

# Pooling efforts to address the challenge





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#### Disclaimer

The International Council of Chemical Associations (ICCA) is working to harness the power of the chemical industry to support sustainable, global solutions. Through our cooperative work with intergovernmental organizations, national governments, local industries and consultants, ICCA's goal is to provide expertise that can help protect health and the environment. The legacy projects with GIZ and Blacksmith outlined in this report (sites at which ICCA member companies and associations had no operational or legal responsibility) are a demonstration of ICCA's commitment to promote sound chemicals management around the world.



All the photographs appearing inside this publication were taken on site in the Ukraine and in Mozambique. "Legacy pollution affects so very many children, who play and live in places with lead, chemicals, mercury, and pesticides at levels we simply find abhorrent in the west. And local health impacts are obvious. Research shows them to be as significant as those from TB or HIV/AIDS. Clearly, we need to work on this."

"Orphaned industrial sites are an issue not addressed sufficiently by any of the three big international chemicals and hazardous waste conventions or by SAICM. That is the reason why the GIZ especially supports least developed countries in need of expertise to deal with industrial legacies on their own account."

"ICCA member associations and companies are working to improve chemicals management through the value chain to prevent future chemical contamination issues; however, they also recognize that intervention is needed to prevent human exposures from legacy contamination and are gratified to have partnered with Blacksmith, GIZ and others to lend our expertise to their efforts in this noble cause."









Frank Fecher, Head of Convention Project Chemical Safety, Gesellschaft für Internationale Zusammenarbeit (GIZ)

Greg Bond and Martin Kayser, Co-Chairs, ICCA Chemical Policy & Health Leadership Group



ICCA LEGACY PROJECT

## **Legacy pollution**

The Toxic Site Identification Program jointly carried out by Blacksmith and the United Nations Industrial Development Organization (UNIDO) has so far identified more than 2,000 legacy pollution sites worldwide, estimated to affect more than 70 million people. This number will rise as new sites are identified.

Legacy pollution causes immense harm, mainly to poor communities in low- and middle-income countries. Children are particularly vulnerable to the health impacts which include physical and mental disabilities, neurological disorders, cancers and even death.

# Who is responsible?

Identifying responsibility for clean-up is a key challenge. Legacy pollution is often found at sites contaminated by past artisanal/industrial mining activities, at abandoned industrial or chemical sites, or at obsolete pesticide storage facilities.

Often the original polluter is no longer available to manage the clean up or there is no clear responsibility for an 'orphaned' site. The polluter may have been a defunct state-owned entity or, in other cases, the company that caused the contamination may no longer be operating at the site, has been sold off, or has gone out of business.

Nevertheless, these sites – typically former chemical manufacturing, formulations, distribution or disposal facilities – need to be remediated in a safe and responsible manner. Often they are either already posing environmental and health hazards, or have the potential to do so. In addition, lack of awareness of proper handling of hazardous chemicals and disposal of waste, particularly in developing countries or economies in transition, continue to create new contaminated sites, posing further threat to human health and the environment.

# **Our first steps**

ICCA believes that those directly responsible for causing the pollution bear the responsibility for the cost of cleanup in proportion to their contribution. In practice, however, these situations are often complicated and drawn out because of legal disputes. Under such circumstances it can prove very difficult not only to assign responsibility but also to secure funding for clean-up and to begin remediation action.

With this in mind, and as part of our commitment to the UN-led Strategic Approach to International Chemicals Management (SAICM), we partnered with two important organizations to jointly address legacy pollution.

The two - the Blacksmith Institute and Germany's GIZ (see pages 4 -7) - are highly respected for their activities worldwide, and have close links with UNEP and UNIDO as well as other international organizations.

The partnerships involved two projects, one in Eastern Europe and the other in Africa.

# The role of **SAICM**

There are significant differences in the capacity and capability of various economies to manage chemicals soundly throughout their life cycle.

To address this challenge, in 2006 the United Nations Environment Programme (UNEP) launched the Strategic Approach to International Chemicals Management (SAICM), a multistakeholder policy framework to promote sound chemicals management around the world.

At the first International Conference on Chemical Management (ICCM-1, Dubai 2006) ICCA made a public commitment to enhance chemical safety down the value chain through the implementation of the Responsible Care® Global Charter and the Global Product Strategy (GPS). These, and other, industry initiatives position the chemical industry as a constructive contributor to SAICM and its key objective that by 2020, chemicals are produced and used in a way that minimize significant adverse effects on the environment and human health.

With respect to addressing legacy pollution, SAICM aims to:

- Facilitate the identification of and disposal of obsolete stocks of pesticides and other chemicals, especially PCBs, particularly in developing countries and countries with economies in transition, and
- Promote the establishment and implementation of national action plans with respect to waste minimization and waste disposal, taking into consideration relevant international agreements and by using the life cycle approach.



## Blacksmith - ICCA project, Gorlovka, Ukraine

This abandoned, former state-owned and operated chemical plant in Gorlovka, Ukraine presented a major health threat to the town's 200,000 residents. A cocktail of chemicals at the site – mainly mono nitro chlorobenzene (MNCB) and some 30 tons of trinitrotoluene (TNT) were contaminating ground water and creating risk for potential explosion. Clearly, urgent remediation was required.

As a first step, Blacksmith introduced the ICCA team to the draft remediation and safety plan, setting the wheels in motion for the two organizations to pay their first joint visit to the Gorlovka plant in November 2011. The visit was an important step, enabling partners to get a better understanding of the situation on-site and to meet with local contractors and sub-contractors specializing in the remediation of TNT. ICCA experts summarized their findings on the Gorlovka site in a detailed report providing numerous recommendations on safety, cleaning of TNT-contaminated equipment and removal of a submersed TNT tank. They also provided feedback for revision of the draft remediation plan.

With the Ukrainian government tackling the MNCB problem, and together with local experts, Blacksmith will conduct the clean-up which anticipates removal of the TNT by September 2013. Funding permitting, Blacksmith will evaluate the need for further remediation of contaminated soil and groundwater at the site.





## Strength in numbers

This, like other projects of its type, requires high levels of funding, expertise and commitment. In this instance Blacksmith has built a strong coalition of stakeholders including UNIDO, the EU's Ukraine delegation, the Swedish International Development Cooperation Agency (SIDA), Green Cross Switzerland, the Ukrainian Ministry of Ecology and Natural Resources, and the Mayor of the City of Gorlovka.

In addition, Blacksmith has created a local stakeholder group that includes contractors, engineers, former employees of the Gorlovka Chemical Plant, environmental professionals, local media, and other interested parties from the local community.

A multi-stakeholder approach has the advantage of ensuring not just the involvement of professional specialists to deal with the problem but also the commitment and support of the local public which suffers the effects of legacy pollution at first hand.



# BLACKSMITH

January 11, 2012

The International Council of Chemical Associations Avenue E. Van Nieuwenhuyse 4, box 1 B-1160 Brussels. Belgium

Dear ICCA Representatives,

Thank you!

As you know, four volunteer remediation experts from ICCA accompanied Blacksmith Institute Project Managers to the site of the abandoned Gorlovka Chemical Plant in the fall of 2011. The purpose of the trip was to familiarize the experts with the conditions at the site and to conduct safety and risk mitigation analysis of the remediation plan.

Blacksmith recently received a detailed and comprehensive report from these experts containing valuable safety analysis, suggestions, alternative options, and recommended protocols. The work of these experts will be extremely valuable to us as we move into the training and implementation phase of the project. Safety is our number one priority at this site, and the recommendations of the volunteer experts have already begun to influence our plans.

We would like to express our gratitude to these volunteers and to ICCA and its member organizations for your assistance and commitment to this work.

Best wishes,

Richard Fuller President, Blacksmith Institute

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# **GIZ - ICCA** project, Maputo, Mozambique

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The second of ICCA's legacy projects, undertaken with Germany's GIZ and UNIDO, focused on the African continent. This project was launched in March 2012 with a two-and-a-half day workshop in Maputo, Mozambique involving local participants together with others from South Africa, Lesotho, Swaziland and Uganda.

For Mozambique, we shared basic knowledge on how to do a site analysis and how to set up a remediation project.

The aim was to build capacity for the remediation of chemical sites among stakeholders in the region. As part of the workshop, we visited several chemical sites in and around Maputo including a tannery, a battery plant and a waste dump. Near Beira in central Mozambique the team visited a site where railway sleepers were treated with tar oil. These visits offered the basis for discussion with participants on how to structure and approach a remediation project.

In fact, the majority of the sites were under new ownership. Nevertheless, the visits and the overall workshop highlighted some basic requirements in Mozambique, in particular the need for a national inventory of legacy sites.

Later on, such a record may facilitate the identification and prioritization of appropriate sites for future remediation. With this in mind, and in order to support local stakeholders' efforts to improve their infrastructure, GIZ and ICCA decided to conduct a follow-up event focused on how to establish a national inventory of legacy sites.



## Laying the foundations

Over the coming months, a pilot area around Maputo will be identified for inventory activities. This will provide the basis for participants to expand to other areas in Mozambique in subsequent efforts and thus help to make the project sustainable.

The capacity development related to an inventory exercise includes:

- Identifying the criteria for sites to be classified as contaminated sites.
- Knowing how to conduct a risk assessment of a contaminated site and prioritize actions.
- Identifying the basic, affordable equipment needed to do an initial on-site analysis, ideally including a practical exercise as part of training.

While it might not seem an obvious priority, we know from experience that effective communication is essential for success. Efforts, therefore, also focus on improving cooperation between the various government departments and authorities, bringing together key players in Mozambique in order to be able to identify contaminated sites. This includes the ministries for environment, industry and agriculture, together with the National Cleaner Production Center, universities and testing centers.

# The challenges of legacy pollution

Lack of appropriate disposal facilities in regions where legacy chemical sites are located

Restrictions on the ability to transport hazardous chemicals across borders to appropriate disposal facilities.

Lack of clear and relevant laws and regulations that prohibit illegal disposal or address responsibility for disposal in developing countries or economies in transition.

Agreement on cost allocation, i.e. to industry, governments, etc.

Potential liability issues for any party that assumes responsibility for problem resolution.

Lack of full knowledge of where legacy chemicals are located, their quantity, and the extent of chemical contamination that exists.

Lack of action, technical capability or support of governments.

Lack of action, technical capability or support of the original owners of the stocks.

Total costs and timelines for full and effective clean-up are often difficult to predict.

## What lies ahead

The groundwork has been laid for progress in the two pilot projects. Blacksmith is well-positioned to complete the clean-up of the Gorlovka site, and Mozambique will be equipped with the information and tools needed to develop an inventory of contaminated sites, an important first step in addressing legacy pollution.

Furthermore, the formation of the Global Alliance on Health and Pollution (GAHP) has set the stage for a multi-stakeholder approach to the legacy pollution issue at the international level and ICCA follows this exciting new development as an observer. Initiated by Blacksmith and the World Bank, the Global Alliance on Health and Pollution is an international response to the health hazards of toxic polluted locations in low- and middle-income countries. The Alliance builds on and collaborates with existing mechanisms such as SAICM, the multistakeholder financial organization GEF and UNEP's International Chemicals Financing Initiative.

The fundamental objective of the Alliance is to coordinate activities and leverage resources available to tackle toxic pollution problems and to align international initiatives with individual country needs. This includes identifying gaps in available resources and coordination of these resources as they become available.

Finally, ICCA will continue to conduct capacity building sessions in developing countries and emerging economies to improve chemicals management and product stewardship through the supply chain, laying the foundation to prevent future contamination.

Our commitment to the SAICM process and our long-established Responsible Care<sup>®</sup> initiative, together with other chemicals management efforts, are crucial elements of the journey. We are one stakeholder among many different bodies: from governments and agencies to commercial organizations, local authorities and of course, the victims of legacy pollution. In time, we hope that together we can make a real and lasting difference.

## About the partners

## **ICCA**

The International Council of Chemical Associations (ICCA) is the global voice of the chemical industry and represents chemical manufacturers and producers all over the world. ICCA works to continually improve the sustainability and safe management of chemicals throughout their lifecycle.

As part of its commitment, ICCA has embraced the goal adopted by the World Summit on Sustainable Development in 2002: that by 2020 chemicals are produced and used in ways that minimize significant adverse impacts on human health and the environment. Responsible Care and the Global Product Strategy are the two flagship programs of ICCA aiming to foster safe and environmentally sound management of chemicals.

ICCA acts as the main channel of communication between the industry and key international organizations for health, environment and traderelated issues.

### www.icca-chem.org

### GIZ

The Gesellschaft fuer Internationale Zusammenarbeit (GIZ) operates in more than 130 countries worldwide with registered offices in Bonn and Eschborn. GIZ has over 17,000 staff across the globe, with 70% employed locally. It supplies demand-driven, tailormade services for holistic sustainable development, supporting partner countries at the local, regional, national and international level.

GIZ operates in many fields, including chemicals through its Convention Project Chemical Safety (CPCS). Other fields include: economic development and employment promotion; governance and democracy; food security, health and basic education; and environmental protection, resource conservation and climate change mitigation. Capacity development for partner-country experts as well as network creation is another major component of GIZ's services.

CPCS acts primarily as a political consultant to BMZ, the German Federal Ministry for Economic Cooperation and Development. It offers support and guidance on chemicals Conventions (Rotterdam, Basel and Stockholm) as well as the SAICM process in the international context and specifically in developing countries. CPCS works with partners from the private sector and multilateral agencies alike, in order to help countries implement international chemical conventions and to eventually introduce their own strategies into national law. **CPCS** activities comprise clean-ups and chemicals / hazardous waste management in small- and medium sized companies.

#### www.giz.de/en

### Blacksmith

Blacksmith Institute is an international non-profit organization dedicated to solving pollution problems in lowand middle- income countries, where human health is at risk.

A global leader in this field, Blacksmith is identifying and cleaning up the world's worst polluted places. Based in New York, Blacksmith works cooperatively in partnerships that include governments, the international community, NGOs and local agencies to design and implement innovative, low-cost solutions to save lives. Since its inception in 1999, Blacksmith has completed more than 40 projects, and is currently engaged in 14 projects in 11 countries.

### www.blacksmithinstitute.org



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