

Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali



Contents

1.	Introduction.....	3
2.	Background Information on the Flexible Framework Initiative	3
3.	Background Information on Mali.....	4
4.	Project Initiation	5
5.	Stakeholders Involved	5
6.	Project Activities	6
6.1	Inception Workshop	6
6.2	Task Force Meetings	6
6.3	Training Workshops.....	8
6.4	Project Closure and CAPP Roadmap Launching Workshop	10
7	Project Reports and Outcomes.....	10
8	Project Accomplishments	10
9	Needs Assessment and Roadmap.....	11
10	Next Steps.....	12
11	Lessons Learned.....	12



1. Introduction

Growth in the industrial sector has been a valuable element of economic development strategies in many countries worldwide. However, many of the chemicals used in industrial operations present a risk of accidents that can cause extensive harm to people, the environment, and local or even national economies. To address this risk, UNEP conducts a number of activities related to capacity building for improved chemical management, particularly with respect to prevention and preparedness for chemical accidents. UNEP's activities aimed at preventing and minimizing the consequences of chemical accidents include the Flexible Framework Initiative, which is a joint effort to develop practically oriented guidance for national governments on chemical accident prevention and preparedness. This case study has been prepared to provide a summary of country level CAPP Programme project activities conducted in Senegal as part of UNEP's Flexible Framework Initiative.

The purpose of this "Chemical Accident Prevention Programme for West Africa" project is to build the capacity of relevant institutions in Mali and Senegal to develop systems aimed at chemical accident prevention and preparedness. The project consists: of identification of the country's situation with respect to chemical accident risks; definition of needs and priorities for improved management of chemical accident risks; and capacity building through training. The project also provides valuable experience and feedback, which is used in the development of guidance materials (*i.e.*, the Flexible Framework Implementation Support Package). The National Department for Sanitation and Pollution and Nuisance Control (DNACPN) of Mali is the lead implementing agency in the country. Project activities are being coordinated by UNEP, in partnership with the French *Institut National de l'Environnement Industriel et des Risques* (National Institute of Environmental Industry and Risks) (INERIS).

This case study outlines the activities conducted as part of the project to date, stakeholders who played a role, and activities planned for the future. It provides background information on the Flexible Framework Initiative, and Senegal's situation with respect to chemical accident prevention and preparedness.

2. Background Information on the Flexible Framework Initiative

The Flexible Framework Initiative is part of UNEP's ongoing activities to build capacities and develop technical tools, methodologies and strategic frameworks for environmentally sound production and use of chemicals. The initiative was started in 2007, following an action point from the Strategic Approach to International Chemicals Management (SAICM) Global Plan of Action (GPA) to develop collaborative practically oriented tools for chemical accident prevention.

The purpose of the Flexible Framework Initiative is to:

- increase countries' understanding of issues related to chemical accident prevention and preparedness;
- improve the capacity of relevant institutions, agencies and experts to address the risks of chemical accidents; and
- help countries to develop and implement an appropriate CAPP Programme.

As part of the initiative, an Expert Working Group was established consisting of selected experts in the fields of chemical safety and industrial accident prevention and preparedness. The Expert Working Group included representatives from relevant UN agencies (UNEP, UNIDO, ILO, UNECE, UNITAR, WHO, Joint UNEP/OCHA Environment Unit, etc.), the European Commission (DG Environment and the Joint Research Centre), the

Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

Organisation for Economic Co-operation and Development, selected countries, and industrial associations, as well as independent experts.

The Expert Working Group met five times between November 2007 and April 2010 to prepare the *Flexible Framework for Addressing Chemical Accident Prevention and Preparedness (Guidance)*. The *Guidance* was designed to assist countries wishing to implement, revise or improve chemical accident prevention and preparedness (CAPP) programmes, and was published in July 2010 (ISBN: 978-92-807-3094-4)¹. The experience from Mali also served to develop the Implementation Support Package (ISBN:978-92-807-3265-8)².

3. Background Information on Mali

Mali's economy is heavily based on agriculture and livestock farming. Together, they make up over 50% of the nation's GDP. Though chemical production makes up only 5.52% of the total country-wide production, there are many hazardous products being stored and transported in the country. Herbicides and pesticides are stocked for use in the agricultural sector, and large amounts of butane are stocked for general purposes. Mining is a relatively new and emerging sector in Mali and, therefore, large quantities of hazardous materials are stored throughout the country. In the early 1960s, an industrial presence began surfacing in the country. The industrial sector today – primarily located in and around the capital city of Bamako – is largely made up of SMEs with a focus on food production as well as the fabrication of construction, textile, dyeing, mining, and chemical products. The artisanal sector for these activities is also very important in Mali. The most hazardous products handled are acids, alkalis, phenolic products, volatile organic compounds (VOCs), heavy metals (mercury, lead, arsenic), and gases (acetylene, butane, hydrogen).

In this sense, the country has outgrown its current ability to fully deal with the risks associated with chemical accidents. In terms of legislation, there are several laws and regulations for regulating chemicals on the Malian territory that have been adopted since the Malian independence. Mali has signed on to many international mandates regarding safety measures related to the handling and usage of hazardous materials, such as the ILO convention 174 on major chemical accidents. However, these are often not adequately implemented making the regulatory framework in relation to chemical accidents weak and lacking obligations for most elements of a chemical accident prevention and preparedness programme

In addition to these legislative gaps in the country's safety practices, Mali faces issues regarding weak technical capacity of personnel and technical preparedness in the prevention of chemical accidents. National ministries in charge of ensuring the implementation of safer practices include, but are not limited to: the Ministry of Health; the Ministry of Industry, Investment, and Commerce; the Ministry of Agriculture; the Ministry of Livestock and Fisheries; the Ministry of Water and Energy; the Ministry of Mines; and the Ministry of Interior Security and Emergency Preparedness.

¹ A Flexible Framework for Addressing Chemical Accident Prevention and Preparedness: A Guidance Document, available online at http://www.unep.fr/scp/sp/saferprod/pdf/UN_Flexible_Framework_WEB_FINAL.pdf

² A Flexible Framework for Addressing Chemical Accident Prevention and Preparedness: An Implementation Support package, available online at http://www.unep.fr/scp/sp/saferprod/pdf/UN_Flexible_Framework_ISP.pdf



4. Project Initiation

The project planning was initiated in February of 2009, when Mali and Senegal together submitted a regional project application to receive funds from the SAICM Quick Start Programme Trust Fund. The Quick Start Programme Project proposal was conditionally accepted by the Trust Fund Implementation Committee in April of 2009. In July 2010 UNEP and the DNACPN signed the project agreement, officially marking its initiation. The French Ministry of Ecology, Sustainable Development, Transport and Housing (MEDDTL) has provided additional funding to complement the Quick Start Programme funding in order to cover the expenses associated with the translation of materials (*The Flexible Framework Guidance*) as well as technical and project support by INERIS.

5. Stakeholders Involved

As far as Malian entities are concerned, DNACPN is taking the lead in regards to the implementation of the project. DNACPN's primary objective is to ensure the development and enforcement of state policies regarding sanitation and the control of pollution and other environmental nuisances.

DNACPN is supported by a number of national institutions and international partners. UNEP's participation is coordinated through the Division of Technology, Industry and Economics (DTIE) – Business and Industry Unit. INERIS is a subdivision of the French Ministry of Ecology, Sustainable Development, Transportation and Housing, whose purpose is the prevention of risks that economic activities might impose on the health and safety of people, their property, and the environment³. Mr. Franck Prats, from INERIS, has helped greatly with the project, providing his expertise along every step of the implementation. Mr. Mohammed Diawara, founder and director of Quartz Afrique and a Senegalese expert in industrial chemical safety, was another individual whose input was of great importance to the success of the project.

Because the *Flexible Framework Guidance* promotes a multi-stakeholder approach that requires coordination and cooperation between different government authorities and other relevant organisations, a number of other ministries and non-governmental stakeholders also participated in project activities. A multi-stakeholder, multi-agency task force was established by the Government of Mali to deal with CAPP issues and drive project activities. This included the Ministries of: Industry; Health; the Environment and Sanitation; Transportation; Geology and Mines; Commerce; Customs; and Trade and Finance. The National Office of Petroleum Products, the Association of Malian Consumers, and the Agency for the Development of Industrial Zones were also involved in project meetings and workshops, as well as representatives from Senghor University. Industry representatives from the Malian branches of TOTAL, Anglogold, Randgold, and the chemical industry also participated in project activities. The relevant extracts from the terms of reference (TOR) of the Task Force and a complete list of organisations that were members of and participated in the task force is included in the 'Project Activities' section.

³ Founded in 1990, INERIS deals with accidental risks (for example at Seveso sites), chronic risks (such as air, water, and soil pollution), and risks associated with the mining sector (gas fumes, post-mining issues, etc). INERIS also provides certification, training, and tools to help with the processes surrounding risk management.



6. Project Activities

6.1 Inception Workshop

Project activities began with a National Inception Workshop held on 4-5 November 2010, hosted by DNACPN and jointly organised by DNACPN, INERIS, and UNEP. The workshop was attended by approximately 60 representatives from various ministries, institutions, academies, NGOs and the private sector (Total Mali, Randgold, and AngloGold). DNACPN's goals for the Inception Workshop were threefold:

- To raise awareness on chemical accident prevention through presenting the experience of several Asian and European countries in the evolution, development and implementation of chemical accident prevention programmes.
- To provide a forum for participants to discuss and raise key issues relevant to chemical accident prevention and preparedness in Mali, including the main objectives of a potential Malian CAPP programme as well as possible advantages and obstacles.
- To establish a multi-stakeholder task force through identification of important stakeholders related to chemical accident prevention and preparedness in Mali.

Additionally, DNACPN aimed to better define government roles and priorities, identify key elements for developing adequate regulations, and build technical capacity for response to chemical accidents. It was also mentioned that the workshop should help create a foundation for project activities by obtaining (i) a commitment to participate in multi-agency task force, (ii) a commitment to contribute to the development of the Country Situation Report, and (iii) an identification of major hazards and needs in the country.



The workshop agenda was developed by DNACPN with assistance from INERIS, UNEP, and international experts. Representatives from partner organisations, including INERIS, Dr. Thierry Verdel from the University of Senghor, and Mr. Loïc Malgorn from the Ministry of Sustainable Development of France gave presentations on: the characteristics, consequences, and examples of chemical accidents; existing legislative systems for the management of hazardous chemicals; the *Flexible Framework Guidance*; CAPP implementation project activities; and expected project outcomes. Representatives from relevant Malian institutions (including the National Departments of Industry, Health, and Civil Protection) presented the existing Malian approach to hazardous chemical management and an overview of industry in Mali. Additionally, group discussions and working sessions were held to identify possible objectives of a CAPP programme in Mali and the challenges and opportunities for its implementation, as well as potential groups to be included in the existing multi-stakeholder task force.

6.2 Task Force Meetings

Following the Inception Workshop, DNACPN established a multi-stakeholder task force to allow the public and private sector to work together in developing a sustainable system for chemical accident prevention and preparedness in Mali. This task force, with assistance from INERIS, acted as the main driving force for project activities. The TOR of the task force mandated it to:

- Guide the development of the Country Situation Report by:



Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

- Collecting/producing the information pertinent to this Report
- Validating the drafts of the Report
- Guide the process of completing the Needs Assessment Report (to be integrated into the Roadmap) by:
 - Participating in this process
 - Validating the final version of the Report
- Guide, review, and validate the training programme with regard to the prevention and preparedness of chemical accidents
- Supervise the development of the Roadmap by:
 - Reviewing the different versions
 - Validating the final version of the Roadmap
- Develop a plan/schedule in order to assure the continuation of the development of a CAPP Programme.

The task force was built upon existing interagency and stakeholder mechanisms for chemicals management and, along with DNACPN and with assistance from INERIS, acted as the main driving force for project activities within the country. Relevant participants were invited to fully address the issues of chemical accident prevention and preparedness. The task force included representatives from:

- National Department for Sanitation, Pollution, and Nuisance Control
- University of Bamako
- Air Liquide – Mali
- TOTAL – Mali
- The gold mines of Yatéla, Morila, Loulo, and Sadiola SEMOS
- Red Cross
- National Association of Dyers
- Central Veterinary Laboratory
- National Health Laboratory
- National Department for Civil Protection
- National Department for Industry
- National Institute of Statistical Analysis
- National Department of Transportation
- National Department of Geology and Mines;
- National Department of Commerce
- Department of Customs
- National Department of Trade and Finance
- Association of Malian Consumers
- Agency for the development of Industrial Zones.

The task force is responsible for determining the most relevant issues and priorities related to chemical accident prevention and preparedness within the country, as well as a path forward for the implementation of CAPP programme elements to address these issues, with the use of the *Flexible Framework Guidance*. The *Flexible Framework Guidance* has now been translated into French with the support of the MEDDTL, and was published and printed as part of the project activities in Senegal and Mali.



Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

The task force is also responsible for the development of the two main project deliverables: the Country Situation Report (an overview of the nature and extent of chemical risks within the country and the existing legal structures and responsibilities related to management of chemical risks); and the Roadmap (an outline of the steps necessary for the implementation of measures related to chemical accident risk management) including a Needs Assessment (a summary of the main requirements and priorities for the country to improve its management).

DNACPN has organised three meetings of the task force:

- The first meeting of the task force was conducted on 18 April 2011. The objectives of this first meeting were to finalize the composition of the task force and to present and facilitate discussion on the outline for the Country Situation Report and Needs Assessment. This half-day meeting was also used to schedule planned activities and key project milestones, and to discuss the relationship between the project and existing activities related to chemical management in Mali (such as being a signatory of the Stockholm and Basel Conventions, as well as pending resolutions related to chemical safety in the petroleum and agricultural industries). During this meeting, task force members also agreed on the terms of reference for task force activities, which outline the responsibilities and participants in the task force.
- The second task force meeting was held on 4 July 2011. At this meeting, a synthesis of the results from the Country Situation Report was presented, along with a preliminary Needs Assessment. The goals of the meeting were to assess the gaps and needs surrounding the CAPP, to come to an agreement regarding the outline of the upcoming Roadmap, and to plan out the second Capacity Building Workshop, as well as the to set up future objectives. Hazards were recognized (such as the fact that of 343 national industrial units, 227 are in Bamako), and suggestions given to address these issues (such as the first programme implementation would focus on Bamako, and military should be present at industrial sites). The meeting also led to the establishment of a sub-group to work on the Needs Assessment and Roadmap. The sub-group consists of the Agencies for Health, Civil Protection, Industry, Transport and Environment as well as the Customs and includes representatives of the private sector.
- A third task force meeting was held on 28 November 2012. The main purpose of this meeting was to discuss the results of the Needs Assessment and the draft Roadmap, allowing for the prioritisation of issues and leading to an action plan. In this way, the points discussed in the meeting anticipate the issues to be addressed in the Roadmap later on. Ms. Johanna Suikkanen, representing UNEP, was following the meeting via video and could consequently get a very direct impression of the development of the CAPP project.

6.3 Training Workshops



A single two-day training workshop was held on 19 – 20 April 2011, which was jointly designed by DNACPN, INERIS, UNEP and Quartz Afrique, based on the issues and priorities identified in the Country Situation Report. Additionally, the agenda was reviewed by representatives of the EC-MAHB and other experts. Approximately 20 participants from the national task force members (academia, private sector and line government agencies) attended the training session.

The objective of the training workshops was to build institutional capacity related to chemical accident prevention and preparedness in order to be able to implement a CAPP

Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

programme anchored in policy. This training workshop was conducted to enhance knowledge on hazardous chemicals and on existing chemical accident prevention and preparedness regulatory systems, and to familiarize participants with the elements of the *Guidance*. It included presentations from international experts on chemical hazards and risks, the existence of hazardous chemicals and activities in Mali, hazard identification and classification, and elements of a CAPP programme (including defining the scope of the programme, roles of competent authorities, and industry responsibilities). Representatives from INERIS presented information on the types of hazardous chemicals used in Mali, as well as the institutional settings and regulatory framework related to hazardous chemicals. Misters Franck Prats and Mohammed Diawara also presented information on risk assessment and methods for undertaking Risk Mapping.



In addition to the presentations described above, training attendees participated in a number of group exercises and discussions. Exercises were conducted on identifying hazards and risks, assessing the causes of accidents, and defining the scope of a CAPP programme. Discussions were held to identify industries or situations in Mali that present chemical risks, possible consequences of accidents, and ways to prevent accidents. Participants also provided examples of chemical accidents that had occurred in Mali, and discussed Mali's use of safety tools such as chemical labels. During the presentations on different elements of a CAPP programme, participants discussed which elements would be the most relevant to the industries present in Mali, as well as what agencies within Mali could be responsible for their implementation.

The second training was organised by DNACPN, INERIS, UNEP though this time with the support of the University Bamako. It took place from 22-23 October 2012 and was broadcasted by videoconference from INERIS in Verneuil-en-Halatte, France. It aimed at addressing issues related to the typical elements of a CAPP Programme, with an emphasis on the preparation of safety reports, inspection, emergency preparedness and information to the public. Given that currently no academic programme for industrial risks exists in Mali, a special component has been added on the development of academic and professional educational programmes relating to the topic.



A third training- with a practical focus- targeting a sub-group of the National CAPP Taskforce of Mali, was organised in Dakar, Senegal on 4-5 December 2012. The training was organised in collaboration with the Direction de l'Environnement et des Etablissements Classés (DEEC), Senegal, and INERIS. It aimed at starting a dialogue between the DNACPN and Inspectors of the DEEC. The training composed of a number of practical exercises, discussions and a mutual industrial site visit, hosted by Senstock, a Senegalese company. The site visit acted as a source of inspiration for improving cross-border collaboration on industrial safety and chemical accident prevention and preparedness between Mali and Senegal and in the West African sub-region.

6.4 Project Closure and CAPP Roadmap Launching Workshop

As a final project activity, DNACPN organised a Project Closure Workshop held on 11 December 2012 to discuss conclusions and lessons learned from project activities, to review the Roadmap for CAPP implementation, and to identify plans for future activities. The meeting was attended by 35 participants, including members of the Task force, participants from UNEP, and a variety of national experts.

Mr. Oumar Diaouré Cissé from DNACPN put into the wider perspective of the Chemical Accident Prevention and Preparedness Programme for West Africa by recalling its objectives, presenting its results and envisioning future scenarios. Building upon this introductory part, Mr. Adama Tolofoudye, a national expert from the University Bamako presented his thoughts on the Country Situation Report and the Roadmap, before all participants were invited to discuss it. As a representative of UNEP, Mr. Abdouraman Bary, put the CAPP Programme West Africa into its wider context of similar projects UNEP carried out before in Asia. Further, he went through the development of Mali's CAPP project and evaluated the single steps by analyzing them according to relevant criteria.

The overall participation throughout the workshop was good. The great variety of topics related to the Roadmap, however, did not allow discussing all the relevant points in detail. Further, there were still questions to be solved concerning the future implementation of Roadmap activities. The priorities for the CAPP Programme implementation are discussed in the following sections ("Needs Assessment and Roadmap" and "Next Steps").

7 Project Reports and Outcomes

As part of the project, the two key deliverables - the Country Situation Report and the Roadmap with the Need Assessment - were prepared by CEED with periodic review of successive drafts and input from the Task force members, as well as extensive technical support by INERIS and UNEP as well as the international experts involved in the project.

The **Country Situation Report** presents an overview of the nature and extent of chemical accident risks within Senegal, as well as the existing legal structures and responsibilities related to the management of these risks. It was prepared by gathering information from consultations, stakeholder records, media reports, and other sources.

The **Roadmap** is an outline of the necessary steps for the implementation of elements of a CAPP Programme to address the priorities identified according to a Needs Assessment, which was developed on the basis of the information given in the Country Situation Report. In this sense, one section of the Roadmap provided a review of the status of CAPP Programme elements in Senegal, resource and capacity building needs for the programme's development, possible sources of funding, and recommendations. This, in turn, helped to create a schedule of milestones for development and implementation of a CAPP Programme, as well as a summary of high-priority actions and needs.

8 Project Accomplishments

The overall objective of the project was to enhance the capacity of relevant institutions in Mali to manage and respond to chemical accident risks, with a long-term view of developing a comprehensive CAPP Programme building upon legislation. To meet this objective, a multi-stakeholder task force for the establishment of a CAPP

Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

Programme was created to serve as the main driving force for project activities and to allow for continuing activities related to CAPP beyond the lifetime of the project. The three held task force meetings contributed to improved coordination and communication between government agencies, industrial representatives, and other stakeholders.

In addition to the establishment of a task force, the deliverables developed as a part of the project will provide a valuable resource for better addressing chemical accident risks within the country or general management of hazardous chemicals in the future. The Country Situation Report incorporates data and information from a wide variety of sources and centralizes it into one sound document. In January 2011, work began on a first draft of the Country Situation Report for Mali. Drafted by national expert Dr. Adama Tolofoudy , the first draft was presented at the initial task force meeting in April 2011. Comments were made at the meeting, and changes were made by Dr. Tolofoudy  in time for a second draft to be presented at the 2nd task force meeting in July 2011. Based on this, different relevant stakeholders were consulted to collect information and to finalise the Country Situation Report (The Roadmap including Needs Assessment is to be discussed in detail in the next section).

Finally, capacity building training activities conducted in the country have resulted in the improved ability of authorities, industries and other stakeholders in Mali to identify, assess, and manage chemical accident risks. In the two training workshops, participants obtained an improved understanding of chemical hazards and accidents, hazardous activities and mechanisms for reducing the risk of accidents. The training activities also provided further opportunities for multi-stakeholder engagement and dialogue.

9 Needs Assessment and Roadmap

Between September 2011 and 2012 the DNACPN consulted the sub-group of the national task force to finalise the Needs Assessment. The Needs Assessment was prepared in collaboration with the Agencies for Health, Civil Protection, Industry, Transport and Environment as well as the Customs Agency and includes representatives of the private sector. The conclusions of the Needs Assessment indicated a need for building the technical, human and legislative capacities in relation to chemical accident prevention and preparedness. It is suggested that the Seveso II directive could be used as an example for developing the Malian National CAPP Programme. The report concluded that given the high population densities present around the industrial facilities that may pose risks, there is a need for considering reinforcing land-use planning and improve training of emergency services by the Civil Protection Agency. Finally, the report puts emphasis on the need to train inspectors that are capable of carrying out safety inspections.

Based on this Needs Assessment, the Roadmap was created pointing towards different issues to be addressed in the short run. These issues can be grouped under three categories, revealing the broad scope of required action Mali is confronted with:

- 1. Reinforcement of regulations concerning accident prevention and preparedness:**
 - o Drafting of legislative texts addressing handling of chemicals (where currently not covered by legislation)
 - o Creation of a department for hazardous installation inspections under responsibility of Ministry of Environment
 - o More efficient application of existing regulations



Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

2. Preparedness and planning in face of emergency situations:

- Creation of emergency plans in pilot sites (in Bamako)
- Involvement of communities into preparedness for emergencies
- Setting up information system about population in risky areas
- Setting up a mobile unit specialised in intervening in case of accident

3. Capacity building for different relevant actors:

- Training of hazardous installation inspectors
- Training of industrial and community actors potentially exposed to consequences of an accident

Besides that, the Roadmap foresees a closer cooperation with Senegal in the context of chemical risk management. Senegal with its – on a regional scale – considerably advanced management could help with its experience and available capacities to give advice to the Mali.

10 Next Steps

Having formally finished the CAPP Project with the Project Closure Workshop in December 2012, the following step would be to successfully implement the activities that have been outlined in the Roadmap. In the case of Mali, this means to progress both in terms of adopting legal standards and effectively implementing them. Mali starts from a point where *de facto* no accident risk management measures are in place and now aims to build up important elements in the short run. This is of course to be welcomed; however, in order to assure an effective implementation, further prioritisation amongst the issues to be addressed might be necessary, taking into consideration the resources at disposal.

To sustain project activities in the future, it will be of major importance for Mali to institutionalise the task force of the CAPP Programme in any way. The accumulated capacities and experience of the task force members will be indispensable to bring tackle the issues addressed in the Roadmap. At the same time, Mali could strengthen the cooperation with international partners (such as UNEP and INERIS) to look for future opportunities of funding and for benefitting from the partners' expertise in technical matters. A continuing and stable cooperation with such international partners could equally be helpful to assure the continuity of the CAPP Programme and to preserve the related achievements.

Apart from that, Mali could together with Senegal use the experience and available capacities gained in under the CAPP Programme to give advice to other West African countries concerning their chemical risk management. In this way, disseminating information about the CAPP project and lessons learned from it could help to eventually strengthen the prevention and preparedness for chemical accidents of a whole region.

11 Lessons Learned

Could include:

- Replicability of CAPP Programme Projects: Is it possible for other West African countries to implement the CAPP Programme without active support of UNEP and INERIS?



Case Study: Chemical Accident Prevention and Preparedness Programme for West Africa: Mali

- Collaborations between stakeholders: Did the project activities reinforce multi-stakeholder collaboration for better preparedness and prevention of chemical accidents?
- The use of the Implementation Support Package: Did it work as planned? Where might be room for improvement? / Where is further guidance needed?
- Applicability of the CAPP project: Is it universally applicable or are there differences in the way it could be applied to Senegal when compared to Mali? (On an abstract level: Can it be applied better to countries with a more advanced chemical accident management system?) / Which elements have to be present for making the CAPP project a success (in terms of internal organisation of the respective country)?
- How can the continuation between the CAPP project and the time after its phasing out be established? What is the role of the different stakeholders in assuring this continuation?

