

Environment – Kenya

Waste Tyre Management

Problem: Environmental pollution through uncontrolled disposal of waste tyres.

Based on available statistics it is estimated that in Kenya about 1.1 Mio waste tyres (respectively 34,000 tons) have been burnt haphazardly, dumped, destroyed or re-used by methods that pollute air, soils and ground water in 2010.

The Kenyan Environmental Management and Coordination Regulations for waste management have already been enacted in 2006, but they do not specifically address the treatment and disposal of waste tyres. There are indeed no such established and certified methods across East Africa. In cement production waste tyre chips can be co-processed as an alternative fuel resource (AFR) replacing fossil fuel in an environmentally sound manner. However, without the regulatory framework to engage in such practices, approval will not be given by the authorities.

Besides, many thousand people are engaged in recycling activities - most of them in the informal sector, picking, processing and trading recyclables from waste, not least of which are old rubber tyres. A minor percentage is used for producing shoes, ropes and other materials, but to a much bigger extent the tyres are burnt in order to separate the steel from the rubber, which is then sold to scrap traders. Those income generating interests cannot be left aside when trying to resolve the issue.

Our partners

Waste Tyre Management Kenya is a unique partnership between the cement and road transport businesses in Kenya and GIZ. The partnership is led by Bamburi Cement Ltd., a local subsidiary of

Lafarge which is a French company specialised in cement, construction aggregates, concrete and gypsum. It currently is the world's largest cement manufacturer. Further partners contributing include Multiple Hauliers (EA) Ltd., providing cargo services in Kenya and the region; Treadsetters Tyres Ltd., one of the largest tyre dealers and re-treading companies in Kenya and Sameer Africa Ltd, formerly under the name Firestone East Africa 1969 Ltd..

Contribution by Waste Tyre Management Kenya

- Project management and monitoring
- Feasibility studies on logistical, financial and technological issues
- Drafting of regulations and concept documents
- Operation of a pilot system on collection, processing and utilization in one cement kiln

Contribution by GIZ

- Facilitation of a multi-stakeholder dialogue and experience sharing with other African nations
- Support to project monitoring
- Assist in training and capacity development measures
- Organization of the international conference

Strategy and activities

The project follows a dual strategy: it will on the one hand support the Kenyan government in providing the regulatory framework, while the private partners on the other hand will implement a sustainable waste tyre management system.

In a phased approach, the concept of this dual strategy will be elaborated and its feasibility assessed. As it is expected that





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the cement industry will be the main user for waste tyres in Kenya, the assessment shall also demonstrate the technical and commercial feasibility of co-processing rubber chips in existing cement plants. The environmental aspects, including regulation, role and capacity of the supervising authorities will be scrutinized. Procedures for licensing, reporting and monitoring will be developed and specific regulations drafted. Capacity development measures for the public sector to supervise the framework adequately will be taken.

Once the required regulatory framework is in place, implementation will follow in the second phase of the project. This will be started on a pilot scale, giving enough time to adapt processing technologies and develop markets in parallel. In order to facilitate the involvement of the informal sector, organised communication will be established to discuss the future waste tyre management system and to develop options for the involvement of the informal sector. An important prerequisite to connect the existing informal waste tyre collection structures with the newly developed waste tyre management system will be a competitive financial compensation, which needs to be in a similar range as the current revenues from selling the tyre steel components to scrap dealers.

Relevance for the partners

Today's waste tyre practices place a substantial public image burden on the commercially involved industries, particularly the tyre and the haulage businesses. While they are increasingly socially and environmentally responsible, they are also challenged with potentially high obligations and expenditures as a result of increasing public pressure and government regulation. It is also imperative that a level playing field for all commercial actors is achieved. Hence an alliance of different industrial sectors and individual competitors aims jointly for a legally binding national solution.

Interim outcomes

An initial study on collection, pre-processing and marketing of waste tyres, showed that co-processing is the preferred solution for waste tyre utilization in Kenya and that the cement industry is willing to purchase waste tyres as alternative fuel. However, high costs for collection and transportation of waste tyres make a viable business model a challenge. A basic poverty impact assessment (PIA) suggested that any model needs to include alternative income options for the informal tyre collectors. As a consequence, a feasible business model requires a financial support mechanism.

The study has informed the drafting of an updated waste tyre regulation, that includes a levy on all imported tyres. Its contents and procedures have been discussed with the National Environment Management Authority (NEMA) and consulted with important stakeholders. The legislative package will be tabled before Parliament for approval in the beginning of 2014.

Already about 5,000 t/a waste tyres are presently collected mostly from the Mombasa area and co-processed in the Bamburi cement plant in Mombasa. This figure is expected to increase once the updated legal framework is in place.

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- **Objective:** A sustainable waste tyre management system is established in Kenya
- **Partners:** Bamburi Cement Ltd., Multiple Hauliers Ltd., Treadsetters Tyres Ltd., Sameer Africa Ltd.
- **Duration:** 2010 – 2014

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