

Needs Assessment: Achievements and Gaps on Chemical Accident Prevention and Preparedness (CAPP) Philippines

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Executive Summary

In a broader sense chemical safety stands for the prevention of chemical accidents and injuries and illnesses due to the exposure from hazardous chemicals. International standards and national law and practice provide benchmarks for the assessment of shortfalls, gaps, needs and the scope for improvement.

The CAPP project has over the past 18 months provided the framework for this needs assessment and gap analysis. More specifically, through a Situationer Report, the gap analysis has included the review of legislation, policies and programs against the background of internationally and nationally accepted standards on chemical safety like the ILO Convention on Chemicals, Basel Agreements, Rotterdam and Stockholm Conventions.

There have been intensive discussion of modalities for the improvement of prevention, enforcement of and compliance with standards on chemical safety; active consultation, training and networking have raised the level of awareness and expertise on chemical safety among concerned stakeholders in the public and private sectors.

In the process several gaps have come into sharper focus:

Gaps have been identified concerning governance of a future sustained CAPP, in defining scope of installations, establishments and industries; in data collection, on-site and off-site responses, in enforcement, and in building expertise. In addition, emphasis is put on Rights and Protection of communities and workers.

The Gap Analysis and Needs assessment have benefitted from the UNEP guidance through a six-step process presented in this Report.

While the above preliminary balance-sheet on safety achievements and gaps is uneven, it can serve as a basis for a Roadmap for Action. Further work will be facilitated by a widespread awareness raising on chemical safety capability building, and advocacy for employers and establishments to develop or strengthen safety management systems both in their own workplaces and include such action in their corporate social `accountability programs in the communities.. Prevention of chemical accidents, along with other aspects of safety is now being recognized everywhere as a major factor not only for the protection of environment, but also of the community and workers rights, as well as an effective means for enhancing productive capacity and the viability of industries.

Needs Assessment: Achievements and Gaps Chemical Accident Prevention and Preparedness (CAPP) Philippines

I. ACHIEVEMENTS

The following review highlights achievements and gaps on community and environment protection on CAPP through a review of the policies, functions and programs of government agencies, NGOs, academe and private sector.

The CAPP project responds to the needs identified in the Global Plan of the Strategic Approach to International Chemicals Management (SAICM) under the Risk Reduction topic. The CAPP project has initiated the review of the situation of the Philippine chemical accident prevention and preparedness, defining its needs and priorities. Thus, the Situationer Report has collated, analysed, and updated the information with regards current policies, systems, structures, and programs for prevention of chemical accidents¹. The data presents achievements, limitations, gaps in policy, program, and in developing a functioning structure and network, and needed resources.

Overall, the Philippines CAPP project benefits from the Six Steps as developed by UNEP in building structures and support and in identifying priorities (Figure 1). The commitment of the country has been evident with the acceptance of the project on CAPP by the DENR and key stakeholders in 2009, during the Inception Workshop and the creation of the Task Force.

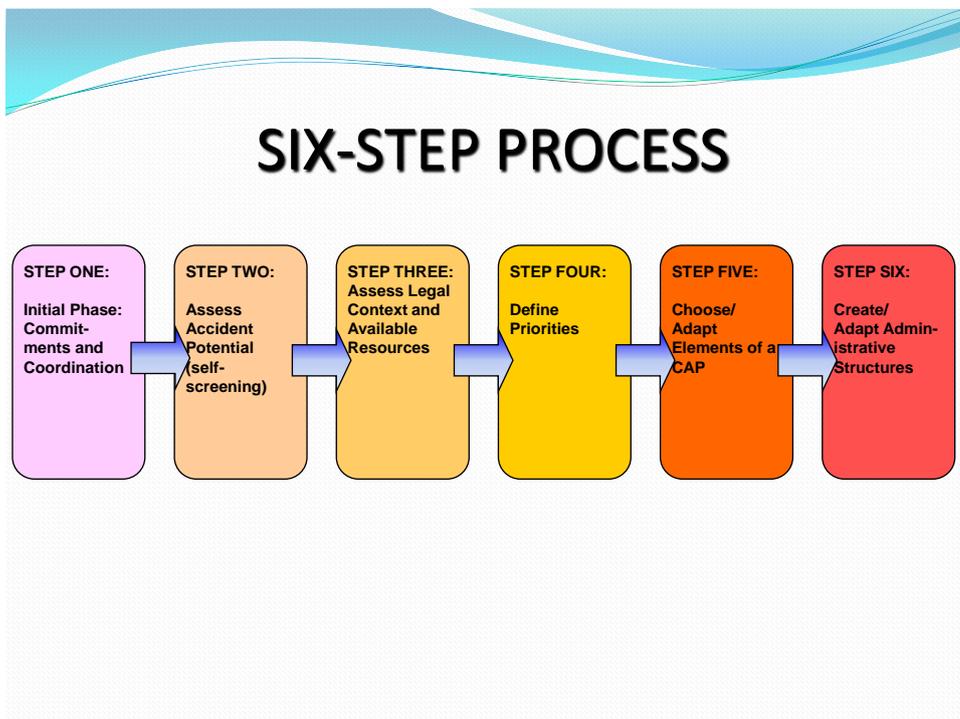
The second and third steps, i.e. assessment of accident potential at a macro, national level is supported by the Situationer report where the legal context and available resources have been reviewed and its findings have been elaborated in detail. Step 4 and 5 will now define priorities. In a sense, this stage has been started by the first capability building exercise last December 2009, with 30 trainees and external and internal experts participating. Following these steps, the Task Force will now have to choose and adapt the relevant elements in the light of risks, priorities, and legal context. The creation of an administrative structure is contained in the Road Map.

Members of the Task Force on CAPP

1. Department of Environment and Natural Resources
2. Environmental Management Bureau
Environmental Law Enforcement Task Force
3. Department of National Defense
Office of Civil Defense (National Disaster Coordinating Council)
4. Department of Interior and Local Government
Bureau of Fire Protection
Philippine National Police
5. Department of Labor and Employment
Occupational Safety and Health Center
6. Department of Agriculture
Fertilizer and Pesticide Authority
7. Department of Transportation and Communication
Philippine Coast Guard
Philippine Ports Authority
Office for Transportation Security
8. Department of Health

- National Center for Disease Prevention and Control
- 9. Office of the President
 - Anti-Terrorism Council Coordinating Center
 - Metro Manila Development Authority
- 10. Philippine Hospital Association
- 11. Samahan sa Pilipinas ng Industriyang Kimika
- 12. Eco Waste Coalition
- 13. Asian Disaster Preparedness Center
- 14. Department of Science and Technology
 - Industrial Technology Development Institute
- 15. Department of Energy
 - PNOC-Alternative Fuels Corporation
- 16. Department of Trade and Industry
 - Board of Investments
- 17. Department of Finance
 - Bureau of Customs
- 18. National Defense College of the Philippines
- 19. Philippine Economic Zone Authority
- 20. Subic ay Metropolitan Authority
- 21. Clark Development Corporation
- 22. University of the Philippines
 - National Poison Management and Control Center (Manila)
 - College of Engineering (Diliman)
- 23. Philippine Chamber of Commerce and Industry
- 24. Pasig City Environment Natural Resources Office
- 25. Trade Union Congress of the Philippines

Figure 1



Achievements of the CAPP project from March 2009 to January 2010

Multi-Stakeholder Task Force on Chemical Accidents Prevention Program formed;

Country Situation Report completed;

Modular training program developed with the assistance of UNEP, EU, ADCP, DENR, and local expertise;

Initial capacity building activities carried out;

The remaining activities include the completion of this Needs Assessment and Road Map, and Conclusion Meeting which will be held in March 2010.

Capability Building: Training Workshop 7-11 December 2009-12-31

This was the first training workshop on CAPP for Philippine stakeholders with 30 participants coming from the membership of the Task Force CAPP, as well from the private sector, inspectors, fire fighters, line government agencies. The training objectives were:

- 1) To familiarize participants with the elements of the Flexible Framework for Chemical Accident Prevention and Preparedness
- 2) To enhance the knowledge and exchange experiences on development and implementation of chemical accident prevention and preparedness program in the region
- 3) To enhance knowledge on role of competent authorities and requirement of industries in CAPP
- 4) To enhance the knowledge and exchange experiences among various stakeholders in CAPP
- 5) To enable participants to prioritize their respective plans and actions on chemical accident prevention.

Following the initial training course given by visiting resource persons from UNEP, EU, ADCP, and local experts from DENR-EMB and the private sector, the training program will now be finalized with the contribution from the local experts as well as the participants. The modules are outlined in Table 1.

Module 1 Introduction: Hazardous Activities	<ol style="list-style-type: none">1) Introduction to Potential Hazardous Activities (interactive discussion with video)2) Potential Hazardous Activities (interactive discussion with video)3) Potential Hazardous Activities in Philippines Industries Support materials: Video, Group Discussion
Module 2 Flexible Framework for Chemical Accident Prevention Programme (CAPP)	<ol style="list-style-type: none">1) Overview of Flexible Framework2) Developing or reviewing a CAPP3) Elements of CAPP

<p>Module 3: Role of Competent Authorities</p>	<ol style="list-style-type: none"> 1) Overview of SCOPE of CAPP Programme (including interactive discussion) 2) Roles of Competent Authorities 3) Roles of Competent Authorities <ul style="list-style-type: none"> - Information Management - Existing external Resources • Roles of Competent Authorities <ul style="list-style-type: none"> - Off site Emergency Plan - APELL and information to the public • Roles of Competent Authorities <ul style="list-style-type: none"> - Inspections – General Concepts • Roles of Competent Authorities <ul style="list-style-type: none"> - Inspections – How to carry out inspections <p>Exercises 1 and 2 -Group Work on inspection</p>
<p>Module 4 Roles and Requirements of Industry (Risk Management)</p> <p>-</p>	<ol style="list-style-type: none"> 1) Hazard Identification and Exercise on HAZOP 2) Risk Assessment (Frequency, Consequence Analysis, and Risk Calculation) 3) Risk Communication and Risk perception including information to the public 4) Overview of Safety management Systems 5) Presentation of existing safety management systems in the Philippines 6) -Overview of Safety reports 7) -Existing information within the country, legal requirements on safety documentation <p>Training support</p> <ul style="list-style-type: none"> - Discussion of key issues on the assessment of Safety reports - Visit to an industrial site, observe existing safety management systems, safety reports, hazard identification and risk assessment, others.
<p>Module 5 Learning from Real</p>	<ol style="list-style-type: none"> 1) Feedback of Field Visit 2) Group Discussions on: <ol style="list-style-type: none"> a. Priorities setting for regulation b. Implement key elements into national policy and/or regulation 3) Definition of Road Map
<p>Closing</p>	

The expected outcome includes the improvement of knowledge on CAPP and the enhancement of capacity & expertise on Chemical Accident Prevention and Preparedness in the Philippines, and additional strengthening of the Framework on CAPP.

Table 2 summarizes the current situation vis-à-vis the elements of CAPP.

PROGRAMME ELEMENTS OF A CHEMICAL ACCIDENT PREVENTION AND PREPAREDNESS	CURRENT SITUATION
SCOPE	Not so well Defined but needs further assessment
HUMAN RESOURCES STRUCTURE	Limited expert build-up needs capability building
INFORMATION MANAGEMENT	Information dissemination done by each agency
INSPECTIONS	Inspectorates in at least five agencies: DOLE, DENR, DA, DILG, Bureau of Fire, Bureau of Customs, but the inspection programs are done separately.
PREPAREDNESS PLANNING (ONSITE)	Standards are implemented by some agencies
PREPAREDNESS PLANNING (OFF SITE)	For major chemical disasters, limited
LAND-USE PLANNING (SITING)	Needs urgent review and participation of urban planners, associations of architects and engineers, DPWH
GENERAL DUTY CLAUSE	Roles and responsibilities are define on site in industry, but compliance is lacking.
NOTIFICATION	Again each agency has its own system
PREVENTION POLICY (SAFETY MANAGEMENT SYSTEMS)	SMS in some large private establishments, but rarely in medium sized and smaller establishments
HAZARD IDENTIFICATION AND RISK ASSESSMENT	Carried out by DENR, DENR, FPA, Industry, DOTC – can strengthen and integrate CAPP
SAFETY REPORTS	Same comment as above
PREPAREDNESS PLANNING (ON-SITE)	For major chemical disasters limited, little experience
INFORMATION TO THE PUBLIC	Carried out separately, harmonized reporting is an exceptions

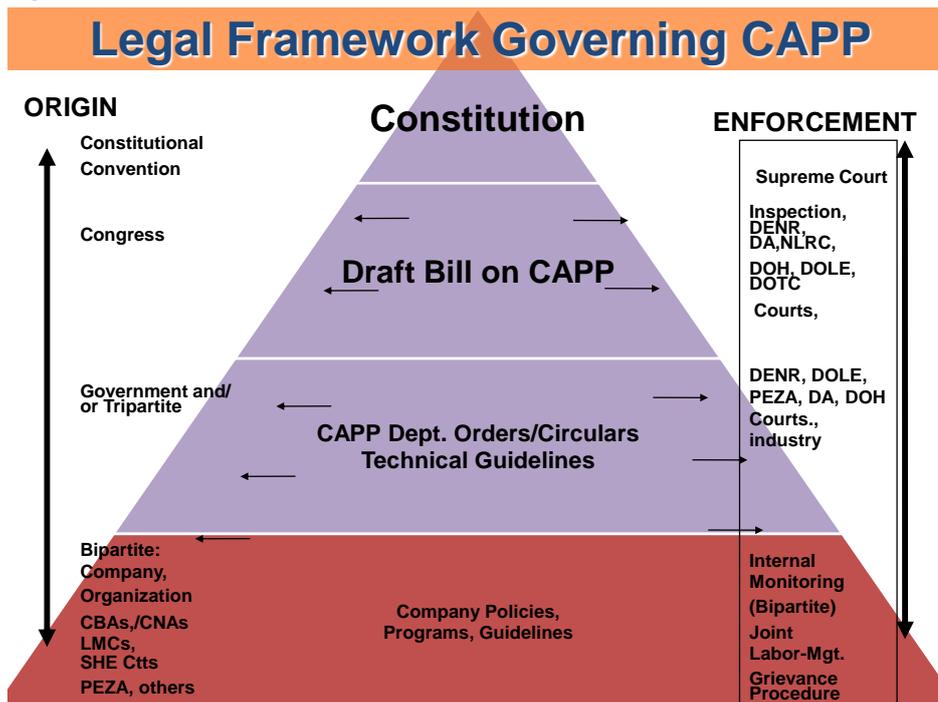
1. Gaps in defining Scope of Installations/Establishments/Industries

Developing a national and local safety management system poses many questions; i.e., there is a need to clarify the scope vis-à-vis actual risk and or potential risks. In principle scope should be based on scientific evidence and on past accidents involving chemicals. The system on reporting, recording and notification of workers' injuries is in place, and establishment submit data on occupational injuries, but information on how such incidents have affected the community and environment in the past remains a weakness on major chemical accidents and on a harmonized reporting by agencies.

Other factors to consider in looking at defining scope are physical boundaries – entire site, the question of including pipelines? How should one deal with transportation accidents which can originate from onsite affecting communities and vice-versa. There was however agreement on the inclusion of interim storage. Further clarifications were raised during the consultations: Should the scope include major chemical accidents or any chemical accident? Seveso II provides guidance on this concern, supported by the European Communities Major Accidents Hazards Bureau (MAHB) ;Guidelines have been developed, for example in the areas of mandatory and voluntary reporting of accidents; on major reporting system through their program called MARS ,on technical reports on inspection, safety management system, land use and others. But there was no clear agreement on their concern.

2. Gaps in Policies

Figure 2



3. Gaps in Governance

The Task Force on CAPP was established in 2009 for the project. Members come from government and non-government organizations, and the private sector. The Task Force's terms of reference includes the development and periodic review of country's profile, needs assessment, and a roadmap using the UNEP guidance material for the development of CAPP. Figure 2 shows the complex linkages between legislation, policies and programs and practices on one hand, and the stakeholders on the other. Much remains to be done to strengthen the linkages by filling existing and potential gaps.

As the Task Force in its many consultations, have agreed to pursue the CAPP not as a project but as an important program on prevention of accidents and disasters caused by chemicals and its use and misuse, a major step in the right direction would be sustaining the program, identifying needed legislative support which addresses governance and resources including the provision of an official identity of the Task Force on CAPP, through a public policy statement endorsing the terms of reference for effective coordination of a sustainable program on chemical accident prevention.

4. Gaps in Human and Financial Resources:

Data Base Gap: Reporting on compliance with chemical safety standards in industries have many shortcomings like:

- Non-submission of mandatory accident reports
- Absence of Safety Committee
- No first aid and/or inadequate safety and health personnel
- No personal protective equipment (PPE)

Expertise Gap: Despite the sustained action in this field by main stakeholders like DENR, DOLE, DTI, DOTC, PEZA, NGOs and specialized training institutions like the Occupational Safety and Health Center (OSHC) and the academe, there is an urgent need to substantially increase and ensure the supply of competent practitioners.

Technical services can be improved by particular increasing the number of:

- workplaces which carry out annual work environment measurements of chemicals, dust, assessment of safety hazards
- Testing of Personal Protective Equipment (PPEs) in a specialized laboratory and advising companies or PPE manufacturers of safe and appropriate use of PPEs
- workplaces given assistance on developing safety policies and programs for;
- Committees (including LGU's, informal economy operators, others)

Training: Expand training activities, in particular to increase the number of:

- trained trainers
- core technical staff
- training programs given on basic, Occupational Safety and Health Management System (OSH-MS) and special topics.
- Basic Chemical Safety

- training, learning sessions given by distant and other methods like video conferencing, accredited safety officers and other experts on safety, and more action in the area of formal education. For example, for educational institutions integrate chemical safety and workplace, environmental safety in general in both undergraduate and post-graduate degrees, i.e. in medicine, nursing, engineering, chemistry.

Figure 3 shows the Summary of Expertise Available from Public, Private and Educational Systems

Field of Expertise	Research Institutes	Universities	Industry	Environmental/Consumer	Labor Unions	Professional Organization
Data Collection	X	X	X	X	X	X
Testing of Chemicals	X	X	x	x		X
Risk Assessment	X	X	X	X	X	X
Risk Reduction	X		x			
Policy Analysis	X	X	X	X	X	X
Training and Education	X	X	X	X	X	X
Research on Alternatives	X	x	x			
Monitoring	X		x			
Follow-up	X		x			
Enforcement (Inspection)						
Information to Workers			X		x	
Information to Public			X			

5. Gaps in Enforcement

In the Philippine context, compliance with safety, health and environment Standards is primarily dependent on the will and initiative of the stakeholders, especially management and labor to achieve accident-free and healthy workplaces. In some instances enforcement is being enhanced through administrative or legal action and/or on sanctions for non-compliance. However, voluntary compliance

carries considerable risks in cases of procedural gaps, jurisdictional conflicts between government agencies, poor preventive and shortcomings in reporting.

The following were recommended for an improved enforcement approach:

1. A better sampling of inspections, to include environment and hazardous installations; improvement of checklist and procedure, continuous education of labor inspectors
2. Many agencies like NGOs and trade unions volunteer to assist in monitoring, but they are limited by the absence of mandate; only DOLE, DENR, PEZA and other agencies with mandata can enter the premises for workplace inspection. However, unions or workers' groups can advocate in their own factories or offices as they are represented in the OSH committees.

The LSEF holds promise, but can only be successful if the employers, owners or operators are convinced enough that without protection of workers, workplaces and the community, their businesses are also in jeopardy through destruction by fire, explosions, absenteeism of sick and injured workers. Advocacy activities should always emphasize the business side of things.

3. Also recommended were:

- legislative efforts to improve sanctions and increase in the number of inspectors,
- strong working relationships with preventive agencies like the OSHC and private associations, members of industry associations, academe
- increasing and strengthening the network of safety and health experts through capability building, accreditation, and continuing education supported by government agencies.
- A framework and database for inspectionable and hazardous/highly hazardous establishments and installations establishments could be improved with focus on chemical safety parameters.
- Capability building of labor inspectors and other members of the regional evaluation and monitoring team should be carried out.
- Ratification of the ILO Convention on Labour Inspection and in Chemical Accident Prevention is recommended.

6. Gaps in knowledge

Solid data on chemical safety provide the basis for legislative action program formulation and implementation as well as exchange of information, monitoring and evaluation. However, observed gaps have been limiting a sustainable action on chemical prevention. They are seen in the aspects of:

-Data Collection Recording, Reporting and Notification: individual agencies have data, but there is no harmony in statistics generated by all of the agencies.

- Limited scope for checking reliability of self-assessment reports, for example in DOLE reports

-Limited capacity for safety inspection for all agencies reviewed

--Late submission of reports, incomplete report forms

In reporting, recording, and notification of chemical accidents, accident reports should in principle include: chemical substances involved, injury to persons or damage to real estate, immediate damage to the environment, damage to property, volume, capacity of production, geographical location, industry process, products. Some agencies have actually covered most of these areas in the reports of local technical case studies, but others have not. There is therefore a need to improve the approach in reporting, and immediate dissemination of information. For these reasons, the inspectors from different agencies should be given adequate information and training from the technical agencies.

The Road to CAPP

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The Road Map has been designed to serve as guidelines for concerted action in the pursuit of a vision of Zero Accident from Chemical Causes. Obviously this vision cannot be achieved through isolated measures; it must be pursued through a logical, internally consistent package of goals, strategies and activities that lends itself for implementation by different stakeholders at national, regional, industry- and establishment levels as well as for appropriate follow-up, monitoring, evaluation and feedback. Based on the Situationer and the Needs Assessment in Part I and II respectively, the proposed Road Map provides a medium term, framework of action on CAPP by defining three overall goals,

1. Governance on Chemical Accident Prevention and Preparedness is supported by appropriate legislation, resources, infrastructure and program,
2. Well-functioning management systems for chemical accident preparedness and prevention in hazardous installations, and
3. Appropriate mechanisms for effective on-site/off-site coordination on chemical accident prevention and preparedness between operators of hazardous installation and concerned authorities and expert agencies.

Table 1 and subsequent paragraphs go into some detail by identifying the strategies and activities best suited for the attainment of these goals. Suggested initiatives range from harmonization of policies to capability building through institution building and skills development of the manpower specialized in the prevention of and response to chemical risks and accidents. At the center of Part III on the Road Map for a Framework on CAPP is a call for the establishment of a strong network for cooperation of stakeholders, with a permanent Task Force serving as focal point with clearing house functions.

ROAD MAP for CHEMICAL ACCIDENT PREVENTION and PREPAREDNESS

Bridging the wide gap in chemical safety management is an urgent matter for a sound chemical accident prevention program. The goal(s) of CAPP is stated in this Chapter. For the long-term, a national and establishment safety system, mapping out of resources, both human and financial to support a focussed structure, supported by clear strategies and long term plans, implemented through practical approaches and well-tested methods, as well as new knowledge and skills on risk assessment and risk management –are all important components of a strategic approach to Implementing Chemical Management (SAICM) through CAPP. These strategies should then be expanded further into specific activities during the next activities of the Task Force on CAPP. Some of these possible activities are mentioned in this paper.

Vision: Zero Accident from Chemical Causes

Goals:

1. Governance on Chemical Accident Prevention and Preparedness is supported by appropriate legislation, resources, infrastructure and program
2. Owners/operators of hazardous installations have in place appropriate policies, and safety management systems, to prevent chemical accidents.
3. Appropriate mechanisms for effective on-site/off-site coordination on chemical accident prevention and preparedness between operators of hazardous installation and concerned authorities and expert agencies.

Table X outlines the different strategies and corresponding action, comments

Strategies	Activities	Comments
<p><i>At National Level:</i></p> <p>Harmonization and strengthening of policies, legislation, structure, programs, resources on Chemical accident prevention</p> <p>Defining and updating scope of Installations, establishments, industries in CAPP</p>	<p>Draft or support a policy on Administrative structure as an Executive Order; convert Task Force to a permanent body to oversee CAPP; define roles of Competent authorities at national and local off site and onsite.</p> <p>Advocate for improving resources in legislative agenda for a CAPP structure that reaches out to the local government level</p> <p>At onsite and off-site, identify actors/agencies involved in</p>	<p>Task Force on CAPP would need to have a public identity through a policy statement:</p>

	implementing a safety management system; roles and responsibilities, rights of employers and of workers	
Development of a Preventive Program focussed on building a Safety Management System	<p>Long and Medium Term planning for CAPP.</p> <p>Annual Operational Planning</p> <p>Require the owner/operator establish a safety management system (SMS) which should be appropriate to the risks posed by the facility.</p>	<p>A medium term Strategic Plan will be developed by the Task Force. Including Goals, Strategies, Activities including Monitoring and Evaluation, Output, Expected Outcome, Resources.</p> <p>At establishment and community levels, this activity will follow the Plan – Do-Check- Action and Continuous Improvement cycle in safety management.</p>
Capability building through Training and Building Technical Skills	<p><i>Training on CAPP</i></p> <p>See Syllabus on CAPP (Table X); also on inspection and <i>use of Tools</i> , e.g. Hazop, Failure Modes and Effects Analysis, Job safety analysis, Accident investigation, work environment measurements, others.</p> <p>Harmonized monitoring and inspection of potential hazards, risks;</p> <p>Evaluation system (internal and external);</p>	<p>The syllabus includes among others-hazard and risk recognition, how to carry out and to write a safety report and an accident report (AI),</p> <p>how to establish a system of recording, reporting, notification</p> <p>Building competence in government and in industry (manufacturers, suppliers,</p>

	-	employers, workers), in use, storage, transfer of chemicals, in communities
Developing a clearing house of information on CAPP	<p>Developing/Maintaining a national register of accident reports and statistics covered by CAPP</p> <p>Development of Information, education, communication materials</p> <p>Dissemination of information</p>	Here the question of scope is revisited; is there a need to develop a mandatory list of accidents as opposed to voluntary reporting?
Work towards a unified functioning and efficient Network model	Establish/strengthen Network for CAPP to enhance the capability of local, regional occupational safety and health organizations in safety promotion, technical assistance, training and research.	Strengthening/ widening of Social network: A group of individuals or institutions who, <u>on voluntary basis</u> , exchange information or undertake joint activities and organize themselves in such a way that their individual autonomy remains intact.
Harmonized enforcement of standards on chemicals	Following training activities, most likely supported by policy	
Rights and Protection Gap:	Integration in awareness and training activities: that protection from unsafe living and working conditions, including chemical safety, is a basic human right of every person, wherever he/she lives and whatever he or she does. Enshrined in the Philippine Constitution of 1987, it is echoed in laws like the RA 6969, and Philippine Labor Code (PLC), the OSHS. s	

There will be an increase demand for CAPP services as awareness is increased, so will the request be on training. To avoid this scenario, an immediate and focused training program will have to be identified, with training of trainers as priority. This can also be integrated in existing training programs of key agencies, e.g. OSHC, DENR (or its representative), academe, others. As advocacy, the ECOP and unions can integrate CAPP in their respective social accountability programs.

Additional Policy activities could include support to policies that strengthen the implementation of:

- a) Persistent Organic Pollutants
- b) Globally Harmonized System of Labeling Chemicals; updating of Threshold Limit Values of Chemicals and of list of chemicals,
- c) Study ILO C 174 "Prevention of Major Industrial Accidents, 1993. ILO Convention No. on Chemical Safety, ILO Convention 176 on Mine Safety, and ILO C on OSH promotional Framework, and analyze the need for ratification.
- d) LGU support. Encourage local ordinances/regulations for the development of needs-specific chemical safety programs per region/LGU/partner thru training, info, TAVs and other developmental programs. Involve the Regional Coordinating Councils (RCCs), Regional Development Council (RDCs), Regional Tripartite Industrial Peace Councils (RTIPC) through Memoranda of Agreement (MOAs) and MOUs.

For Dissemination of information, there should be agreement on major contents and messages, but individual agencies can go on separate information approaches and activities.

- a) Local dissemination: integrated in existing media, establishments, industry associations, responsible care projects
- b) Mass media dissemination: specific radio, TV, print program; but integrated in other broadcast and print media, through regular press conferences

For building capability through technical skills, the following should be practiced and developed:

- a) Simplified method of evaluating chemical hazards and risks: compiling an inventory of chemicals in the workplace, ranking their potential hazards for fire, explosions and health and safety, in-depth evaluation of hazards
- b) Using chemical safety data sheets
- c) Labelling and signages
- d) Process safety approach
- e) Behavioural safety

Target for Training: Preventive Human resource (safety and environment personnel urban planners and policymaker and program implementors:

Training programs on technical skills and knowledge can be carried out jointly or separately. Should continue and strengthen OSHC's, UP, DA, SPIK and others' training programs as discussed in this report. As the informal economy and small enterprises make up the bulk of industry, focus should be given to these industrial sites.

The Plan and Program should be integrated in GOs and NGOs work plan and budget. So far, most regional offices, some local government units have committed to support safety in general; but there should now be a focus on major chemical accident prevention and

preparedness. The use of the regional coordinating councils can be a vehicle for such progressive expansion of CAPP network. (Figure 1)

There should be a systematic exploration of cooperation and funding with old and new partners for CAPP for support to the Road Map by carrying out a donors' meeting once the Road Map and Strategic Plans and Operational Programs are finalized.

Finally, for improving knowledge through research will help strengthen policies and programs surrounding CAPP on the following topics

- a) Hazardous Potentials – updating the mapping of establishments in the country that pose serious risks to communities including locations of hazardous installations and their potential for domino effects
- b) Types of hazardous installations that are widespread including small businesses and those in the informal economy, that use toxic/ flammable or environmentally hazardous chemicals/ large and small scale mining.
- c) Future industrial developments that involve hazardous substances
- d) Response plans and resources available in the event of chemical accident
- e) Common Toxic and Hazardous Substances from Industry, Potential Health Effects, Areas in the Philippines being monitored, (by whom, by what agency).
- f) Knowledge of database of Chemical Accidents, what caused them, how and by whom they were responded to.
- g) Study on costs of major accident and injury categories; analytical data and analysis on the return on investment of preventive OSH programs and their financing
- h) Requirements of ratified international Conventions, ILO Convention 176 on Mine Safety, Stockholm Convention, others

Figure 1: Regional and Local CAPP Network



Part 3: ROAD MAP: THE PHILIPPINE FLEXIBLE FRAMEWORK ON CHEMICAL ACCIDENT PREVENTION AND PREPAREDNESS

The Road Map has been designed to serve as guidelines for concerted action in the pursuit of a vision of Zero Accident from Chemical Causes. Obviously this vision cannot be achieved through isolated measures; it must be pursued through a logical, internally consistent package of goals, strategies and activities that lends itself for implementation by different stakeholders at national, regional, industry- and establishment levels as well as for appropriate follow-up, monitoring, evaluation and feedback. Based on the Situationer and the Needs Assessment in Part I and II respectively, the proposed Road Map provides a medium term, framework of action on CAPP by defining three overall goals,

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Table X and subsequent paragraphs go into some detail by identifying the strategies and activities best suited for the attainment of these goals. Suggested initiatives range from harmonization of policies to capability building through institution building and skills development of the manpower specialized in the prevention of and response to chemical risks and accidents. At the center of Part III on the Road Map for a Framework on CAPP is a call for the establishment of a strong network for cooperation of stakeholders, with a permanent Task Force serving as focal point with clearing houses functions.

ⁱ Situation Report on Chemical Accident Prevention and Preparedness in the Philippines (CAPP), February 2010, Interagency Task Force on CAPP