Action to unlock commercial fibre potential

Multi-stakeholder consultation in conjunction with the joint meeting of the intergovernmental group on hard fibres and the Intergovernmental group on jute, kenaf and allied fibres

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Environment and Sustainability: Transforming Biomass into a Resource Fibre waste management systems: opportunities, costs and technology advisory resources

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Project: Development of research with waste of sisal (*Agave sisalana* Perrine) pulping – Pharmacological properties.

Reseach carried out by UNESP in collaboration with: Common Fund of Food and Agriculture Organization of the United Nations, Sindycate of industries of vegetables fibers of Bahia State SINDIFIBRAS – Bahia, Brazil, Secretary of Science, Technology and Invention of State of Bahia.

Summary
Brazil - the highest biodiversity on the planet, featuring a huge native medicinal plants, however remains poorly known and little studied and explored. The **Agave** - plant originated from Yucatan - Mexico). Their properties - their precious fiber for the manufacture of various utensils such as carpets, ropes, twine, marine cables, bags, brooms and other networks, but also for natural food source (feed) and alcoholic beverages like a international tequila.

Currently, the *Agave sisalana* Perrine (sisal) is the main hard fiber produced worldwide. This specie was introduced in Brazil (the largest exporter of this fibre in the world)

In Brazil - cultivation of sisal is on the Northeast - states of Bahia, Paraiba and Rio Grande do Norte, respectively 93.5, 3.5 and 3.0% , in a poor areas of **small producers**, with a predominance of **family labor**. The sisal fibre - several million dollars in exports for Brazil and generate more than half **million jobs** directly and indirectly through its chain of services. (maintenance activities of plowing, harvesting, refining and processing of fiber and ends with the industrialization and production of handicrafts) .

The general goal of this projet was the study the technical and economic feasibility of the use of liquid waste of sisal (*Agave sisalana*) obtained from the pulping process in order to develop new commercial products contributing to sisal production. There will be presented the results of: determination of the toxicity of the sisal waste for human and environment, the study for preliminary assessment of potential antifungal, bio-insecticide, antibacterial activity, antioxidant and pesticide of waste of sisal (mucilage and liquid from sisal), the comparison of the efficiency of this activities of sisal waste with commercial products currently used.