

UNREGULATED USE OF TOXIC WOOD PRESERVING CHEMICALS IN KENYA:

HEALTH AND ENVIRONMENTAL ISSUES

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ABSTRACT

Health, safety, and environmental contamination related to wood preservation and wood preservatives are issues in Kenya, as well as in other Eastern and Central African countries, that need to be addressed urgently. Substantial amounts of toxic chemicals used for wood preservation continue to find their way into the environment in an unregulated manner.

Wood treaters, consumers, the relevant authorities responsible for forest products utilisation, or environmental health and safety, and the public, appear to be unaware of the risks that these chemicals represent due to the absence of information and regulations. Lack of appropriate training for plant operators and managers in matters relating to health, safety or the environment, and inadequate legislations to ensure protection of operatives and minimise risks to health and environmental contamination, increase risks at treatment plants.

Failure to properly inform timber users and the public on the risks that treated timbers represent further accentuates such risks. There are no policies or regulations to ensure that, when removed from service, treated timbers are properly and safely disposed of.

Existing regulations are either too old or silent on wood treating chemicals. The four chemicals used in the country, CCA, Creosote, PCP, and BFCA are known to be toxic, dangerous to human health and the environment, and need to be regulated more rigorously through appropriate policies, codes of good practices, and legislations.

Keywords: Kenya, preservatives, health, environment, legislations.

1.0 INTRODUCTION

Problems associated with wood preserving chemicals, wood preservation plants, and treated timbers placed in the built, soil, or aquatic environments have hardly received the attention they require in Kenya, or in Africa as a whole. Environmental problems and health and safety issues associated with wood preservation in Kenya have been discussed by Venkatasamy [1], suggestions, and recommendations made, but with no reactions from the relevant authorities, the wood preservation industry, or timber users.

It is also alarming to note that toxic chemicals, be it in wood preservation, or for pest control in buildings, or in agriculture, are freely available and used without proper control. Local national institutions concerned with dangerous chemicals have not discussed possible dangers that wood treating chemicals represent to human health and the environment, or attempted to formulate and recommend regulations and codes of good practices to control their use. Existing legislations related to pesticides or industrial chemicals are either too old or do not treat wood preserving chemicals as a specific class of toxic and hazardous substances.

Some of the international organizations concerned with problems pertaining to human health and the environment (UNEP, FAO, UNIDO, WHO) have not identified problems specifically associated with wood preserving chemicals in Africa. UNEP produced a comprehensive technical guide in 1994 [2], expressly for industrial wood preservation in developing countries, but the document has never been properly circulated, discussed, or utilised, and is now outdated.

Most suppliers do not provide adequate information on the risks associated with the chemicals they market. The Pest Control Products Board of Kenya has failed to make it regulatory that such information be available and appropriately disseminated. Information available from other countries does not appear to have been of interest to either the industry or the relevant authorities in this part of Africa.

2.0 LEGISLATIONS ON WOOD PRESERVING CHEMICALS

It is important to note that although legislations concerning health and safety and environmental contamination exist [3], they all preclude wood preservation and wood preserving chemicals. The existing Kenyan Acts of 1972 are old and without specific references to wood preserving chemicals.

The recent Kenyan Environmental Management and Co-Ordination Act [4] does not specifically refer to wood preservation and wood preserving chemicals. The Kenya Bureau of Standards (KBS) has so far been silent about environmental and health and safety implications of wood treating chemicals used in the country. The KBS has not yet formulated standards and specifications regarding application methods, fixation, permanency, and permissible maximum leaching levels of preservatives or preservative elements, defined methodologies for testing and monitoring, or appropriate methods for safe disposal of treated timbers removed from service.

It is therefore not surprising to note that wood treaters are little concerned with the environment, or the risks that treated timbers represent. It must also be mentioned that wood treaters in Kenya are not aware of the many problems associated with wood treating chemicals that have been identified elsewhere.

The situation cannot be much different in most other parts of Africa, as concern about the environmental toxicity of wood preserving chemicals has not been expressed yet.

3.0 CONTROL OVER USE OF WOOD PRESERVATIVES

No information is available from the Pest Control Products Board or the Kenyan Bureau of Standards as to the existence of limitations concerning the use of wood preserving chemicals. It does not appear that the Kenyan authorities are aware of recent developments elsewhere on restrictions on the use of several wood preserving chemicals, including CCA and PCP, both currently in use in Kenya, and other African countries. It is therefore urgent for the relevant national authorities in Kenya to analyse and consider areas where control on wood treating chemicals should be effected, formulate preliminary national guidelines, standards, regulations, and the eventual necessary legislations for enforcement.

Any efforts towards exercising control on wood preservation nationally necessarily require constant and continuous information on developments internationally. The Kenyan authorities appear to be unaware of development elsewhere, including restrictions on CCA and creosote, both currently in use in this country.

It is also noted that the Kenyan Forest Department has not been in a capacity to take the responsibility of ensuring maximum and safe utilisation of forest products.

4.0 RESTRICTIONS ON USE OF TREATED TIMBERS

There are no legislations or codes of practice in the country restricting the use of treated timbers to specific environments or for specific end uses, a further reflection on the lack of control on the use of wood treating chemicals. The bulk of creosote-treated wood is invariably used in soil contact. Leaching standards, especially with regards to leaching of polyaromatic hydrocarbons (PAH) components of creosote has not been established, and as a result, there have been no restrictions on the use of creosote-treated wood.

With CCA-treated wood, there is no visible cause for concern once the wood is dry. Once fixed in the wood, CCA becomes harmless and there can hardly be stringent restrictions on the use of the treated wood. The bulk of CCA-treated timber is used in ground contact and little information is available on degree of fixation and leaching rates, although, similar to creosote-treated timbers, short service lives indicate the possibility of both poor fixation and high leaching.

No chemical is presently used on wood that comes in contact with food yet. With the present shortage of wood in the country, it is expected that treaters may soon suggest using wood preservatives to protect food containers, CCA being the most likely candidate to be proposed.

The use of PCP for treating timbers in dwelling houses and offices is allowed in Kenya. Commercial industrial oils with additions of 2% to 6% PCP is freely and extensively used to treat roof timbers for dwelling homes. The necessity for restrictive legislations becomes even more pressing if cheaper, but even more toxic wood preserving chemicals, are introduced in this country.

5.0 REGULATIONS ON DISPOSAL OF TREATED TIMBERS

Once treated timbers leave the treatment plant, wood treaters are not concerned as to how or where the wood is used, or how it is disposed of once out of service. There are no “responsible authorities” in the country to ensure safe usage as well as safe disposal. Consumers are uninformed about safe disposal methods and facilities for disposal have not been put in place yet.

The main users of treated poles, the Kenya Power and Lighting Company (KPLC) and the Posts and Telecommunications Corporation (KPTC) have no policies as to safe disposal of the large number of treated poles (CCA & Creosote) removed every year. These are allowed to deteriorate naturally on site or in central depots, or sold for reuse. There is a likelihood that a substantial amount ends up as fuelwood for industrial or domestic uses.

Whereas safe disposal of treated timbers, although costly, has become regulatory in many countries outside Africa, legislations and basic recommendations are lacking in Kenya.

There is a necessity to ensure that treaters not only act as guarantors as to the quality of the product, but also with regards to protecting human health and the environment, and the management of the product during and after use. The Forest Department should also play an active role in matters pertaining to standardisation of forest products, including standards and specifications for treatment, treated products, and safe wood utilisation generally.

6.0 CONCLUSION

A lack of expertise, professionalism, and appropriate legislations and codes of good practices have resulted in the wood preservation industry taking a backyard role in this country in the technology of wood treatment. Whereas efforts in other countries outside Africa concentrate on development of safer chemicals, phasing out of existing ones that are environmentally dangerous, and bringing the industry to adopt safer and cleaner techniques of production, both the industry and the “relevant regulatory authorities” in Kenya have shown little interest for human health and the environment.

The approach of finding after-the-fact solutions has persisted for too long. It is urgent that regulatory instruments with a prevention-oriented approach, and with an objective to monitor every stage in the life cycle of wood treating chemicals be enacted in this country.

What is immediately required from both the industry and the “relevant authorities” is a change of attitude and a willingness to learn from the experts and the experience of others and other countries.

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