and Requirements for Transferring Proposals for Plant Protection Products to Biocides. FKZ 3708 63 400. Available under http://www.umweltbundesamt.de/publikationen/thematic-strategy-on-sustainable-use-of-plant and Gartiser, S., Burkhardt, M., Groß, R., Calliera, M. (2014): Reduction of environmental risks from the use of biocides: Environmental sound use of disinfectants, masonry preservatives, and rodenticides. FKZ 3711 63 410. Available under http://www.umweltbundesamt.de/publikationen/reduzierung-der-umweltrisiken-durch-den-gebrauch.

2 Call for Action

In summary we see the need of the following **regulatory actions** for a sustainable use of biocides:

1. Inclusion of biocides in the Directive 2009/128/EC establishing a framework for Community action to achieve the sustainable use of pesticides or creation of an independent framework on the sustainable use of biocides. A framework should be defined allowing for national regulations of the different topics. Topics to be regulated at EU-level are:

    a. Mandatory best practice and use of alternatives.
    b. Mandatory training and further education.
    c. Requirements for sales.
    d. Equipment for the application of biocides.
    e. Prohibition or restriction of certain modes of application (e.g. aerial spraying).
    f. Restriction of the use of biocidal products in sensitive areas.
    g. Establishment of independent advisory services.

2. Inclusion of biocides in the Regulation (EC) 1185/2009 concerning statistics on pesticides to gain an overview about the biocidal products available on the market and the amount of products sold and used.

Additional measures needed for a sustainable use of biocides:

3. Implementation of EU-wide environmental monitoring programs in order to generate additional knowledge on the use and environmental impact of biocidal products.
4. Implement more differentiated regulation of biocides in treated articles without primary biocidal function.
5. Consider non-chemical alternatives, especially in public calls for tender and support programs.

The following **further possible regulatory amendments** are examples referring to other regulatory areas that might also promote a sustainable use of biocides but are not further discussed in this paper:

6. In Directive 98/83/EC on quality of water for human use, the term “pesticide” should be generalised and extended to refer to both, plant protection products and all biocidal products.
7. The Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture should be amended to cover other contaminants than heavy metals, such as biocides.

3 Rationale for a concerted European effort

Preserving, protecting and improving the quality of the environment is a goal of the European Union according to Article 191 of the Treaty on the Funtioning of the European Union. Biocides are likely to cause adverse effects to the environment due to their intentional function. The main objectives of sustainable use of biocides are from our point of view the protection of the environment especially of water bodies and soil, the preservation of biodiversity, the minimisation of hazards to human health, and the avoidance of resistance development. The incorrect, overdosed or unnecessary use of biocidal products thus should be prevented by law.

Background

Unlike "normal" chemicals, biocides are substances designed to affect living organisms. In many cases "affecting" means killing. Undesirable effects on environment and health are thus likely to occur. This is true even if products are authorised, because the aim of the authorisation procedure is for every single product to keep these effects below an unacceptable level, not to eliminate the effects as a whole. However, the environment is not exposed to a single product but to a mixture of countless substances in different uses. Biocides share this situation with plant protection products (PPP). Also many biocides share with PPP the mode and area of application: Many biocides are used in the vicinity of humans or in such a way that they directly or indirectly enter the environment.

From our point of view it is a matter of balance, justice and proportionality to regulate the general use of pesticides for both biocides and PPP in a comparable way. This leads us to the conclusion that rules for a sustainable use of biocides are needed. But the current legal provisions on biocides do not address the use phase of biocides. The experiences that we made during product authorisations and mutual recognitions until now have shown that the Regulation (EU) 528/2012 concerning the making available on the market and use of biocidal products (Biocidal Products Regulation, BPR) is not sufficient to establish sustainable use of biocides. To achieve a sustainable use of biocides in the EU and to avoid difficulties during the harmonised product authorisation an EU framework for the sustainable use of biocidal products is needed that allows national implementation of the important measures.

Directive on a sustainable use of pesticides

The Directive 2009/128/EC establishing a framework for Community action to achieve the sustainable use of pesticides gives us an idea on how the support of sustainable use of biocides could look like. The need to lay down rules for a sustainable use of biocides as well has already been included in this Directive and thus been acknowledged by the European Community. Recital 5 of the Directive anticipates that the scope will be extended to cover biocides. However, there are no political intentions noticeable towards implementing such extension. From our point of view, the report on measures geared to the sustainable use of biocidal products according to Article 18 of the BPR should be the starting signal for such activities in July 2015.

We think that it is not reasonable to just copy and paste the measures stipulated for PPP. For the upcoming steps towards a sustainable use of biocides we suggest to take a stepwise approach and focus as a first step especially on those uses with direct applications in or emissions to environmental media. We think that measures can be rather promptly proposed for uses that are closely related to uses in the PPP area like some uses of rodenticides or insecticides or uses where product authorisation has already started and appropriate information is available. For other uses it will be necessary to gain more knowledge to identify which measures are needed.

The problem of missing data

Data are missing on the volumes of production, sale or use of biocidal products. Often, this data gap is used as an argument against taking action for a sustainable use of biocides. We therefore strongly plead for the inclusion of biocides into Regulation (EC) 1185/2009 concerning statistics on pesticides. Recital 4 of this regulation says that "neither the Commission nor most Member States currently have sufficient knowledge or experience to propose further measures regarding biocides". However, it is anticipated in recital 5 of this Regulation that the scope of it will be extended in

future to cover biocides as well. Eight years after the first proposal of the EU Commission for this Regulation the experiences with the evaluation of biocides have shown us that this extension is urgently needed. The inclusion would lead to a better knowledge of the application of biocides for the different purposes and a more realistic view on exposure and risk for the environment.

Monitoring can also contribute to a more realistic view on existing contamination of the environment. For Germany we are currently working on a monitoring concept which will be shared and discussed within the EU. A joint effort by all Member States regarding a common EU-wide monitoring strategy would be reasonable and desirable.

This knowledge together with data regarding uses can then be used for a target-oriented prioritisation of measures to achieve the highest benefit for the environment with minimal investment.

The proposal

Even though a lot of information on the use of biocides is still missing, we are convinced that this is not an argument that there is no need for action. In many cases, as experiences from product authorisations and mutual recognitions so far showed us, evidence is strong enough to take action.

In our “Call for action” we therefore propose a split approach:

- In cases where the experiences to date already show that measures are needed, precise measures are proposed that should be put into practice.
- In cases where knowledge gaps are seen that prevent a qualified proposal we appoint the gaps to be closed and propose adequate measures e.g. by the inclusion of biocides in the Regulation (EC) 1185/2009 concerning statistics on pesticides or by further studies.

The mentioned approach should be able to solve some of the problems that result from the use of biocides and get one step closer towards a sustainable use of these products.

4 Sustainable use of biocides from the environmental perspective: measures required

This chapter describes details of the proposed measures we consider as essential for the sustainable use of biocides and which are on the majority not covered by the existing provisions of the Biocides Regulation 528/2012. For each measure the recent status quo is described. As this status might be very different in each Member State and details of the different national legislations are not publicly known we therefore present in this paper the status quo as it is currently in Germany as an example with some further examples from other Member States.

4.1 Best practice and use of alternatives

The wrong, overdosed or unnecessary use of biocidal products leads to unnecessary exposure of the environment and with that to risks for the environment that are avoidable. The definition of "Codes of Best Practice" could promote practices that reduce such risks.

Status quo: At the moment during product authorisation the conditions of use can only be based on the outcome of the risk assessment of the single product. Restrictions have to be based on risk quotients or the outcome of the efficacy testing. This leads to the situation that many unnecessary uses cannot be restricted even though this would be desirable for a sustainable use of biocides. "Best Practice Codes" could solve this problem but are not available for all uses, there are gaps especially in non-industrial applications, and the codes are not legally binding[2]. The experiences show that non-binding codes are likely not to be followed. For industrial applications "Best Practice Reference Documents" (BREFs) developed under Directive 2010/75/EU on industrial emissions sometimes include best practices concerning biocides to a varying extent.

Goals: Advice should be provided to users of biocidal products enabling them to perform the minimal necessary and most effective use of biocidal products. If a use is considered necessary by the user, information should be provided on how to use the product in a sustainable way.

Instruments: To reach the goal for non-industrial applications "Codes of Best Practice" should be developed product type (PT) or even use specific. These documents should provide information on essential cases, where the use of biocidal products is necessary (e.g. including a definition of threshold levels when use of biocidal products becomes necessary) and methods how to use the biocidal products with the least risks. Emphasis should be laid on non-chemical alternatives that can be used instead of the biocidal products, and other measures to avoid or minimise the use of biocides in an effective way. Thus, the documents should not be product-centred but focus on the various preventive and control measures of the pest. They should include general aspects of a sustainable use of biocides but have to be PT - or use-specific at the same time. The "Codes of Best Practice" should be legally binding.

For industrial applications the BREFs should be developed further and best practices concerning biocides should be incorporated. This comprises specifications on how to reduce the use of biocides in these applications: the promotion of non-chemical alternatives and preventive measures.

To facilitate the adherence to the "Codes of Best Practice", these should be included in curricula for training and further education (see chapter 3.2). Additionally, the establishment of independent advisory services could lead to a better knowledge of users regarding "Codes of Best practices" and also enhance the surveillance of the adherence of the codes (see chapter 3.10).

Incentives to follow the "Codes of Best Practice" could be given by including the need to follow them in public calls for tender or in public support programs like the support of energy-efficient refurbishment of houses (e.g. biocide-free paint on exterior thermal insulation composite systems). To improve the awareness of the people responsible for the calls it would be helpful to provide information for them.

2 cf. Zamparutti et al. 2010

Uses in focus: Uses of biocidal products by professionals. Thereby it is necessary to develop several use specific "Codes of Best Practice" and not one general code for all biocidal products. For non-professionals the application of "Codes of Best Practice" cannot be expected. Information of this user group should rather be done by general information (see chapter 0). Uses by non-professional users that would require the adherence to "Codes of Best Practices" e.g. as a risk mitigation measure to enable a safe use within the product authorisation should not be authorised for this user group.

Excursus: Efficacy – determining factor for a sustainable use

If biocides are used below efficient concentrations emissions to the environment occur without having benefit from the application of the product for the user. For a sustainable use of biocides it has to be ensured that the products are having the desired effect. At the same time it should be refrained from overdosage. Both could be avoided by strengthening the knowledge of good practices.

Efficacy tests that have to be done during product authorisation are an important parameter to define the conditions of use. Only applications that have proven their efficacy can be authorised (with the exemption of treated articles, see below). But what if these tests do not reflect realistic use conditions? In our national workshop in June 2013 it was discussed that the recommended efficient amount of disinfectants needed for barns could be decreased by up to 50 % if the temperature and time during the efficacy test would be adapted to realistic conditions in barns. In the EU-Workshop in March 2014 it was questioned that efficacy testing of disinfectants marketed for consumer use reflects the way consumers would use the products. We think that the guidance on efficacy testing should be revised with regard to realistic use scenarios to prevent overdosage or usage without having a benefit at all.

4.2 Training and further education

Training and further education are important to ensure the dissemination of best practices to professional users and thus to ensure a responsible use of biocides. It cannot be expected from persons who are not aware of the specific risks posed by biocides to minimise these risks as much as possible. Non-professionals cannot be reached by this measure. For them information has to be provided in different ways. Training and further education are also important for the distributors of biocidal products as they should be able to give recommendations concerning the use. The results of a questionnaire distributed within our recently finalised research project showed that professional users have a high interest in information on new practices or risk mitigation measures. These could be disseminated within training and further education measures.

Status quo: Until now, training and further education for the use of biocides are not extensively regulated in the EU. Some Member States oblige professional users of certain PT to complete trainings, but not all[3]. In Germany there are some specific apprenticeships related to the application of biocides (e.g. pest control operators). During the EU-workshop in March 2014 it was agreed on the need of proper trainings and education programs for professional users which should include general awareness raising.

Goals: Professional users should be aware of risks arising from the use of biocidal products, the best practice and correct use of the products and preventive methods or alternatives to minimise their use. This should lead to reduced emissions to the environment.

Instruments: To reach the goals obligatory training and certification schemes for professional users and distributors of biocidal products should be established. This does not necessarily only mean the establishment of new professional trainings. In many cases it might suffice to include the use of preventive or alternative measures or the sustainable use of biocides in existing curricula (e.g. nurses, painter, plasterer, pest controllers, architects) if this is not already the case. Trainings that already promote the sustainable use of biocides as well as other non-chemical means could be included in a positive list of professions who do not need an additional training. For all other professionals who use biocides but have not acquired qualified knowledge on the sustainable use of biocides a special training should be made mandatory. In this case the training should only be provided by officially accredited and licensed institutes. This training has to be licensed by independent authorities to ensure a general education not focussing on biocidal products only but also on the avoidance of those. The education should be updated continuously to ensure up-to-date knowledge.

From our point of view it is important to make the training mandatory and to stipulate provisions for the duration, content and certification of those courses to provide legal certainty to all professional users.

Uses in focus: Uses of biocidal products by professionals. The extent of these training measures should be adapted to the extent the use of biocidal products is part of the job. For example pest controllers should gain a broader knowledge than e.g. painters, where the training should only be a part of their apprenticeship. For non-professionals trainings are not feasible. Information for this user group can only be provided by general information (see chapter 0), among others, via leaflets or in form of an advisory service prior to the sale of the product. Distributors of certain products should be enabled to provide proficient advice regarding the products they are selling via training measures.

4.3 Requirements for sales

The free availability and the extensive advertisements for biocidal products might lead to unnecessary or ineffective applications of products resulting in emissions to the environment without having a significant benefit for hygiene or material protection. The moment of sale is therefore an important opportunity to raise awareness for possible risks and communicate preventive measures, alternatives and the safe use of the products to the user. There is no justification to miss this opportunity for biocides while seizing it for plant protection products. Products not authorised for the general public or restricted to trained users only should not be freely available.

3 cf. COWI. 2009

Status quo: At the moment there is no regulation of sales for biocidal products in the BPR.

At the same time advertisements promote unnecessary and superfluous uses of biocidal products from our point of view. However, the use of biocidal products is only sustainable if it has practical benefits. We think that this is not always the case in promoted uses. At the moment the examination whether a use is necessary or not is not part of the product authorisation. However, for example the US Food and Drug Administration (FDA) proposed a rule requesting that a clinical benefit has to be shown for antiseptic products used with water (e.g. hand soaps). This thought could be included in future regulations of biocidal product authorisation.

Goals: Misuse and unnecessary applications should be minimised by accommodating rules for sales to reduce the risks biocidal products pose to human health and the environment.

Instruments: The point of sale should be used to provide information and advice to users. To ensure that advice can be given for certain products self-service and internet sales should be prohibited for products with certain substances (e.g. candidates for substitution) or products which are not authorised for the general public. These products should only be sold by qualified trained persons (see chapter 3.2). The distributors should be obliged to provide comprehensive information to non-professional users regarding the risks for human health and the environment and regarding preventive or alternative non-chemical measures. Biocidal products that are solely authorised for professional use should only be sold to persons who have received training on how to use the corresponding product and hold a corresponding certificate. The point of sale could also be a moment to gain insight in frequency of use and amounts of biocidal products. This is done in Belgium for products that are only authorised for professional users (see chapter 3.8).

A study should be conducted to evaluate whether it would be possible to prohibit the product authorisation or the advertisement of uses that have no benefit for human or animal health or for protection of natural or manufactured materials. If possible, further restrictions on advertisements should be included in a future legislation.

Uses in focus: The prohibition of self-service and internet sales should be restricted to products containing active substances with especially problematic properties (e.g. candidates for substitution or PBT/vPvB-substances which for reasons of infection protection have been authorised for the general public). These products should only be sold by qualified trained persons. As some biocidal products are closely related to PPP it would be according to the legal principle that legal practices should be balanced and appropriate if the related biocidal products which also contain the active substances would be treated similarly. For other products (e.g. those which are authorised for use by the general public) it would be sufficient in most cases to provide general information. A possible restriction for the advertisement of biocidal products should be valid for all uses.

Excursus: Chemical Leasing – a possibility for biocides?

Chemical Leasing is a service-oriented business model that changes the business model from selling chemicals to selling the function of the respective substance[4]. Due to this shift the supplier gets an own motivation to reduce the amount of substance used because he is paid by functional unit (e.g. m² disinfected surface) instead of being paid by amount of chemicals used. This leads to a reduction of chemical use because suppliers are using all their knowledge to improve the application of the chemicals.

4 cf. UNIDO. 2013

In pilot projects the amount of chemicals needed for different applications was decreased e.g. due to optimisation of processes[5]. As this leads to a more efficient use of chemicals the model could be an important step towards the sustainable use of biocides in the professional area. A project of Schülke & Mayr GmbH, financed by the German Federal Environmental Foundation (DBU), dealt with Chemical Leasing of disinfectants[6]. In a pilot project the hospital of Worms tried to enhance the hygiene status while reducing the use of disinfectants and the effects on the environment. In the end the hygiene status in the hospital has been increased. To achieve this it was necessary to increase the amount of hand and instrument disinfectants while the amount of surface disinfectants could be decreased.

For some other product types it would be better if the use of biocides would be replaced by alternative or preventive measures if possible (e.g. rodent or insect control with traps or structural measures). However, a total replacement of chemicals by non-chemical methods is not the main focus of Chemical Leasing. Thus, for biocides it would be important to advance the concept of Chemical Leasing towards Knowledge Leasing. The service of suppliers should go further than just providing or applying biocidal products. It should move towards a holistic counselling that takes into account preventive or organisational measures that can reduce the risk of infestations. If an infestation has taken place, it should include biocide-free alternatives into its considerations on how to control the pest. Pilot projects have shown that the intensive collaboration increases the customer loyalty over the time. In Germany pest controllers would be an important group to consider this model in their business practice if they are not doing it already. In public calls for tenders Chemical Leasing could be requested and thus be supported.

During an ongoing UBA-project pilot projects are supported by the contractors with no costs involved. Also the United Nations Industrial Development Organization (UNIDO) or the DBU might support pilot projects.

4.4 Equipment for the application of biocides

The design, construction and maintenance of machinery for biocide application play a significant role in reducing the adverse effects of biocides on human health and the environment. Inappropriate or badly maintained equipment for biocides may cause undesired losses or overuses leading to unnecessarily high exposure.

Status quo: Different than for PPP, for biocides there is currently no regulation of the machinery that is used for their application. This causes a lack of evaluation and regular inspections during the service-life of this machinery. However, there are existing CEN or ISO standards available and also some national schemes for specific applications like the list of the German Robert Koch-Institute on disinfection machines.

Generally, until now there is not much knowledge on the equipment that is used for the application of biocides. On the one hand this complicates product authorisation because worst case estimates have to be assumed for the exposure calculations. On the other hand there might be risks due to the equipment we are not aware of.

Goals: The equipment that is put on the market for the application of biocides should be state of the art technology to reduce risks. The equipment that is already in use should be in a condition that does not pose unnecessary risks.

Instruments: Provisions are necessary for the quality of equipment used (e.g. safety and spray

5 cf. BiPRO. 2010
6 cf. Schülke & Mayr GmbH. 2012

drift) combined with regular inspections of equipment that is already in use. The inspections should be done in regular intervals and be proven by certificates. Professional users should do regular calibrations and technical checks of their equipment. This should be included in the respective training curricula. New equipment should be designed according to specific design criteria that ensure a high level of protection for the user and the environment. It might be favourable to establish positive lists of equipment with special properties, e.g. a high drift reduction. These lists could be used for restrictions of use in special sensitive areas (see chapter 3.6) or risk mitigation measures during product authorisation.

It should be a first step to get a market overview concerning the used equipment before establishing quality criteria and control procedures. The inclusion of biocides in the Machinery Directive (as requested in recital 3 of Directive 2009/127/EC amending Directive 2006/42/EC with regard to machinery for pesticide application) would be an effective way in the long run.

Uses in focus: A systematic overview over the equipment in use should be compiled for all uses. However, there should be a feasible distinction in the depth of the analysis. While it might be important to gather all information regarding different types of sprayers it would not be reasonable to gather all information regarding different dishcloths used for the application of disinfectants. Based on this market overview the equipment that needs further regulation should be identified. The experiences and discussions up to now have led us to the conclusion that machinery for applications similar to the applications of PPP needs further regulation.

4.5 Prohibition or restriction of certain modes of application

Certain modes of application can lead to disproportional higher risks than other modes.

Status quo: Aerial spraying has been banned for PPP in general according to article 9 of the Directive 2009/128/EC because of the potential to cause significant adverse impacts on human health and the environment, in particular from spray drift. At the moment, there are no comparable comprehensive provisions for biocidal products even though these could be similar products. Biocidal products are applied by aerial spraying as well (e.g. mosquito control or control of oak procession moths) but there may be more application methods that pose substantially higher risks than others. Specific application methods have already been prohibited during the evaluation of active substances (e.g. for some rodenticides the use as tracking powder). Thus, for biocides it might be appropriate to extend the application methods to be generally prohibited or restricted. For example, spraying of paints by non-professional users might cause higher exposure to the environment than other application methods like brushing while brushing being still feasible for non-professional users. This measure could also be used to restrict uses that are likely to be unnecessary for specific user groups, e.g. for private users.

Goals: Modes of application with significantly higher risks should be banned or restricted to reduce the risks posed by these applications.

Instruments: First an evaluation of all specific prohibitions in Member States should be conducted. In Germany for example there are no prohibitions in place in contrast to other Member States where e.g. aerial spraying is already banned. Examples for possible prohibitions that were mentioned on our EU workshop were: every day consumer products (PT1, 2); rodenticides (PT 14) for private use (limited use to bait boxes), fields of cereal crops, and areas of public use; antifouling (PT 21) on pleasure boats in the area of lakes and Baltic Sea; preservatives and coatings containing biocides (PT 7, PT 10) for private use. Based on this study the existing prohibitions should be examined whether the reasons for the prohibitions might be relevant for other Member States as well or new restrictions could be proposed to fill existing gaps.

Uses in focus: The decision on the modes of applications to be prohibited or restricted should be based on the extensive study mentioned above.

4.6 Reduction of biocides use in sensitive areas

Sensitive areas exist all over Europe. These can be nature protection sites according to Directive 2000/60/EC establishing a framework for the Community action in the field of water policy. Additionally, there are protection sites according to the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora and the Directive 2009/147/EC on the conservation of wild birds. Some biocidal products can be used directly in these areas or indirect emissions to these areas might occur. Insecticides that are used for the control of mosquitoes or oak procession moths might be applied to nature and water protections sites. This is happening in Germany on a regular basis. Disinfectants for fish farms or cooling water treatment can enter water protection areas directly as well as antifoulings especially in marinas.

Also areas that are used by the general public or especially vulnerable groups can belong to sensitive areas. In this text we focus on measures to protect nature and water protection sites as only this was part of the recent project. However, it has been discussed on our workshops that in public areas the use of biocides should be kept as low as possible while ensuring that there are no risks for the public health by not fighting pests.

Status quo: There is no harmonised regulation of the application or service-life of biocides in sensitive areas. In some European states there are certain restrictions for the use of biocides. Finland for example has a ban on antifouling products in freshwater[7]. In Finland and Sweden the sensitivity of the Baltic Sea is already considered during national product authorisation of antifouling paints. In Switzerland it is prohibited to treat wood and store treated wood in groundwater protection areas[8]. Also in Germany some regional regulations exist. These restrict or prohibit e.g. the use of antifouling products on boats at the Lake Constance[9], the Wakenitz[10] and on several water reservoirs in the region of the Ruhr[11]. In Germany we are also aware of regulations establishing water protection sites that take into account a prohibition of plant protection products but not of biocides – even though these may include the same active substances and products. However, there is no systematic overview over these regulations that are sometimes on very small scales. We hope that the study that is conducted by Milieu Ltd. for the EU Commission at the moment will shed some light on this topic as the distributed questionnaire asked for information regarding specific regulations to protect certain areas.

Goals: The emission of biocides to sensitive areas should be minimised as much as possible.

Instruments: The special needs of sensitive areas should be considered during the control of infestations. In nature or water protection sites this means that the use of biocidal products has to be prohibited. In other sensitive areas biocide-free alternatives should be used preferably or products that were authorised according to the simplified procedure laid down in article 25 of the BPR. Products with a high risk of losses or with substances that are candidates for substitution should be banned completely. To reduce emissions state-of-the-art technology should be used for the application to prevent negative impact on the environment. This could be either done by prohibiting certain modes of application that have a known high emission or by defining a positive list of machinery with low emissions (see chapter 3.5).

Uses in focus: It should be focused on uses that lead to emissions to the sensitive areas. These could be direct entry pathways of insecticides or antifouling agents or indirect pathways as they occur through leaching of wood preservatives or of facades.

7 http://www.tukes.fi/en/Branches/Chemicals-biocides-plant-protection-products/Biocides/Restrictions-on-the-use-of-biocidal-products/Antifouling-products/ (Accessed on 8 December 2014.)

8 „Verordnung zur Reduktion von Risiken beim Umgang mit bestimmten besonders gefährlichen Stoffen, Zubereitungen und Gegenständen vom 18. Mai 2005 (Stand am 1. Dezember 2014)“

9 „Verordnung über die Schifffahrt auf dem Bodensee vom 25. November 2013“

10 „Landesverordnung über die Regelung des Gemeingebrauchs und des Befahrens mit Wasserfahrzeugen auf der Wakenitz und den Ratzeburger Seen vom 25. Januar 2000“

11 „Freizeitordnung des Ruhrverbands für die Hennetalsperre, Sorpetalsperre, Möhnetalsperre, Biggetalsperre und Listertalsperre vom 01. Januar 2014“

Excursus: Treated articles

"Treated articles" in the context of the BPR means any substance, mixture or article which has been treated with, or intentionally incorporates, one or more biocidal products. According to the BPR treated articles should not be placed on the market unless all active substances contained in the biocidal products with which they were treated or which they incorporate are approved in accordance with this Regulation. If treated articles have a primary biocidal function they are considered as biocidal products. However, if they have another primary function (like antibacterial socks or kitchen equipment) they are not considered as such products.

This has the consequence that treated articles do not fall under any provisions that might be established during product authorisation. This includes e.g. conditions of use or restrictions not to use products in certain areas that are especially sensitive. Furthermore the efficacy of the active substances that could be contained in the treated articles only has to be proven in a general way and not for this specific usage. This might lead to unnecessary emissions to the environment and should be avoided. Risks that were detected during the risk assessment of the respective active substances do not have to be pointed out on the labels of the treated articles. We think it would be important for a sustainable use of biocides to develop more differentiated regulations on EU level on treated articles that do not have a primary biocidal function.

4.7 Information and awareness raising

Information and awareness raising are important to communicate risks and their mitigation to users of biocidal products that cannot be reached by training and further education measures.

Status quo: The need to inform the general public on biocides is already included in article 17 (5) sentence 3 of the BPR. The article requests that Member States shall take necessary measures to provide the public with appropriate information about the benefits and risks associated with biocidal products and ways of minimising their use. In Germany, for example, the different information offers are gathered on a website of the Federal Office for Chemicals at the Federal Institute for Occupational Safety and Health (BAuA)[12]. In this context we are providing information regarding alternative and preventive measures to minimise the use of biocidal products to the minimum necessary[13].

Information about the authorised products can be found on the website of the BAuA as well. However, the information that is given there is not very detailed.

Another possibility to inform the user of biocidal products are the labels of the respective products. These have been criticised in our workshops as they have to be overloaded with information due to different legal requirements. Eco-labels can support the users in their choice of products from our point of view. However, we see no need in the establishment of eco-labels for biocidal products. These imply that some products are eco-friendly which they are not due to the inherent properties of biocides. However, we support the use of eco-labels for biocide-free alternatives (e.g. in Germany: "Blue angel" for indoor pest control and prevention) or, at most, also eco-labels for products containing only active substances from Annex I of the BPR.

12 http://www.biozid-portal.de/biozid-portal/de/Startseite.html
13 www.biozid.info

Goals: Misuse and unnecessary applications should be minimised by informing all users on a sustainable use of biocides and alternative methods.

Instruments: We think that the legal basis already exists in the BPR to allow for measures to inform the general public. However, we think it would be helpful for all Member States to work closer together in this topic and exchange ideas for information campaigns. Denmark for example launched a creative campaign including a website[14], music video and apps. At the moment the information offers in Germany also concentrate on online services (see above). It should be considered to include also other ways of communication to reach a larger user group.

To enhance the comprehensibility of labels the legal requirements should be critically evaluated in a study and revised if necessary to simplify them. Some Member States authorise the product label together with the biocidal product. This could be a way to review the labels as an important tool to inform users and could be made mandatory for all Member States. The use of barcodes for smartphones or similar approaches could support users to get access to more detailed information. This may also help against overloading of labels with information. Again, this would be a technical way that would not be open to people without smartphones.

The online information regarding the authorised products could be extended towards brief results of the risk assessment and further information to give people an overview over different possibilities and the respective risks.

Uses in focus: The information of the public is especially important for uses by non-professional users because for these users a gap of information is assumed and they cannot be reached by training measures. However, awareness raising is considered important for all user groups to a different extent.

4.8 Data collection

As explained in chapter 2 missing data is an important issue that prevents the elaboration of target-oriented measures for some areas. From our point of view the generation of data concerning the use of biocides should be the very first measure to tackle to be able to identify the most problematic use areas and develop appropriate measures for all biocidal products.

Status quo: At the moment data on the production, sale or use of biocidal products is scarce. There is no reliable overview over the amounts that are used in Germany and the EU. In Belgium certain sales of biocides have to be registered (see chapter 3.3). However, this may only be feasible for products that are not sold in high volumes as for example products authorised for professionals only. Another way would be to request data from the applicants during product authorisation. This is being done in some States where the applicants have to report their production, import and export annually (e.g. Denmark, Norway). This has the drawback that there may be little information regarding the actual uses of the products in the collected data.

The only indication we have in Germany is the notification of biocidal products due to a specific national ordinance (Biozid-Meldeverordnung). All biocidal products marketable in the framework of the transitional rules have to be notified to the BAuA before they are placed on the market. This notification does not include any data on production or sale amounts. Thus, we do not know how much of the respective substances is used in Germany and can be expected in the environment. This is the problem in the other Member States as well.

Goals: The amounts of biocides that are used and how they are used should be known to gain more insight and enable target-oriented measures.

Instruments: Biocides should be included in the Regulation (EC) 1185/2009 concerning statistics on pesticides. In recital 5 of this Regulation it is already anticipated that the scope of it will be extended to cover biocides as well. The variables to be collected that are related to the use would have to be adapted to biocides. For PPP the quantity of the respective substance used on a specific crop and the area treated with the substance are reported at the moment.

Uses in focus: This data should be available for all PT to allow prioritisation of measures between uses.

14 http://www.hverdagsgifte.dk/

4.9 Environmental monitoring

The knowledge about biocidal active substances in the environment is an important factor to elaborate measures that promise the highest benefit for the environment with minimal investment.

Status quo: Knowledge about the occurrence of biocides in environmental compartments is only fragmentary. Some active substances have been included as priority substances under the Water Framework Directive 2000/60/EC or in national legislation e.g. in the German Surface Water Ordinance. However, these are mainly substances that are also used in PPP. An all-embracing approach for the environmental monitoring of biocidal active substances is missing. All available data for Germany has been compiled in a research project of the UBA[15]. This data shows that biocidal active substances are found in German environmental matrices and thus should be monitored further. Examples from other Member States show similar results.

Goals: The pollution of the environment should be investigated to enable goal-oriented emission reduction measures.

Instruments: For the monitoring of biocides in the environment a comprehensive approach should be elaborated to define a reasonable monitoring strategy. This should be based on the way the substance is used, how much is used and the substances properties. In Germany we are currently working on a project to define such monitoring strategy which could also be used by other Member States. We are planning a workshop in June 2015 in cooperation with the NORMAN Network[16] to discuss the concept with national experts and colleagues from the Member States. We hope to implement the monitoring concept in practice in Germany by the responsible German Federal States as soon as possible.

In general monitoring programmes have to be paid for by the Member States. A risk-based specific monitoring however could be the duty of an applicant during active substance approval or product authorisation.

Uses in focus: Environmental monitoring is only reasonable for specific substances. This has to be focussed on the most problematic cases and decided on based on use types, usage amounts and substance properties.

4.10 Surveillance

Surveillance of the compliance to “Codes of best practice” or risk mitigation measures laid down during product authorisation is in our point of view critical for the success of these measures.

Status quo: Surveillance of the sale and use of biocidal products is organised in different ways in the Member States. For example in Germany it is a task of the Federal States. Generally it can be stated that at the moment the staff for the surveillance of the differentiated uses is generally limited.

Goal: To enforce the proposed measures responsible authorities are needed with enough personnel to observe the market and the uses. Independent advice should be given to the users.

Instruments: A mechanism should be established to survey the sales and/or use of biocidal products. The results of the surveillance should be publically reported every year. Additionally to the task of surveillance the mechanism should include an independent advisory service to give support to the users aside a commercial background.

Uses in focus: Surveillance of sales and uses should be established for all PT if possible. However, this will be especially difficult for non-professional users.

15 cf. Rüdel and Knopf. 2012

16 Network of reference laboratories, research centres and related organisations for monitoring of emerging environmental substances

5 References

BiPRO (2010): Chemical Leasing as a model for sustainable development with test procedures and quality criteria on the basis of pilot projects in Germany. FKZ 3707 67 407. Available under http://www.chemicalleasing.com/docs/news/CL%20UBA%20Project%202010%20FINAL.pdf. Accessed 16 June 2014.

COWI (2009): Assessment of different options to address risks from the use phase of biocides

Rüdel, H., Knopf, B. (2012): Vorbereitung eines Monitoring-Konzepts für Biozide in der Umwelt, Final report of FKZ 360 04 036 by Fraunhofer IME, Schmallenberg for the Umweltbundesamt, Dessau-Roßlau.

Schülke & Mayr GmbH (2012): Chemikalienleasing – effiziente und nachhaltige Krankenhaushygiene. https://www.dbu.de/projekt_26035/_db_1036.html. Accessed 16 June 2014.

UNIDO (2013): Chemical Leasing - Redefining the sustainable management of chemicals. http://www.unido.org/fileadmin/user_media/Services/PSD/UNIDO_business_partnerships/Chemical_Leasing.pdf. Accessed 16 June 2014.

Zamparutti, T., Goldenmann, G., van der Burgt, N., Vernon, J., Tuffnell, N., Gartiser, S. (2010): Study towards the Development and Dissimination of Best Practice on Sustainable Use of Biocidal Products.

6 Annex – Possible actions at national level

To illustrate the possibilities we see to implement a sustainable use of biocides at national level we compiled a set of measures for Germany. For several of these measures the regulatory background already exists in Germany and a rapid implementation should be possible. However, this does not replace the need for a collective European solution. It should only be an encouragement for national authorities that want to take a leading role in the sustainable use of biocides and that want to implement first measures while a European approach is still under discussion.

Regulatory actions

To achieve a sustainable use of biocides we propose the following regulatory actions:

1. Establish an ordinance defining "Codes of Best Practice" for biocidal products according to §17 (3) sentence 2 ChemG and making their adherence mandatory.
2. Establish an independent advisory service for the use of biocidal products and its surveillance.
3. Establish an ordinance making training mandatory for the use of certain biocidal products according to §17 (3) sentence 1 in conjunction with §17 (1) No. 2 ChemG and defining the respective curricula.
4. Establish an ordinance defining requirements for sales for biocidal products according to §17 (3) sentence 1 in conjunction with §17 (1) No. 1c ChemG.
5. Establish an ordinance defining procedures to gain knowledge on the use of biocidal products and establishing an environmental monitoring according to §12h (2) No. 2.
6. Establish an ordinance establishing control procedures for equipment for the application of biocidal products according to §12h (2) ChemG.

Non-regulatory actions

To promote the sustainable use of biocides and alternative measures we propose the following:

1. Give advice during the development of BREFs on biocides and possible alternatives.
2. Establish the imparting of sustainable use of biocidal products and alternatives or preventive measures in existing curricula of apprenticed professions.
3. Make available information for the responsible persons on a sustainable use of biocides on www.beschaffung-info.de.
4. Develop concepts to implement Chemical Leasing or Knowledge Leasing in businesses selling biocides.
5. Extent the information of the general public from online offers to other ways of communication to reach a broader user group.
6. Extent the information regarding authorised biocidal products.
7. Inform the Federal States on risks of biocides to promote the restriction of their use in regional legislation on water and nature protection sites.

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