

Date: 2023-06-01  
KemI reference no: H19-06276  
Contribution No: 13038



## Bilateral cooperation between Zambia Environmental Management Agency (ZEMA) and the Swedish Chemicals Agency (KEMI) on pesticide management



---

Progress report 2022

## Table of contents

1	Executive summary.....	3
2	Background .....	4
2.1	The chemicals challenge.....	4
2.2	Theory of change .....	5
2.3	Connection to the Sustainable Development Goals .....	7
3	Context analysis.....	8
4	Progress report with results from 2022 .....	10
4.1	General.....	10
4.2	Short-term objective 1: A revised registration process for pesticides in Zambia to support registration of efficacious products that will not cause unacceptable harm to human health and the environment is established and the capacity of ZEMA staff and other relevant institutions has increased .....	10
4.3	Short-term objective 2: ZEMA has improved its management of highly hazardous pesticides .....	11
4.4	Short-term objective 3 - An IT system for registration of pesticides is established and the information on ZEMA’s website has been further developed .....	12
4.5	Communication and dissemination of results .....	12
4.6	Cross-cutting issues.....	12
	Human rights, including gender .....	12
	Sustainability .....	12
	Anti-corruption .....	13
5	Synergies with KEMP’s other Sida funded projects.....	13
5.1	ITP.....	13
5.2	Global programme on chemicals management.....	14
6	Risk management .....	15
7	2022 budget follow-up .....	16
8	Results matrix.....	17
	Annex 1 – Programme study visit.....	20

## 1 Executive summary

In 2022, an amendment bill was prepared in order to reintroduce necessary legal provisions for registration of pesticides in the overarching legislation, the Environmental Management Act No. 12 of 2011. The amendment bill was presented to the Cabinet in February 2023 and is expected to be adopted by the Parliament within the first half of 2023.

Parallel to this process, the project focused on the continued development of regulations to introduce a pesticide registration requirement where the product's health and environmental risks are assessed before the Agency takes a decision. A number of drafting sessions with experts from ZEMA and KEMI were organised to further develop the legal text and associated annexes containing data requirements etc. An internal review of the draft regulations was undertaken to receive input from ZEMA inspectors and management. An advanced stage of draft regulations (including necessary application forms) is now available for review by a wider range of stakeholders.

Work related Highly Hazardous Pesticides (HHPs) continued in 2022, with a focus on cleaning of data from the field surveys, data analysis and reporting of results. Due to the high workload at ZamStats (related to the 2022 national census) and other unforeseen circumstances, it was not possible to finalise the data analysis and report in 2022 and the report is expected to be ready during the first half of 2023.

In September 2022, a team of nine experts from ZEMA made a study visit to KEMI in Stockholm in order to meet various KEMI experts and discuss Swedish experiences from handling applications for approval of pesticides, developing registers of chemicals, providing support to industry and other stakeholders, enforcement etc. Meetings with other Swedish institutions involved in the management of pesticides were also organised. The knowledge gained will benefit the development of a suitable process for handling of application for registration of pesticides as well as the development of a pesticide database and other supporting tools.

In order to strengthen implementation of GHS (the globally harmonised system for classification and labelling of chemicals) in Zambia, a three day in-depth training was organised with participants from all of ZEMA's offices as well as other relevant ministries and agencies. Theory was mixed with exercises and participants had the possibility to practice application of the GHS criteria using cases from Sweden and Zambia.

In 2022, the project supported work related to digitisation of the licensing process for pesticides and toxic substances within the cooperation between ZEMA and the Smart Zambia Institute (a Division in the Office of the President which is charged with the responsibility of the management and promotion of electronic Government services and processes). In cooperation with business analysts, the licensing process was reviewed in order to develop an on-line application system and process work-flow. The work will benefit future inclusion of the pesticide registration process into the on-line application system.

## 2 Background

### 2.1 The chemicals challenge

The production of chemicals (including pesticides) around the world is steadily increasing. The number of chemical substances in commercial use is increasing, as are the volumes sold. Between 1950 and 2000, the volume of world production increased from around 7 000 000 tonnes to around 400 000 000 tonnes<sup>1</sup>, and there is still an upward trend<sup>2</sup>. Between 2000 and 2010, total world production increased by 54 % according to the American Chemistry Council's Global Chemical Production Regional Index.

The trade with chemicals and articles containing chemicals is steadily increasing across the world. The international chains of production and trade are often long and complex. The global trade with chemicals and articles results in significant spread of chemicals during production, use and disposal as waste. Chemicals are further dispersed across national boundaries with air and water. As issues concerning chemicals become global, the importance of finding global solutions to limit the dispersal of hazardous substances is increasing. In many countries, however, preventive chemicals control is non-existent or weakly developed.

Many chemical substances can have adverse effects on human health and the environment if used incorrectly, which is detrimental to countries' development. According to the World health organization (WHO) in 2016, approximately 1.3 million people die every year due to injuries caused by industrial chemicals, pesticides and occupational exposure (air pollution is not included)<sup>3</sup>. That is in the same order of magnitude as the number of yearly deaths in 2016 related to road injury, 1.4 million, and HIV/AIDS, 1.0 million<sup>4</sup>. Hence, the benefits for societies and individuals from improved and preventive chemicals control are significant.

Lack of preventive chemicals control risks to counteract successes in other areas. Economic and social growth often leads to an increased use of chemicals in agriculture, industry and households. If there is no legal framework and institutional capacity for chemicals control, then this increase can lead to high economic and social costs due to health and environmental problems. If instead proper legal frameworks and institutional capacity for preventive chemicals control are developed at the same time as the use of chemicals in developing countries is increasing then some of these costs can be prevented. Adequate control of hazardous chemicals is also highly relevant from the perspective of poverty.

Pesticides need particular attention since they are designed to be toxic to target organisms such as insects, weeds, and fungi and they are deliberately spread in the environment.

Statistics show that 25 % of world production of pesticides is used in lower and middle income countries while 95 % of pesticide poisoning cases occur in these countries<sup>5</sup>. So called Highly Hazardous Pesticides are often older, broad-spectrum pesticides that are cheaply available. Many of these pesticides have been taken off the market in high-income countries but they frequently remain registered and used in low- and

---

<sup>1</sup> KemI (2010). Kemisk industri ur ett ekonomiskt perspektiv. Utvecklingstendenser i världen, EU och Sverige. Rapport nr 2/10

<sup>2</sup> CEFIC (2020). Facts & Figures 2020 of the European chemical industry.

<https://cefic.org/app/uploads/2019/01/The-European-Chemical-Industry-Facts-And-Figures-2020.pdf>

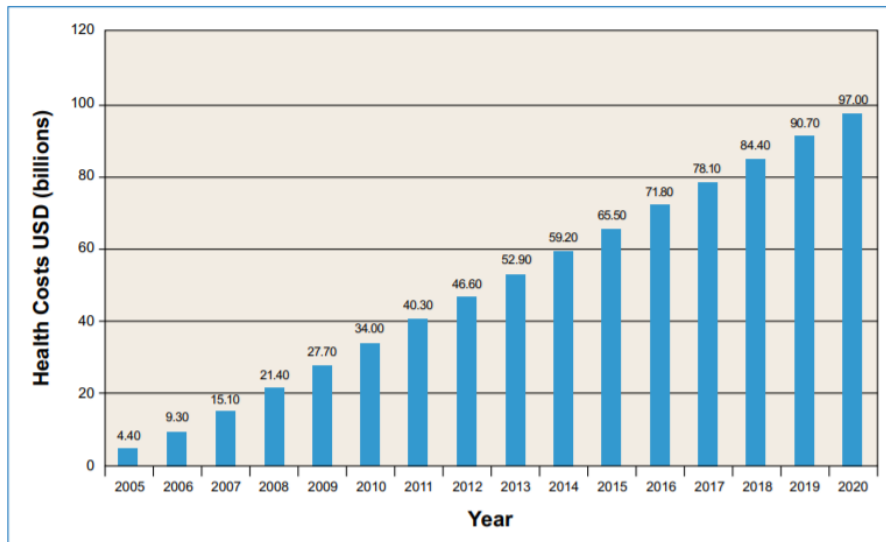
<sup>3</sup> WHO (2016). Public health impacts: Knowns and unknowns. <http://www.who.int/ipcs/publications/chemicals-public-health-impact/en/>

<sup>4</sup> <http://www.who.int/en/news-room/fact-sheets/detail/the-top-10-causes-of-death> (Latest accessed 13 June, 2018)

<sup>5</sup> Global situation of pesticide management in agriculture and public health, FAO and WHO, 2019

middle-income countries (LMIC). Although they constitute only a small proportion of pesticides, they have caused health problems and fatalities in many parts of the world, often because of occupational exposure and accidental or intentional poisoning. Some pesticides will also accumulate in different organisms and remain in the food chain causing long-term adverse effects in the environment.

In a report from UNEP<sup>6</sup> (2013), it is demonstrated that the accumulated costs of injury to smallholder pesticide users in Sub-Saharan Africa is substantial and that the costs are increasing (see below figure)



Source: Calculations made by the authors of this report.


Putting in place measures aimed at reducing the risk of exposure to hazardous pesticides should therefore be considered a priority. In 2015, this was acknowledged also at global level when the International Conference on Chemicals Management (ICCM) recognised Highly Hazardous Pesticides as an issue of concern. All stakeholders are encouraged to undertake concerted efforts to implement the HHP Strategy at the local, national, regional and international levels, with emphasis on promoting agro-ecologically based alternatives and strengthening national regulatory capacity to conduct risk assessment and risk management, including the availability of necessary information, mindful of the responsibility of national and multinational enterprises.



## 2.2 Theory of change

Below is a description of the underlying theory of change for the technical cooperation between ZEMA and KemI.

Chain of results	Underlying assumptions	Mitigation measures
If ZEMA develops a pesticide registration system including requirements for a hazard and risk assessment that is supported by technical guidelines and Standard Operation Procedures etc.	The management of ZEMA makes sure that staff from ZEMA have the time, mandate and relevant positions in their organisations to develop Technical guidelines, Standard Operation Procedures	Development of in-depth relationship/dialogue with ZEMA’s management around: <ul style="list-style-type: none"> <li>participation of staff at ZEMA in the revision of the current registration scheme for</li> </ul>

<sup>6</sup> Report on the Costs of Inaction on the Sound Management of Chemicals, UNEP, 2013

Chain of results	Underlying assumptions	Mitigation measures
<p style="text-align: center;"><i>and</i></p> <p>If ZEMA proposes amended legislation to introduce provisions for registration of pesticides</p> <p style="text-align: center;"><i>and</i></p> <p>If highly hazardous pesticides in use in Zambia are identified and listed</p> <p style="text-align: center;"><i>and</i></p> <p>If the phasing out or restriction of prioritized HHPs has started</p> <p style="text-align: center;"><i>and</i></p> <p>If an IT system for registration of pesticides has been developed</p> <p style="text-align: center;"><i>and</i></p> <p>If ZEMA staff have acquired relevant skills and knowledge, e.g. by being trained in methods for risk assessment, risk management and GHS and by taking part in the development of guidance documents etc. <b>then...</b></p>	<p>(SOP) etc. and contribute to an amended legislation to support an improved registration scheme.</p> <p>Work within a FAO supported project on highly hazardous pesticides is making progress to serve as a basis for the development of proposals to phase out the most highly hazardous products.</p> <p>Identification of alternative products and/or methods to HHPs is making progress and the alternatives are available and accepted among extension officers and farmers.</p> <p>IT hardware and a digital platform is available at ZEMA to enable inclusion of a pesticide registration module</p> <p>Relevant ZEMA staff have the possibility and capacity to take part in trainings on risk assessment and risk management of pesticides and in trainings on how to work according to new procedures when handling applications and managing HHPs</p>	<p>pesticides in Zambia and in different trainings</p> <ul style="list-style-type: none"> <li>• consequences and requirements of an improved registration scheme which will place a large responsibility on companies in terms of increased data requirements and application of new guidance,</li> <li>• commitment and input from other relevant institutions regarding participation in the project</li> </ul> <p>Assignment of a long-term adviser from KemI to be located in Lusaka that can provide technical assistance and advice on a day-to-day basis</p> <p>If the mid-term review that Sida plans to carry out 2022 shows lack of progress, KemI and ZEMA can mutually agree on ending the collaboration in advance.</p>
<p style="text-align: center;"></p> <p>...ZEMA staff are likely to use the improved practices: they will use new relevant methods and tools pertaining to risk assessment and risk management of pesticides, supported by new information, procedures, guidelines, amended legislation and IT support system <b>then....</b></p>	<p>The management of ZEMA are committed to:</p> <ul style="list-style-type: none"> <li>• ensuring that a large enough group of staff maintain the knowledge and skills pertaining to the training included in the technical assistance</li> <li>• continuing the implementation of the new working practices</li> <li>• continuing the management of HHPs</li> <li>• safeguarding that the work on amended legislation to support an improved registration scheme is making progress</li> </ul>	<p><i>Partly beyond the sphere of control of the collaboration</i></p> <p>Development of in-depth relationship/dialogue with ZEMA's management around the value and importance of:</p> <ul style="list-style-type: none"> <li>• maintaining and continuing implementation of new working procedures for registration of pesticides and management of HHPs</li> <li>• maintaining necessary skills of ZEMA staff</li> </ul>

Chain of results	Underlying assumptions	Mitigation measures
	<ul style="list-style-type: none"> <li>maintaining the IT support system for the registration of pesticides</li> </ul>	
	<p>There is a political willingness to engage in reforms aiming at more systematic and effective control of pesticides that will safeguard human health and environment.</p>	<i>Beyond the sphere of control of the collaboration</i>
<p>... ZEMA staff involved in the management of pesticides are likely to become more effective to manage risks to human health and the environment <b>then...</b></p>	<p>There is willingness among different stakeholders to collaborate for a more systematic and effective control of pesticides that will safeguard human health and environment.</p> <p>There is support from concerned industry for a more systematic and effective control of pesticides that will safeguard human health and environment.</p>	
		
<p>... ZEMA will contribute to sound management of pesticides in Zambia to safeguard human health and the environment</p>		

## 2.3 Connection to the Sustainable Development Goals

In 2015, the UN General Assembly adopted Agenda 2030 with 17 sustainable development goals (SDGs) and 169 targets, which aims at achieving sustainable economic, social and environmental development by the year 2030. The Agenda is universal, and all countries have a responsibility to implement the agenda and to contribute to the achievement of the goals, both nationally and globally.

Several of the SDGs have direct or indirect connections to chemicals. Preventive chemical management is a prerequisite for sustainable development and a means for contributing to the achievement of most of the objectives in Agenda 2030. There are clear associations between sound chemicals management and several of the goals: safe food and agriculture (SDG 2), good health (SDG 3), clean water (SDG 6), safe working environments (SDG 8), sustainable cities (SDG 11), sustainable consumption and production patterns (SDG 12), and protection of ecosystems and biodiversity in water and on land (SDG 14 and 15). Chemicals are mentioned specifically in three targets (3.9, 6.3 and 12.4) belonging to some of these SDGs.

These goals can in turn contribute to reduction of poverty and illness and improve the standard of living for all people. Investment in preventive chemicals control lays the ground for social welfare and contributes to the reduction of poverty. Preventive chemicals control therefore also contributes to the goals relating to reducing poverty (SDG 1), economic growth (SDG 8) and innovation (SDG 9). In SDG target 16.6, the importance of legal frameworks and institutions is highlighted.

It is clear that sound chemicals management can have a direct positive effect on the overall goal of sustainable development and poverty reduction, as well as a better health and access to clean water.



Figure 1. Chemicals and waste management related to the Sustainable Development Goals (IOMC, 2018<sup>7</sup>)

### 3 Context analysis

Zambia is considered one of the most unequal countries in the world with a majority of the poor people living in the rural areas. Most people living in these areas are smallholder farmers involved in the agricultural sector. The diversification of the economy, from a copper-based mono- economy to a more favourable diversified economy, has resulted in the agriculture sector receiving priority attention by the Government. In this regard, the country is promoting crop diversification from maize to other crops such as soya beans, wheat, beans, cotton, groundnuts, coffee, oil crops and tubers. In supporting this sector, the Government has also improved access to agro inputs, especially among the smallholder farmers and this has resulted in an increased use of pesticides, which can be seen from the increase in the importation of pesticides; which has continued to increase over the years, from about 70,000 tonnes in 2009 to 218,000 tonnes in 2013 (statistics from ZEMA).

The population at risk include farm workers, spray operators, children and the general community (due to spray drift and pesticide residues in crops). There is limited knowledge among people about the hazards that these pesticides pose to health and to the environment. Difficulties in accessing proper risk mitigation measures, such as personal protective equipment, due to cost and availability lead to extensive exposure of people.

<sup>7</sup> [http://www.who.int/iomc/publications/IOMC\\_CWMandSDG\\_brochure\\_final\\_01Feb18.pdf](http://www.who.int/iomc/publications/IOMC_CWMandSDG_brochure_final_01Feb18.pdf)



There is considerable amount of literature that try to monetize health effects from pesticides (agro-chemicals). Data from the Kafue basin in Zambia show that pesticides used in one single crop (cotton) resulted in estimated costs of more than 11,000,000 Kwacha in 2010 (see below table)<sup>8</sup>.

Table 3 (continued): Monetized Health Effects : AGRO-CHEMICALS				
Country, City/Region	Chemical/Chemical Category	Health effect	Monetized Data	Source
Zambia, Kafue Basin	Chemicals used on cotton fields	Acute pesticide poisonings	Kwacha 11,286.85 million (USD 2.1 million): lost labor income due to illness (51.1%), medical costs (40.7%); transport and other costs (8.1%)	(Bwalya 2010)

Pesticide risks have also been highlighted in the ongoing Musika Programme, which has been funded by SIDA since 2011. Musika is a Zambian non-profit company with a mandate to stimulate and support private investment in the Zambian agricultural market with a specific focus on the lower end of these markets. Musika’s goal is to achieve poverty reduction by making sure agricultural markets work for all stakeholders and in particular the rural poor in Zambia. During its work the Musika programme has reached the conclusion that it is critical that all stakeholders associated with the agricultural supply chain – including statutory bodies such as Zambia Environmental Management Agency – play a role in building the capacity of supply chain partners and farmers to be aware of and mitigate these risks. In this regard, Musika is currently working with ZEMA on safe use of pesticides among the agro-dealers.

Even though Zambia’s current legal framework to a large extent regulates pesticides, it does not provide for registration of pesticides before they can be sold and used in Zambia. The current licencing system that is in place does not include a comprehensive evaluation and may therefore not identify products with unacceptable risks to human or animal health or the environment. Due to this gap in the legislation, there is a possibility that hazardous pesticides enter the Zambian market and cause risks to users, consumers and the environment.

Current legislation on pesticides and toxic substances enables ban and severe restriction of the use or production of a pesticide if the unregulated use or production is or is likely to be harmful to human health, animal or plant life or the environment. However, the legislation does not contain criteria for implementation of the provisions and it has therefore not been used to ban or restrict pesticides in Zambia. Zambia is party to the Stockholm, Rotterdam, Basel and Minamata conventions. The conventions have, however, not been domesticized in Zambia because of this legal gap.

Today’s handling of applications for pesticide licences involves a lot of manual work and the newly launched e-ZEMA portal for applications is still not working in an effective way.

<sup>8</sup> Report of the Cost of Inaction on the Sound Management of Chemicals, UNEP, 2013

## 4 Progress report with results from 2022

### 4.1 General

With eased restriction related to Covid-19, project activities picked up speed in 2022 and it was possible to make progress related to all project objectives.

For the first time during the project implementation, KEMI experts from Stockholm could travel to Zambia to take part in a 3-day training on GHS.

### 4.2 Short-term objective 1: A revised registration process for pesticides in Zambia to support registration of efficacious products that will not cause unacceptable harm to human health and the environment is established and the capacity of ZEMA staff and other relevant institutions has increased

Since the current overarching legislation, the Environmental Management Act No. 12 of 2011, lacks an express provision to register pesticides, a process to cure this legal gap was initiated in 2021, and continued in 2022. An amendment bill to provide for registration of pesticides as well as for the Minister to subsequently promulgate Regulations pertaining to the registration of pesticides was developed in close dialogue with the Ministry of Green Economy and Environment and Ministry of Justice. A stakeholder consultation with representatives from the aforementioned ministries as well as Ministry of Mines and Mineral Development, Ministry of Finance and National Planning, Water Resources Management Authority, Impact Assessment Association of Zambia, Zambia National Farmers Union, and CropLife Zambia was organised in August 2022. All stakeholders were positive to the amendment and no major suggestions for amendments of the draft bill was brought forward. The bill was expected to be adopted by Parliament in 2022. Due to other urgent issues within the government the foreseen adoption of the amendment bill was however slightly delayed. The bill was presented to the Cabinet in February 2023 and formal adoption by the Parliament is expected shortly.

Based on the legal gap analysis and the initial drafting that was done in 2021, the development of the draft regulations on registration of pesticides continued in 2022. During a number of drafting sessions technical and legal experts from ZEMA and KEMI further developed the legal text and associated application forms specifying data requirement etc. In April, the draft regulations were presented to ZEMA inspectors from HQ and all the regional offices to collect their input and suggestions for amendments. The draft regulations were also presented to ZEMA management at a separate meeting in order to collect their views and suggestions. Following these internal consultations, the drafting team made minor amendments of the draft regulations and it is now ready for review by a wider range of concerned stakeholders. As soon as the EMA amendment bill is adopted by Parliament, consultations with a wider range of stakeholders and a Regulatory Impact assessment (RIA) can be initiated.

The planned decision making process for registration of pesticides is suggested to include an advisory committee called the Chemical Safety Committee. The said committee is planned to comprise of representatives from academia and selected ministries and it should review proposed decisions on

pesticides and associated mitigation measures and provide advice to ZEMA's Director General. Draft terms of reference for the committee were developed in parallel with the drafting of the regulations on pesticide registration and a pilot meeting with the committee was organised in May 2022. Representatives from University of Zambia, Ministry of Green Economy and Environment, Ministry of Health, Zambia Bureau of Standards and National Institute for Scientific and Industrial Research took part in the pilot meeting.

In September, a group of nine experts from ZEMA made a 5-day study visit to KEMI in Sundbyberg, Sweden. Main objective of the study visit was to learn from Swedish experiences from handling applications for pesticides, developing registers of chemicals, providing support to industry and other stakeholders, enforcement etc. A large number of KEMI experts gave presentations on different topics, followed by discussions with ZEMA experts. The draft regulations on pesticide registration were reviewed together with a KEMI lawyer and suggestions on possible changes and additions were discussed. Meetings with the Swedish Food Agency and the Swedish University of Agricultural Sciences were also organised during the study visit. A detailed agenda for the study visit can be found in Annex 1.

In October 2022, a three day in-depth training on the globally harmonised system for classification and labelling of chemicals (GHS) was organised in order to strengthen capacity of staff at concerned ministries and agencies and enhance implementation of GHS in Zambia. A total number of 25 participants took part in the training, 18 inspectors from ZEMA (representing HQ and all regional offices) and 7 experts representing Ministry of Health, Ministry of Agriculture, Ministry of Labour and Social Security, Zambia Agricultural Research Institute, University of Zambia and Zambia Bureau of Standards. Three experts from KEMI with long experience from enforcement of legislation on GHS presented the classification criteria for physical hazards, health hazards and environmental hazards in detail. Theory was mixed with practical group work where the participants worked on various cases from Sweden and Zambia. Following the workshop, ZEMA and KEMI started developing a check list to support ZEMA inspectors in the review of proposed classification and labelling of chemicals. The continued development and finalisation of the checklist will be undertaken as part of a change project of one of the ITP participants from ZEMA.

### **4.3 Short-term objective 2: ZEMA has improved its management of highly hazardous pesticides**

In 2022, work related to Highly Hazardous Pesticides (HHPs) focused on cleaning of data from the field surveys and analysis of the data. The fact that data on use and exposure to pesticides was collected during three different field surveys, there was a need to clean the data in order to allow merging of the datasets and subsequent analysis.

The data cleaning was mainly done by experts from ZamStats, ZEMA and KEMI. Due to high workload at ZamStats connected to the 2022 census, together with other unforeseen circumstances, the data cleaning was substantially delayed. An additional expert from University of Zambia was therefore engaged to support the final data cleaning and analysis.

A draft report was developed early 2023 and validation of the results will soon be initiated.

#### **4.4 Short-term objective 3 - An IT system for registration of pesticides is established and the information on ZEMA's website has been further developed**

In 2022, the project supported work related to digitisation of the licensing process for pesticides and toxic substances within the cooperation between ZEMA and the Smart Zambia Institute (a division in the Office of the President which is charged with the responsibility of the management and promotion of electronic Government services and processes). In cooperation with business analysts, the licensing process was reviewed in order to integrate the ZEMA licensing system into the so called Government Service Bus (GSB), an on-line system gathering government services and linking various databases in order to facilitate application for these services and make the handling of the applications more effective. The work related to the licensing process will benefit future inclusion of the pesticide registration process into the on-line application system.

During the study visit to Sweden, KEM's pesticide register and product register were presented and discussed with the ZEMA experts. This information will also benefit the inclusion of pesticide registration into the GSB and also the development of a pesticide database.

Draft texts on the ZEMA-KEMI project have been developed and will be published at the ZEMA website as soon as possible.

#### **4.5 Communication and dissemination of results**

No specific communication activities were undertaken in 2022.

#### **4.6 Cross-cutting issues**

##### **Human rights, including gender**

Strengthening of pesticide management and phase out of the most hazardous products contributes to protection of human rights, such as the right to a clean and healthy environment, the right to adequate food, as well as the right to health.

When assessing pesticides, risks to both men, women and children are being considered in order to ensure equal protection of everyone. Depending on division of responsibilities men's and women's exposure may differ and this is taken into consideration when addressing and mitigating pesticide risks.

##### **Sustainability**

All activities are aligned with ZEMA's priorities and supports on-going work, which ensures that the results from the cooperation are incorporated into regular operations and that they are sustainable.

The Kemi long-term expert works closely together with ZEMA's technical experts. Continuous dialogue and joint development of legislation, guidelines etc. ensures continuous capacity building of ZEMA staff and adaptation of deliverables to local needs and resources.

## Anti-corruption

According to the grant arrangement between Sida and KemI, all project funds are handled by KemI and are subject to auditing by an external party. The KemI project coordinator receives monthly financial follow ups from the international unit's controller, which makes it easy to keep track of expenditures and to make corrections, if necessary.

## 5 Synergies with KEMI's other Sida funded projects

KEMI is always striving to ensure synergies between its Sida funded projects and programmes, activities and cooperations funded by other sources as well as its global work on chemicals management.

### 5.1 ITP

In March-April, four experts from Zambia took part in the 5<sup>th</sup> session of the International Training Programme (ITP) on "Developing Strategies for National Chemicals Management". The experts represented ZEMA, Ministry of Water Development, Sanitation and Environmental Protection and Ministry of Health. Due to covid restrictions the training was held on-line. Participants were able to travel to Sweden in November 2022 for various study visits and to present the results of their change projects. The participant's change projects focused on the following:

- Safe Management of Water Treatment Chemicals among Water Utility Companies (MoWDSEP)
- Chemical management through Border Control (ZEMA)
- Development of guidelines for the safe handling of chemicals at Cancer Diseases Hospital (MoH)

The project conducted by one of the Inspectors from ZEMA resulted in improved compliance levels regarding imports and transport of pesticides and toxic substances and the revenue collection increased. Experiences gained from this project can be used for strengthening compliance at other border posts and also when developing enforcement activities related to the upcoming registration of pesticides and phase out/restrictions of highly hazardous products.

In October 2022, five additional experts from Zambia took part in the 6<sup>th</sup> session of ITP on "Developing Strategies for National Chemicals Management". The experts represented Ministry of Health, Ministry of Mines And Mineral Development, ZEMA and Zambia Compulsory Standards Agency. The participant's change projects focused on the following:

- Detection of rodenticide residue on clean cutlery stored in cupboards in selected public restaurants in Lusaka District (Ministry of Health)
- Replacement of mercury in small scale gold processing in Zambia (Ministry of Mines And Mineral Development)
- Assessment of the effects of fludora fission in Mafinga (Ministry of Health)
- Development of guidelines to support pesticides registration (ZEMA)
- To change enforcement, inspection, sampling and testing criterion for chemical fertilizers and other chemicals at Zambia Compulsory Standards Agency(ZCSA), in order to improve regulation and compliance of chemicals fertilizers to zambian standards (ZS 605, ZS 606, ZS 607 & ZS 608) in Zambia (Zambia Compulsory Standards Agency)

The above change project intended to be conducted by one of the ZEMA Inspectors will directly benefit the ZEMA-KEMI project. The development of guidelines on data requirement for chemical pesticides and biopesticides is something that is needed for the registration system for pesticides.

The ITP training provides a good opportunity for various government experts from Zambia to get in depth training on various aspects of preventive chemicals control and to network and share experiences with participants from other countries and sectors. This kind of broad training on chemicals management is not part of the ZEMA and KEMI project and therefore complements the bilateral cooperation in a good way.

## 5.2 Global programme on chemicals management

In the bilateral cooperation between ZEMA and KEMI, guidance and tools developed by KEMI within the global programme on chemicals management are used to support the work in Zambia. Practical use of these support tools provide feedback on their relevance and useability, and thereby enable further development and adaptation of the guidance and tools to support the target groups in the best possible way.

Within KEMI's global programme, KEMI provides financial support to University of Cape Town (UCT) to manage networks and discussion forums for representatives from authorities and institutions working with pesticides and other chemicals. Experts from ZEMA and other concerned stakeholders can take part in these Forums and exchange views and experiences and discuss chemicals management issues with experts from other countries. This further supports capacity building of ZEMA staff and is a good complement to activities within the bilateral cooperation. It is also possible for ZEMA staff to share experiences from the ZEMA-KEMI cooperation and thereby support capacity building of experts in other countries.

UCT is also supporting SAPReF (Southern African Pesticide Regulators Forum), which is a committee under SADC (Southern African Development Community). In December 2022, ZEMA and KEMI took part in a physical 3-day meeting organized by SAPReF to continue the development of a SADC strategy on highly hazardous pesticides. During the meeting, participants reviewed the draft strategy and provided input. The strategy is expected to be finalized during the first quarter of 2023 and it will then be presented to SADC for formal adoption. When adopted, the strategy will further highlight the priority and importance of work related to HHPs in Zambia as well as in the SADC region. Information on identified HHPs in other SADC countries can be used as a reference to the list of substances developed in Zambia to ensure that they are aligned and that no relevant HHPs are missing. Information and experiences from other countries within SADC that have come further than Zambia in their phase out of HHPs can be used within the ZEMA-KEMI project to facilitate eg. identification of viable alternatives to HHPs and thereby expedite the phase out process. In addition, the improved capacity of ZEMA staff resulting from the ZEMA-KEMI cooperation makes it possible for Zambia (through ZEMA) to be one of the leaders and driving forces in the work on strengthening and harmonization of pesticide management within SADC.

Within the framework of the global programme, KEMI is also supporting FAO. Focus of FAO's project is "Strengthening capacity for sound pesticide management through improved implementation of the International Code of Conduct on Pesticide Management" and has the following planned outputs:

1. Enhanced international guidance on pesticide management
2. HHPs addressed as a priority issue and adoption of HHP alternatives encouraged
3. Improved communication and visibility of FAO activities to implement the International Code of Conduct on Pesticide Management

## 4. Strengthened country capacities for life-cycle pesticide management

All of the above outputs will benefit Zambia and the ZEMA-KEMI cooperation, either directly or indirectly.

## 6 Risk management

No	Risk	Initial estimation (May 2020)		Estimated risk in 2022	Follow-up
		Probability	Effect on the project		
1.	Insufficient access to staff and other resources	Medium	High	Stable	Relevant expert have been available for activities within the ZEMA-KEMI project. No specific actions taken.
2.	Change in priority of issues related to pesticide management at ZEMA	Low	High	Stable	Strengthened pesticide management remains a high priority for ZEMA management and the project has received strong support in 2022.
3.	Insufficient support for endorsement of the proposed amendment to the pesticide regulation	Medium	High	Stable	Close and continuous dialogue between ZEMA and Ministry of Justice during the process of preparing the EMA amendment bill has contributed to increased understanding of the importance of the reintroduction of a requirement for pesticide registration. Given the current political climate, it is unlikely that the proposed EMA amendment bill and the subsequent pesticide regulations will not be endorsed.
4.	Greater political changes (policy change)	Medium	Medium	Stable	There are no indications that the new government has changed view regarding the importance of introducing a pesticide registration requirement. As employment and investments are also high priority for the government and it is however important to monitor and try to counteract efforts to weaken the protection of human health and the environment. No specific action taken.
5.	Procurements (including sub-contracting of consultants) within the project can include a possibility for corruption.	Medium	Low/ medium	Stable	When procuring equipment within the project, Swedish rules for procurement are followed (including Sida's guidelines). All project funds are managed by KEMI and are subject to separate audits by an external auditor.
6.	Natural disasters and pandemics	High	Medium	Stable	The project continue to monitor the Covid-19 situation to be able to adapt working methods etc., if necessary.

## 7 2022 budget follow-up

Cost items	Budget Jan-Dec 2022	Outcome Jan-Dec 2022	Balance
<b>Available funds</b>			
Opening balance (remaining funds from 2021)			1 083 228
Contributions from Sida		2 360 000	
<b>Total available funds</b>		<b>3 443 228</b>	
<b>Fees/salaries</b>			
1. Long-term expert	850 000	842 018	7 982
2. Short-term experts	470 000	405 228	64 772
<b>Fees/salaries total</b>	<b>1 320 000</b>	<b>1 247 246</b>	<b>72 754</b>
<b>Reimbursables</b>			
3. Reimbursable long-term expert	700 000	664 512	35 488
4. Travel and accommodation for Kemi experts	70 000	36 417	33 583
<b>Reimbursable total</b>	<b>770 000</b>	<b>700 929</b>	<b>69 071</b>
<b>Assignment costs</b>			
6. Material and equipment	105 000	1 030	103 970
7. Purchased services	1 050 000	864 818	185 182
<b>Assignment costs total</b>	<b>1 155 000</b>	<b>865 848</b>	<b>289 152</b>
<b>Total costs</b>	<b>3 245 000</b>	<b>2 814 023</b>	<b>430 977</b>
<b>Closing balance 2022</b>		<b>629 205</b>	

The official financial report is found as a separate document.







## 8 Results matrix



😊 = According to plan, 😐 = Small deviations compared to plan, ☹️ = Not according to plan

Short-term objective 1 - A revised registration process for pesticides in Zambia to support registration of efficacious products that will not cause unacceptable harm to human health and the environment is established and the capacity of ZEMA staff and other relevant institutions has increased				
Outputs	Indicator	Results 2022	Assessment of status	Comments
1.1 A revised pesticide registration process, including technical guidelines, Standard Operating Procedures etc., is developed	Guidelines, checklists, templates etc. for applicants and pesticide registrars are developed and tested	Draft pesticide regulations (including application forms) are available for review by a larger group of stakeholders. Draft checklists and guidelines are being developed.	😐	Focus on development of necessary legislation on pesticide registration has delayed this activity. As soon as the regulations have reached a sufficiently advanced stage the development of a suitable registration process can start.
1.2 The capacity of ZEMA staff and other relevant institutions to handle pesticide application according to the new process has increased	Ability to handle applications according to the new pesticides registration process	No results to report.	😐	
	Number of participants in trainings that have increased their capacity to assess pesticides	25 participants from ZEMA and other concerned ministries and agencies took part in a 3-day advanced training on GHS where they learned to apply the classification criteria.	😊	

Short-term objective 2 - ZEMA has improved its management of highly hazardous pesticides				
Outputs	Indicator	Results 2022	Assessment of status	Comments
2.1 Highly hazardous pesticides in use in Zambia are identified and listed	Knowledge on which pesticides used in Zambia that fulfill the criteria as HHPs	Draft list of pesticides that fulfill HHP criteria 1-7 is available. Data from HHP field surveys in 8 additional districts that was collected	☹️	High workload at ZamStats (due to the 2022 census) and other unforeseen circumstances caused substantial delay of the

Progress report 2022\_FINAL

Short-term objective 2 - ZEMA has improved its management of highly hazardous pesticides				
Outputs	Indicator	Results 2022	Assessment of status	Comments
		in 2021 was cleaned and data analysis was initiated. A data tabulation plan and report template was developed by a team of expert and initial drafting of the report started.		finalisation of the data cleaning and subsequent analysis of the data.
2.2 Available alternatives are identified and a management plan for HHPs is developed	Knowledge on suitable alternatives to HHPs in use in Zambia	No results to report.		Assessment of alternatives can be done when the complete list of identified HHPs is available. The activity had to be postponed due to the delay in finalising the field survey report.
	Agreed risk management measures	No results to report.		
2.3 New or amended legislation is proposed	Recommendations for amendments of the legislation is proposed.	No results to report.		As soon as the HHP phase out plan has been developed and agreed these activities can be undertaken.
	Draft legal text is available.	No results to report.		

Short-term objective 3: An IT system for registration of pesticides is established and the information on ZEMA's website is further developed				
Outputs	Indicator	Results 2022	Assessment of status	Comments
3.1 A specification for an IT system is available and an IT consultant has been procured	Content/requirement for the IT system discussed and agreed Suitable consultant identified and procured	The project supported work related to digitalisation of the licensing system for pesticides and toxic substances.		Since the development of regulations on pesticide registration has been slightly delayed it has not yet been possible to proceed with this activity. The project have instead supported work related
3.2 An IT system for pesticide registration is available and tested	IT system for registration of pesticides developed and tested	No results to report.		

Short-term objective 3: An IT system for registration of pesticides is established and the information on ZEMA's website is further developed				
Outputs	Indicator	Results 2022	Assessment of status	Comments
				to the Smart Zambia initiative, which will benefit future work on pesticide registration.
3.3 Revised information related to pesticides for ZEMA's website is available	Information needs identified	Issues for publication have been identified.	☹️	As soon as ZEMA has decided how to present the information it will be possible to proceed with publication on the website.
	Updated information developed and published	Draft information for publication on the ZEMA website is available.	☹️	

## Annex 1 – Programme study visit

Time	Activity	Responsible
<b>Friday, September 23</b>		
21:35	Departure from Lusaka	
<b>Saturday, September 24</b>		
13:10	Arrival in Stockholm Check in to Elite Hotel Adlon Afternoon and evening free	
<b>Sunday, September 25</b>		
All day	Free	
<b>Monday, September 26 (meeting room “Vänern”)</b>		
09:00-09:15	Welcome to KEMI Head of Department for Development of Legislation and other Instruments	Ms. Ingela Andersson, Head of Department
09:15-10:00	Introduction of participants	All
10:00-10:30	Coffee/tea	
10:30-12:00	Demonstration of pesticide register Discussions	Ms. Louise Hansare, Unit for Coordination and Authorisations
12:00-13:15	Lunch	
13:15-15:00	Demonstration of product register and online reporting of data. Legislation related to registers. Discussions	Mr. Carl-Henrik Eriksson and Ms. Inger Lindqvist, Unit for Product Register and Chemicals Statistics
15:00-15:30	Fika	
15:30-16:30	To be decided	
18:30	Dinner at Märten Trotzig, Västerlånggatan 79, Old Town	
<b>Tuesday, September 27 (meeting room “Vänern”)</b>		
09:00-10:30	Handling of pesticide applications, dossier review Working procedures, guidance documents etc.	Ms. Isabella Danckwardt-Lillieström, Unit for Coordination and Authorisations
10:30-11:00	Coffee/tea	
11:00-12:00	Pesticide application fees and annual fees Legislation related to fees	Ms. Isabella Danckwardt-Lillieström, Unit for Coordination and Authorisations
12:00-13:15	Lunch	
13:15-15:00	Helpdesk and guidance for companies	Ms. Åsa Almkvist and Ms. Liv Åkerblom Espeby, Unit for Guidance and Regulatory Information
15:00-15:30	Fika	
15:30-16:30	To be decided	
<b>Wednesday, September 28 (meeting room “Vänern” 9-13, meeting room Hjälmarén 13-16.30)</b>		
09:00-9:30	Presentation on decision making criteria, risk mitigation etc.	Ms. Elsa Rosén, Legal Secretariat

Progress report 2022\_FINAL

Time	Activity	Responsible
9:30-10:00	Presentation on current status of EMA amendment bill, pesticide regulations and general	Mr. Mwase Kumwenda, ZEMA
10:00-10:30	Discussion on the draft regulations on pesticide registration	All
10:30-11:00	Coffee/tea	
11:00-11:20	Welcome to KEMI	Per Ängqvist, DG
11:20-12:00	Continued discussions on the draft regulations on pesticide registration	All
12:00-13:15	Lunch	
13:15-15:00	Management of public health pesticides Rodenticides, insecticides User categories, certification system etc.	Ms. Anneli Rudström, Unit for Guidance and Regulatory Information
15:00-15:30	Fika	
15:30-16:30	To be decided	
<b>Thursday, September 29</b>		
07:30	Departure to Uppsala from hotel	
<b>09:00-12:00</b>	<b>Visit to Swedish University of Agricultural Sciences</b>	
9:00-9:15	Tea/coffee with welcome and round of presentations	Sara Gräslund, SLU Global and all.
9:15-9:30	The rationale for the ZEMA-KemI visit to SLU.	ZEMA and KEMI
9:30-9:45	Brief about SLU	Sara Gräslund
9:45-10:00	Short break	
10:00-10:45	Approaches to reduce pesticide use in farming (including IPM, agroecology, biological control) (20 min presentation and discussion by all)	Mr. Paul Egan, SLU Global and Department of plant protection
10:45-11:00	Short break	
11:00-11:45	Environmental monitoring of chemical pesticides – (20 min presentation and discussion by all).	Ms. Bodil Lindström, SLU Centre for Pesticides in the Environment
11:45-12:00	Wrap-up discussion	All
12:00-13:00	Lunch (Syltan)	
13:30-16:30	Visit to Swedish Food Agency Consumer risk assessment Monitoring of pesticide residues	Ms. Anneli Widenfalk
16:30-17:30	Return to Stockholm	
<b>Friday, September 30 (meeting room “Vänern”)</b>		
09:00-10:30	Enforcement of legislation on pesticides	Ms. Jenny Karlsson and Ms. Johanna Stigwall, Unit for Enforcement of Rules – Pesticides and Articles
10:30-11:00	Coffee/tea	
11:00-12:00	Pesticide risk assessment	Mr. Imran Ali
12:00-13:15	Lunch	
Afternoon	Conclusions	
<b>Saturday, October 1</b>		
15:05	Departure from Stockholm	
<b>Sunday, October 2</b>		
14:35	Arrival in Lusaka	