

Guidance on Calculation of Action Plan Costs for Specific Persistent Organic Pollutants

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1. Introduction

The Stockholm Convention on persistent organic pollutants (POPs) requires each Party to “develop and endeavour to implement a plan for the implementation of its obligations under this Convention” and “review and update, as appropriate, its implementation plan on a periodic basis and in a manner to be specified by a decision of the Conference of the Parties”.¹

In developing, reviewing, and updating a national implementation plan (NIP) for the Stockholm Convention, a number of action plans (or “strategies” or other similar plans) can be developed.² The implementation of each action plan will typically require a range of resources, such as human resources, facilities, equipment, services, and materials. Accurate costing of action plans will greatly facilitate national implementation as well as an understanding of the true costs of implementing the Convention globally. In order to facilitate a calculation of action plan costs, UNITAR, in collaboration with the Secretariat of the Stockholm Convention³, has developed the following guidance, which presents a number of considerations that a Party may wish to take into account.

Many Parties have completed the first edition of their NIP and are in the process of NIP review and updating for the new POPs. In most cases, the Parties will have developed a number of discrete action plans where details necessary for meeting the related obligations will have been outlined and agreed. Activities that are identified under each action plan can form the basis for costing of action plans. Identifying the costs of activities also plays a role in the assessment of the funding needed by developing country Parties and Parties with economies in transition to implement the Convention.⁴

While the starting point for costing is each country’s NIP, additional guidance has been provided here to serve as a “check” against the NIP’s content. Firstly, as each Party’s unique national situation will determine which Convention obligations are relevant, a Party could consider reviewing its obligations (and priorities) by working through the Decision Trees on Stockholm Convention obligations set out in Annex 2 to the present document.⁵ Secondly, for each major area under the Convention, a (non-exhaustive) list of relevant obligations and selected activities are presented below (section 3). These can be used to assist with a review of existing action plans to ensure that all major obligations and associated activities have been included. The areas covered are as follows:

- Intentionally produced POPs:
 - aldrin, alpha hexachlorocyclohexane (alpha-HCH), beta hexachlorocyclohexane (beta-HCH), chlordane, chlordecone, dieldrin, endrin, heptachlor,

¹ Guidance for assisting countries in the preparation of national implementation plans was adopted by the Conference of the Parties at its first meeting; see decision SC-1/12. Guidance for the review and updating of national implementation plans (Annex to decision SC-1/12) and an elaborated process for such review and updating (Annex to decision SC-2/7) were also adopted by the Conference of the Parties at its first and second meetings respectively.

² In this context, each Party must determine which action plans are critical and which are of secondary importance.

³ In accordance with Decisions SC-1/12, SC-2/7, and SC-3/8 of the Conference of the Parties of the Stockholm Convention.

⁴ In accordance with decision SC-5/22.

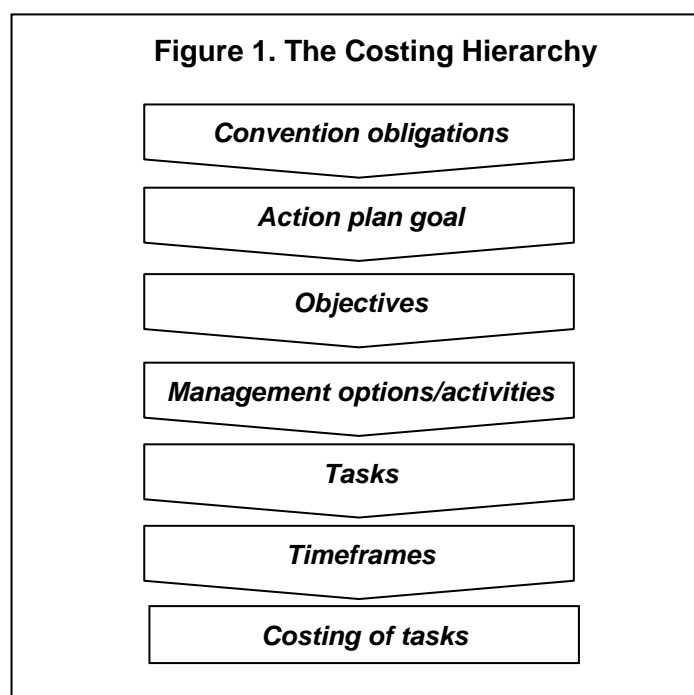
⁵ The Decisions Trees were initially developed jointly by UNITAR and UNEP.

- hexabromobiphenyl (HBB), hexachlorobenzene (HCB), mirex, pentachlorobenzene (PeCB), toxaphene;
- tetrabromodiphenyl ether (tetraBDE) and pentabromodiphenyl ether (pentaBDE) (commercial pentabromodiphenyl ether), hexabromodiphenyl ether (hexaBDE) and heptabromodiphenyl ether (heptaBDE) (commercial octabromodiphenyl ether);
 - lindane; endosulfan;
 - DDT, perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) and PFOS related chemicals⁶
 - Intentionally produced POPs: polychlorinated biphenyls (PCBs)
 - Unintentionally produced POPs: hexachlorobenzene (HCB), pentachlorobenzene (PeCB), PCBs, PCDDs/PCDFs
 - Stockpiles
 - Wastes
 - Trade
 - Articles containing POPs

⁶ PFOS related chemicals are chemicals that contain the structural element PFOS in their molecular structure as they are and were produced with perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) as an intermediate or starting material.

2. Practical Steps for Costing Action Plans

This part of the document outlines a sequence of steps that can assist Parties when costing action plans. These steps—or the “costing hierarchy”—is illustrated in figure 1 below. (Further details on these steps as well as the entire action plan process, from planning to implementation, are provided in the “Guidance on Action Plan Development for Sound Chemicals Management” developed by UNITAR and presented in Annex 3 of this document).



To illustrate the steps, the theme of “Intentionally produced POPS: polychlorinated biphenyls (PCBs)” will be used as an example.

Convention Obligations

Each Party may wish to review the major obligations under the Convention against their NIP’s content. This can be achieved by reviewing the decision trees (Annex 2) and/or the (non-exhaustive) list of relevant obligations and selected activities (Section 3).

The major obligations for Parties under the Convention that relate to PCB management and elimination include, as appropriate, that Parties:

1. Act in accordance with the Convention goal⁷ of the elimination of production and use of PCBs
2. Cease production of new PCBs immediately (upon entry into force)⁸
3. Eliminate use of in-place PCB equipment by 2025
4. Make best efforts to identify, label, and remove from use equipment containing > 50ppm, with a higher priority given to equipment containing higher levels of PCBs

⁷ Stockholm Convention on POPs, Article 1

⁸ Stockholm Convention on POPs, Annex A, Part II

5. Do not trade in PCB equipment (except for environmentally sound management of wastes)
6. Do not engage in recovery of liquids with >50 ppm PCBs for reuse (except for maintenance and servicing of existing equipment)
7. Achieve environmentally sound management of PCB wastes as soon as possible and by no later than 2028
8. Report to the Conference of the Parties every 5 years on their progress

Action Plan Goal

Based on the relevant obligations and country situation, the Party can establish a goal for the action plan.

For PCB management and elimination, the action plan goal could, for example, be “Identify and eliminate the use of PCBs in equipment by 2025, promote measures to reduce exposures and risk related to PCB use, and ensure environmentally sound waste management of PCB liquid and PCB-containing equipment by 2028”.

Action Plan Objectives

Objectives state, at a finer level of detail than the goal, the specific outcomes that the action plan expects to accomplish. Some objectives can be attained only towards the end of action plan implementation; others may be met along the way.

Objectives for a PCB management and elimination action plan could include:

- Establish a legal framework and technical standards, and strengthen related enforcement for managing PCB-containing equipment and articles by 2011
- Establish a regularly-updated system for identifying and labeling PCB-containing equipment by 2012 to enable prioritisation of highest risk equipment and allow tracking over time throughout the life cycle
- Strengthen national capacity for environmentally sound management of PCB-containing equipment by 2012
- Ensure environmentally sound handling and transportation of PCB wastes, and environmentally sound disposal by 2013
- Ensure that stakeholders (e.g. electricity companies, government, private operators involved in maintenance, transport, and destruction, NGOs) have sufficient levels of awareness regarding PCB management and elimination by 2013

Management Options/Activities

An activity can be defined as an element of work performed during the course of action plan implementation. An activity has an expected duration, cost, and resource requirements. In some cases, activities will only address one objective, while in other cases they will help to deliver multiple objectives.

For the objective “Establish a legal framework and technical standards, and strengthen related enforcement for managing PCB-containing equipment and articles by 2011”, management options/activities may include, inter alia:

- Import: Reviewing and enforcing custom control mechanisms, and training of custom officers for compliance with Stockholm, Basel, and Rotterdam Conventions

- Production: Developing and implementing controls on industrial companies' manufacturing of electrical transformers using a pollutant release and transfer register approach (including analysis of input material: second hand material, mineral oil, etc.), as well as a purchasing policy for input material
- Use:
 - Developing and implementing a PCBs declaration system to competent authorities including risk assessment of PCBs and PCB-contaminated transformers in use and decommissioned
 - Ensuring compliance for PCB transformers in use (e.g. labelling, default protection device, fire protection devices)
 - Undertaking annual reporting
 - Carrying out inspection of PCB installations
- Disposal:
 - Regulating handling, packaging, transportation, and destruction of PCB wastes
 - Establishing a licensing system for relevant companies
 - Implementing the Basel Convention mechanisms for transboundary shipment of PCB wastes
- Recycling: Reviewing regulations related to the recycling of used oil, waste control, pollutant release and transfer register approach for recycling activities, and the recycling of metal scraps

For the objective "Establish a regularly-updated system for identifying and labeling PCB-containing equipment by 2012 to enable prioritisation of highest risk equipment and allow tracking over time throughout the life cycle", management options/activities may include, inter alia:

- Developing/maintaining detailed inventories of PCB oils, equipment, and wastes, which identify the holders of PCBs and PCB-containing equipment, with a segregation between PCB oil equipment and mineral oil equipment associated with a risk assessment determining the phase out process
- Determining PCB levels in equipment in-use nationally
- Developing/maintaining inventory models for equipment containing pure/high concentrations of PCBs
- Developing/maintaining inventory/estimation models for equipment with low concentrations of PCBs in oils (by criteria of distribution)
- Developing risk assessment models to prioritise action taken to protect human health and the environment (most exposed populations, critical steps in the sound management of equipment, etc.)
- Making use of IT-based tools for the maintenance and monitoring of PCB-containing equipment and life-cycle management

For the objective "Strengthen national capacity for environmentally sound management of PCB-containing equipment by 2012", management options/activities may include, inter alia:

- Carrying out environmental management based on BAT/BEP for transformers in use and decommissioned, developing management rules for purchasing equipment, maintenance, and replacement
- Producing and/or using substances or adopting approaches that are proven alternatives to PCBs
- Reducing risk of PCB releases from equipment in use, ensuring electrical utilities are undertaking environmentally sound management of PCB oils and equipment

- Developing and implementing risk-based PCB equipment phase-out plans including progressively removing PCB equipment from high-risk locations
- Ensuring electrical utilities are equipped with tracking systems for PCB equipment

Breaking Down Activities into Tasks

Since activities are typically large elements, to accurately estimate the costs of an action plan, it is particularly important to break down activities to the task level. Activities should only be broken down to a level which enables an accurate estimation of time and resource requirements and provides enough information for those responsible for implementing the particular activity or task.

For the activity “Determining PCB levels in equipment in-use nationally”, tasks may include, inter alia:

- Reviewing results of the preliminary PCB inventory from the NIP to determine the location of in-use equipment that can contain PCBs
- Procuring and training on approved PCB testing kits
- Testing of possibly PCB-containing equipment
- Compiling and analyzing data

Timeframes

While the duration of each activity/task, at this stage, can only be an estimate, the amount of time required for each provides important input into calculating the costs. Reviewing earlier projects may provide insight into realistic timeframes, and experience shows that this is the most efficient way of learning to plan realistically. In addition, where activities or tasks are of a technical nature, it may be necessary to consult with those who have the related technical knowledge or expertise in order to make realistic estimations. Experience has shown that however careful the planning, it is wise to build in extra time to allow for unforeseen events.

An underestimation of time required for an activity or task can be caused by a range of miscalculations, such as leaving out essential activities and tasks; not accurately accounting for interdependence of activities or tasks; not accounting for time required for ordering and delivery of equipment; and failure to accurately consider competing resources (e.g. scheduling the same person or equipment for simultaneous activities or tasks).

Costing of Tasks

With a complete set of activities and tasks defined for each action plan, a range of related resources can be accurately estimated. These may include, inter alia, human resources, facilities, equipment, services, and materials. To determine the resource inputs required to complete each activity and related tasks, the following questions can be asked, among others:

- How many people are required?
- What type of skills/expertise do they need to possess?
- Are particular facilities, equipment, services, or materials necessary?
- What duration of time is needed (for human resources, equipment, etc.)?
- Are there any other special requirements or resources not yet covered?

Finer details on each resource can be defined by considering the following:

<i>Human resources</i>	<ul style="list-style-type: none"> - knowledge and skills (including for project/activity management) - person-days required - estimated cost
<i>Facilities</i>	<ul style="list-style-type: none"> - types - space and time required - estimated cost
<i>Equipment</i>	<ul style="list-style-type: none"> - types - space and time required - estimated cost
<i>Services</i>	<ul style="list-style-type: none"> - types (e.g. travel expenses, translation) - quantity - estimated cost
<i>Materials</i>	<ul style="list-style-type: none"> - types - quantity - estimated cost
<i>Other resources</i>	<ul style="list-style-type: none"> - unique skills - resources not covered above

Other useful approaches for accurately estimating costs could include: identifying “soft costs” such as current labour costs in the country, and identifying “hard costs” such as disposal costs and equipment costs. Reviewing earlier projects may also provide insight into realistic resource requirements.

Once calculated, totalling the costs for each set of tasks and activities can then provide a general estimate of the cost of the action plan.

A “Resource Requirements Matrix”, as presented in Box 1 below, can assist in identifying and recording the various costs of an action plan. (A blank Resource Requirements Matrix and Checklist is presented in Annex 1.)

Box 1: Resource Requirements Matrix

A Resource Requirements Matrix is a tool which can assist in charting the various costs of an action plan. It can also help with preparing action plan budgets and financial mobilisation efforts. An illustration of the Resource Requirements Matrix is provided below for the activity “Determining PCB levels in equipment in-use nationally”.

Activities and Tasks from the Action Plan	Human Resources	Facilities	Equipment	Services, Materials, etc.	Other Resources	Total Resource Costs
Activity: Determining PCB levels in equipment in-use nationally						
Task: Reviewing results of preliminary PCB inventory from the NIP to determine location of in-use equipment that can contain PCBs	Qualified reviewer (2 person-days)	Office	Computer with appropriate software			2 person-days*daily wage: \$xx Office rent: \$xx
Task: Procuring and training on approved PCB testing kits	Chemicals management staff (0.5 person-days) Trainer (5 person-days) Administrative staff (1 person-days)	Office			Training on testing kit use	0.5 person-days*daily wage: \$xx 5 person-days*daily wage: \$xx 1 person-days*daily wage: \$xx Protective clothing: \$xx Testing kits: \$xx
Task: Testing of possibly PCB-containing equipment	Qualified driver (16 person-days to travel across country) Labourers (56 person-days) Manager (8 person-days)	Sites where PCB-containing equipment are in-situ	Vehicle; PCB testing kits; tools and safety equipment for opening of PCB-containing equipment; computer for recording of results	Cooperation of authorities with PCB-containing equipment; advance approvals, etc.	Petrol	16 person-days*daily wage: \$xx 56 person-days*daily wage: \$xx 8 person-days*daily wage: \$xx Vehicle: \$xx Petrol: \$xx Tools and safety equipment: \$xxx Computer: \$xxx
Task: Compiling and analyzing data	Qualified data input specialist (3 person-days); Manager for data review (1 person-day)	Office	Computer and software			3 person-days*daily wage: \$xxx 1 person-day*wage: \$xxx

Note:

- The activities outlined here are for illustrative purposes and are not comprehensive.
- “Person-days” refer to the number of full-time days that would be required to complete an activity or task. For example, 5 person-days may equal one person working 5 days or 2 persons working simultaneously for 2.5 days. It is also important to estimate the costs of a person-day for the particular type of human resource required. For example, 1 person-day for a manager will likely be more costly than the same amount of time required for a labourer.

Incremental Costs

As part of costing action plans, developing country Parties and Parties with economies in transition, should give due consideration to the identification of incremental costs⁹ in light of Article 13 of the Convention.

In this context, the Global Environment Facility (GEF)—in its capacity, on an interim basis, as the principal entity entrusted with the operations of the financial mechanism of the Stockholm Convention—requires that project proposals discuss the value-added of GEF involvement through incremental reasoning.¹⁰

As defined by GEF, “GEF finances the incremental or additional costs associated with transforming a project with national/local benefits into one with global environmental benefits as well.”¹¹ GEF grants cover the difference or “increment” between a less costly, more polluting option and a costlier, more environmentally friendly option.

The approach by GEF¹² in determining incremental cost consists of five steps that simplify the process of negotiating incremental costs, clarifies definitions, and links incremental cost analysis to result-based management and the GEF project cycle. The emphasis is on the fit with focal area strategies and co-funding in relation with the impact/value-added of the proposed GEF intervention. The “incremental costs analysis annex” is no longer a requirement of project documentation. The steps are as follows:

- (a) Determine the environmental problem, threat, or barrier, and the “business-as-usual” scenario (or: What would happen without the GEF?)
- (b) Identify the global environmental benefits (GEB) and fit with GEF strategic programs and priorities linked to the GEF focal area
- (c) Develop the results framework of the intervention
- (d) Provide the incremental reasoning and GEF’s role
- (e) Negotiate the role of co-financing

In order to provide detailed information on the business-as-usual, the Party could undertake an assessment of ongoing and planned activities and determine the quantitative (e.g. budgets and planned expenditures) and qualitative (e.g. institutional capacity) inputs that would be forthcoming regardless of whether the GEF intervention occurs or not. In simplified terms: it should be possible to calculate which action plan costs relate to business-as-usual—i.e. the situation or context relevant to the proposed project intervention in a country or proposed project site as it would expectedly unfold without the GEF support—and which relate to the alternative “with GEF” scenario—i.e. the proposed role for the GEF based on the expected global environmental benefits of the future project.

By identifying incremental costs for the implementation of the Convention, developing country Parties and Parties with economies in transition will be able to better target financial

⁹ Under Article 13 of the Stockholm Convention, developed country Parties shall provide new and additional financial resources to enable developing country Parties and Parties with economies in transition to meet the agreed full incremental costs of implementing measures which fulfil their obligations under the Convention as agreed between a recipient Party and an entity participating in the mechanism described in paragraph 6 of the same Article.

¹⁰ GEF Trust Fund CEO Endorsement/Approval Template; <http://www.thegef.org/gef/node/3627>

¹¹ Evaluation of Incremental Cost Assessment. GEF/ME/C.30/2

¹² Operational Guidelines for the Application of the Incremental Cost Principle. GEF/C.31/12

and technical assistance. Distinguishing between baseline and incremental costs is also an essential element of the assessment of the funding needs for the implementation of the Convention as called for by the Conference of the Parties.¹³

3. Selected Convention Obligations and Activities

3.1 Intentionally Produced POPs

Annex A (elimination): aldrin, alpha hexachlorocyclohexane (alpha-HCH), beta hexachlorocyclohexane (beta-HCH), chlordane, chlordecone, dieldrin, endrin, heptachlor, hexabromobiphenyl (HBB), hexachlorobenzene (HCB), mirex, pentachlorobenzene (PeCB), toxaphene; tetrabromodiphenyl ether (tetraBDE) and pentabromodiphenyl ether (pentaBDE) (commercial pentabromodiphenyl ether), hexabromodiphenyl ether (hexaBDE) and heptabromodiphenyl ether (heptaBDE) (commercial octabromodiphenyl ether), lindane, endosulfan,

Annex B (restriction): DDT, perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) and PFOS related chemicals

The major obligations for Parties under the Convention that relate to this theme include, as appropriate, that Parties:

1. Act in accordance with the Convention goal¹⁴ of elimination of production and use of all intentionally produced POPs (industrial chemicals and pesticides)
2. Eliminate or restrict production and use and in each case, trade will be restricted¹⁵
3. Eliminate all of the above-listed chemicals (Annex A) and restrict DDT as well as perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) and PFOS related chemicals, for which there are “Acceptable Purposes” (Annex B)

Possible activities to meet the obligations may include:¹⁶

1. Producing and/or using substances or adopting approaches that are proven alternatives to the above chemicals
 - Seeking out internationally available information on alternatives recommended for use by experts and/or in use in other countries
 - Undertaking a feasibility study of alternatives and developing a transition study
 - Undertaking awareness raising among target groups that can be affected by the change to alternatives
 - Undertaking capacity building for workers and others that produce and/or use the alternatives

¹³ Decision SC-5/22 requests Parties to report on their needs every four years distinguishing baseline and incremental needs.

¹⁴ Stockholm Convention on POPs, Article 1

¹⁵ Stockholm Convention on POPs, Article 3

¹⁶ For Parties that have completed, or are in the process of completing the first or subsequent edition of their NIP, the (non-exhaustive) lists of activities outlined in this guidance should only serve as an indicative “check” on existing work already undertaken by Parties.

2. Adopting and implementing a suitable legislative framework for achieving the obligations related to the prohibition and/or use by the Party of the above chemicals
3. Enforcing legislation and regulations
 - Determining the current state of enforcement of existing legislation, and requirements, where necessary, for strengthening such enforcement of legislation prohibiting production and/or use of the above chemicals. Such requirements can include activities for:
 - capacity building for enforcement, including training and resources to equip staff with the necessary skills and equipment to enforce existing/new regulations (e.g. with the ministry of agriculture, customs authorities, laboratories, ministry of justice or legal affairs)
 - data collection and information exchange for reporting and assessing progress towards implementation
 - awareness raising for key stakeholders
4. Ensuring transparency, effective coordination, and assignment of responsibilities among government agencies, industry, nongovernmental organisations (NGOs), and other stakeholders more broadly
5. With regard to hexachlorobenzene (HCB), continuing use as a closed-system site-limited intermediate in the manufacture of other chemicals, and notifying the Secretariat
6. With regard to tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether) and hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether), continuing use for recycling of articles containing these POPs and the use and final disposal of articles manufactured from such recycled articles, if the Party has registered the specific exemption
7. With regard to lindane, continuing use as a human health pharmaceutical for control of head lice and scabies as second line treatment, if the Party has registered the specific exemption
8. With regard to endosulfan, continuing use as a pesticide for crop-pest combination according to Annex A Part VI, if the Party has registered the specific exemption
9. With regard to DDT, continuing use as a closed-system site-limited intermediate in the manufacture of other chemicals, and notifying the Secretariat
10. With regard to DDT, continuing registered acceptable purpose production and/or use for disease vector control if it is only produced or used for disease vector control in accordance with the WHO recommendations and guidance on the use of DDT, and when locally safe, effective and affordable alternatives are not available to the Party in question
11. With regard to perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) and PFOS related chemicals, continuing use of the registered specific exemptions and registered acceptable purposes production and use
12. Developing and implementing plans to address stockpiles and wastes of these substances (also see Sections 3.4 and 3.5)
13. For chemicals, such as hexabromobiphenyl, tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether), hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether), and perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) and PFOS related chemicals, occurring as constituents of articles, fulfilling the requirements for articles containing POPs (see also section 3.7)

3.2 Intentionally Produced POPs in Annex A (elimination): polychlorinated biphenyls (PCBs)

The major obligations for Parties under the Convention that relate to this theme include, as appropriate, that Parties:

1. Act in accordance with the Convention goal¹⁷ of the elimination of production and use of PCBs
2. Cease production of new PCBs immediately (upon entry into force)¹⁸
3. Eliminate use of in-place PCB equipment by 2025
4. Make best efforts to identify, label, and remove from use equipment containing > 50ppm, with a higher priority given to equipment containing higher levels of PCBs
5. Do not trade in PCB equipment (except for environmentally sound management of wastes)
6. Do not engage in recovery of liquids with >50 ppm PCBs for reuse (except for maintenance and servicing of existing equipment)
7. Achieve environmentally sound management of PCB wastes as soon as possible and by no later than 2028
8. Report to the Conference of the Parties every 5 years on their progress

Possible activities to meet the obligations may include:

1. Enhancing national regulatory infrastructure and supporting mechanisms
 - Import: Reviewing and enforcing custom control mechanisms, and training of custom officers for compliance with Stockholm, Basel, and Rotterdam Conventions
 - Production: Developing and implementing controls on industrial companies' manufacturing of electrical transformers using a pollutant release and transfer register approach (including analysis of input material: second hand material, mineral oil, etc.), as well as a purchasing policy for input material
 - Use:
 - Developing and implementing a PCBs declaration system to competent authorities including risk assessment of PCBs and PCB-contaminated transformers in use and decommissioned
 - Ensuring compliance for PCB transformers in use (e.g. labelling, default protection device, fire protection devices)
 - Undertaking annual reporting
 - Carrying out inspection of PCB installations
 - Disposal:
 - Regulating handling, packaging, transportation, and destruction of PCB wastes
 - Establishing a licensing system for relevant companies
 - Implementing the Basel Convention mechanisms for transboundary shipment of PCB wastes (also see Sections 3.4-3.6)
 - Recycling: Reviewing regulations related to the recycling of used oil, waste control, pollutant release and transfer register approach for recycling activities, and the recycling of metal scraps (also see Sections 3.4-3.6)

¹⁷ Stockholm Convention on POPs, Article 1

¹⁸ Stockholm Convention on POPs, Annex A, Part II

2. Enhancing national capacity for environmentally sound management of PCB-containing equipment in use
 - Improving generation and collection of data and information on PCBs to support environmentally sound management of PCBs at the national level, including developing and maintaining detailed inventories of PCB oils, equipment, and wastes held by utility companies.
 - Developing/maintaining inventories which identify the holders of PCBs and PCB-containing equipment, with a segregation between PCB oil equipment and mineral oil equipment associated with a risk assessment determining the phase out process
 - Developing/maintaining inventory models for equipment containing pure/high concentrations of PCBs
 - Developing/maintaining inventory/estimation models for equipment with low concentrations of PCBs in oils (by criteria of distribution)
 - Developing risk assessment models to prioritise action taken to protect human health and the environment (most exposed populations, critical steps in the sound management of equipment, etc.)
 - Making use of IT-based tools for the maintenance and monitoring of PCB-containing equipment and life-cycle management
 - Carrying out environmental management based on BAT/BEP for transformers in use and decommissioned, developing management rules for purchasing equipment, maintenance, and replacement
 - Producing and/or using substances or adopting approaches that are proven alternatives to PCBs
 - Reducing risk of PCB releases from equipment in use, ensuring electrical utilities are undertaking environmentally sound management of PCB oils and equipment, progressively removing PCB equipment from high-risk locations, developing and implementing risk-based PCB equipment phase-out plans, and ensuring electrical utilities are equipped with tracking systems for PCB equipment
3. Undertaking environmentally sound handling and transportation of PCB wastes, and environmentally sound disposal: decontamination and thermal decomposition processes
4. Undertaking awareness raising for stakeholders (e.g. electricity companies; government; private operators involved in maintenance, transport, and destruction; NGOs), including developing and implementing a communications plan on the impact of PCBs on health and environment addressing:
 - risk of exposure to PCBs
 - biodegradation and bioaccumulation of PCBs
 - concentration of PCBs in the food chain
 - cost/benefit of PCB management options
 - mechanisms for regulation
 - mechanisms for capacity building
 - mechanisms for disposal

3.3 Unintentionally Produced POPs in Annex C: hexachlorobenzene (HCB), pentachlorobenzene (PeCB), PCBs, and PCDDs/PCDFs

The major obligations for Parties under the Convention that relate to this theme include, as appropriate, that Parties:

1. Act in accordance with the Convention goal of continuing minimisation and, where feasible, ultimate elimination of total releases of chemicals in Annex C derived from anthropogenic sources (dioxins, furans, HCB, PeCB, PCBs)
2. Promote application of available, feasible, and practical measures to achieve realistic and meaningful levels of release reduction or source elimination
3. Promote development and, where appropriate, require use of substitute or modified materials, products, and processes to prevent formation and release of POPS in Annex C
4. Promote, and as provided for in an action plan, require use of best available techniques (BAT) for new sources within the following industrial source categories (Annex C, Part II) that have potential for comparatively high formation and release of POPs to the environment:
 - waste incinerators (municipal, hazardous or medical waste; sewage)
 - cement kilns firing hazardous wastes
 - pulp production involving chlorine
 - thermal processes used in metallurgical industry (secondary production of aluminum, copper or zinc; sinter plants in iron and steel industry)
5. Phase in any BAT requirements for such new sources as soon as practicable but no later than 4 years after entry into force of the Convention
6. Promote the use of best environmental practices (BEP) for these new sources
7. Promote the use of BAT and BEP for:
 - New sources within 13 categories (Annex C, Part III)
 - open burning of wastes (including landfill sites)
 - thermal processes in metallurgical industry not specified in Part II
 - residential combustion sources
 - fossil-fuel fired utility and industrial boilers
 - firing installations for wood and other biomass fuels
 - chemical production processes releasing unintentionally produced POPS (e.g. chlorophenols, chloranil)
 - crematoria
 - motor vehicles (especially those burning leaded gasoline)
 - destruction of animal carcasses
 - textile and leather dyeing and finishing
 - shredder plants for the treatment of end-of-life vehicles
 - smouldering of copper cables
 - waste oil refineries
 - Existing sources within all categories (Part II and III, as listed in 4 and 7, above)
8. Undertake inventory maintenance and action plan updating in relation to 1-7, above

Possible activities to meet the obligations may include:

1. Monitoring and developing or refining an inventory, focusing on main source categories and the main release categories (air, water, land, product, residue)
 - Building capacity building for monitoring that addresses data management, sampling techniques, and validation of analytical methods
2. Adopting and implementing a suitable legislative framework that facilitates coordination of actions taken by key stakeholders
3. Enforcing legislation and regulations and building capacity to enforce existing/new regulations
4. Developing available, feasible, and practical measures to achieve reductions and source elimination
5. Developing and, where appropriate, requiring use of substitute or modified materials, products, and process to prevent the formation of unintentional POPs
6. Promoting and pursuant to the action plan, requiring the use of BAT and BEP, for new existing sources, as required in Annex C, Parts II and III
 - Building capacity for use of BAT/BEP, including funding for and convening of training workshops, giving special attention to the reduction, continuing minimisation and, where feasible, the ultimate elimination of unintentionally produced POPs
7. Ensuring transparency, effective coordination, and assignment of responsibilities among government agencies, industry, NGOs, and other stakeholders more broadly
 - Implementing strengthened mechanisms for public participation in the regulation of sources of chemicals listed in Annex C, as well as for the public availability of monitoring data from Annex C sources (taking into account the guidance in para. 5 of Article 9)
 - Improving and expanding reporting of releases and other relevant information involving Annex C substances, as a significant contribution to providing information exchange (Art. 9) and public information, awareness, and education (Art. 10)

3.4 Stockpiles

The major obligations for Parties under the Convention that relate to this theme¹⁹ include, as appropriate, that Parties:

1. Act in accordance with the Convention goal of environmentally sound management of stockpiles that consist of, contain, or are contaminated by POPs
2. Not allow recovery, recycle, reclamation, direct use, or alternative uses of POPs
3. Not transport these materials across international boundaries without taking into account international rules (e.g. Basel Convention)
4. Develop strategies for identifying contaminated sites and, if remediation is attempted, do it in an environmentally sound manner

¹⁹ Stockholm Convention on POPs, Article 6

Possible activities to meet the obligations may include:

1. Carrying out inventories of stockpiles consisting of or containing chemicals listed in Annex A or B
 - Training and equipping local teams to carry out a comprehensive national inventory on obsolete pesticides, associated contaminated materials, and equipment as well as their storage locations (also see section 3.5)
2. Strengthening policy and regulatory regimes related to pesticide management at the country level
 - Undertaking capacity building to implement pest and pesticide regulations, and to raise awareness and engage major stakeholders, including producers' organisations and civil society on the regulatory and policy frameworks
3. Managing stockpiles, as appropriate, in a safe, efficient, and environmentally sound manner
4. Undertaking clean up and site remediation measures to mitigate the impact of obsolete pesticides threatening communities and ecosystems
5. Capacity building for sound pest management
 - Undertaking sustainable pest management interventions in target areas where the benefits are likely to be higher and where there are opportunities for integrated pest management adoption, involving strong collaboration with existing agricultural programmes in the county, e.g. addressing prevention of exposure to stockpiles, and accessibility to low and no-risk alternatives and substitutes
 - Undertaking public awareness campaigns and communication outreach on the appropriate use of pesticides that involve culturally-adapted messages to end-users of pesticides with the objective of enhancing decision-making processes, practices, and understanding of the potential adverse impacts of pesticides
6. Developing and implementing sustainable strategies for future management of pesticide-related waste

3.5 Waste

The major obligations for Parties under the Convention that relate to this theme²⁰ include, as appropriate, that Parties:

1. Act in accordance with the Convention goal of environmentally sound management of wastes that consist of, contain, or are contaminated by POPS
2. Not allow recovery, recycle, reclamation, direct reuse or alternative uses of POPs
3. Not transport these materials across international boundaries without taking into account international rules (e.g. Basel Convention)
4. Develop strategies for identifying contaminated sites and, if remediation is attempted, do it in an environmentally sound manner

Possible activities to meet the obligations may include:

1. Reviewing existing legislation and enforcement, regarding:
 - control of import of pesticides (intentional or non-intentional import of non-authorized pesticides)

²⁰ Ibid.

- phase-out dates for production and use of POPs
 - health and safety legislation to protect workers from possible exposure to POPs
 - emergency contingency planning, spill, and accident response
 - specifications of acceptable analytical and sampling methods for POPs
 - identification of contaminated sites and remediation technologies and provisions enabling the development of related inventories
 - provisions and requirements relative to the storage, handling, collection, and transport of wastes and specifications for containers, equipment, bulk containers, and storage sites containing POPs
 - requirements for hazardous waste treatment and disposal facilities
 - transboundary movement requirements in accordance with the Basel Convention
2. Capacity building for:
 - enforcing legislation (inspection, risk assessment, control, licensing private companies for laboratory work, handling, transportation, and storage)
 - developing and maintaining an inventory of POPs waste: analysis, characterization based on disposal requirements
 - handling, transportation, temporary storage of POPs waste and undertaking BAT/BEP for the management of POPs waste
 - transboundary shipment (mechanisms of the Basel convention)
 - financial mechanisms for incremental management costs
 3. Determining scope/amount of wastes
 - Identifying POPs wastes and stockpiles consisting of or containing POPs chemicals in the formal and informal sector
 - Developing appropriate strategies for the identification of products and articles in use and wastes consisting of, containing, or contaminated with POPs
 - Developing and maintaining inventories to establish a baseline quantity of products, articles, and wastes consisting of, containing, or contaminated with POPs
 - Establishing an information registry to assist with safety and regulatory inspections
 4. Undertaking analysis of wastes
 - Sampling of POPs wastes
 - Analysis to select appropriate disposal technologies and relevant disposal facilities
 - Monitoring of waste disposal processing
 5. Developing a strategy, allowing waste separation and temporary storage including:
 - classification of POPs waste based on risks during storage and disposal technologies (e.g. organic, inorganic, flammable, non-flammable, reactivity with humidity, acids)
 - temporary storage of POPs waste according to the characterization and the disposal technology (e.g. handling, collecting, transporting, and storing in an environmentally sound manner)
 6. Developing and implementing a disposal management plan in accordance with the Basel Convention based on destruction and irreversible transformation methods
 - Identifying disposal facilities (e.g. domestic treatment if disposal facilities available, pre-treatment if appropriate; regional facilities; export facilities)
 - Obtaining bids
 - Obtaining export licences from transit and export countries
 - Packaging for shipment
 - Addressing handling

- Ensuring transporting across international boundaries takes into account international rules, standards, and guidelines (e.g. Basel Convention, concerning packing, labelling, and safety information)
 - Ensuring appropriate disposal whereby POPs content is destroyed or irreversibly transformed in an environmentally sound manner, taking into account international rules, standards, etc.
 - Reporting to Secretariat of the Basel Convention
 - Preventing recovery, recycle, reclamation, direct reuse, or alternative uses of POPs, including:
 - reuse of POPs waste as medicine or for food conservation
 - control of illegal import and export of POPs wastes and uncontrolled landfills POPs wastes
7. Undertaking awareness raising of stakeholders, including public sector, private sector, civil society (NGOs, informal sector)

3.6 Trade

The major obligations for Parties under the Convention that relate to this theme²¹ include, as appropriate, that Parties:

1. Restrict trade for all POPs in Annex A and B
2. Limit imports and exports to shipments:
 - intended for environmentally sound disposal, or
 - to parties with “specific exemptions” under Annex A or B, or “acceptable purposes” under Annex B
3. Adhere to certain requirements when exporting to non-Parties, i.e.
 - conditions on both Non-Party and Party, and
 - accountability requirements (use and disposal of POPs)

Possible activities to meet the obligations may include:

1. Establishing national registers and databases related to exports and imports of chemicals, including safety information
2. Building capacity to provide the infrastructure and skills necessary to manage transboundary movement of chemicals, including ensuring chemicals are handled safely throughout their life-cycle, in an environmentally sound manner
 - Providing training courses for customs agents and border patrols regarding chemicals-related categories, trade names, names of preparations, code numbers, information on hazard classification, physicochemical, toxicological, and ecotoxicological properties, among other considerations
 - Training scientists, with requisite laboratory equipment and facilities, to enable them to assess and identify chemical components and characteristics in the context of international trade of those substances
 - Training regulatory officials and customs agents as appropriate, on the workings of the Rotterdam, Stockholm, and Basel Conventions, and SAICM as those and other relevant international instruments relate to their trade-related responsibilities

²¹ Stockholm Convention on POPs, Article 3(2)

- Building capacity with regard to the rules, procedures, and infrastructure, including laboratories, necessary to ensure compliance with and responsible use of the Rotterdam Convention rights and obligations
3. Ensuring that good management practices for chemicals are in place, and that any hazardous chemicals being exported or imported are adequately protective of human health and the environment (also see section 3.4)
 4. Taking effective steps and special precautions to minimise and prevent illegal international traffic in harmful, hazardous, or toxic chemicals and pesticides

3.7 Articles Containing POPs

The major obligations for Parties under the Convention that relate to this theme²² include, as appropriate, that Parties:

1. Act in accordance with the Convention goal of environmentally sound management of articles upon becoming wastes that consist of, contain, or are contaminated by POPs
2. Develop and implement strategies to identify articles in use that consist of, contain, or are contaminated by POPs
3. Not allow recovery, recycle, reclamation, direct use, or alternative uses of articles containing POPs
4. Not transport articles in use, or upon becoming waste, that consist of, contain or are contaminated by POPs across international boundaries without taking into account international rules (e.g. Basel Convention)
5. Where quantities of a chemical occurring as constituents of articles manufactured or already in use before or on the date of entry into force of the relevant obligation with respect to that chemical, notify the Secretariat that a particular type of article remains in use within the Party. The article shall not be considered as listed in Annex A or B. The Secretariat shall make such notifications publicly available²³

Possible activities to meet the obligations may include:

1. Investigating the technical aspects of the risks associated with chemicals in articles, and developing appropriate systems to enhance information exchange in the supply chains
2. Developing criteria for those chemicals that need to be included in a watch/monitor list regarding chemicals in articles
3. Establishing/strengthening a management regime that seeks to ensure that all appropriate types of information, including where appropriate on chemicals in articles, is available, accessible, adequate, and appropriate to the needs of all stakeholders
 - Notifying the Secretariat that a particular type of article remains in use within the Party
 - Transmitting relevant information and data on chemicals in articles to the Stockholm Convention and SAICM secretariats, and other relevant actors
 - Improving communication concerning chemicals in articles throughout their product supply chain and life-cycle

²² Stockholm Convention on POPs, Article 6(d)

²³ Stockholm Convention on POPs, note ii of Part I of Annex A and Annex B

- Using various communications-related tools (advertisements, workshops, public service announcements, posters, etc.) to increase the level of awareness and knowledge about risks to human health or the environment
- Convening workshops among companies selling or using products which contain POPs or other potentially suspect chemicals to consider options for investigating the matter further, and for their willingness to collectively address the matter in coordination with the national authorities and other interested stakeholders

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Annex 1: Resource Requirements Matrix Template and Checklist

Activities and Tasks from the Action Plan	Human Resources	Facilities	Equipment	Services, Materials, etc.	Other Resources	Total Resource Costs
Activity:						
Task:	- knowledge and skills - person-days required - estimated cost	- types - space and time required - estimated cost	- types - space and time required - estimated cost	- types - quantity - estimated cost	- unique skills - resources not covered elsewhere	
Task:						
Task:						
Task:						
Task:						
Task:						
Task:						
Task:						
Total:						

Annex 2: Stockholm Convention Obligations Decision Trees

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Decision Trees to assist with the Implementation of the Stockholm Convention

Drafts
April 2012 Edition



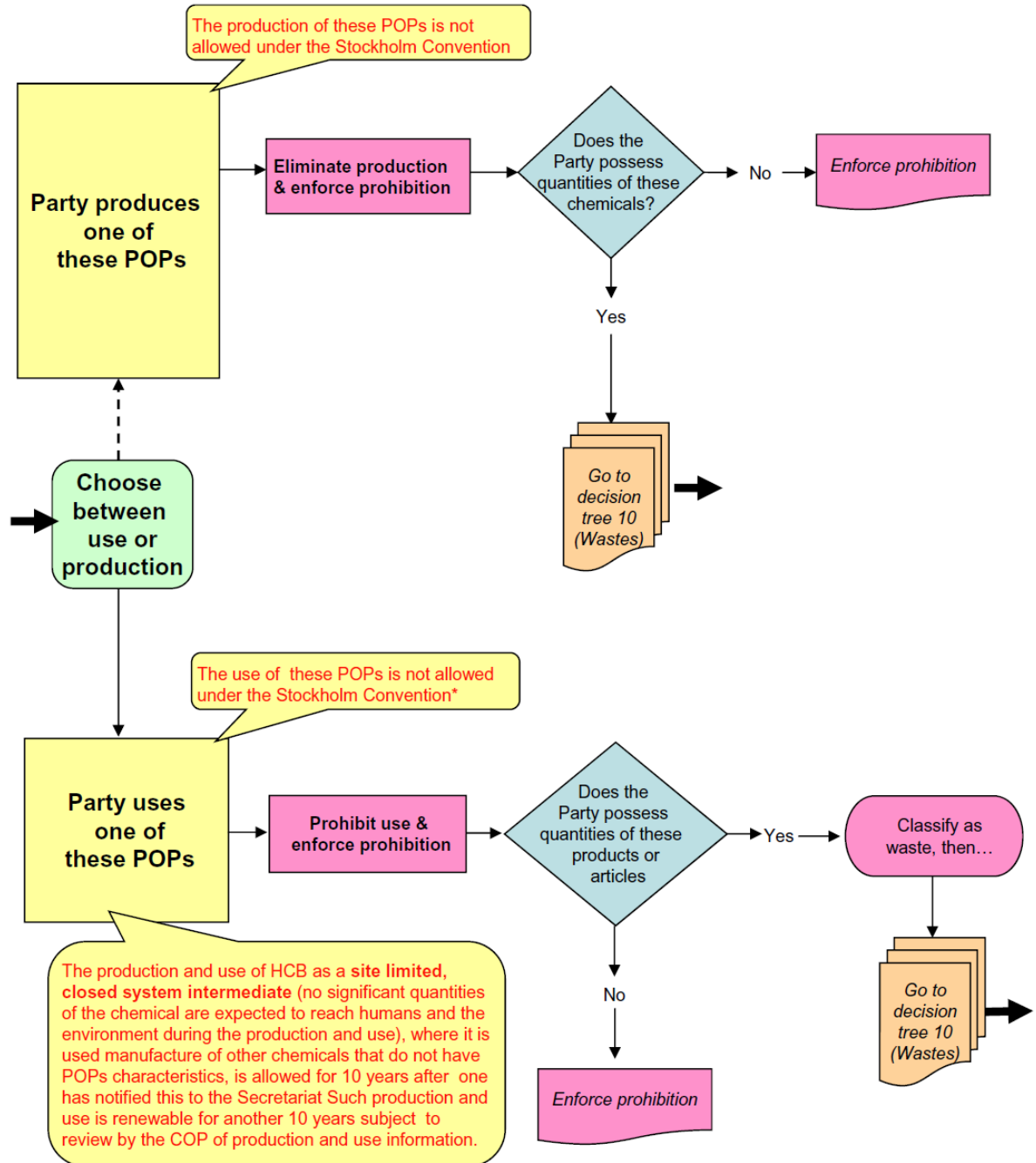
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United Nations Institute for Training and Research

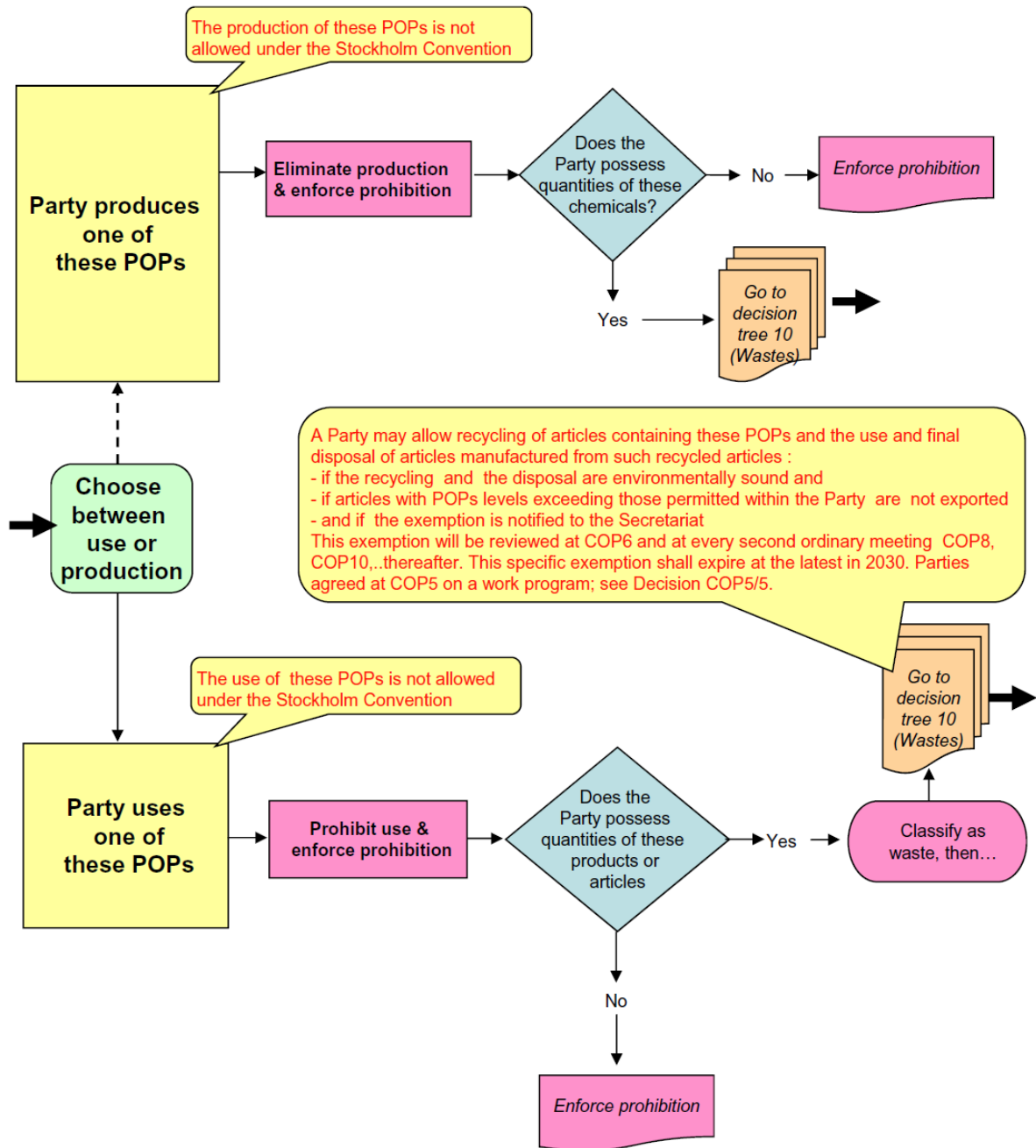
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1. Intentionally produced POPs:

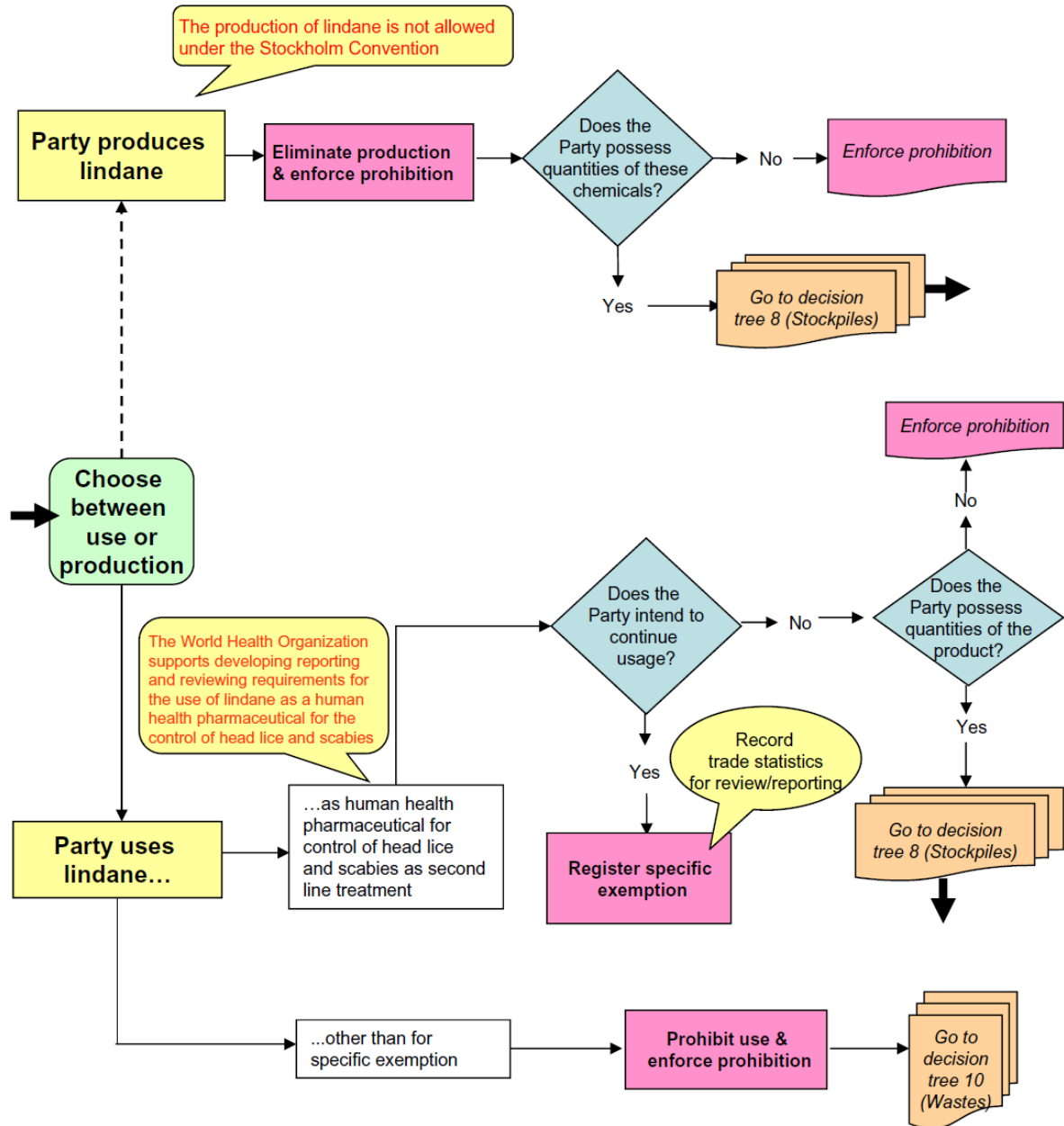
aldrin, alpha HCH, beta HCH, chlordane, chlordecone, dieldrin, endrin, heptachlor, hexabromobiphenyl, HCB, mirex, pentachlorobenzene, toxaphene



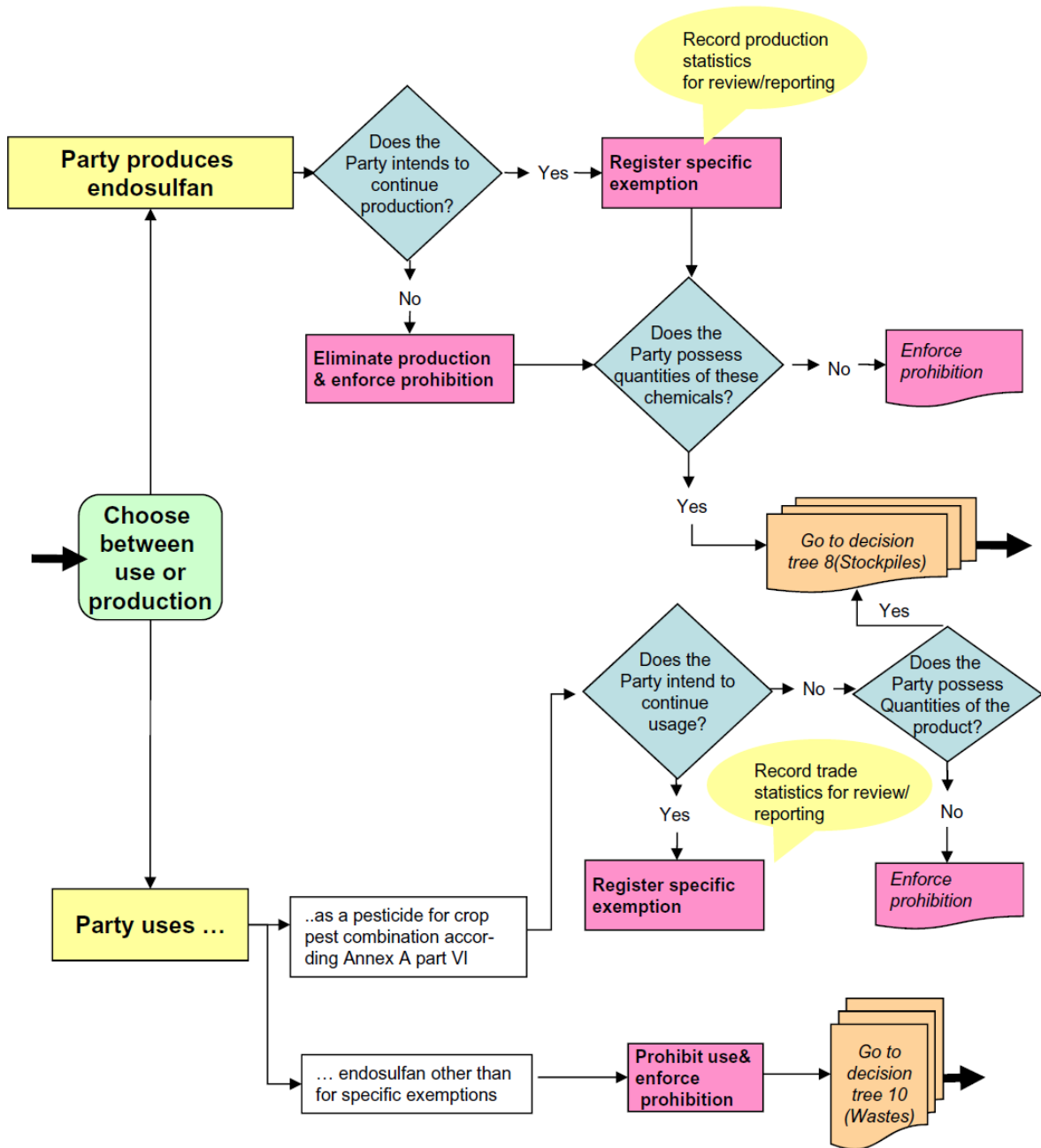
2. Intentionally produced POPs:
*tetraBDE and pentaBDE (commercial PentaBDE),
 hexaBDE and heptaBDE (commercial OctaBDE)*



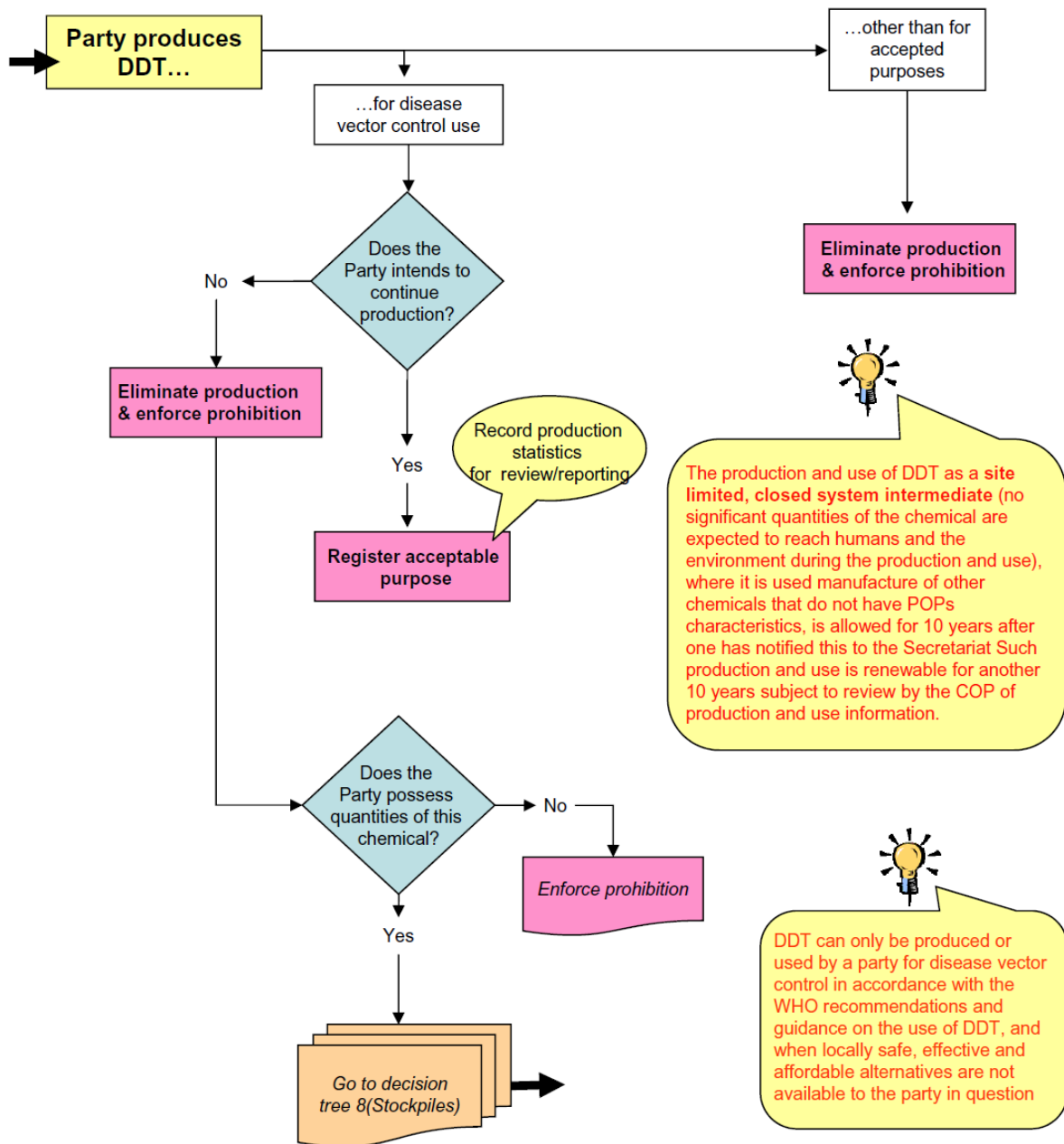
3.1 Intentionally produced POPs with specific exemption: *lindane*



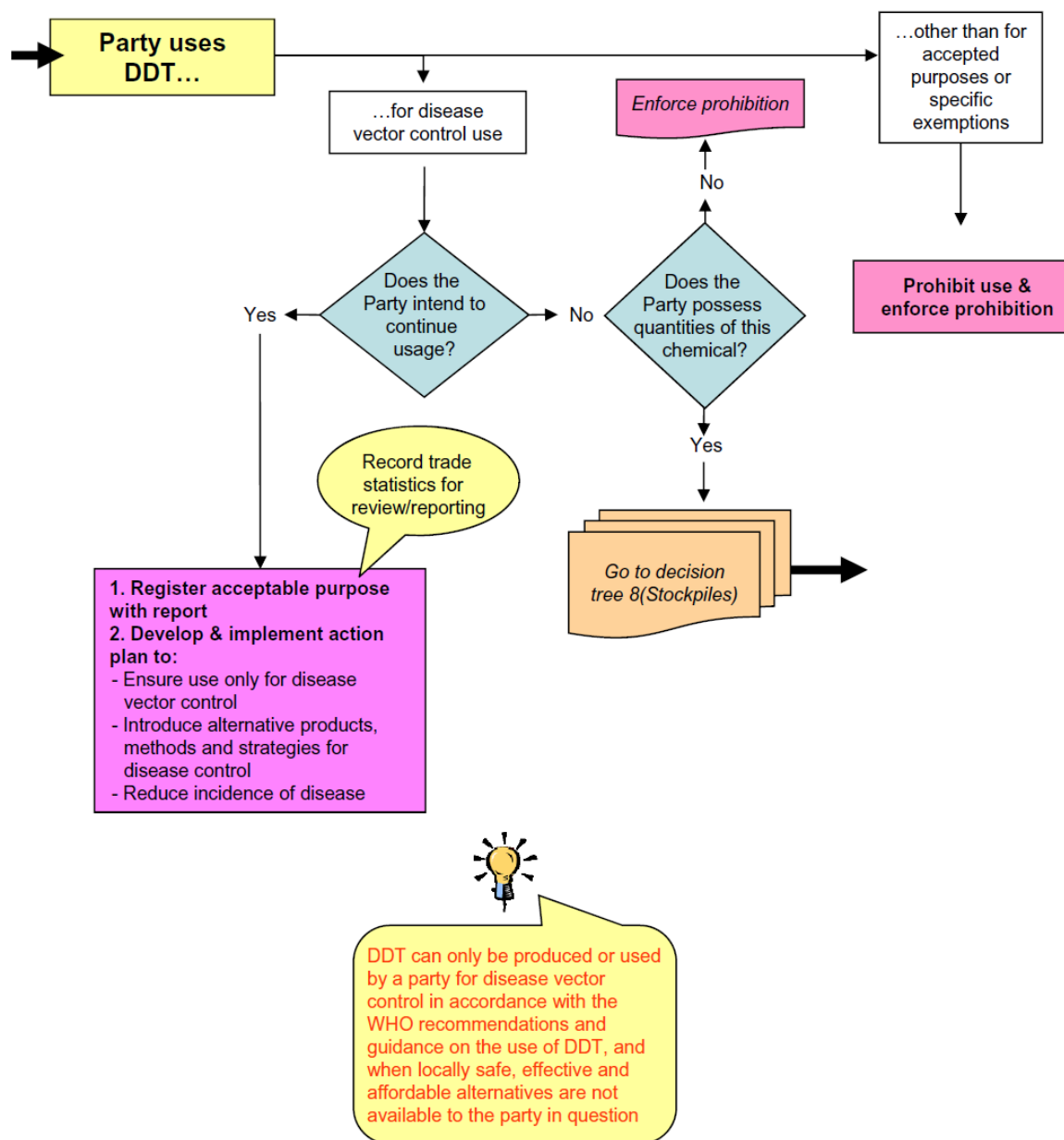
3.2 Intentionally produced POPs with specific exemption: *endosulfan*



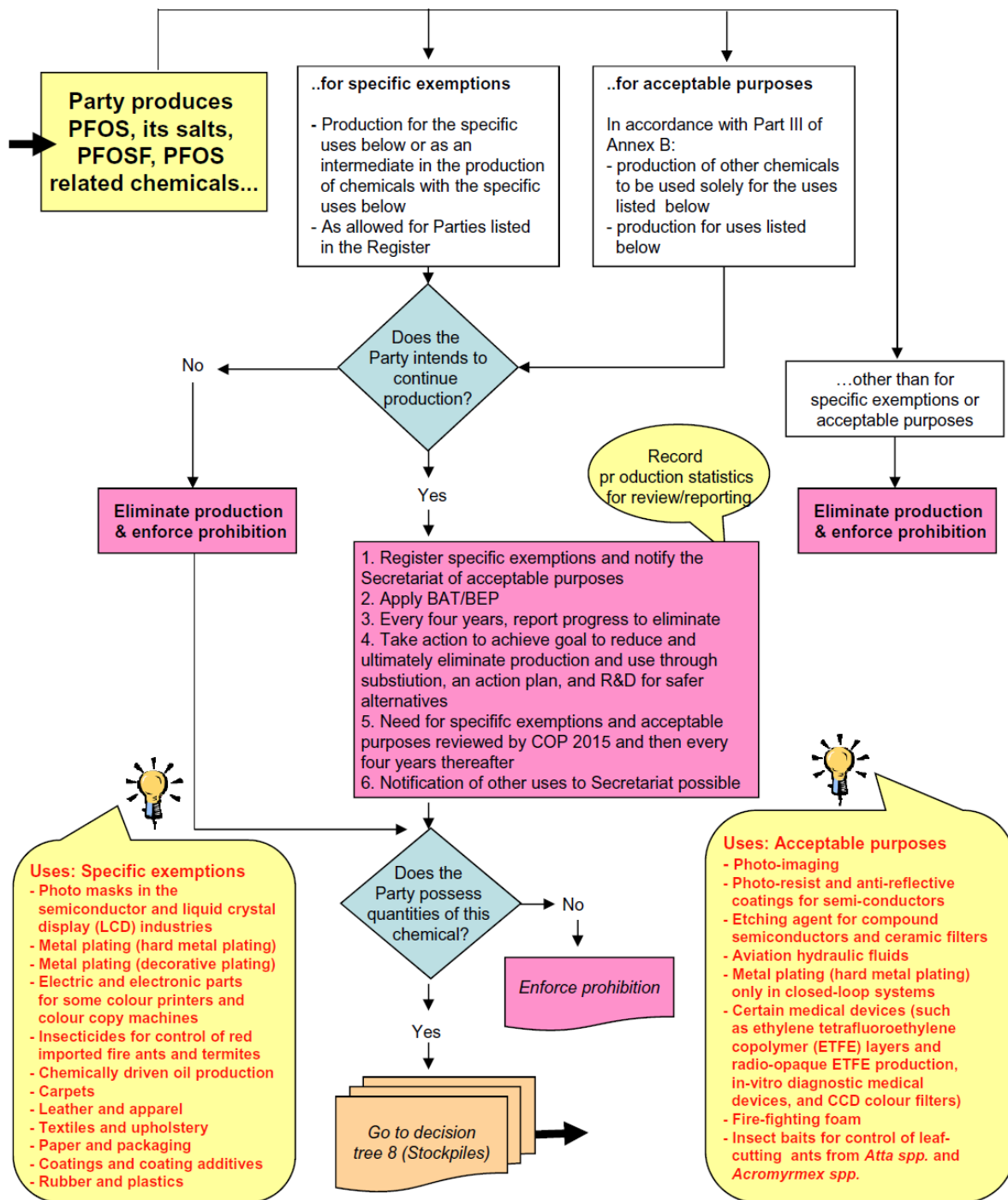
4.1 Intentionally produced POPs: DDT production



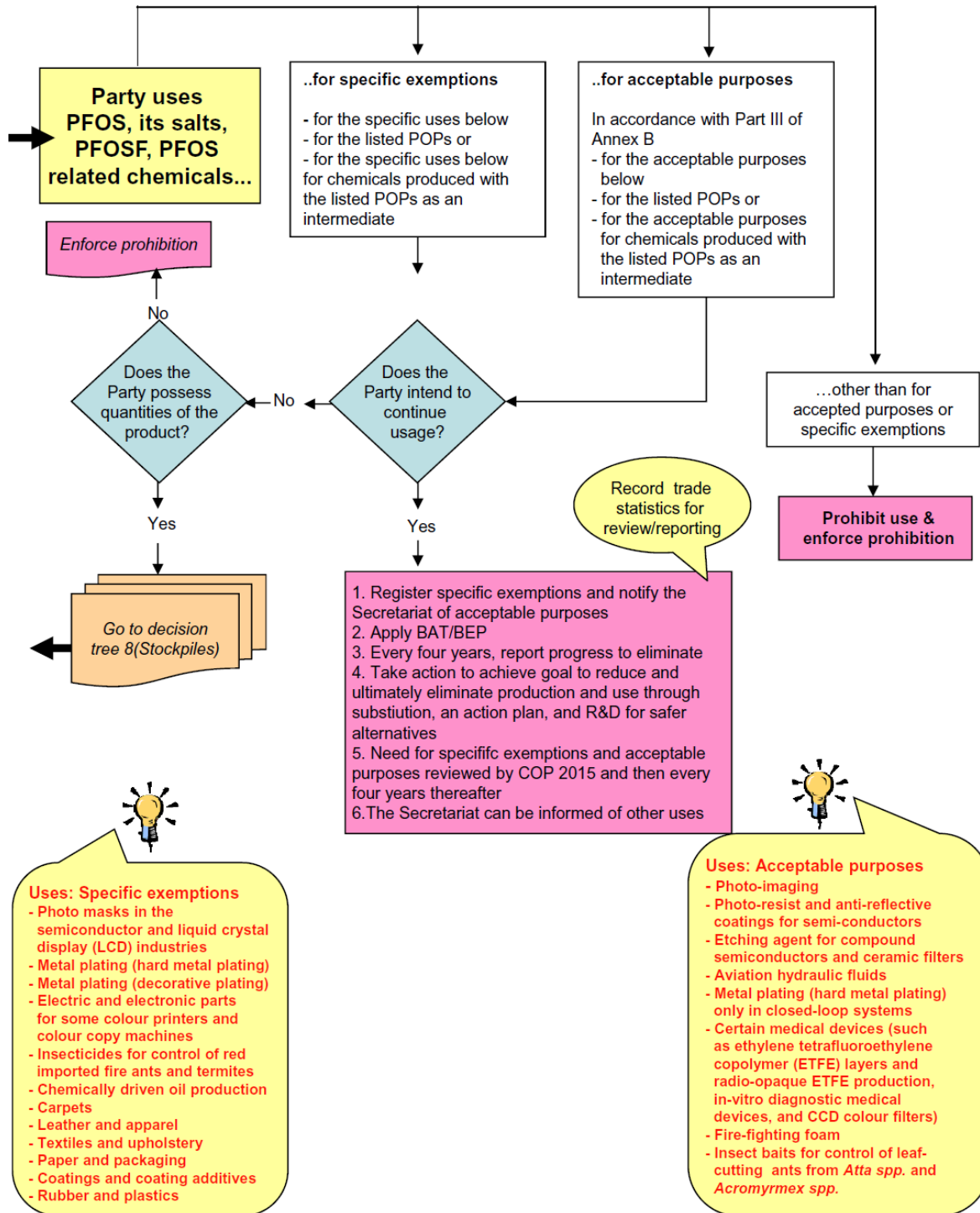
4.2 Intentionally produced POPs: DDT use



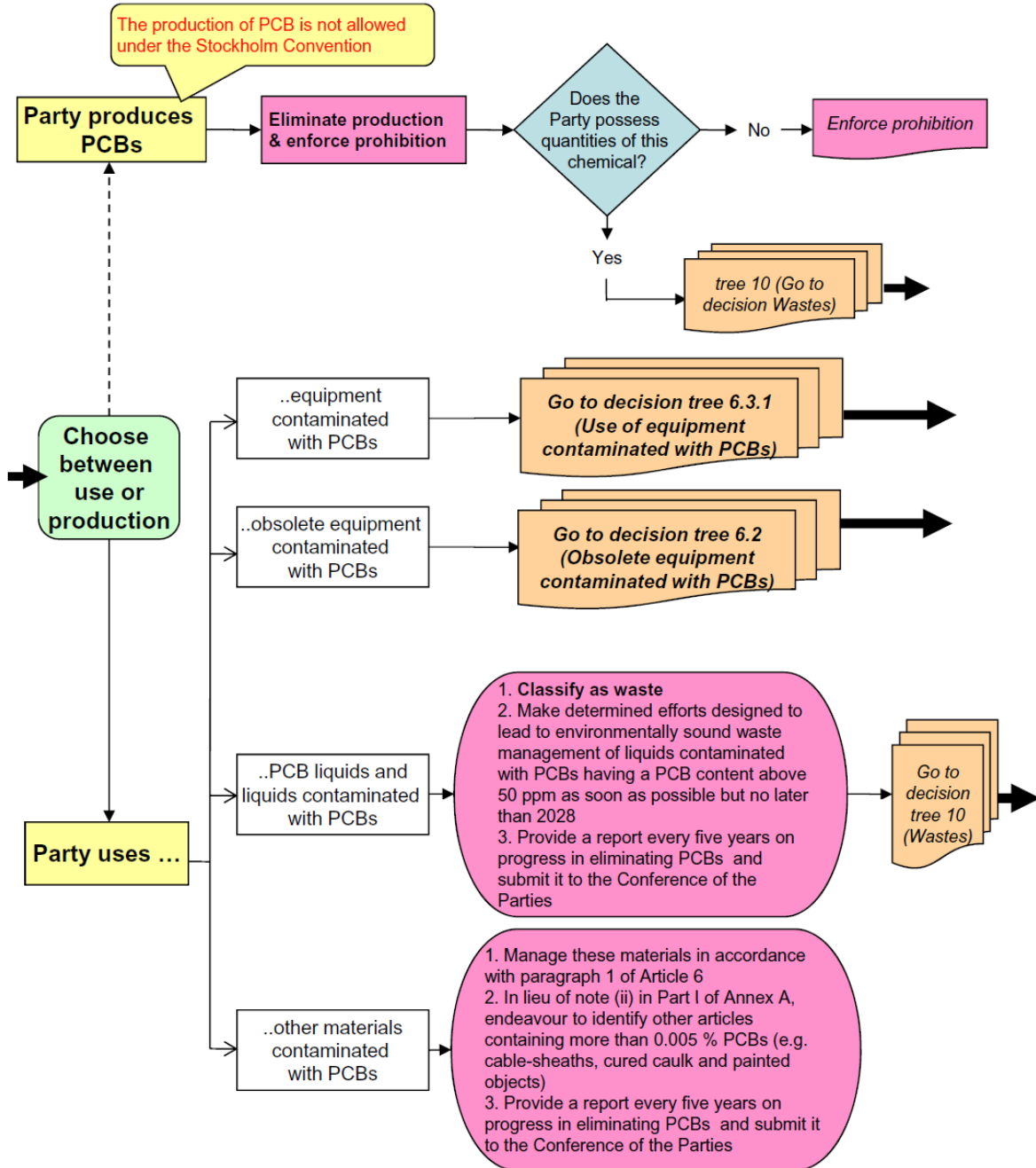
5.1 Intentionally produced POPs: PFOS, its salts, PFOSE, PFOS related chemicals - production



5.2 Intentionally produced POPs: PFOS, its salts, PFOSF, PFOS related chemicals - use

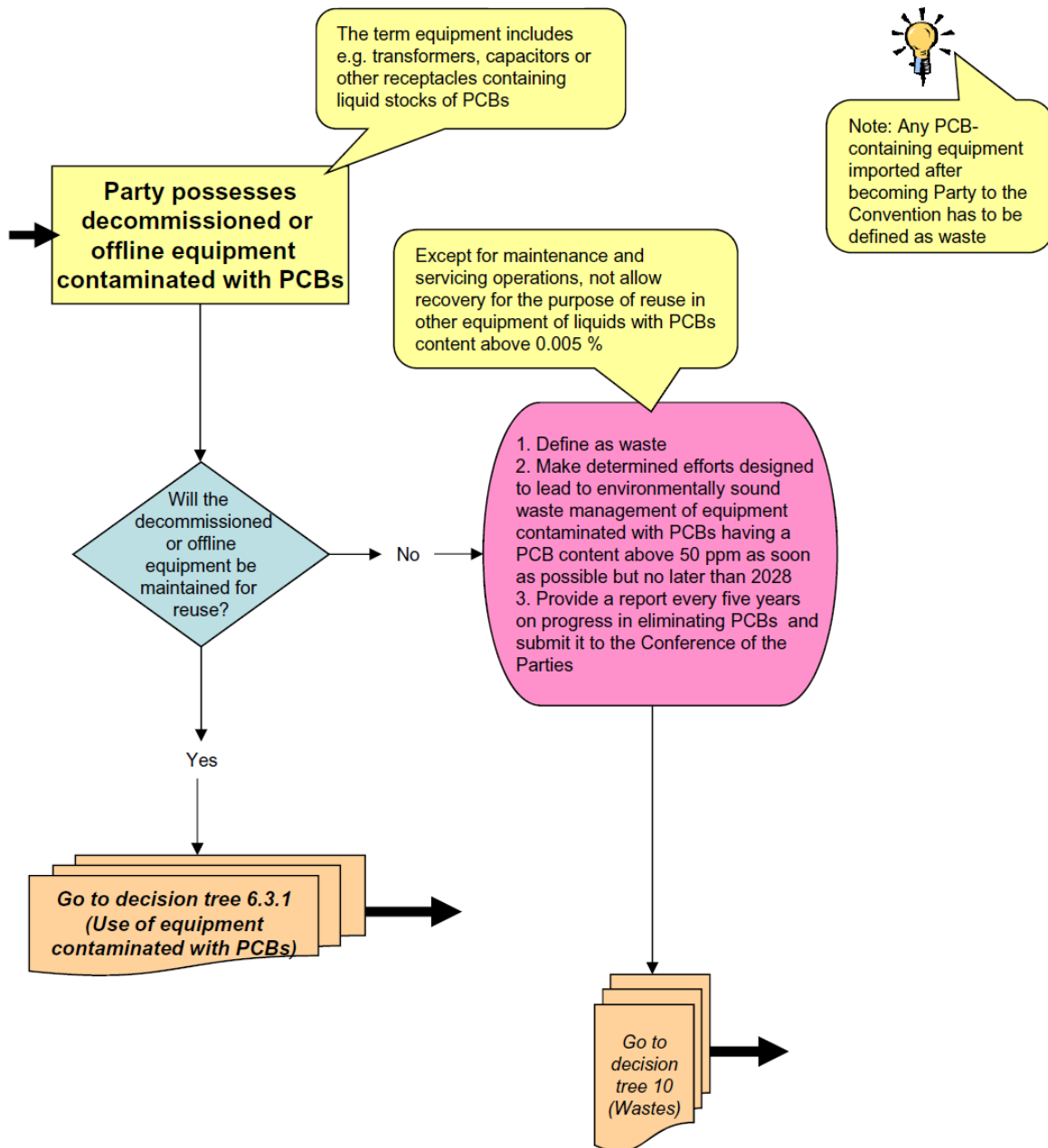


6.1 Intentionally produced POPs: PCBs

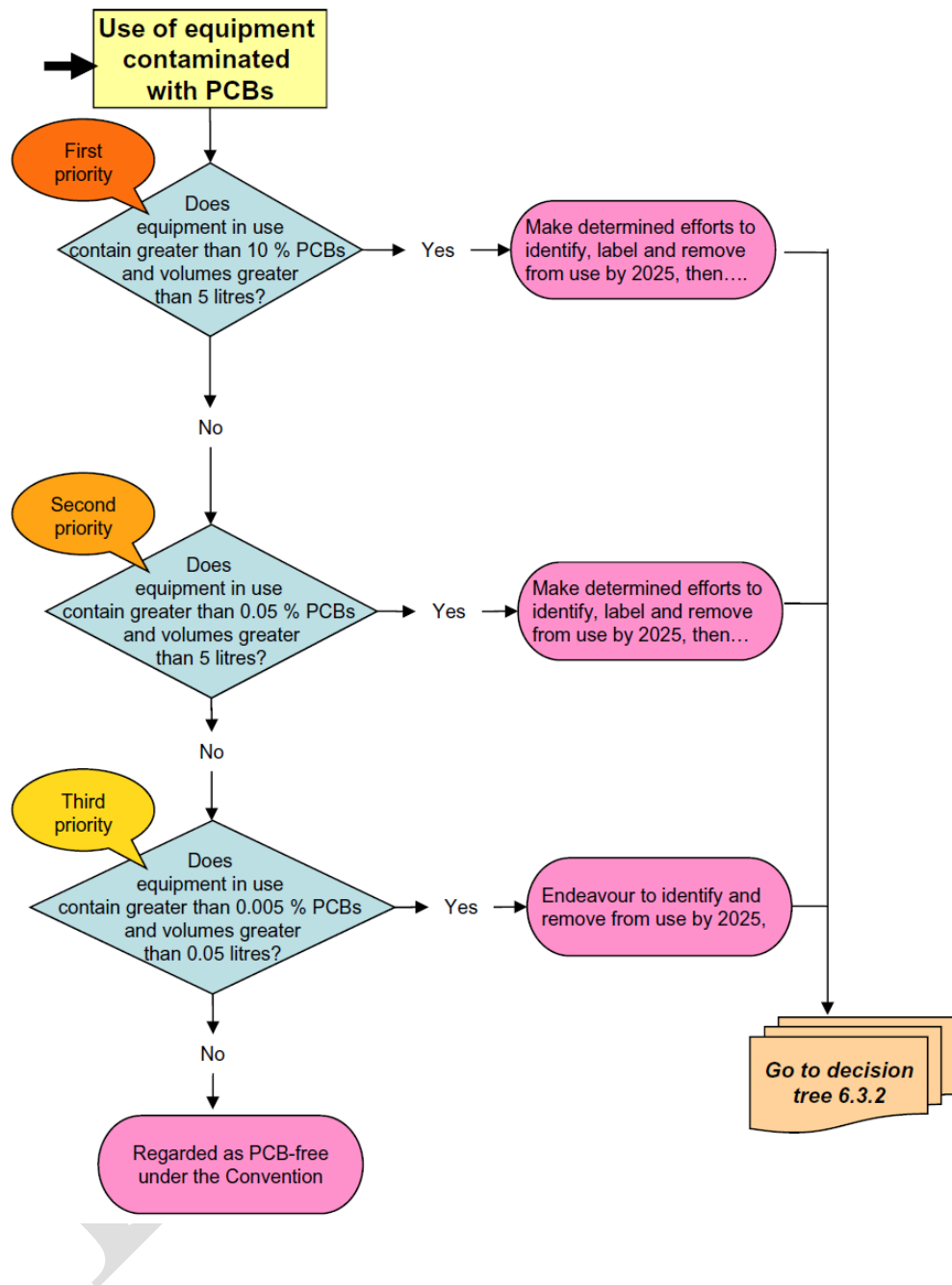


6.2 Intentionally produced POPs:

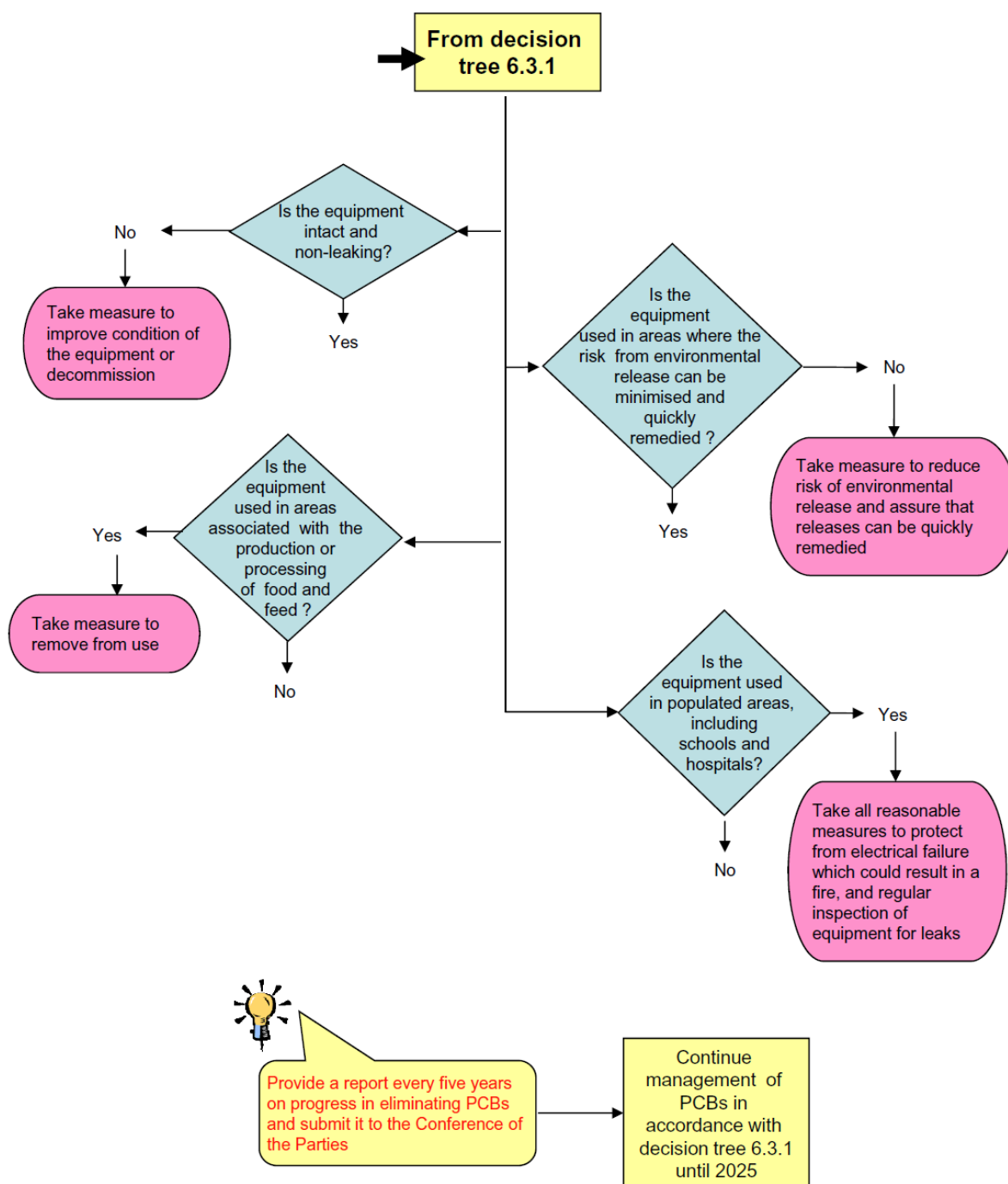
PCBs (*Decommissioned or offline equipment contaminated with PCBs*)



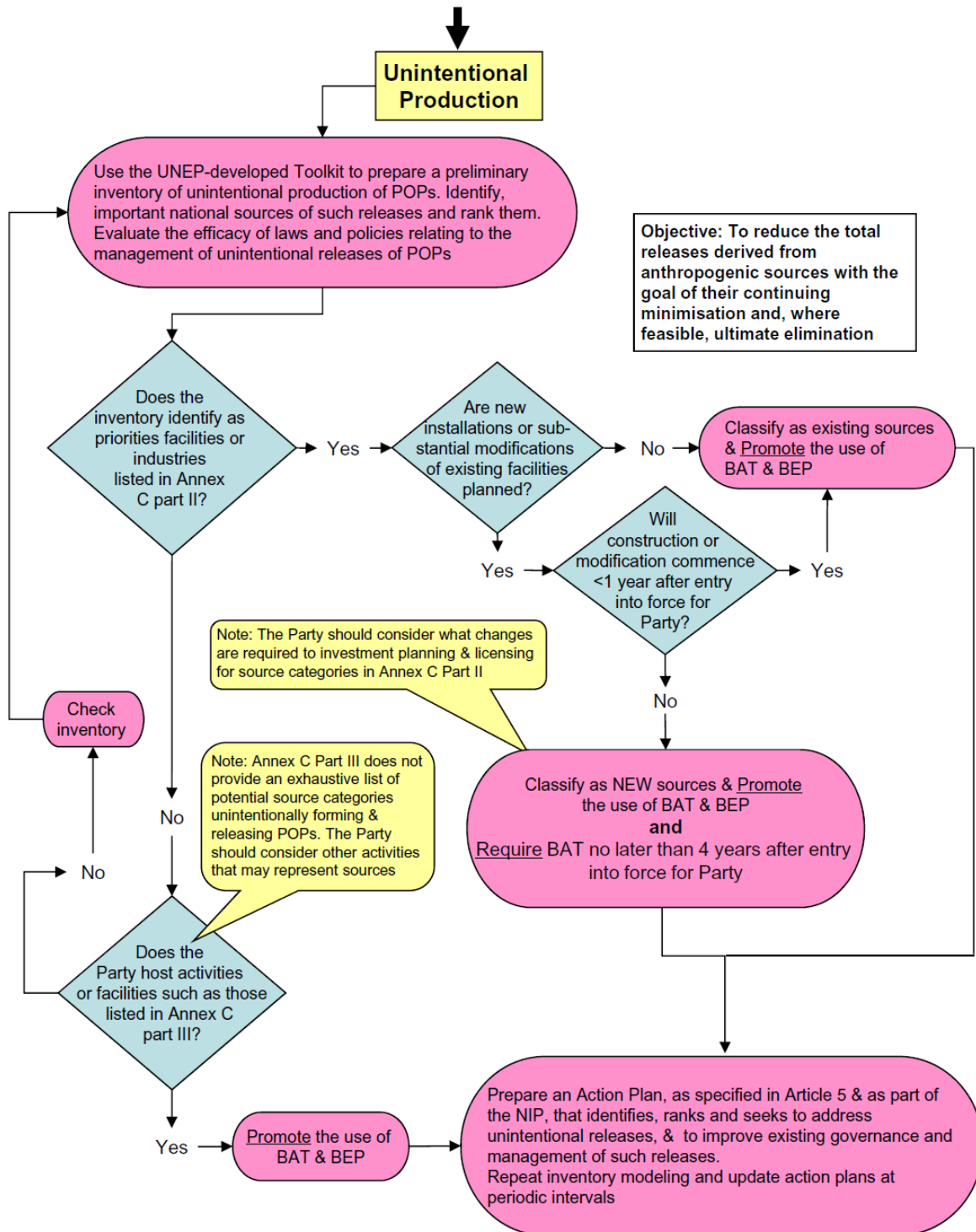
6.3.1 Intentionally produced POPs: PCBs (Use of equipment contaminated with PCBs)



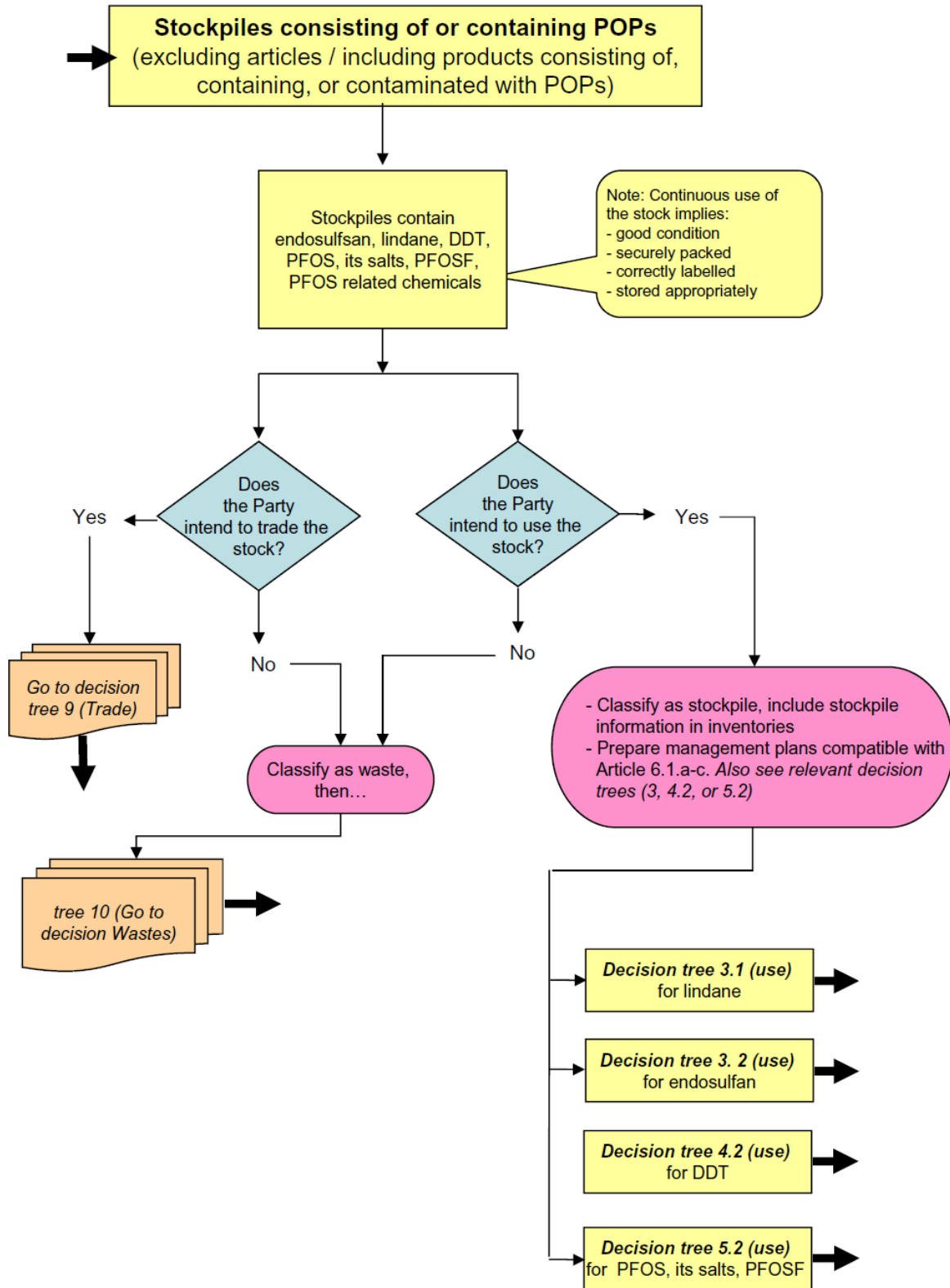
6.3.2 Intentionally produced POPs: PCBs (Use of equipment contaminated with PCBs)



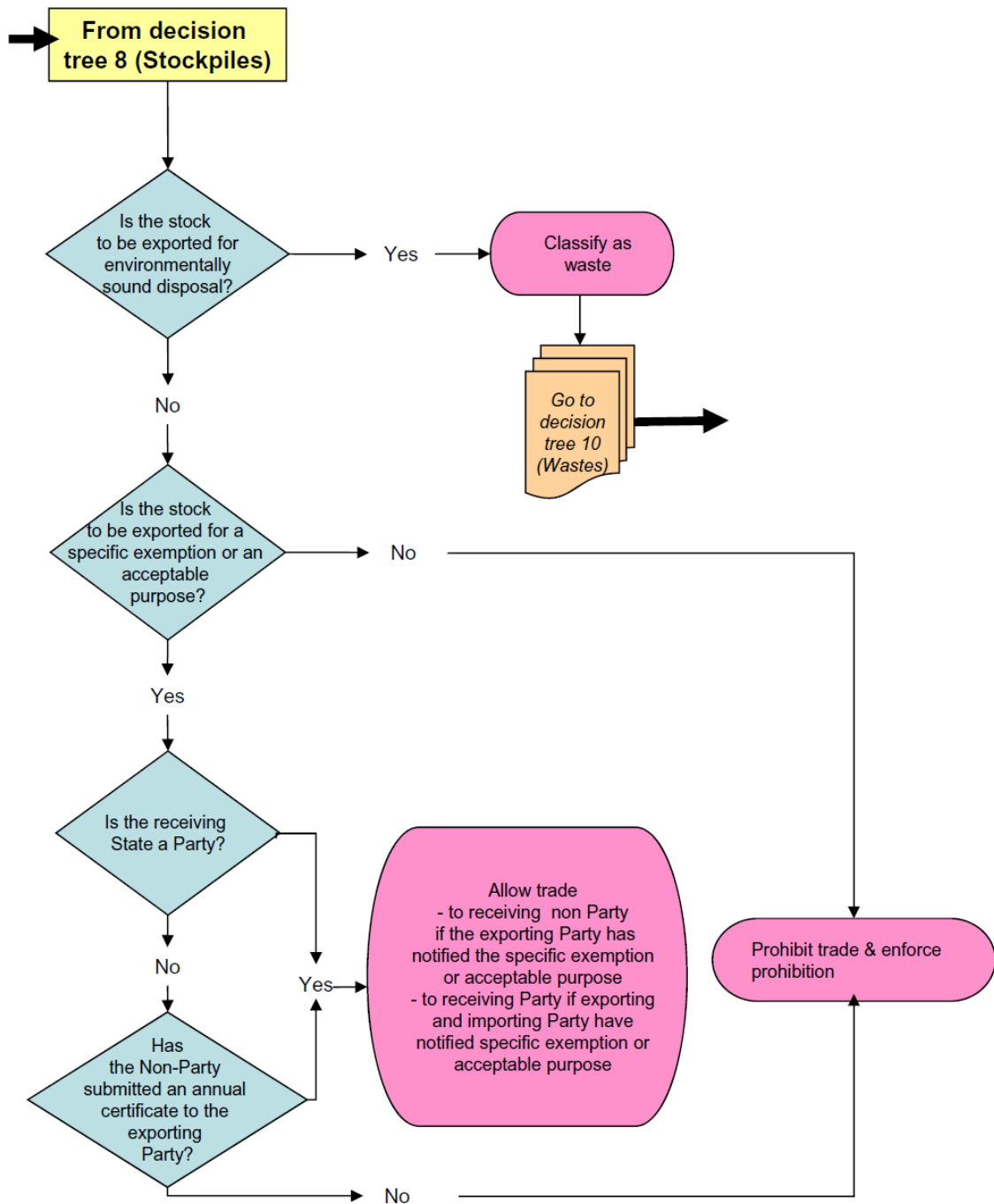
7. Unintentionally produced POPs HCB, pentachlorobenzene, PCBs, PCDDs/PCDFs



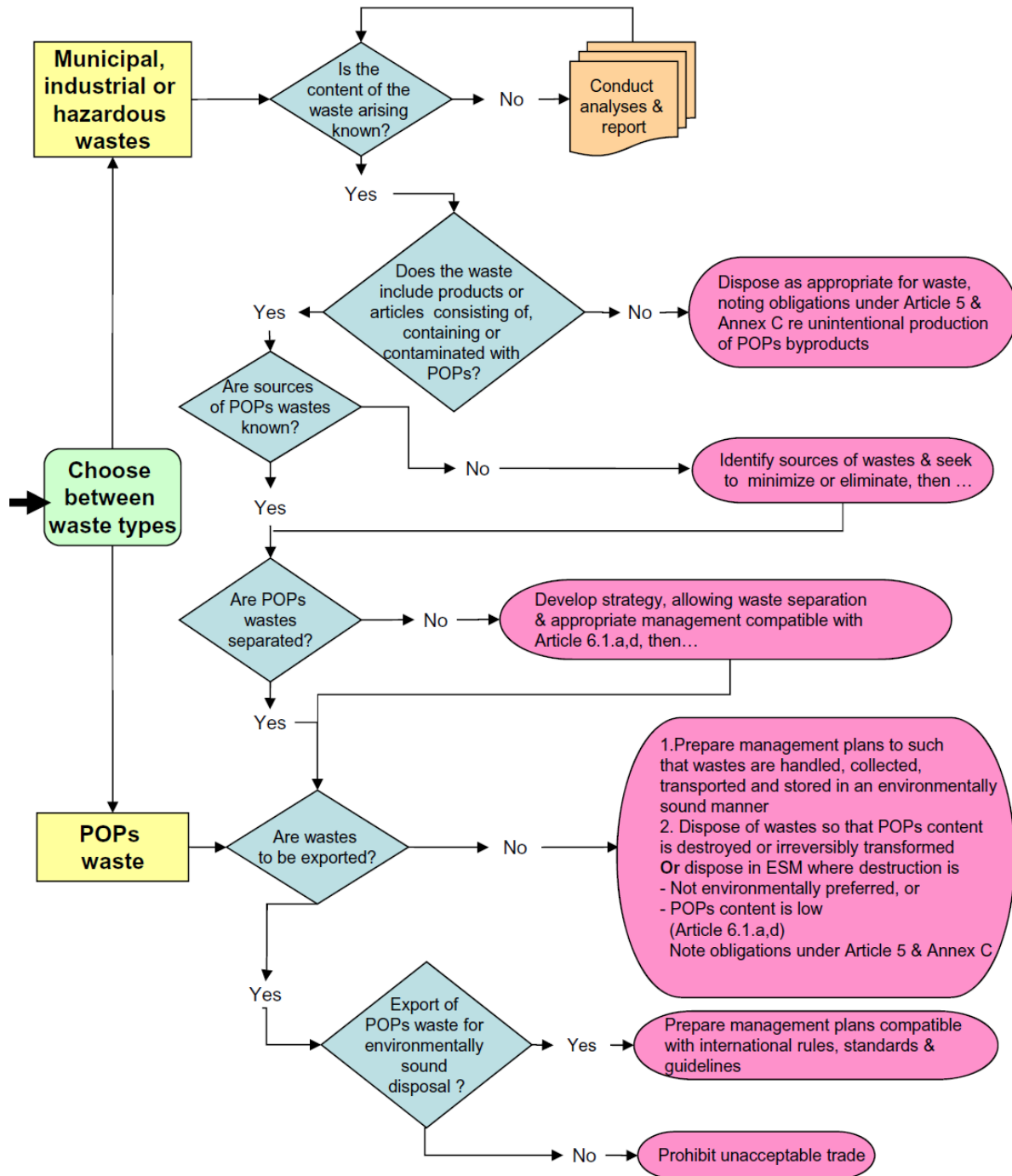
8. Stockpiles



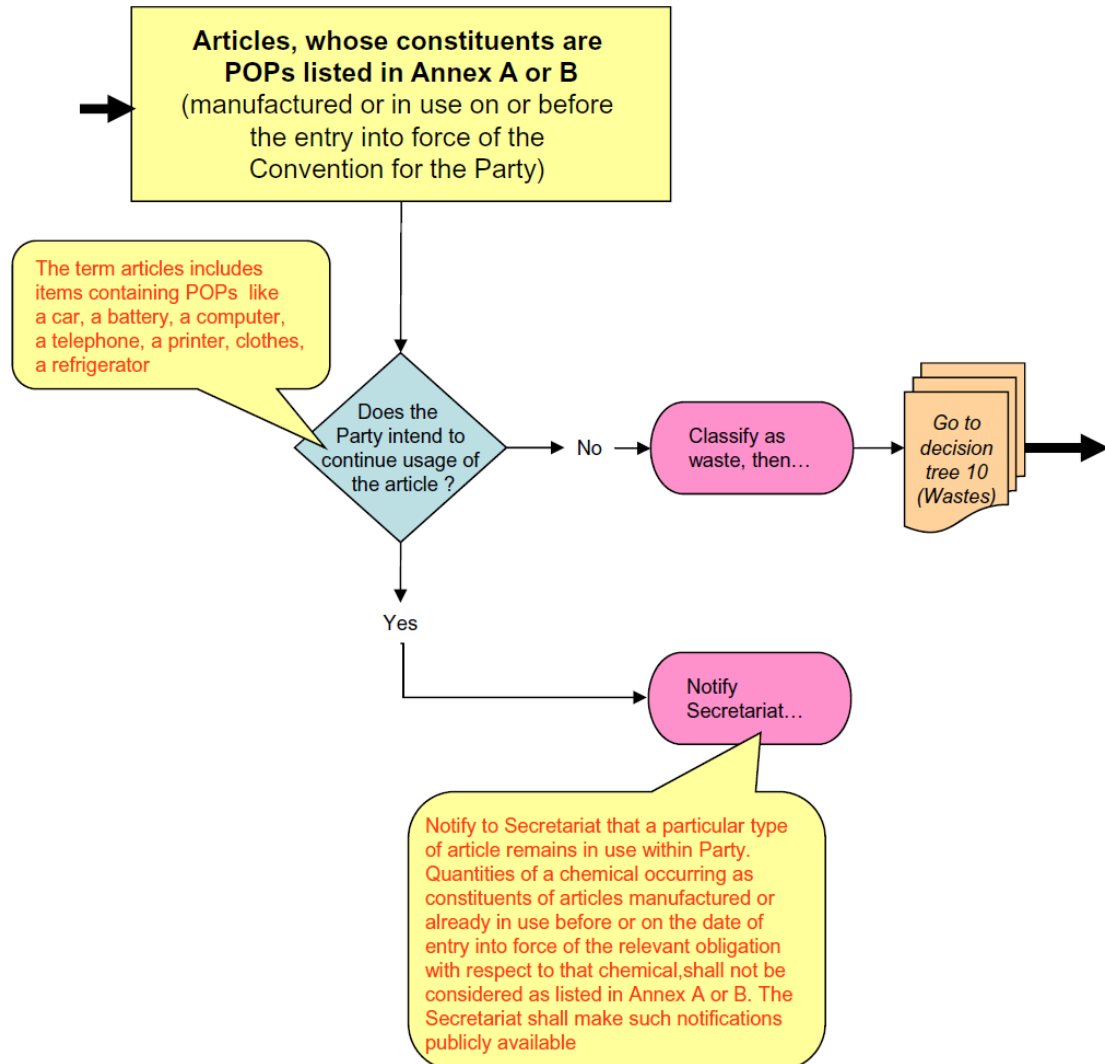
9. Trade



10. Wastes



11. Articles containing POPs



Annex 3: Guidance on Action Plan Development for Sound Chemicals Management

DRAFT

Guidance on Action Plan Development for Sound Chemicals Management

Guidance Document

March 2009 Edition

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IOMC

INTER-ORGANIZATION PROGRAMME FOR THE SOUND MANAGEMENT OF CHEMICALS
A cooperative agreement among UNEP, ILO, FAO, WHO, UNDO, UNITAR and OECD

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INTRODUCTION

Introduction and Training Overview

Background and rationale

Faced with a wide range of issues pertaining to chemicals management, countries today require a flexible, strategic approach to help ensure success in related projects and programmes. Making use of proven action plan development processes, tools, and techniques can provide the structure, focus, coherence, and control needed to develop and achieve practical goals. Understanding what planning and implementing a project entails and how to improve the likelihood of success is the basis of action plan development.

Action plan development helps a team to focus on priorities by developing and sharing one vision: a common goal, an agreed process to reach it, the means to track performance (ensuring transparency), and the ability to adequately adapt to change. While such efforts may be time-consuming at first, in the long-term action plan development will save time, effort and resources, and reduce the risk of failure.

Action plan development skills and the broader principle of sound planning have long been valued in the business world. Today, the value of action plan development in all fields is recognised by donor countries, grant awarding agencies, assistance-providing intergovernmental organisations, as well as experts in the chemicals management field (many of which have expressed a need for capacity building in this area). Furthermore, the principles used in this document – national/local ownership, comprehensive stakeholder participation, etc. – are based on evaluations of international cooperation on capacity development over the last few decades.

This guidance outlined here is broad in character. The approach a country takes in developing an action plan is dependent upon its own particular ‘country context’ or cultural, political, and administrative systems. Interpretation and modification of the process, tools, etc. outlined here need to be made with the particular country context in mind in order to ensure that action plan development is undertaken in a way that enables optimum efficiency and effectiveness and minimum conflict. In some cases, commitment will have been obtained prior to developing the action plan. In other cases, it will be crucial to identify how to integrate the action plan into country priorities and where to obtain commitment. In addition, it is important to recognise local/national experiences and build on lessons learned.

Training objectives

This guidance document aims to assist those involved in chemicals and waste management to build the capacity to: develop sound, realistic action plans for any desired project; effectively collaborate with stakeholders in a transparent manner; increase their competitiveness internationally when submitting proposals for funding; and ultimately follow-through with the plan (accommodating any arising challenges or opportunities along the way).

To achieve these objectives, this document provides guidance on action plan development processes, tools, and techniques in order that the readers:

- consider and understand the elements of a project and the related value of action plan development;
- strengthen their action plan development skills; and
- apply these skills to their respective projects.

Terminology

The terms selected for this guidance document are commonly used, but no universal terminology exists. Action plan development may, for example, be called project planning; similarly, targets, goals, objectives, and strategies are terms used elsewhere with varying meanings. It is recommended that the country developing action plans provide a list of terms to be used and their agreed definitions, in order for all stakeholders and reviewers to understand the action plans as they read and work through them. A list of the terms used for this guidance document is presented in Annex 9.

Training scope and content

This guidance document has been designed to strengthen the action plan development skills of a variety of (both governmental and nongovernmental) stakeholders active in the field of chemicals and waste management.

The following provides a brief outline of the guidance document (a corresponding diagram illustrating an overview of the action plan process is presented below).

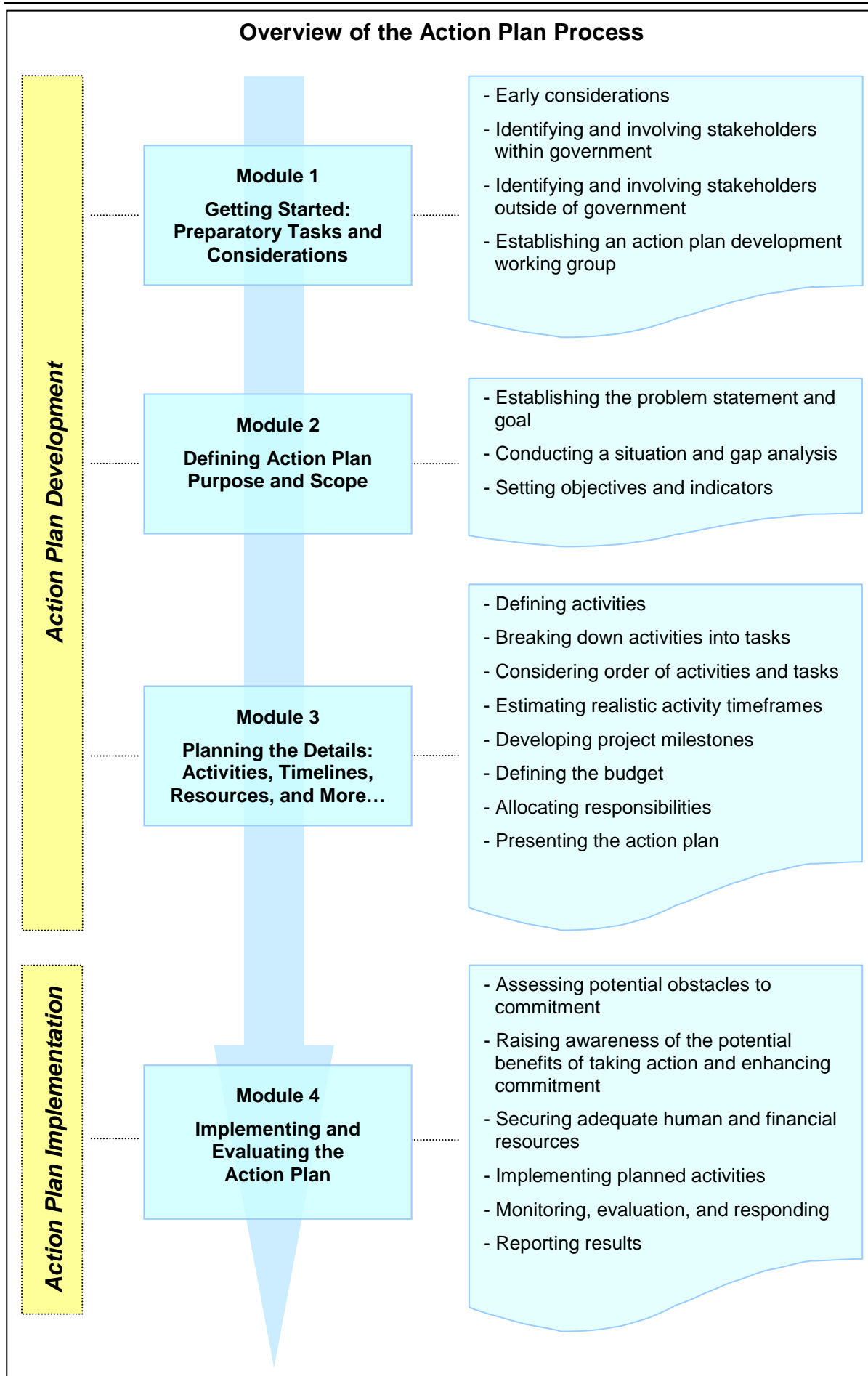
Introduction: focuses on the overall concept of action plan development and its potential to facilitate action towards addressing priority topics of national chemicals management.

Module 1. Getting Started: Preparatory Tasks and Considerations: outlines some of the early organisational issues that might take place before the team begins to develop the action plan.

Module 2. Defining Action Plan Purpose and Scope: leads participants to develop the 'foundation' of the action plan.

Module 3. Planning the Details: Activities, Timelines, Resources, and More...: guides participants to gain an understanding of the various components and details that must be developed in order to prepare a thorough action plan.

Module 4. Implementing, and Evaluating the Action Plan: concerns the marketing of the action plan, securing resources, and taking the necessary steps to ensure successful implementation.



Training Approach

This guidance document, as the core material of a UNITAR training approach on action plan development, makes use of key action plan development concepts, specific chemicals management examples, and a range of tools and exercises to assist with the various phases of action plan development.

In the training workshop, through interactive sessions at each phase, participants will have worked their way through the significant parts of the action plan development process. Where working groups have already been formed or action plan topics already selected prior to the workshop, participants will focus on these during the workshop breakout group sessions.

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Introduction to Action Plan Development

Learning objectives

This module elaborates on the concept of action plan development, encouraging readers to:

- increase their familiarity with the overall concept of action plan development; and
- appreciate the value of action plan development and the potential to apply such tools/techniques at a variety of levels – for example, developing action plans as part of a National Implementation Plan for the Stockholm Convention; preparing proposals to present to external donors; or planning and implementing national chemicals management projects.

Focus of the module

Key issues for this module include important action plan development definitions and elements, practical benefits of action plan development, and presentation options. The following issues are discussed:

- What is an action plan?
- Elements of an action plan
- Potential benefits of action plan development
- Key principles of action plan development and implementation
- Presenting an action plan

What is an action plan?

The purpose of an action plan is to provide a clear basis or ‘road map’ for the implementation of activities aimed at addressing an identified priority issue. This type of planning tool is particularly useful when an initiative might involve a range of groups or individuals who may not be accustomed to working together and who represent divergent interests and perspectives.

A well-prepared action plan outlines the specific goal and objectives to be achieved; related activities to be undertaken; time frames; resource requirements; responsibilities of the participants; and evaluation details. The three main pillars of an action plan are: quality, cost, and time. It is important that an action plan is not seen as a snapshot of a particular situation or a one-time event. Rather, the action plan can be modified as necessary as part of an ongoing process (accommodating changes as new information emerges).

Action plan development can also be referred as ‘project planning’. However, for the purposes of this guidance document, the term ‘action plan development’ has been selected as this term is more commonly used in the field of chemicals management.

An action plan has a clearly defined start and end. This is in contrast to a programme, which is typically on-going. Nevertheless, general programmatic work can also benefit from applying the same action plan development principles presented in this guidance document.

Elements of an action plan

Key elements of an action plan include:

- situation analysis and gap analysis;
- goal and objectives; and
- outline of activities and tasks, and related timeframe, resources, responsibilities, etc.

The following text box provides a possible table of contents for an action plan. A diagram of the action plan ‘hierarchy’ is presented in Annex 1.

Potential benefits of action plan development

Sound action plan development can help to make it easier to coordinate activities, lead teams to reach objectives, and secure more predictable results. Properly applied, action plan development allows one to “hold the project in the palm of one’s hand”.

Potential benefits of sound planning can include:

- ensuring a common goal for the action plan;
- ensuring a clear understanding of the planning process;
- increasing transparency in planning and implementing (and evaluating) a project;
- anticipating, identifying, and addressing potential logistic issues;
- enhancing communication, coordination, commitment, and teamwork;
- increased likelihood of mobilising funding for a project;
- improved results and performance, as well as optimum use of resources (such as time and money);
- sustaining momentum and focus;
- facilitating systematic implementation and monitoring of the action plan; and
- facilitating a clear evaluation of the action plan’s impact.

Other benefits related to action plan development include:

Developing the action plan collectively: Working with large and potentially diverse groups on a particular initiative and ensuring that success is achieved can be challenging. Collectively developing an action plan ensures that the team takes responsibility for and ‘ownership’ of the project, understanding their potential roles in implementation as well as the project as whole.

Updating the action plan: During action plan development, participants can anticipate and address potential issues related to the logistics of the project. During implementation, the action plan also facilitates the monitoring of the implementation of activities and therefore allows a quick reaction to opportunities or problems. In addition, regular updating of the action plan contributes to the establishment of progress reports for good communication within the implementing team but also with donors. It also facilitates the evaluation of the project’s success at the end of the project.

Possible Table of Contents for an Action Plan

Executive Summary

- Summary of the rationale of the action plan including a list of action items for decision makers (*who* should do *what* on the basis of this document) (2 pages)

1. Introduction and Background

- Rationale and context of the action plan
- Overview of the participation and preparation process (2-3 pages)

2. Situation Analysis and Gap Analysis

- Summary overview of the situation and gaps to be addressed (detailed situation and gap analysis can be included in Annex) (2-3 pages)

3. Goal and Objectives

- List of the goal and objectives of the action plan (1 page)

4. Proposed Implementation Strategy

- Detailed description of the proposed activities, tasks, responsibilities, etc. as well as monitoring and evaluation details (proposed timelines and budget can be included in the annex) (10-20 pages)

5. Proposed Next Steps and Follow-up

- Brief description of next steps that need to be taken in order to be in a position to implement the action plan (this section should clarify *who* is expected to do *what*) (1-2 pages)

Annexes

- Terms of reference of the action plan working group (including names and contact addresses of members)
- Detailed situation and gap analysis (20-30 pages)
- Gantt chart/PERT chart for implementing the action plan
- Draft budget

Key principles of action plan development and implementation

The action plan process is a long one: from the inception of an idea about an action through its development, actual implementation, and finally follow-up. This involves:

- preparatory planning for action plan development (in the case of a National Implementation Plan (NIP) for the Stockholm Convention, this may take months);
- developing the action plan (a couple of years for the NIP); and
- implementing, following up, and revising (as necessary) the action plan (years to decades for the NIP).

Experience has shown that this long process strongly benefits from a strategy to:

- look ahead (try from time to time to envisage the end of the process);
- advance in small steps (too much planning or projects that are too large may easily become inefficient); and
- look back (stop from time to time to review what can be learnt from experience and revise the action plan accordingly).

Presenting an action plan

Developing an action plan helps to provide a clear visualisation of the project, outlining, *inter alia*, activities, timelines, and resources. The plan can be visually presented in various ways. Some of the most common approaches are outlined below.

Gantt chart

A common tool used in project management for visualising the schedule and actual progress in a project is the Gantt chart.²⁴ It allows an understanding of the project at a glance.

The chart clearly lists each activity and task – represented by a single horizontal bar. These ('Gantt' or 'task') bars are positioned across a timescale, which is displayed at the top of the Gantt chart. The length of an individual bar represents the amount of time estimated to complete an activity or task; the placement of the bar represents the corresponding start and finish dates.

Linking bars in a Gantt chart also reflects relationships (or 'dependencies') between tasks, such as whether a particular task can start before another task is finished. A Gantt chart can also include budget and human resource details.

Gantt charts can be developed simply on paper or with the aid of a word processor, such as Microsoft Word. Specific planning software also exists to facilitate the process, such as Microsoft Project, among others.

²⁴ The Gantt chart was developed by Henry Laurence Gantt (1861-1919), a mechanical engineer, management consultant and industry advisor, in the second decade of the 20th century. Accepted as a commonplace project management tool today, it was an innovation of world-wide importance in the 1910s and 20s. Early on, Gantt charts were used on major infrastructure projects including the Hoover Dam (starting in 1931) and the United States' interstate highway network (starting in 1956).

PERT chart (Project Evaluation Review Technique chart)

When it is more important to focus on the relationships between activities and tasks rather than the schedule, the PERT chart, also known as the network chart, can be more useful than the Gantt chart. The PERT chart displays the interdependencies between tasks. In a PERT chart, each activity or task is represented by a box (sometimes called a node) which contains basic information about the activity or task. Tasks that depend on one another for completion, or simply follow one another in a sequence of events, are connected by link lines. The PERT chart provides a graphical representation of how activities or tasks are linked to each other in the project.

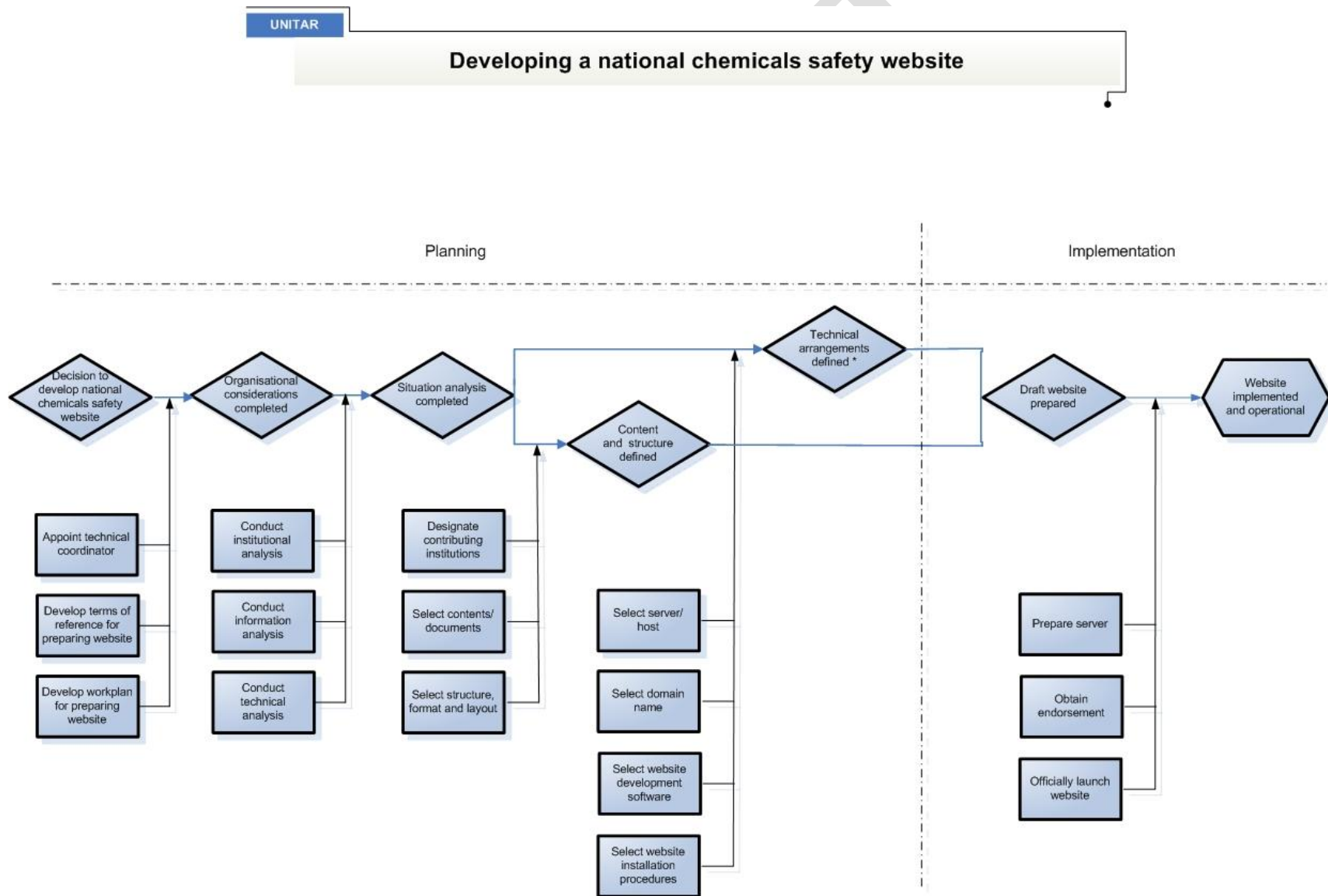
Used together, PERT and Gantt charts can provide complementary information on the project's activities, tasks, and schedule.

Although it is possible to develop PERT charts using specific software such as Microsoft Project, graphical or presentation software such as Microsoft Visio or PowerPoint may ease the process.

Examples of Gantt and PERT charts are presented below.

Example of a Gantt Chart

Action Plan for GHS Regulatory Implementation by 2008



ID	Task Name
1	Activity 1: Te c
2	Review exis
3	Propose am
4	Activity 2: Eco
5	Review econ
6	Report to G
7	Activity 3: Dra
8	Review exis
9	Draft amend
10	Review revis
11	Submit imp
12	Activity 4: Re g
13	Implementin
14	GHS-bas ed
15	Activity 5: App
16	Initiate use
17	Training/aw
18	Inspectorate

Example of a PRR

* If host/implementation arrangements pose serious challenges, arrangements can be made with UNITAR to host and, if necessary, prepare the national chemicals safety website.

MODULE 1. GETTING STARTED: PREPARATORY TASKS AND CONSIDERATIONS

Learning objectives

This module outlines some of the early organisational issues that might take place before the team begins to develop the action plan.

Focus of the module

Key issues discussed in this module include:

- Early considerations
- Identifying and involving stakeholders within government
- Identifying and involving stakeholders outside of government
- Establishing an action plan development working group

Early considerations

At the outset, the project team should decide on the number of action plans to be developed as part of their work. It is important to prioritise the topics or issues within the country in order to ensure that a manageable number of action plans are developed. For example, in developing action plans as part of a National Implementation Plan for the Stockholm Convention, at least 17 possible action plans (or “strategies” or other similar plans) can be developed. In this context, each Party must determine which action plans are critical and which are of secondary importance.

Another key consideration concerns securing resources for the action plan *development* process. In some cases, a budget for developing an action plan(s) will be built into a project (e.g. Global Environment Facility (GEF) enabling activities for the Stockholm Convention). In other cases, mobilising other (either domestic or external) resources specifically for action plan development will be necessary. A range of techniques and tools can assist in this effort. For example, this may involve raising awareness regarding chemicals issues among decision makers and the public; moving chemicals-related issues higher on a country’s internal priority list; and ensuring that those responsible for chemicals issues understand the country’s internal decision making processes for allocation of internal governmental resources, as well as improve their knowledge of external funding opportunities (including details of the processes for obtaining such funding)²⁵. Some of these concepts are discussed in Module 4.

Related to the above, it’s never too early to think about possible funders for action plan *implementation* as well as associated project budgets. ‘Mainstreaming’ chemicals management activities into overall national priorities, such as national poverty reduction strategies or national sustainable development strategies, for example, is one approach to broadening the appeal of the action plan. Moreover, another useful exercise is to consider or

²⁵ UNITAR has developed guidance on this area in *Financial Resource Mobilisation for the Sound Management of Chemicals: Guidance Note - Working Draft (2001)*. See www.unitar.org/cwm

review who might fund the implementation of the action plan, besides national funding. Funders could be, for example, the European Commission or GEF. Also it may be helpful to consider what kind of implementation budget is likely or realistic (e.g. GEF enabling activity funding, UNITAR grant). Such considerations help ensure that the action plan includes an appropriate budget range.

Identifying and involving stakeholders within the government

It is necessary to identify stakeholders within the government who have the potential to become involved in the action plan development process. Those potential partners who have mandates directly related to the action plan topic are the most obvious and easiest to identify. There may be partners, however, for whom the relationship is not as immediately obvious. For example, officials from a Ministry of Finance may have no direct mandate relating to chemicals management, but may make decisions that have profound implications for the success of an action plan. If a forum exists to enhance dialogue and coordination at the interministerial level²⁶, it may provide an effective mechanism to identify potential partners.

Identifying and involving stakeholders outside of government

Involving stakeholders outside of government may:

- lead to better decisions;
- foster acceptance of decisions; and
- promote accountability, and therefore credibility.

Not all interested and affected nongovernmental parties (hereinafter called stakeholders) will need to be directly involved in developing and implementing an action plan. It is nevertheless important to understand who the stakeholders are for a given issue and to ensure that their perspectives and concerns are taken into account. Involving key stakeholders may also be of practical relevance, since their actions and commitment will likely be essential to the implementation and success of the action plan.

Important questions to consider at the outset regarding stakeholder involvement include:

- Has a clear statement of purpose and intentions for the stakeholder involvement process been provided?
- Have deadlines for completing the process and any stages along the way been set and made clear? Have interim activities been clarified?
- Has the process been agreed to by all stakeholders (including, for example, how information will be managed, and an outline of principles to be respected)?
- Do stakeholders have a clear understanding of what is expected of them? Have they been provided a range of options for participation corresponding to their interests?
- Do selected stakeholders include those affected by the proposed action plan and are they representative of the relevant sectors, interests, and/or regions?

²⁶ Greater detail on interministerial dialogue and coordination, and examples of bodies designed to enhance dialogue and coordination, as well as some common characteristics for such efforts based on country experiences are outlined in UNITAR's guidance document entitled, *Developing and Sustaining an Integrated National Programme for Sound Chemicals Management*. See www.unitar.org/cwm

- Has appropriate funding been secured to support the stakeholder involvement process (such as production of information, meeting-related costs, capacity-building requirements, etc.)?
- Do any stakeholders require special capacity-building efforts or assistance to participate (such as information, travel expenses, language interpretation or special facilities)?
- Has an evaluation and feedback mechanism been developed on stakeholder involvement?

Tools for conducting a “stakeholder analysis” – an assessment of who should possibly be involved or might want to be involved – as well as discussion on stakeholder groups, involvement mechanisms, etc. are presented in Annexes 2.A to 2.D.

Stakeholder Involvement

Stakeholder support and ‘buy-in’ for the action plan is critical to the success of action plan development and ultimately implementation. The Aarhus Convention, for example, establishes that sustainable development can be achieved only through the involvement and active participation of all stakeholders, and links government accountability to environmental protection. The Convention elaborates on Principle 10 of the Rio Declaration, which establishes the public’s right to access to information, to participation in decision making and to justice in environmental matters.

Increasingly, donors (such as the Global Environment Facility (GEF)) encourage concrete stakeholder involvement in efforts such as action plan development and implementation. For example, in the Stockholm Convention, Articles 7 (Implementation plans) and 10 (Public information, awareness and education) explicitly call for stakeholder involvement in implementing the convention.

Establishing an action plan development working group

Developing an action plan should be viewed as an exciting opportunity to gain new experiences, develop new skills and knowledge, and make a positive contribution to the associated topic. Part of thinking through preparatory tasks and considerations includes the formation of an action plan development working group. Selection of participants for this group might be based on the processes outlined in the *Identifying and involving stakeholders* sections presented above. While not all stakeholders can be part of the working group, it is important to include a representative balance of interests to contribute to the process.

The working group should meet early on in the action plan process and develop (or approve) a set of terms of reference, workplan, and budget. Developing terms of reference, workplan and budget will help to ensure that each member of the working group is in agreement concerning important administrative and organisational details relevant to developing an action plan. This section concerns action plan *development* only; the action plan itself will include implementation details.

Terms of reference

Terms of reference should comprise brief, operational details on various administrative and organisational issues pertaining to action plan development (suggested terms of reference are provided in Annex 3). Such issues include: who the participants in the action plan development working group are, how the working group will work together, and how decisions will be made.

Workplan

A workplan sets out other details for action plan *development*, such as:

- expected outputs (e.g. defined objectives, first draft of the action plan);
- the sequence of events and timelines for the process (e.g. when meetings will take place, when the situation analysis will be prepared), as well as monitoring procedures to ensure that the process is on track; and
- milestones (reference points for monitoring progress, such as when certain planning activities should be completed).

In cases where several action plans are being prepared at the same time, such as in the NIP process or as part of an integrated national programme for sound chemicals management, a mechanism should be developed for coordination between the various action plan development working groups, as well as between the actual action plans and other national actions (see Module 4 for further discussion).

Budget

A budget should provide a detailed estimate concerning the cost of various components of the above workplan for which resources are needed (e.g. meeting expenses, travel, secretariat support). In most contexts, and if stakeholders are included, resources required for action plan development will require modest resources.

Evaluating the Action Plan Development Process

It is strongly recommended that development of the action plan is evaluated to help identify strengths and weaknesses in the process. This can provide an important feedback loop for the development of additional action plans in the future. Moreover, the identification of strengths and weaknesses which existed in the action plan development process may provide insight and contribute to the effectiveness of action plan implementation.

MODULE 2. DEFINING ACTION PLAN PURPOSE AND SCOPE

Learning objectives

This set of modules leads participants to develop the ‘foundation’ of the action plan, such as establishing the goal and objectives, and conducting a situation and gap analysis of the current country situation.

Focus of the module

This set of modules focuses on:

- Establishing the problem statement and goal
- Conducting a situation and gap analysis
- Setting objectives and indicators

A wide range of terminology exists regarding action plan development and the field of project planning in general. The terminology used for this guidance document (see Annex 9) has been chosen in the hope that it is most appropriate to chemicals management processes.

Module 2.A. Establishing the Problem Statement and Goal

Establishing the problem statement

When embarking upon the development of an action plan, it is useful to begin by establishing a problem statement. A problem statement is a brief description of the specific problem that the action plan will address. It should include enough contextual detail to establish why it is important. A problem statement outlines the *need* for the action plan; an essential fact for decision makers.

The problem statement might be based on, *inter alia*: decisions at the international level, such as the establishment of a convention; an accident or other event that led to media/public attention being focused on a particular issue of chemicals management; or identification, through national level processes (e.g. National Profile preparation), of significant hazards or critical gaps in the chemicals management structure, such as a lack of testing for pesticide residues in food.

Examples of problem statements include:

- For the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS): Dangerous chemicals are produced, imported, and used without critical information on their hazards being provided. In some cases, chemical products are found on store shelves with improper or incomplete labels, or labels with hazard statements in languages or symbols not understood by the general population.
- For Pollutant Release and Transfer Registers (PRTR): The negative impacts from emissions of chemicals into the environment are clear, however we lack information on where such emissions are taking place, which makes it difficult to develop effective countermeasures.

Establishing the goal

Building on the problem statement, it should be possible to establish a goal for the action plan. The goal is a concise statement that describes the action plan's purpose (what it will achieve). Goals must be realistic and not too ambitious.

Examples of possible goals include:

- Elimination of PCBs from use and storage.
- Full implementation of a national system to classify and label chemical substances, consistent with the Globally Harmonized System.
- Development of a working PRTR.

In some cases, the goal will be pre-determined; for example, being a Party to a convention requires meeting certain commitments, which can shape the goal. In other cases,

the goal will need to be established based on a particular country situation; for example, in response to a particular problem or a national decision to implement a programme, such as a PRTR.

What is Capacity Building?

The term “capacity building” is used in many contexts, often with little reflection regarding its meaning. Over the last few years experts from many countries have been moving towards a common definition of the term and there is now general agreement that “capacity building” can be taken as “the actions needed to enhance the ability of individuals, institutions, and systems to make and implement decisions and perform functions in an effective, efficient, and sustainable manner”.

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Module 2.B. Conducting a Situation and Gap Analysis

Situation analysis

What is the situation or state of affairs in which the action plan will be carried out? What infrastructure is currently in place? Where do challenges lie and what opportunities exist for attaining the goal? Undertaking a situation analysis helps to answer such questions and provides a basis for discussing what the priorities of an action plan might be. Key outcomes of a situation analysis include identifying relevant existing structures upon which cooperative relationships could be built/strengthened, and revealing potential overlap. The process for undertaking a situation analysis could be divided into two active parts, information collection and information analysis.

To identify what sorts of information will need to be collected for the situation analysis, it would be useful to dissect the goal at a general level. For example, for the goal “Elimination of PCBs from use and storage”, it would be important to examine the country’s current situation regarding relevant legal and administrative issues, such as monitoring and reporting practices and regulations. It would also be necessary to consider relevant operational issues, such as infrastructure for maintenance and disposal, production of alternatives, etc. This will also later help in analysing gaps between the present situation and the desired one.

Information for the situation analysis can be obtained through: literature reviews, personal communications, interviews or group discussions/meetings, site visits, etc. A National Chemicals Management Profile, if one has been prepared, could serve as a good starting point for this analysis. A situation analysis should not, however, solely consist of a literature review.

Considering Priorities

Throughout the development of an action plan, priorities will need to be considered. For example, as part of the situation analysis, the action plan development working group may begin to identify areas of priority concern. Similarly, in undertaking a gap analysis, the group may discover certain gaps that should receive priority attention. For example, in developing an action plan on the reduction of unintentionally produced POPs, a priority may be to raise awareness regarding the open burning of municipal waste. A variety of guidance/tools on priority setting exists to assist countries. For some examples, see Annex 4.

What is a National Profile?

A National Chemicals Management Profile is a comprehensive assessment of the national infrastructure, relating to the legal, institutional, administrative, and technical aspects of chemicals management, along with an understanding of the nature and extent of chemicals availability and use in the country. This is an important prerequisite for building national capacity in a systematic way.

Guidance on preparing a National Profile, which may assist in developing a situation analysis, is offered in UNITAR's *Preparing a National Profile to Assess the National Infrastructure for Management of Chemicals: A Guidance Document*. A Companion Guidance Note on preparing/updating a National Profile as part of a Stockholm Convention National Implementation Plan is also available. These documents can be downloaded at www.unitar.org/cwm

While each action plan will differ, asking a number of basic questions will help organise the situation analysis. The questions can include:

- What relevant legal instruments, policies, and/or non-regulatory mechanisms exist?
- What relevant ministries, agencies, and other governmental institutions exist?
- What relevant industry, public interest groups, and bodies in the research sector exist?
- What relevant technical infrastructure (including data access and use) exist?
- What level of awareness, understanding, and competence do those in government, workers, and the public have concerning the issue for which the action plan is being developed?
- What (human and financial) resources (having only a preliminary understanding at this stage) might be available for action plan implementation?

Gap analysis

Based on the results of the situation analysis, it should be possible to identify where the current situation does not meet the established goal and related possible requirements – answering the question “*What is missing?*”

This may involve the identification of gaps or needs in, *inter alia*: legislation, enforcement, analytical capacity, and material and human resources.

Having developed a more complete picture of the country situation through the situation and gap analysis, it may be useful or necessary to modify the goal in order to more accurately reflect the current situation. However, if the goal is set through an international agreement, the only opportunity that may exist is to strengthen it.

Module 2.C. Setting Objectives and Indicators

Setting objectives

Based on the situation and gap analysis, it will have become clear what needs to be achieved in order to meet the goal. This should provide the direction needed for setting objectives.

Objectives state, at a finer level of detail than the goal, the specific outcomes that the action plan expects to accomplish – answering the question “*What needs to be achieved to get from where we are now to where we want to be?*” Some objectives can be attained only by the end of the project; others may be met along the way. The principle of starting in small steps (as discussed in the introduction module) should be kept in mind (also see the textbox on “SMART Objectives”). Objectives, like goals, can be revisited as necessary.

The following provides some examples of goals and possible related objectives:

For the goal, “Elimination of PCBs from use and storage”:

- A revised PCB inventory for all types of PCBs in use and present in the country is completed by 2008.
- A programme to replace PCBs in transformers is under way by 2009.

For the goal, “Full implementation of a national system to classify and label chemical substances, consistent with the Globally Harmonized System”:

- Legislation is developed and comes into force facilitating the new system by 2007.
- Training of all relevant parties regarding the new system is completed by 2008.

For the goal, “Development of a working PRTR”:

- Strengthening electronic exchange of information on chemicals emissions by 2007.
- A trial reporting period on a limited number of chemicals is developed and completed by 2008.

SMART Objectives

Well-developed objectives are ‘SMART’ objectives: **S**pecific, **M**easurable, **A**ssignable/agreed, **R**ealistic and **T**ime-dependant.

An objective that is too ambitious should be avoided – it could undermine the success of the action plan. It is therefore important to assess the feasibility of the objectives and select ones which are achievable with the means available (or within a budget that can be reasonably mobilised). An example of an unrealistic objective is “Fully functional metals analysis lab installed within one year for under 10,000 USD”. A disappointing and unsatisfactory outcome of an action plan which is based on unachievable objectives is to produce a document which results in little more than a paper exercise. Regularly asking questions like “Is this particularly realistic?” and “Will this be effective?” as the action plan is developed will help to keep it focussed, and ultimately successful.

Defining performance indicators

The success of an action plan can be measured by the degree to which its objectives were achieved. Defining performance indicators for each objective specifies how this achievement will be measured and verified.

An indicator can be defined as a statistic or measure that provides information about change. It can address a number of factors: (i) Quality: the type or nature of the change; (ii) Quantity: the scope or extent of the change, such as by how much or how many; and (iii) Timing: the time in which the change should have taken place. Making use of indicators at various stages of the implementation of the action plan can help the project team understand where they are and how well they are progressing towards meeting the various objectives.

Indicators should say as much as possible at as little cost as possible. Simply stated, indicators can be developed by asking, “*How will we know if we have achieved this objective?*” Criteria that may be used to develop effective indicators include:

- *Feasibility*: an indicator should be suitable in terms of costs, equipment, skills, and time required to measure;
- *Relevancy and Accuracy*: an indicator should reflect what is being measured in an accurate way;
- *Sensitivity*: an indicator should be capable of detecting changes over the desired time period;
- *Unbiased*: an indicator should not be open to more than one interpretation about what is being measured and what data are being collected – it should have clear operational definitions that are independent of the person conducting the measurement; and
- *Adequate*: the number of indicators tracked for a given result should be the minimum necessary to ensure that progress toward the end result is sufficiently captured.

The easiest indicators to measure are those referring to *action*. For example, an indicator that could be used to measure the objective, “A programme to replace PCBs in transformers should be replaced between 2008 and 2020”, might be “Numbers of transformers containing

PCBs in use each year after 2008”. For the objective, “Demonstrate that the project will successfully train lab staff”, an indicator could be “Response time for laboratory analysis”.

Often, indicators that require a binary response – a ‘yes’ or ‘no’ answer – provide the simplest approach yet may still ensure effective evaluation of the impact. An example of a binary indicator is: “Parliament has adopted legislation to replace PCB in transformers by 2008”.

More complex indicators are also possible, but are typically more difficult and costly to obtain. For example, an indicator related to exposure, such as dioxins, furans or PCBs, may cost several hundred US dollars for a single measurement. Such indicators are seldom if ever used in a broad action plan, but might be useful for objectives of more limited scope. For example, an indicator for the objective “Pesticide-contaminated site X should be undergo remediation by 2011” might be “Levels of relevant pesticides in selected food samples from neighbouring villages measured in 2011, 2016 and 2021.” In such cases, it may be more reasonable to draw on databases of health effects, such as poisonings or occupational illnesses; however, building such databases is a long-term undertaking.

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MODULE 3. PLANNING THE DETAILS: ACTIVITIES, TIMELINES, RESOURCES, AND MORE...

Learning objectives

Having identified the objectives, this module guides participants to gain an understanding of the various components and details that must be developed in order to prepare a thorough action plan. This involves:

- selecting activities which will effectively meet the action plan's objectives;
- working through a range of practical related implementation details;²⁷ and
- looking at the utility of Gantt and PERT charts (and considering the various software available to prepare these).

Focus of the module

This module focuses on:

- Defining activities
- Breaking down activities into tasks
- Considering order of activities and tasks
- Estimating realistic activity timeframes
- Developing project milestones
- Defining the budget
- Allocating responsibilities
- Presenting the action plan

²⁷ Note that the tools and exercises presented below are not prescriptive, but can be modified to suit particular country needs, situation, etc.

Identifying and Evaluating Options

The need to determine options exist at all stages of the action plan development process. For example, from determining which stakeholders to involve to deciding on which tasks are required to fulfil an activity. For any action plan, a range of options may also be possible for achieving the goal or objective. For example, the following options could exist to undertake legislative reform to implement an effective integrated law on the sound management of chemicals: a country could, *inter alia*: (i) develop a new comprehensive law; (ii) reform existing laws and fill gaps with new laws; or (iii) leave existing laws in place and fill gaps with a mix of new laws and voluntary initiatives.

In addition, options might include a combination of measures, such as legal measures (e.g. amending an existing law); administrative measures (e.g. ensuring that qualified staff dedicated to implementing the action plan are in place); and operational measures (undertaking training/capacity development activities to help ensure that the option is successfully implemented).

In some cases, it will be necessary to formally evaluate the different options available.* This may involve assessing the options against a set of evaluation criteria (taking into account specific country needs, circumstances, and resources) such as:

- *Urgency/Timing aspects*: Will the option be able to meet health and/or environmental needs that must be addressed in an urgent manner? Can the option be implemented within the required timeframe?
- *Practicability/Feasibility*: Is the option able to be undertaken in a reasonable manner considering socio-economic factors, etc.? Are there other factors that make the option unrealistic?
- *Affordability*: Is the estimated cost of implementing the option affordable?
- *Efficiency and Effectiveness*: Does the option make the most optimum use of resources? What degree of impact will the option have in meeting the goal/objective?
- *Cost-benefit*: Will the option achieve a degree of impact worthy of its cost?
- *Monitorability*: Is it possible to measure the progress towards achieving the option?

* An example of a tool that may be used for evaluating options is presented in Annex 5.

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Defining activities

In Module 2, participants developed a strong understanding of the situation and gaps, and identified clear objectives for the action plan. Activities needed to achieve the objectives can now be developed. In some cases, activities will only address one objective, while in other cases they will help to deliver multiple objectives.

Activities are the highest level of action in the action plan hierarchy (see Annex 1) – they set the path for which the fine details are developed. An activity can be defined as an element of work performed during the course of a project. An activity has an expected duration, cost, and resource requirements.

One approach to identifying and selecting activities for a project begins with a brainstorming session. Working group members can identify any activities that they believe will help to reach the objective(s). These suggestions can be collected and compared, providing a comprehensive list which can then be assessed in order to develop an effective and logical set of activities. It may also be helpful to consult with those (working group members, other organisations, etc.) who have had experience with similar action plans in the past.

Considering Possible Funders and Associated Project Budgets

Developing some idea about who might fund the action plan (e.g. European Commission, Global Environment Facility (GEF)) and what kind of budget is likely or realistic (e.g. GEF enabling activity funding, UNITAR grant) is a useful exercise in order to ensure that the action plan includes an appropriate budget range.

Another issue to keep in mind is whether certain activities can be sustained while awaiting funding. In other words, if it takes considerably longer than expected to mobilise funds for particular activities, will the activities still be desirable once resources have been obtained? In this case, it might be useful to consider two possible tracks: one set of activities if resources are attained quickly and a different set of activities if resources are delayed. A useful analogy is a fast intercity train and a slower regional train. Both arrive at the same destination but travel at different speeds.

Breaking down activities into tasks

Since the activities are typically large elements, they will need to be broken down into more manageable tasks. Activities should only be broken down to a level which enables the action plan development working group to effectively estimate time and resource requirements and provides enough information for those responsible for the particular activity or task. Breaking down activities into too much detail overemphasises the role of planning and makes it difficult to easily obtain an overview. Experience shows that it is difficult to control more than 10-20 tasks per activity.

Identifying “Low Hanging Fruits”

Often the people who care most about chemicals management issues and clearly see the need for improvement are those working at the technical or middle management level. What can be done at this level, and outlined in an action plan, to initiate a concerted national effort to improve the ways in which chemicals are managed in the country? Not discounting the need to bring in high-level support and commitment, there are steps that can be taken at the “working” level to trigger action. A lot can be achieved when people who are working in chemicals management on a day-to-day basis see opportunities for improvement and decide to take action. While some options will require policy-level support and additional resources, others can be achieved with modest means and through good will and dedication. The benefits of “low hanging fruits”, when combined, can have a cumulative effect or can reinforce one another, thereby helping to set in motion systematic change on a larger scale. Moreover, this principle can be applied beyond the “working level” to all levels of decision-making where practical action can be taken.

Considering order of activities and tasks

With a comprehensive list of activities and tasks required to complete the action plan, it is important to assess how they relate to each other in order to determine the necessary sequence of implementation and identify any dependencies. In other words, which activities/tasks can begin immediately? Which activities/tasks need to be completed before others can begin? Do some activities/tasks need to start at the same time?

Work Breakdown Structure

A common planning tool used to help breakdown activities into more manageable parts is the Work Breakdown Structure (WBS). This involves picturing the action plan as a hierarchy of activities and tasks. A WBS is developed by firstly listing activities; listing underneath each activity, the various tasks required to accomplish the respective activity; and so on until the desired level of detail is reached. The WBS is also the basis for both Gantt and PERT charts.

Activity: Repackage and store 100 tons of obsolete pesticides stockpiles in an environmentally safe manner
Task: Obtain UN approved packaging materials suitable for long-term storage of chemicals
Task: Repackage (when possible) and label the chemicals stocks
Task: Transport the repackaged stocks
Task: Store in a designated well-designed, secure and controlled facility(ies) for one year

Estimating realistic activity timeframes

Estimating how much time each activity/task will likely require to be completed is key to developing an effective action plan. While the duration of each activity/task, at this stage, can only be an estimate (be prepared to adjust the action plan during its implementation), the durations should be carefully estimated to ensure that the action plan is as accurate as possible.²⁸ Reviewing earlier projects may provide insight into realistic timeframes, and experience shows that this is the most efficient way of learning to plan realistically. In addition, where activities or tasks are of a technical nature, it may be necessary to consult with those who have the related technical knowledge or expertise in order to make realistic estimations. Experience has shown that however careful the planning, it is wise to build in extra time to allow for unforeseen events.

If funds are in place for the action plan, it would be possible at this stage to not only estimate start and finish dates for each activity/task, but also set the specific dates for each. Where this is not possible, a format independent of specific dates can be used, such as “month 1, month 2”, etc.

Developing project milestones

Project milestones are reference points that mark clearly distinguishable events in the action plan that can be used to monitor progress during implementation. They are predetermined points to gauge whether a project is on track as planned. The simplest project milestones are the dates estimated for the start or completion of an activity. For example, “Inventory of obsolete pesticides updated”.²⁹

Defining the budget

A range of resources are typically required to implement an action plan. These may include, *inter alia*: human resources, facilities, equipment, and materials. Other costs may include travel, training, etc.

To determine the resource inputs required to complete each activity and related tasks, ask the following questions:

- How many people are required?
- What type of skills/expertise do they need to possess?
- Are particular facilities, equipment, services, or materials necessary?
- Are there any other special requirements not yet covered?

²⁸ An underestimation of time required for an activity or task can be caused by a range of miscalculations, such as: leaving out essential activities and tasks; not accurately accounting for interdependence of activities or tasks; not accounting for time required for ordering and delivery of equipment; and failure to accurately consider competing resources, e.g. scheduling the same person or equipment for simultaneous activities or tasks.

²⁹ The difference between project milestones and indicators is that project milestones monitor the action plan’s implementation schedule whereas indicators measure the degree of the action plan’s effectiveness in meeting its objectives.

Reviewing earlier projects may also provide insight into realistic resource requirements.

It is important to be as accurate as possible when estimating resource requirements at this stage. Experienced donors will be able to recognise an unrealistic estimate. In addition, the more accurate the estimates are, the less likely that the project will run into problems during implementation (and require requests for additional funds). Finer details on each resource can be defined by considering the following:

- *Human resources*: knowledge and skills (including for activity management); person-days required; estimated cost;
- *Facilities*: types; space and time required; estimated cost;
- *Equipment*: types; time required; estimated cost;
- *Services*: types (e.g. travel expenses, translation); quantity; estimated cost;
- *Materials*: types; quantity; estimated cost; and
- *Any special requirements*: unique skills; resources; etc.

Totalling the costs for each activity and task can provide a general estimate of the cost of the action plan.³⁰

On the chance that the project will not gain approval for all the required resources, look for compromises that will not threaten the overall goal and objectives of the project. For example, if an action plan on “PCB inventory strengthening” with a budget of 25,000 USD only receives funding for 10,000 USD, expectations may need to be revisited so that the goal is to develop a more comprehensive and accurate PCB inventory, rather than a perfect one. In addition, it should be possible, with less-than-optimal funding, to commence with some action plan implementation activities that can be addressed early on. These activities should result, if possible, in the fulfilment of at least one or more action plan objectives.

A Resource Requirements Matrix, as presented below, can assist in identifying and recording the various costs of an action plan.

³⁰ In-kind resources should also be considered.

Resource Requirements Matrix

A Resource Requirements Matrix is a tool which can assist in charting the various costs of an action plan. It can also help with preparing action plan budgets and financial mobilisation efforts. Allocating the budget to the action plan manager, as well as monitoring and controlling the action plan can also benefit from the use of this matrix. Resources can also be incorporated into a Gantt chart.

Activities and Tasks from the Work Breakdown Structure	Human Resources	Facilities	Equipment	Services, Materials, etc.	Special Resources	Total Resource Costs
Activity: Repackage and store 100 tons of obsolete pesticides stockpiles in an environmentally safe manner						
Task: Obtain UN approved packaging materials suitable for long-term storage of chemicals	Qualified driver (10 person-days) Labourer (20 person-days)		Transport trucks	Packaging materials	Petrol	10 person-days/daily wage: \$xx 20 person-days/daily wage: \$xx Trucks: \$xx Packaging materials: \$xx Petrol: \$xx
Task: Repackage (when possible) and label the chemicals stocks	Labourer (40 person-days) Manager (5 person-days)		Protective clothing (overalls, masks, gloves...)			40 person-days/daily wage: \$xx 5 person-days/daily wage: \$xx Protective clothing: \$xx
Task: Transport the repackaged stocks	Qualified driver (16 person-days) Labourer (56 person-days) Manager (8 person-days)		Transport trucks		Petrol	16 person-days/daily wage: \$xx 56 person-days/daily wage: \$xx 8 person-days/daily wage: \$xx Trucks: \$xx Petrol: \$xx
Task: Store in a designated well-designed, secure and controlled facility(ies) for 2 year	Warehouse & monitoring staff (730 person-days)	Long-term storage facilities	Supervisory equipment (warning system...)			365 person-days/daily wage: \$xx Facilities: \$xx

Note: The activities outlined here are for illustrative purposes and are not comprehensive.

Note: "Person-days" refer to the number of full-time days that would be required to complete an activity or task. For example, 5 person-days may equal one person working 5 days or 2 persons working simultaneously for 2.5 days. It is also important to estimate the costs of a person-day for the particular type of human resource required. For example, 1 person-day for a manager will likely be more costly than the same amount of time required for a labourer.

Allocating responsibilities

This step helps to determine, in a preliminary manner, who will be responsible for completing each activity and task. This demonstrates to donors that agreement and commitment in principle has been achieved from action plan participants. At this stage (as human and financial resources may not be adequately secured), it may be wise to assume that identified participants will be available to participate as agreed upon in this step, while keeping in mind that, in reality, responsibilities may need to be adjusted.

Key questions include:

- Who has the appropriate knowledge?
- Whose commitment is required?
- Have the capability, skills, and expertise of each working group member, stakeholders, etc. been taken into account before allocating responsibilities for activities and tasks?
- Does each participant understand what will be required of them?

Responsibility Assignment Matrix

Various tools can be used to facilitate this step including the Responsibility Assignment Matrix. Listing responsibilities can also be incorporated into a Gantt chart.

1. <i>Activities and Tasks from the Work Breakdown</i>	<i>Person/Org: Ministry of Agriculture</i>	<i>Person/Org: Ministry of Environment</i>	<i>Person/Org: Project Coordination Unit</i>	<i>Person/Org: Advisory Technical Group</i>
Activity: Repackage and store 100 tons of obsolete pesticides stockpiles in an environmentally safe manner				
Task: Obtain UN approved packaging materials suitable for long-term storage of chemicals		Arrange transport	Select packaging materials to be used (p)	Advise on appropriate packaging materials
Task: Repackage (when possible) and label the chemicals stocks	Obtain protective clothing		Hire appropriate labourers Monitor execution of the task (p)	Plan the repackaging and labelling process
Task: Transport the repackaged stocks			Select a transport company Monitor execution of the task (p)	Advise on transport companies that can ensure safe transport of hazardous substances
Task: Store in a designated well-designed, secure and controlled facility(ies) for one year	Advise on possible facilities	Select suitable facility Hire and manage warehouse staff (p)	Develop and submit proposals for possible facilities Organise supervisory equipment	Advise on appropriate facility type and design floor plan

Note: (p) indicates which person/organisation has the primary responsibility for each task.

Presenting the action plan³¹

Gantt chart

A Gantt chart can be used to provide a quick graphical overview of the action plan. This is useful for efficiently communicating the content of the action plan to potential funders as well as a tool for project team members to gauge their efforts during the implementation process (see introduction module).

PERT chart

When it is more important to focus on the relationships between activities and tasks rather than the schedule, the PERT chart, also known as the network chart, may be more useful. This tool is also useful for both communicating and implementing the action plan.

Used together, PERT and Gantt charts can provide complementary information on the project's activities, tasks, and schedule (see introduction module).

Obtaining approval of the action plan

At this stage, the action plan should be formally validated by all members of the action plan development working group. This helps to ensure ownership and commitment to the actual plan, thereby increasing the likelihood of a successfully implemented project.

Considering Harmonisation across Action Plans

When several action plans are being prepared at the same time as part of a wider effort, such as preparation of a NIP for the Stockholm Convention, it is important to ensure that the various action plans are coordinated and harmonised. For example:

- Are the various parts of the action plans sufficiently harmonised with respect to structure, terminology, headings, etc.?
- Can some activities be common to more than one action plan? Identifying such common activities, and breaking them down to the task level may greatly assist with the development of realistic human and financial resource estimates. It might be desirable to consider cross-referencing between related activities (both within an action plan and across different action plans), or make a general comment in the text stating that there may be possibilities to combine activities and that such possibilities will be reviewed in more detail prior to implementation.

³¹ Guidance on preparing Gantt and PERT charts is available from UNITAR in *Developing a Gantt and PERT Chart, Draft Training Manual*. See www.unitar.org/cwm

MODULE 4. IMPLEMENTING AND EVALUATING THE ACTION PLAN

Learning objectives

This set of modules guides participants to market the action plan, secure resources, and take the necessary steps to ensure successful implementation.

Focus of the module

This set of modules focuses on:

Module 4.A. Obtaining High Level Commitment

- Assessing potential obstacles
- Raising awareness of the potential benefits of taking action and enhancing commitment
- Securing adequate human and financial resources

Module 4.B. Implementing Activities and Monitoring and Evaluation

- Implementing planned activities
- Monitoring, evaluation, and responding
- Reporting results

Module 4.A. Obtaining High Level Commitment

Commitment from national decision makers needs to be obtained at various stages of the action plan *development* process: at the beginning, at critical points identified during the process, and at the end when the action plan has been finalised. There are different forms of commitment, such as formal agreements, ministerial directives, etc. Commitment from external decision makers may also need to be obtained following national approval.

Assessing potential obstacles to commitment

An important component of obtaining high level commitment involves assessing potential obstacles or bottlenecks. Such obstacles or bottlenecks could include: competing priorities that might threaten support for the action plan; a lack of awareness about the topic or issue; and contradictory or duplicative mandates (or lack of a mandate) related to the action plan. Such obstacles may have already been identified in the action plan development process and addressed. In other cases, these will require further attention.

Raising awareness of the potential benefits of taking action and enhancing commitment

At this stage, it will be necessary to communicate the intentions of the action plan to those who have decision making power concerning its implementation. Raising awareness about the action plan is a good way to begin gathering support.

The action plan itself can provide a succinct overview of the proposed action and may contain background information on the action plan, such as the rationale for development, with anticipated benefits, links to other national priorities, and a summary of how the action plan was developed³²; key outputs, such as the main activities and tasks; and an overview of monitoring and evaluation procedures. An essential activity is to distribute some form of the action plan in a timely and appropriate manner, in pre-approved form, to those who have an influence over its approval. It is also important to modify the materials to target different audiences. For example, a brief executive summary of the action plan (or ministerial briefing note; see Annex 6) outlining the need for action, some of the proposed activities, and the intended outcomes will probably be sufficient for a high level audience. A press release will probably be the most appropriate document to promote the action plan through the print media or to communicate to the public at large (see Annex 7).

One possible approach to communicating the relevancy of an action plan to decision makers and ultimately to enhance commitment and cooperation is to highlight where several national goals may be served by the action plan. Examples of relevant questions in the case of action plans prepared as part of a NIP for the Stockholm Convention may include:

- Do the action plans contain elements that can be useful for the management of a broader range of chemicals, such as pesticides or industrial chemicals in general?

³² Providing brief details on the stakeholders, ministries, etc. that were involved in the development of the action plan, as well as information on the development process itself (such as the number of meetings, lessons learned, criteria used for prioritisation, etc.) could serve as a historical record of the process and help to share the details with potential donors.

- Are there elements that can be used to facilitate the attainment of national goals in the broader development agenda? For instance, chemicals issues are often related to agriculture, health, water, energy, or more generally poverty issues (see textbox on “Institutionalising the Project” below).

Securing adequate human and financial resources

The goal and objectives of the action plan will not be reached without securing adequate human and financial resources. Chemicals management priorities will always compete for resources with many other legitimate issues. Those decision makers (both domestic and external³³) that are responsible for committing human and financial resources, therefore, not only need to be aware and understand what the action plan is addressing, but need to express their support through the allocation of adequate resources.

Some issues to consider include:

- Can obligations be placed on nongovernmental sectors, such as industry, to remove some burden from the government regarding action plan implementation?
- Does the action plan have high level support, and will that support be clearly communicated to external donors?
- Does the action plan include priorities? These may help donors understand the most pressing issues of the action plan.
- Are the resource needs realistic and thought through as comprehensively as possible?

³³ For some perspectives of donor institutions and development agencies regarding capacity building assistance for chemical safety, see Annex 8.

Institutionalising the Project

In some cases, institutionalising the project may be essential for the longer-term success of an action plan. In other cases, the action plan may be of particular scope or of a limited duration for which 'institutionalising the project' may not be appropriate. This concept goes beyond the one-time securing of human and financial resources: it means ensuring that activities under the project are seen as a normal part of how a government conducts its work. Indicators of a successfully institutionalised action plan can be, for example, a long-term financial commitment by decision makers and the permanent establishment of a body to oversee its work.

Related to this, ensuring ongoing commitment is essential so that when the funds for the action plan are finished, the country will be dedicated to building on the action plan, for example, by establishing a regular budget line in their national budget.

It is also important to explore the links between chemicals issues and the myriad related issues of sustainable economic and social development such as, *inter alia*: the protection of human health; the economic benefits of a cleaner environment for attracting investment within the country; fostering sustainable agriculture for the internal market and complying with agricultural and other export requirements for external markets; and the contribution that the sound management of chemicals can make to reinforcing the legislative and policy framework of a country. A useful approach is to mainstream chemicals management activities into overall national priorities, such as national poverty reduction strategies or national sustainable development strategies. How to relate chemicals management issues to issues of poverty reduction and sustainable development in general should be considered at virtually every stage in the action plan development process.

Module 4.B. Implementing Activities and Monitoring and Evaluation

Implementing planned activities

Having gained approval and support for the action plan, the implementation phase can begin based on the activities and details developed in the action plan. Key steps to initiate implementation of the action plan may include:

- selecting a project team leader and team members;
- holding a project team meeting to formally launch the commencement of action plan implementation (discuss the goal, objectives, activities, possible challenges, etc. to ensure that all members understand and agree with the action plan); and
- agreeing on working practices and processes (including methods for communication).

It may also be useful to prepare a 1-2 page ‘start-up’ or ‘inception’ report to summarise the goal, objectives, and major activities, as well as list participants.

Monitoring, Evaluation, and Responding

Monitoring the implementation phase helps to ensure that the original action plan is on schedule. Since various factors can affect the quality, time, and costs related to implementing the action plan, an early-warning monitoring system provides the ‘insurance’ needed to steer the project back on track (see Module 3, Project milestones section).

Questions that could assist in monitoring the project include:

- Has each project milestone been met according to schedule?
- Have certain activities been more challenging than expected and did this affect the quality?
- Are there times where the estimated costs have exceeded expectations?

At various stages of the project, the degree of success in achieving the objectives (and ultimately goal) of the action plan should also be evaluated. This can be achieved by using the performance indicators (defined in Module 2.C). If the performance indicators were met, it is safe to say that the objectives and therefore the goal are being/were achieved.

If the performance indicators demonstrate that certain objectives were not achieved, it may be necessary to assess what went wrong and develop a revised action plan. In the longer-term, evaluating the impact of the project provides insight into what lessons can be learned to guide future efforts (such as the development and implementation of future action plans).

Monitoring and evaluation of the action plan is based on three fundamental steps:

- *Measuring progress*: The project team leader should have a mechanism to continually be aware of the status of the project. Communicating with project team members, the team leader knows whether planned activities are implemented on time and within the agreed quality standards and budget (based on project milestones, the planned schedule, budget, etc.). Achieving project milestones is a good measure of

the project's progress. In addition, evaluating the effectiveness of the project at certain time periods, based on the performance indicators, will provide an indication of the degree of success to-date regarding anticipated impact and insight into whether the project is heading in the right direction towards meeting the objectives and ultimately goal.

- *Analysing the situation:* Where progress and effectiveness has not gone according to plan, the related situation should be analysed to determine the cause of any positive or negative deviations.
- *Determining the necessary action:* The results of the monitoring and evaluation process may reveal that additional action is necessary to remedy the situation. This may require modification of the action plan.

Effective monitoring and evaluation provides the information required to measure progress; enables such progress to be systematically communicated to project team members, stakeholders, funders, etc.; and gives justification for making any adjustments to the action plan.

Updating the Action Plan

It is important to remember that the action plan is not a static document; it should be a 'living' document that can be adjusted to respond to any deviation from the original plan. When such updating is required, the following process can help to make it as painless as possible:

- discuss proposed changes with project team members;
- revise the action plan to address the new situation and agreed response; and
- circulate the revised action plan to team members for approval.

Reporting results

By providing a standard framework for recording the action plan implementation phase, progress reports can act as an important tool for both monitoring progress as well as later evaluating impact. Similar to the discussion on obtaining commitment, it may be necessary to create alternate versions of the progress (and final) reports in order to best reach specific target audiences.

Progress reports may include:³⁴

- purpose and scope of the project;
- project progress, looking at the project milestones (focusing on the quality, time, and cost aspects of the activities) and performance indicators (focussing on quality, quantity, and timing aspects related to expected impact);
- deviations from original plan and reasons;

³⁴ Adapted from World Health Organisation. 2004. Planning Workshop Manual (Draft).

- revised plan (where applicable);
- financial report; and
- revised budget (where applicable).

Having achieved the intended results, the project should be formally closed by closing the project's financial accounts, preparing a formal final project report, and holding a final project team meeting.

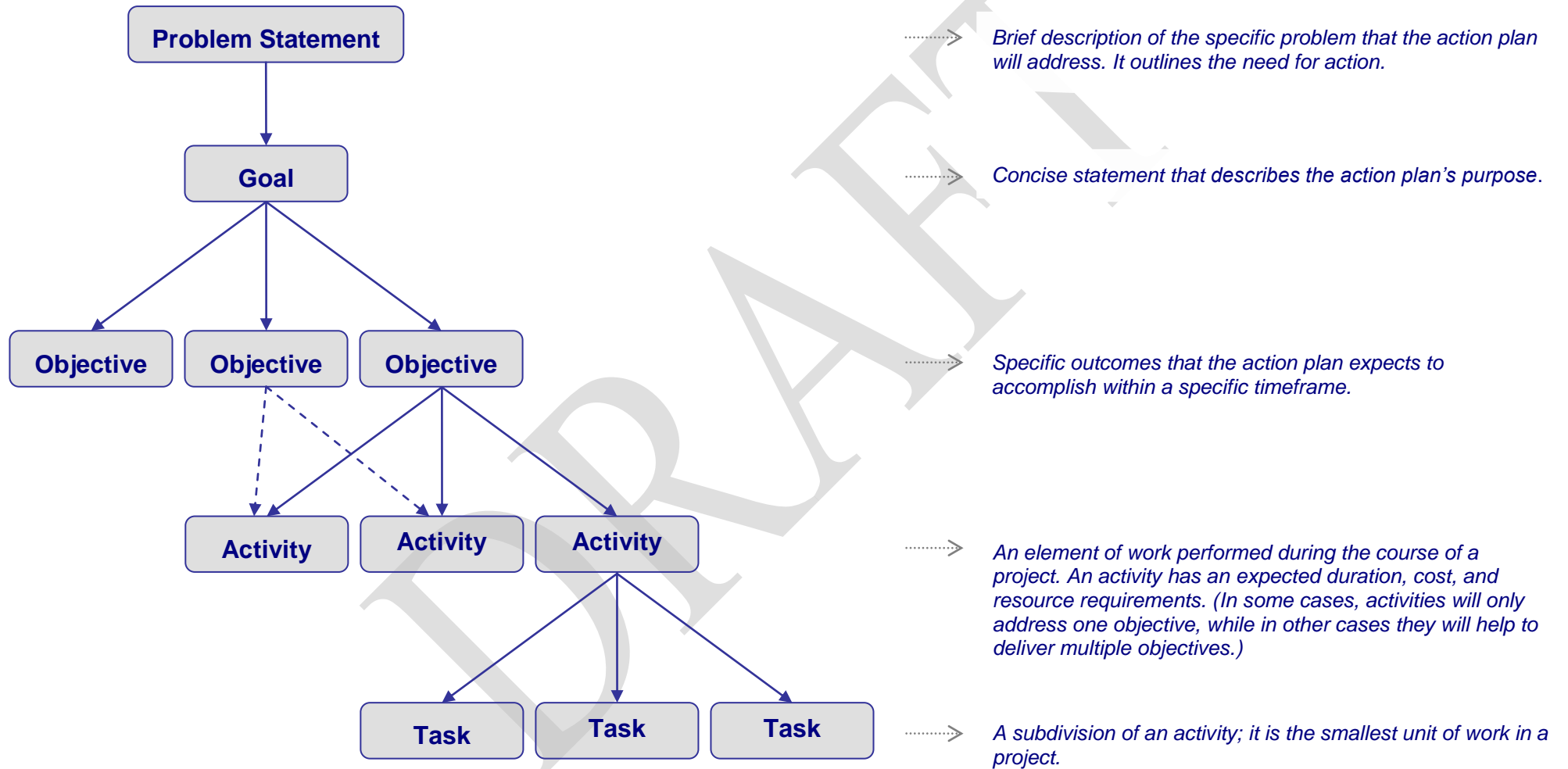
A final report is a useful tool to record an overall history of the project, outlining what the project achieved, and thereby communicating the results to project team members, funders, and any other interested and affected parties. It may also be required by the funders of the action plan (likely in addition to various progress reports along the way).

The final report may include:

- purpose and scope of the project;
- project evaluation in terms of implementation (using project milestones) and impact (using performance indicators);
- deviations from original plan and reasons (quality, time, cost, etc.);
- financial report (an assessment of the initial set of anticipated resource requirements vs. those that were actually used, and reasons for any changes);
- an overview of the strengths and weaknesses of the project ('lessons learned');
- list of publications; and
- conclusions.

In some cases, such as action under particular conventions, a formal reporting regime may have already been established.

Annex 1: The Action Plan Hierarchy



Annex 2.A.: Stakeholder Analysis

Identification and involvement of stakeholders is broadly discussed in Module 1. In order to determine who should possibly be involved or might want to be involved, the following questions can be asked:

- Who might be affected by the action plan and to what extent?
- What are their interests and positions (expressed, implicit, or hidden)?
- Who has information, expertise, or new points of view that might be helpful?
- Who has been/is involved in similar initiatives or planning? Who can actively contribute to the development of new policy or projects? Do they have special skills?
- Who has expressed interest in being involved in similar initiatives/efforts before?
- Who else might be interested in preparing the action plan?
- Are all affected interests represented in proportion to their importance?
- Might some stakeholders obstruct decision making or frustrate implementation? If so, how might this be prevented?

A simplified table for categorising stakeholders, which may assist with the stakeholder analysis, is shown below. After identifying stakeholders, their interests, etc., it may be helpful to divide stakeholders into four categories: those who will likely want to participate fully or whose active involvement will determine the credibility of the process; those who would likely play a more limited role; those who likely will wish simply to be kept well informed; and those who will not want to be involved. This categorisation may help with organisational matters.

<i>Who?</i> Stakeholder Name	<i>What?</i> Stakeholder Interests, Position, Official Mandate, etc.	<i>Why?</i> Reasons for Inclusion	<i>How?</i> Possible Role

Annex 2.B.: Checklist of Possible Stakeholders

Ministries concerned with the sound management of chemicals

Chemicals management is a diverse field, spanning issues of public health, environmental protection, economics, industry, agriculture, worker protection, international relations, and trade. As a result, a wide range of governmental ministries and agencies have responsibilities related to chemicals management.

Ministries concerned with, or who have a role in, the management of chemicals can include Ministries of Agriculture, Commerce, Customs, Economics, Environment, Finance, Foreign Affairs, Health, Industry, Justice, Labour, Public Works, Telecommunications, and Transportation. Other governmental entities (such as central agencies or councils) could also have an interest, including those responsible for the development and implementation of laws, regulations, policies, and activities related to chemicals management throughout their life cycle, and/or aspects of pollution prevention and control.

The allocation of responsibilities can vary between countries. Countries may use different titles for their ministries/agencies. In most cases:

- Ministries of *Agriculture* are generally concerned with the use of agricultural chemicals for the benefit of securing food supplies;
- *Customs Authorities* are generally responsible for ensuring that chemicals do not enter or leave the country contrary to government regulations, and tariffs and duties;
- Ministries of *Environment* are generally concerned with the direct and indirect effects of releasing chemicals into the environment as emissions and wastes to air, water, and land;
- Ministries of *Finance* have a central role in financial resource allocations for chemicals related activities;
- Ministries of *Foreign Affairs* usually coordinate all international aspects of chemicals management, such as participation in relevant international agreements and conventions and sometimes foreign aid;
- *Government printing/publications offices* are generally concerned with the publication and distribution of laws, regulations and other government documents, and can play a role in raising public awareness;
- Ministries of *Health* are mainly concerned with the short- and long-term health impacts of chemicals (including emergencies and poisonings) on the general public or specific population groups;
- Ministries of *Industry* are often concerned with the production of chemicals and chemical products and the introduction of cleaner production technologies;

- Ministries of *Justice or Legal Affairs* are generally concerned with the development and enforcement of laws and regulations, and often deal with issues concerning public access to information, the protection of confidential business information, criminal and forensic issues, and accidents/incidents/terrorism;
- Ministries of *Labour* are generally concerned with occupational health and safety issues related to the use and handling of chemicals at the workplace;
- Ministries of *Planning* primarily deal with economic planning (and land use/regional development). This ministry can also often deal with the donation or receipt of development assistance, which could include chemicals for agricultural use, technical or financial assistance for the development of chemical industries, or technical assistance for the management of chemicals;
- Ministries of *Science and Technology* play an important role in deciding the future direction and resource allocations for research and, at least indirectly, action on chemicals;
- Ministries of *Trade* are generally responsible for regulating the import and export of chemical substances and often have the authority to issue relevant trade permits; and
- Ministries of *Transport* are generally concerned with the safe transportation and storage of chemicals during the distribution phase.

Stakeholders outside government

Chemicals play a part in nearly all aspects of modern life. As a result, many individuals and groups in society have an interest in and are potentially affected by the way in which chemicals are managed and used. Those who produce, sell, and use chemical products – from industrial managers to shopkeepers to homemakers – have responsibilities related to their judicious and correct use and sound management. Users, worker, and others may be interested in benefits as well as risks associated with chemicals. A successful action plan therefore requires involvement of those outside of government. If public and private interests are not supportive and/or engaged, the best-planned government programme could result in nothing more than a paper exercise.

Most stakeholders can be found in various identifiable categories. Such categories include:

- industry associations and industrial enterprises;
- the agricultural sector (e.g. farmers, agricultural associations, cooperatives);
- retailers and distributors;
- public health professionals;
- workers and workers' unions;
- public interest groups (e.g. environmental groups, consumer protection groups);
- research institutes and academia;
- women's organisations;
- communities; and
- individual citizens.

Annex 2.C.: Principles for Stakeholder Involvement in Action Plan Development and Implementation

The following is a brief overview of key principles and processes which should be considered in any effort to meaningfully engage stakeholders in action plan development and implementation.³⁵

Transparency

The key principle underlying successful cooperation is *transparency*. In cases where bodies are charged with making decisions and seeking stakeholder opinions, those who provide input into decision making need to have the opportunity to have their views adequately heard, considered, and responded to – especially if the decision made is contrary to what they sought. In order to maximise transparency, decision makers must adequately communicate the reasons for the decision and the related factors that were considered. Anything less – for instance giving a decision without providing the reasons behind it – can sow mistrust among those who provided input and may affect their future participation in such processes.

Ensuring Roles and Responsibilities are Clear

All stakeholders need to have clear roles and responsibilities. Coordination with stakeholders should commence with the development of sound terms of reference. Such terms of reference are, in effect, the ground rules for participation. They can outline how decisions will be made – for example, by consensus where possible and by government officials where it is not. The terms of reference should also make it clear whether stakeholders are to receive feedback and input from their respective constituencies, or simply try their best, from their own experiences, to represent what they think their constituencies' views will be.

Comprehensive Participation

One of the key elements to improving stakeholder participation is to involve stakeholders, where possible and appropriate, throughout the chemicals management process (e.g. from decision making and action plan development to implementation and review). Of particular importance is the inclusion of stakeholders at the early and formative stages, especially when decisions are to be made in the development of public policy. Involving stakeholders as early as possible may result in the identification of issues which might have otherwise been overlooked or not considered important, but which could prove to be of significant importance for certain stakeholders, for the matter in question, or for the final decisions or actions. Moreover, where stakeholder participation occurs exclusively at the latter stages of policy discussions or development, those not present at the start are often incapable of influencing the selection of alternative decisions or key variables since key decisions will likely have already been made.

In order to facilitate comprehensive participation, discussions should occur with stakeholders present whenever possible. Stakeholders who know what the limits of their influence are in

³⁵ Adapted from Turner, Brandon. "Public Participation in Environmental Impact Assessment: Recommendations for Improvement". *International Journal of Environmental Education and Information*, 19 (2), 2000.

the process (if it has clear terms of reference) should be able to give their input freely with the understanding that their advice will not always be adopted. In general, however, the overall process should greatly benefit from such participation.

Two-way Communication

In order to maximise the gains from comprehensive stakeholder participation in chemicals management, a communicative relationship between and among stakeholders and government must exist. Successful stakeholder involvement will be severely challenged if these relationships are not characterised by two-way communication, but rather by a mere one-way flow of information from the ‘chief’ decision makers (e.g. government) to the remaining stakeholders. There are a variety of ways to both involve and facilitate an interactive relationship between stakeholders (and government), which can be strategically employed to complement all stages of chemicals management. These include advertisements, leaflets, media, displays, exhibitions, questionnaires and surveys, telephone ‘hot lines’, open houses, personal contact, community liaison staff, community advisory committees, presentations, roundtables, workshops, public meetings, and public inquiries.

Understandable and Timely Information Disclosure

Another factor which can greatly affect the degree and efficacy of involving stakeholders in chemicals management is the provision of information which sufficiently caters to the differing needs of the various participating stakeholders. Clearly written documents and related materials are of crucial importance for stakeholders. The timely provision of information is also vital – especially in terms of building trust and confidence for those that are new to a process. Language barriers and a possible lack of technical expertise among stakeholders must also be addressed.

Despite sufficient access to information – even information which has been written with the readability of the wider stakeholder population in mind – some stakeholders may still find the often technical nature of chemicals management and the related environmental effects perplexing. While individual stakeholder representatives who participate at relatively high levels are likely to be highly familiar with chemicals issues, those who participate at other levels could be less knowledgeable. Poor understanding of chemicals management will undoubtedly devalue the availability of quality literature and documentation. Another means of improving stakeholder involvement, which works towards addressing these issues, is stakeholder education.

Stakeholder Education

Educating stakeholders about chemicals management can empower them to engage more actively and effectively in shaping the outcome of chemicals management activities, and in protecting their interests. Often, certain stakeholders, such as the workers or community residents, are inadequately informed concerning their potential role(s) in chemicals management. Various methods, however, can be used to improve upon such a deficiency which include stakeholder training programmes, computer-based participation, open houses, plain language, phone lines, educational publications, and videos. The more such education is administered by entities credible to the stakeholder, the more likely will the knowledge be trusted and the stakeholder feel comfortable with participating in the action plan development and implementation.

Adequate Funding

Armed with sufficient skills and materials to make informed and meaningful contributions to chemicals management, certain stakeholders may still be at a severe disadvantage concerning their involvement due to a lack of financial resources. Insufficient resources can significantly impact certain stakeholders' involvement in chemicals management, greatly reducing the effectiveness and credibility of their participation and discouraging involvement. For example, at the early stages of developing a chemicals management action plan, certain stakeholder groups may require technical advice on the characteristics of the matter in question in order to ensure that all key issues and contentious aspects are identified. In addition, other costs, such as travel, incurred as part of the participation process, can severely debilitate certain stakeholder groups, such as representatives of workers and community residents, who inevitably will not have resources comparable to private groups, such as industry representatives.

As those responsible for developing chemicals-related policies, programmes, and action plans reach out for input into decision making, some decisions, however, even in a politically charged field like chemicals management, can be relatively easy to reach by consensus from the participants. As long as participants feel like they have been treated as equals around the table, and the structure of who has final decision making power and other ground rules are clear throughout, such processes can be effective pillars of a sustainable platform for integrated chemicals management.

Annex 2.D.: Some Stakeholder Involvement Approaches

Stakeholder Involvement Approaches	Definition	Examples	Advantages
<i>Two-way Communication</i>	Basic information collection and timely response to public questions or concerns.	Survey, questionnaire, Internet discussion groups, workshops, discussion papers, feedback lines.	Opportunity to interact with stakeholders and adapt assessment to address specific concerns more directly.
<i>Advisory Bodies</i>	A short-term body with a mandate to gather expert opinion on an issue or bring together different types of expertise.	Scientific advisory boards, expert advisory panels, programme advisory committees.	Provide informed, multistakeholder insights and recommendations; forum for public to influence decision.
<i>Stakeholder Consultation</i>	A facilitated process for fostering dialogue and gathering public input. Stakeholders can contribute to process design and implementation.	Consultation meetings, teleconferencing, focus groups, community meetings, hearings.	Involvement of professional facilitators to lead discussion and seek common ground can build trust and demonstrate government's commitment to openness and transparency.
<i>Partnerships</i>	A participatory process in which two or more parties accept joint responsibility for various aspects of the process.	Co-hosting workshops, co-production of educational materials, joint delivery of a service.	Facilitators help to ensure that all voices are heard. Representatives of participating organisations share information with their members and act on their behalf.
<i>Joint Decision Making</i>	An approach in which two or more parties make decisions about a policy, programme and/or process, and share responsibility and accountability for the outcome.	Joint working group for drafting policy guidance documents, multistakeholder board of directors, co-sponsored programmes, round-tables, consensus-building.	Key stakeholders usually become involved at an early stage, and share ownership of the process and outcome.

Source: Adapted from Health Canada. *Guidance Document on Public Involvement (Draft)* 1 October 1999.

Annex 3: Possible Terms of Reference for Action Plan Development Working Groups (With Annotations and Examples)

1. Brief Introduction and Background of the Initiative

- Basic guidelines for the action plan
- Driving forces/Key issues of the priority topic

2. Objectives of the Action Plan Working Group

- Drafting the action plan
- Obtaining support from ministries concerning action plan development

3. Organisational Structure

Name, position, institution, and contact details for each of the following:

- Working group chair
- Working group secretariat
- Other working group members
- Additional resource persons and/or resource institutions

4. Responsibilities of Action Plan Working Group Members

4.1 Working Group Chair's Responsibilities

- Monitoring and reporting on progress and outcomes regarding the action plan development workplan
- Facilitating action plan working group meetings
- Ensuring that all members are heard equally (as arranged)

4.2 Working Group Secretariat's Responsibilities

- Coordinating the action plan working group
- Arranging and preparing action plan working group meetings
- Providing facilities and materials for the action plan working group meetings
- Preparing and distributing reports for action plan working group meetings
- Recording minutes of the action plan working group meetings and submitting to the working group leader
- Acting as focal point through which information flows

4.3 Other Working Group Members' Responsibilities

Common Responsibilities:

- Participating in the action plan working group meetings
- Reporting to the action plan working group secretariat
- Reporting to respective constituencies
- Providing expertise and relevant input information

- Contributing to the preparation of action plan
- Implementing tasks as agreed by the action plan working group

Responsibilities for Specific Members:

- Preparing data concerning specific topics
- Hosting/chairing meetings on a rotating basis

5. Operating Procedures

- List of location(s) and schedule for action plan working group meetings
- Establishing sub-working groups (if necessary)
- Working group meeting minute taking
- Details regarding process for rotating action plan working group chair
- Mechanism for discussion (e.g. roundtable, seminar)
- Decision making procedures (e.g. consensus)

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Annex 4: Prioritisation Tool

Various guidance and tools exist regarding prioritisation. For example, guidance on conducting a priority assessment as part of preparing a NIP for the Stockholm Convention is provided in the UNEP/World Bank document *Interim guidance for developing a national implementation plan for the Stockholm Convention*.³⁶

An example of a prioritisation tool that can be used to rank areas or issues of concern is presented below. For this tool, a set of simple decision criteria has been provided against which the various issues can be evaluated and prioritised. However, the best set of criteria is one decided and agreed upon by the working group.

Issue Prioritisation Matrix

Ranking issues against the following criteria will allow a simple comparison of the relative importance of each and should thereby facilitate further group discussion on setting, confirming or reviewing priorities. Such a tool, however, should not be seen as an end in itself. It is first and foremost an evaluative tool. Simply adding values assigned to each issue will not take into account the different weighting assigned to particular criteria.

Issue	Criteria			Priority Ranking³
	Scale of Problem¹	Level of Concern²	Ability to Adequately Address Issue²	
- <u>Issue 1</u>				
- <u>Issue 2</u>				
- <u>Issue 3</u>				
- <u>Issue 4</u>				
- <u>Issue 5</u>				
- <u>Issue 6</u>				

¹ Enter: local, regional, national, or global.

² Enter: low, medium, or high.

³ Provide relative ranking from 1 to 5 of the problem(s) being faced by the country (1 = most severe problem(s); 2 = second most severe problem(s), etc.). The same ranking can be given to different issues where appropriate.

³⁶ See www.pops.int/documents/implementation/nips/guidance/default.htm

Since prioritisation can take place at various stages of the action plan development process, and therefore in different contexts, the table above has limited usefulness. It would typically be used following a situation analysis or at a priority setting workshop. In other situations, there may other criteria that is more appropriate. For example, as part of preparing a NIP for the Stockholm Convention, a country may wish to prioritise its action plans. Criteria that might be relevant for such an exercise could include urgency of the matter, time limitations for meeting related obligations of the Convention, or opportunities for synergies with other national priorities (e.g. poverty reduction, health issues).

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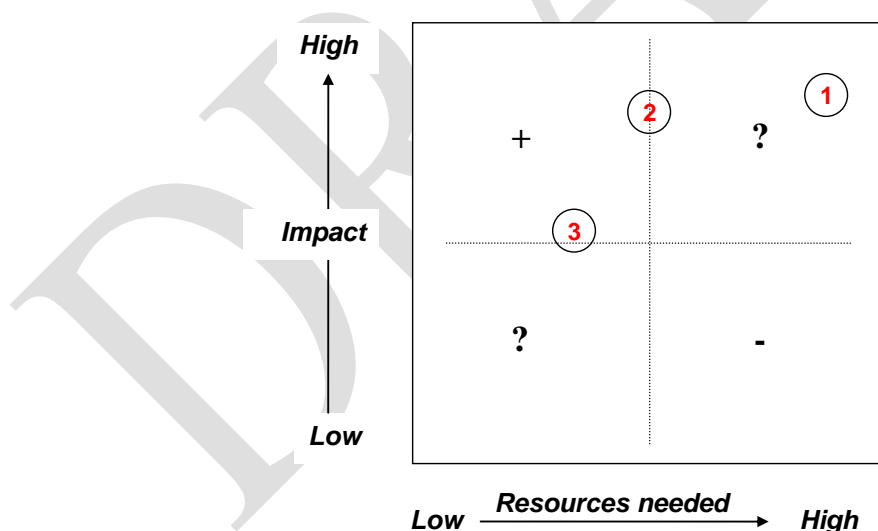
Annex 5: Evaluating Options Tools

Options Evaluation Matrix

One tool which can facilitate the evaluation of options is the *Options Evaluation Matrix*. As discussed above, a range of criteria can be used to facilitate the evaluation. It is therefore necessary to consider the specific context of the action plan and determine which criteria are most appropriate. For the example below, *impact* and *resources* have been selected for illustration.

In this example, each option can be assessed according to its degree of impact and resources required, thereby aiding comparison. The “impact” refers to the estimated positive effect that the option will have in the action plan. “Resources needed” refers to the resources required to complete the option. Before estimating resource requirements, however, it is useful to define the term “resources” as it may include labour costs, time needed to train participants, money for material expenses, hiring specialised staff, etc.

Mapping options in the matrix helps to identify which options provide the highest level of return for the lowest cost.^{37*} The upper left quadrant is the region of high impact/low resources – the most desirable. The lower right quadrant is the region of low impact/high resources – options which should be avoided. The two remaining quadrants (low impact/low resources and high impact/high resources) contain question marks because the selection of options falling in these regions is more difficult and probably can only be made based on the long-term direction and goal of the action plan.



To illustrate this tool, possible evaluations of the options outlined above to undertake legislative reform to implement an effective integrated law on the sound management of chemicals have been plotted on the matrix:

1. Develop comprehensive chemicals law middle of the top right quadrant

³⁷ The selection of the ‘best’ options based on the matrix is not clear-cut, but rather needs to be adapted to each unique context. For example, there may be cases where considerable resources are available and it becomes more desirable to select an option with a high impact despite its high resource requirements.

2. Reform existing laws and fill gaps with new laws
3. Leave existing laws in place and fill gaps with a mix of new laws and voluntary initiatives

Multi-criteria Analysis

Another possibility for evaluating options is to develop a multi-criteria analysis using more than two variables as illustrated below. With this tool as well, it is necessary to select criteria most appropriate to the particular situation.

Using this tool, evaluating options against the following set of criteria will allow a simple comparison of the relative advantages and disadvantages of each and should thereby facilitate further group discussion. Such a tool, however, should not be seen as an end in itself. It is first and foremost an evaluative tool. Simply adding the numbers assigned to each option will not take into account the different weighting assigned to particular criteria.

Criteria	Option 1	Option 2	Option 3	Option 4
Urgency/Timing Aspects	4	3	2	1
Practicability/Feasibility	1	3	4	5
Affordability	4	4	3	2
Efficiency and Effectiveness	2	4	2	1

1 = criterion speaks strongly against the option

2 = criterion speaks against the option

3 = criterion speaks neither speaks against nor support the option

4 = criterion supports the option

5 = criterion strongly supports the option

Annex 6: Informing a Minister: A Short Primer on Ministerial Briefing Notes

Government Ministers, due to the nature of their profession, have very limited time to address a great number of issues, many of which require informed decisions. The Ministerial Briefing Note has evolved in many countries as an effective tool to brief, make recommendations to, and otherwise keep Ministers and other senior officials informed about important issues.

As a country develops action plans for sound chemicals management, details should be communicated regularly to senior officials. Clear communication takes on greater importance when decisions are needed that will affect the future direction of chemicals work in the country.

<u>TITLE</u>	<u>DATE</u>
<u>ISSUE</u>	
<ul style="list-style-type: none"> • XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX XX XXX XX XX XX X XXX XX XXX. 	
<u>BACKGROUND</u>	
<ul style="list-style-type: none"> • XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX XX XXX XX XX XX X XXX XX XXX. 	
<u>STATUS</u>	
<ul style="list-style-type: none"> • XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX XX XXX XX XX XX X XXX XX XXX. XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX XX XXX XX XX X XXX XX XXX. 	
<u>RECOMMENDATION</u>	
<ul style="list-style-type: none"> • XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX XX XXX XX XX XX X XXX XX XXX. • XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX XX XXX XX XX XX X XXX XX XXX. 	
<u>ACTION OR DECISION RECOMMENDED</u>	
<ul style="list-style-type: none"> • XXXC XXXX XX XXXX XXXX XXXX XXX XXX XX XXXXXX XX • XX XXX XX XX XX X XXX XX XXX. 	
Name, title, and telephone number, signature	

Briefing notes should provide:

- a succinct statement of the case or issue;
- the essential background information, the current status of the matter; and
- the recommendations made or directions sought, if any.

Briefing notes should generally not exceed two pages, and must be clear and accurate.

Point form should be used, unless otherwise requested. Briefing notes should also be clearly dated.

The figure is an example of a briefing note, possible headings, and suggested text type.

All briefing notes should be approved by senior officials in accordance with the procedures of the ministry. The name, title, and telephone number of the official who prepared the briefing note and of the person who approved it should appear along with their signatures at the bottom of the briefing note.

Annex 7: Elements of a Press Release

Below is an annotated example of a press release that can be used to promote an action plan, planning event or other important matter relating to sound chemicals management that should be communicated to the public at large.

- **Letterhead:**
The press release should be on Ministry or other official stationary.
- **A standard introduction for a press release:**
FOR IMMEDIATE RELEASE
- **Who to contact for more information. Include address and phone number:**
Contact: _____
Press Officer: _____
Government Communications Division, Lead Ministry: _____
Name and telephone contact: _____
- **Succinct title that attracts the reader's attraction:**
For example: "Country X puts forth plan to protect citizens and the environment from dangerous chemicals".
- **Begin with the location and date, followed by an introduction covering all major points:**
City name, Country name, date and year.
- **A quote by a government representative is helpful (a Minister is desirable):**
A sample quote: "This new plan, once implemented, will be a concrete step towards sustainable development for our country."
- **Include information about why this event is newsworthy:**
Sample background information: "This action plan on pesticides was developed as part of a United Nations Institute for Training and Research (UNITAR) project, with Swiss government funding, for Developing and Sustaining an Integrated National Programme for Sound Chemicals and Waste Management. This is a new process designed to ensure that our country can plan and work together with all sectors of government and society to strengthen our laws, policies, and practices for sound chemicals management. Every year, people and the environment are needlessly exposed to dangerous chemicals. This effort, when implemented, will help to minimise or prevent harm from chemicals, while ensuring that their safe use will continue to provide many benefits to our society. The project, which began in our country in March 2004, will conclude in September 2005."
- **Conclude with further contact information:**
"For more information contact (name, telephone number(s), and web address)"(if available).

Annex 8: Donor Perspectives

Over the years considerable experience has been accumulated concerning capacity building for the sound management of chemicals. Recognising this, some of the perspectives of donor institutions and development agencies have recently been compiled in a discussion paper entitled *Capacity Building Assistance for Chemical Safety: A Perspective of Donor Institutions and Development Assistance Agencies*.³⁸ Some of the important messages of the paper are:

- It is necessary to demonstrate on governmental policy particularly in the area of development cooperation much better the value-added of chemical safety for health and environment protection and to make convincingly evident that safe handling and use of chemicals is an essential prerequisite for sustainable economic and social development.
- Typically, donors do not consider chemical management issues as stand-alone issues, but take them into account as integral parts of development assistance programmes and projects, considering *inter alia* economical, ecological, cultural and sociological issues. Consequently, proposals for chemical safety projects must be logically connected to the national strategies for sustainable development of the recipient country, referring to Agenda 21, the WSSD Plan of Action, the Millennium Development Goals, and other relevant international instruments and declarations.
- Development assistance approaches should recognise the shared obligation and contributions for the sound management of chemicals of producers, distributors, users, governments and, if appropriate, international organisations to proposed projects. This includes in-kind and budget contributions of all stakeholders to the work programmes, e.g. if the programme affects ongoing activities or already installed mechanisms/institutions.
- Capacity building projects must ensure that they effectively reach the target stakeholders directly involved in handling and use of chemicals. When e.g. a train-the-trainers approach is chosen, the effective implementation of the programme on ground level must be the final target and has to be monitored and documented.
- The value-added of chemicals management project components to the countries development process should be clearly described. The activities addressing chemical safety can then be mainstreamed more readily with ongoing development assistance programmes and projects. Most chemical-related projects would then be addressed under the development assistance priorities, and would not have to be channelled to donors separately.
- If a programme or project is already initiated in a related sector, the chemical safety issues should be integrated in this programme/project rather than being developed and implemented separately. Examples:

³⁸ This document, prepared through the IFCS Forum Standing Committee, can be downloaded at: www.who.int/ifcs/documents/saicm/donor_persp_en.pdf

- A systematic evaluation of development assistance programmes and projects will help to identify elements with chemicals management components and possible connections to chemical safety issues, e.g. technical assistance for hospital infrastructure should address hospital waste minimisation and environmentally sound disposal of the remaining waste, to avoid *inter alia* uncontrolled burning resulting in high dioxin/furan and mercury emissions.
- The chemical life cycle analysis can be a complementary approach to identify other relevant intervention areas, e.g. if chemicals are imported or produced in one place and are used elsewhere, the ongoing and planned programmes/projects in the transport sector should consider transport and storage of dangerous goods, too.
- Synergies between implementation of different multilateral environmental agreements should be systematically identified and documented in project proposals, e.g. strengthening import/export control of chemicals should not focus on PIC chemicals only, but on all chemicals and toxic waste to support the build-up of a comprehensive border control and registration scheme for all toxic substances.
- Work in the area of capacity building should be systematically undertaken and begin with and be based on the stocktaking of existing infrastructure and capacity building activities covering all relevant aspects of chemicals management, i.e. by developing or updating of a National Profile according to the procedure developed by UNITAR/IOMC while applying a multi-stakeholder participatory approach.
- Information exchange and coordination of development assistance programmes at the recipient country level should be carried out systematically, among international organisations, MEA secretariats and donors. An information exchange tool such as INFOCAP should be used systematically by all stakeholders involved.
- The on-going, planned and completed work programmes on chemicals related issues should be made available and cross-checked by the recipient countries and the different donors and institutions before new programmes start to avoid overlapping and duplication.
- Indicators should be developed that both provide information on the effects of chemical safety interventions linked to sustainable development goals, and allow effect monitoring, i.e. tracking and reporting on the progress towards achieving results on the ground and ultimately the sustainable development goals.
- Progress in capacity building for chemical safety should be assessed using measurable indicators. Documentation of the achievements and progress as measured by indicators, impact monitoring and review of implementation should be a prerequisite for identifying priorities for further activities and launching new programmes.

These considerations are also well in-line with broader experiences outside the field of sound chemicals management³⁹, which have been summarised as requiring the following key elements:

- Ownership involving stakeholders from the beginning;
- Integration and taking full account of ongoing actions;
- Cross-sectoral harmonisation between donors and recipients;
- Increased use of modern technology and communication; and
- Development of new forms of cooperation such as decentralised cooperation among local authorities.

³⁹ World Summit on Sustainable Development Johannesburg, South Africa, 26 August-4 September 2002: Partnership plenary sessions, WEHAB discussions, Summary report of the Chair. www.johannesburgsummit.org/html/documents/summit_docs/0902_conf16_add2.pdf

Annex 9: Glossary

Action plan:

An action plan outlines the essential elements of a project: specific goal and objectives to be achieved, related activities to undertake, timeframes, resources requirements, responsibilities amongst the participants, and evaluation details.

Activity:

An element of work performed during the course of a project. An activity has an expected duration, cost, and resource requirements. Activities are often subdivided into tasks. In some cases, activities will only address one objective, while in other cases they will help to deliver multiple objectives.

Budget:

A detailed estimate of the costs for various components of the workplan or action plan for which resources are needed.

Commitment:

A formal decision to provide resources (e.g. human, financial) for a particular purpose.

Gantt chart:

Frequently used in project management, the Gantt chart is a horizontal bar chart which provides a graphical illustration of a schedule that helps to plan, coordinate, and track specific activities and tasks in a project.

Gap analysis:

An identification (based on the results of the situation analysis) of where the current situation does not meet the established goal and related possible requirements – answering the question “What is missing?” or “*What needs to take place to get from where we are now to where we want to be?*” This may involve the identification of gaps in, *inter alia*: legislation, enforcement, analytical capacity, and material and human resources.

Goal:

A concise statement that describes the action plan’s purpose.

Indicators:

Critical information that allows one to assess the degree to which objectives are achieved. They must be relevant (actually represent what they purport to), reliable (based on statistics that can be assembled consistently and accurately), and clear (easy to understand).

Implementation phase:

The phase of a project in which the activities and tasks of the action plan are undertaken.

National Profile (for chemical management):

A comprehensive assessment of the national infrastructure, relating to the legal, institutional, administrative, and technical aspects of chemicals management, along with an understanding of the nature and extent of chemicals availability and use in the country.

Objectives:

Objectives state, at a finer level of detail than the goal, the specific outcomes that the action plan expects to accomplish within a particular time frame. They should be detailed enough to provide an overall sense of what exactly is desired without outlining the specific steps necessary to achieve that end. Objectives link 'upwards' to a goal and link 'downwards' to activities. Some objectives can be achieved only by the end of the project; others may be met along the way.

PERT chart:

A project management tool used to schedule, organise, and coordinate tasks within a project. The PERT chart has the advantage of clearly illustrating dependencies between activities, tasks, etc.

Project Milestones:

A key event that provides a measure of progress in implementing the action plan. The simplest milestones are the estimated dates for completion of certain important activities.

Project:

A series of interrelated activities and tasks undertaken to accomplish a specific goal or end result. A project has a start and an end; it is not ongoing.

Progress Report:

A description of the course of the action plan. It can show what the action plan has achieved at specific intervals, reasons for any deviations from the original plan, and covers financial issues.

Resource:

Anything that is needed to complete an activity or task. This may include: human resources, facilities, equipment, materials, etc.

Situation analysis:

An investigation into the situation in which the action plan will be carried out. It provides insight and guidance into where challenges lie and where opportunities exist.

Stakeholder:

An individual, group, or organisation that may be interested in or affected by a chemicals management decision or initiative.

Stakeholder analysis:

An exercise to identify interested and affected parties of an action plan, initiative, etc. and to assess their interest.

Stakeholder participation:

The involvement of stakeholders in the decision making process of action plan development or implementation, a programme, etc. This participation can comprise various levels of involvement such as 'two-way communication', 'joint decision making', etc.

Task:

A subdivision of an activity; it is the smallest unit of work in a project.

Terms of reference:

Terms of reference, in the context of an action plan, comprise brief, but sufficiently descriptive operational details on various administrative and organisational issues pertaining to the *development* of the action plan.

Workplan:

Sets out the details for the *development* of the action plan, such as the sequence of events, timelines, milestones, and expected outcomes.

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