

SPEECH BY DEPUTY VICE-CHANCELLOR RESEARCH PRODUCTION & EXTENSION UNIVERSITY OF NAIROBI ON SODA LAKES BIO-PROSPECTING

Salutations:-

- The Cabinet Secretary Ministry of Environment Water and Natural Resources
- Governor- His Excellency the Governor of Nakuru County
- UNEP representative
- Heads of Institutions

All protocols observed

White biotechnology also known as Industrial Biotechnology, meaning the use of nature toolbox for industrial production points to the application of biotechnology where at the same time environmental improvements and sustainability may be gained. It is in the production of Agrichemicals however, that the most beneficial effect may be achieved for environmental sustainability.

In 2006 the European Union decided that Industrial biotechnology and sustainable chemistry are an important research area for the future competitiveness of the EU. Platforms for white biotechnology have been formed in several countries and bio-prospecting is at the centre of all these platforms. Invitations to Kenyan scientists to collaborate in these programmes have been received and their contributions recognized.

The Soda Lakes Bio-prospecting proposal represents the era of new biology – (Chemical Microbiology) possibilities and problems in Industrial Biotechnology and Environmental Protection. This project is suggesting the use of enzymes, the biological catalysts, for catalyzing

chemical reactions in the textile and agricultural protection to meet most demands of Kenyan chemical industry, and will hence be more environment-friendly as compared to the traditional fossil based chemistry used in the production of chemicals and pesticides.

University of Nairobi researchers have also expressed the view that it is time for a paradigm shift in the Kenyan chemical industry. For this to be realistic, it is critical to involve the stakeholders. Hence industries like Rivatex and others over the entire value chain of chemicals production should be invited to be partners for this proposal.

Soda Lakes Bio-prospecting focuses on development and application of clean processes based on biocatalysts for production of chemical products from renewable raw materials.

The overall aim of the programme is to demonstrate the feasibility of robust biotechnology tools and processes to establish a technology link between the renewable sector and the chemical producer and end-user industry. A basic idea is that a range of industries led by Rivatex, the Textile Industry and Agro-protection players should participate in the programme and help to identify products for which the environmental performance is of importance and where Soda Lakes Bio-prospecting project could create business opportunities.

Other cornerstones of the Soda Lakes bio-prospecting approach are to assess the environmental impact of the chemical products from a life-cycle perspective, and to identify critical factors for the introduction of new technologies (i.e. industrial biotechnology) in the traditional chemical industry.

In order to realize this, project steering committee meeting need to be reorganized in order to provide closer contact between it and the participating companies and policy makers. Some meetings should be held at the companies including also time for direct discussions with representatives of the Ministry. In this way it will be possible to observe and increasing interaction between researchers of Soda Lakes Bio-prospecting and companies and policy makers. Decisions should also be taken to align research priorities according to achieved product properties and market interests. In this way, the application rather than the generic product is set as the goal. This way the companies will see their best interest served. Products from soda Lakes Bio-prospecting are a path further down towards the market.

With the present low awareness in Kenya of the existence and possibilities of Industrial biotechnology, an important mission for Soda Lakes Bio-prospecting project is to provide a visible good example of how biotechnology can be used to improve the environment and gain sustainability in the production of chemicals.

Finally, the Soda lakes Bio-prospecting project, and the possible future large-scale industrial applications, will certainly make a contribution to solve some of the challenges that face Kenya's Textile and agricultural Industry.

For a paradigm shift in the Kenyan chemical and agricultural industries, the possibilities if industrial biotechnologies, need attention from politicians, from research sponsors, from environmental organizations, from consumers, from financial institutions from the public and from the media.