

Report on the Project

Construction of an Internet Site for the Exchange of Information on Renewable Material Resources

Presented by

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1 - View of the Project within the Scope of Interest of INES

INES has vested interest in the realization of sustainable development. But the concept of sustainable development itself could only be operational through finding new tangible alternatives for development. The renewable material resources represent a pillar in any strategy for the realization of sustainable development, because they are more compatible with the ecosystem cycles: during their extraction, manufacture, consumption as well as their post-consumption or disposal stage of their life-cycle. That is why this project could be considered of special interest to INES as a catalyst for the promotion of sustainable development worldwide.

2 - View of the Project within the Scope of Interest of EGYCOM

EGYCOM is working as a catalyst in the promotion of endogenous development all over Egypt. The renewable material resources (RMR) are abundantly available and extensively distributed in the rural areas of Egypt. Over and above, the agricultural residues being an important category of RMR are available almost for free in most of the Egyptian villages and are

being under utilized or open-field burned causing a lot of environmental pollution. Therefore, it is much easier to begin endogenous development with what people have more from and know better about, i.e., RMR. That is why the RMR project represents an important vehicle for EGYCOM for the realization of endogenous development.

3 - Mission of the Project

The increasing environmental awareness of people worldwide together with threats posed by the neoliberal globalization calls for the active participation of the civil society down to the level of the local community and for the real change of the prevailing unsustainable patterns of production and consumption. This calls for a new transition in the form and pace of technological and organizational innovation. Therefore, it is thought that the construction of a site on the Internet on RMR may provide **a forum for inviting and encouraging different stakeholders to innovate and adopt innovative ideas for the sustainable use of RMR.** Thus, it is thought, may contribute to a new culture of modernity more harmonious with nature and more responsive to the real human needs. **The project mission will be fulfilled through the realization of the following objectives:**

- 1 - Improvement of quality of data, information and knowledge about RMR worldwide.
- 2 - Creation of the opportunity to exhibit market-ready products from – and innovative applications of – RMR.
- 3 - Attraction of the attention of consumers to the merits or products from RMR as compared with those from non-renewable from a life cycle analysis perspective and their harmony with the principles of sustainable development.

- 4 - Support of the initiatives of consumers, entrepreneurs and researchers to set best practice examples for the sustainable use of RMR.
- 5 - Creation of a framework for the interaction between the producers of products from RMR and the consumers/users of these products who will be encouraged to express their viewpoints and remarks on these products.
- 6 - Support of establishment of networks, associating the producers of renewable material resources, local entrepreneurs and industrial investors, R & D institutions, as well as local authorities and NGOs, interested in the preservation of the environment. Such networking may serve as a vehicle for creation of patterns of sustainable development in different regions of the world, based on the judicious use of renewable material resources. A successful example is the INBAR (the International Network of Bamboo and Rattan): beginning as a non-governmental organization in 1979 linking national research institutions and NGOs in an informal network targeting its activity to serve the small enterprise and the poor.
- 7 - Motivation of people to imagine future local communities they would like to belong to, which have sustainable life styles built on the sustainable use of RMR.

4 - Intention of the Project

The project will provide a forum for inviting and encouraging different stakeholders to innovate and adopt new ideas for the sustainable use of RMR. Besides, the site offered by the project will help to develop synergistic relations between: the producers, (owners of RMR, the manufacturers (SME's down to artisans) and the involved R & D

institutions. In addition, the site will give a marketing support to the producers of products, made from RMR, especially the artisans in villages and small towns, who are deprived of any mean of publicity or market connections.

5 - Domain of the Project

- 1 - The project will be confined to the renewable material resources of plant origin. Fig. 1 illustrates a proposed classification of these resources. These resources exist in a wide variety in different ecological conditions worldwide. These resources could be classified into cultivated flora and natural flora. The former could also be further classified into timber trees, fruit trees and seasonal crops. Each of these resources could be further classified into primary and secondary products, and so on.
- 2 - There is in general a great shortage in information on renewable material resources. This is especially true for the **secondary products of these resources**, usually called agricultural residues. Due to the short-sighted vision of market economy most of these secondary products were irrationally used or even totally neglected causing environmental problems.
- 3 - Even if this information is available for some resources, the quality of this information is low. In most cases no scientific methodology was applied to assess the availability of these resources depending on the species, ecological conditions and conditions of agriculture.
- 4 - Over and above, the information on renewable material resources are available, in many cases, in a form, inappropriate for sustainable development. **What is needed is to develop community-or province-centered databases giving a clear picture of the local**

availability of these resources. This is especially important for many renewable material resources, which are either perishable or bulky or both and are thus uneconomic to transport to far sites for further processing. Such databases will help realize the integrated use of locally available renewable resources. It may be uneconomic to establish an industry on a single resource, but the combination of different locally available resources may provide good economics for industrial utilization. On the other hand examples from the Zero Emission Research Institution (ZERI) demonstrate how all side products from a production chain (e.g., production of beer or coffee beans) can be reused.

5 - The present curricula in science and engineering classes deal mainly with steel and concrete and to lesser extent with other metals, ceramics, plastics and glass. **There is a clear negligence of renewable material resources in these curricula.** We need to accept the challenge of engineering of renewable material resources, which means the transformation – via imaginative thinking and design and then manufacturing – of these resources from their original state as isentropic materials extracted from nature to, more or less, isotropic materials having reliable and predictable performance. Within this framework we need to begin with developing a new vision of properties of both renewable and non-renewable resources proceeding from clear definition of functionality of use/application of the resource and from understanding of its life cycle.

6 - **Focus of Concern**

It is suggested to confine the scope of the present project to:

- ◀ The industrial applications (manufacturing industries from handicrafts to small-and medium-scale enterprises (SME's);
- ◀ Building applications;
- ◀ Infrastructural applications (e.g., geotextiles).
- ◀ Other agricultural applications (fodder, composting ... etc.).
- ◀ Energy.

The aforementioned areas have been chosen with the following considerations in mind:

1. In these areas there are considerable potentials for substituting the unsustainable use of non-renewable material resources with the sustainable use of renewable material resources, which goes in harmony with the principles of sustainable development;
2. These areas are in need of Research & Development efforts and technology transfer, which may be stimulated by the project;
3. These areas are of direct concern to the poor, especially in the South, either as a consumer (e.g., building applications) or as a producer, since considerable labor opportunities could be generated through the dissemination of handicrafts and SMEs, based on innovative industrial use of renewable material resources, or their use in fodder, composting or energy applications.

7 - Achievements Up-to-Date

The first stage of the project has been accomplished. The English version of the site (www.egy-com.org) is now working. I submit a file illustrating the website page. The site includes the following sections:

- Products
- Projects

- Publications
- Papers
- Links
- Reports
- M.Sc. and Ph.D. theses

Within the present stage, an attempt is being made to give a market support to one artisan in Aswan, who manufactures souvenirs from palm midrib. If successful, we will invite other artisans to show their products in our site.

8 - Future Work

In the near future we will begin the Arabic version of the site. Besides, we will invite all the concerned institutions, manufacturers, producers of RMR, NGOs, etc. to contribute to the site. Thus, new content will be added. I hope that when the site gathers enough momentum an electronic news letter could be issued.

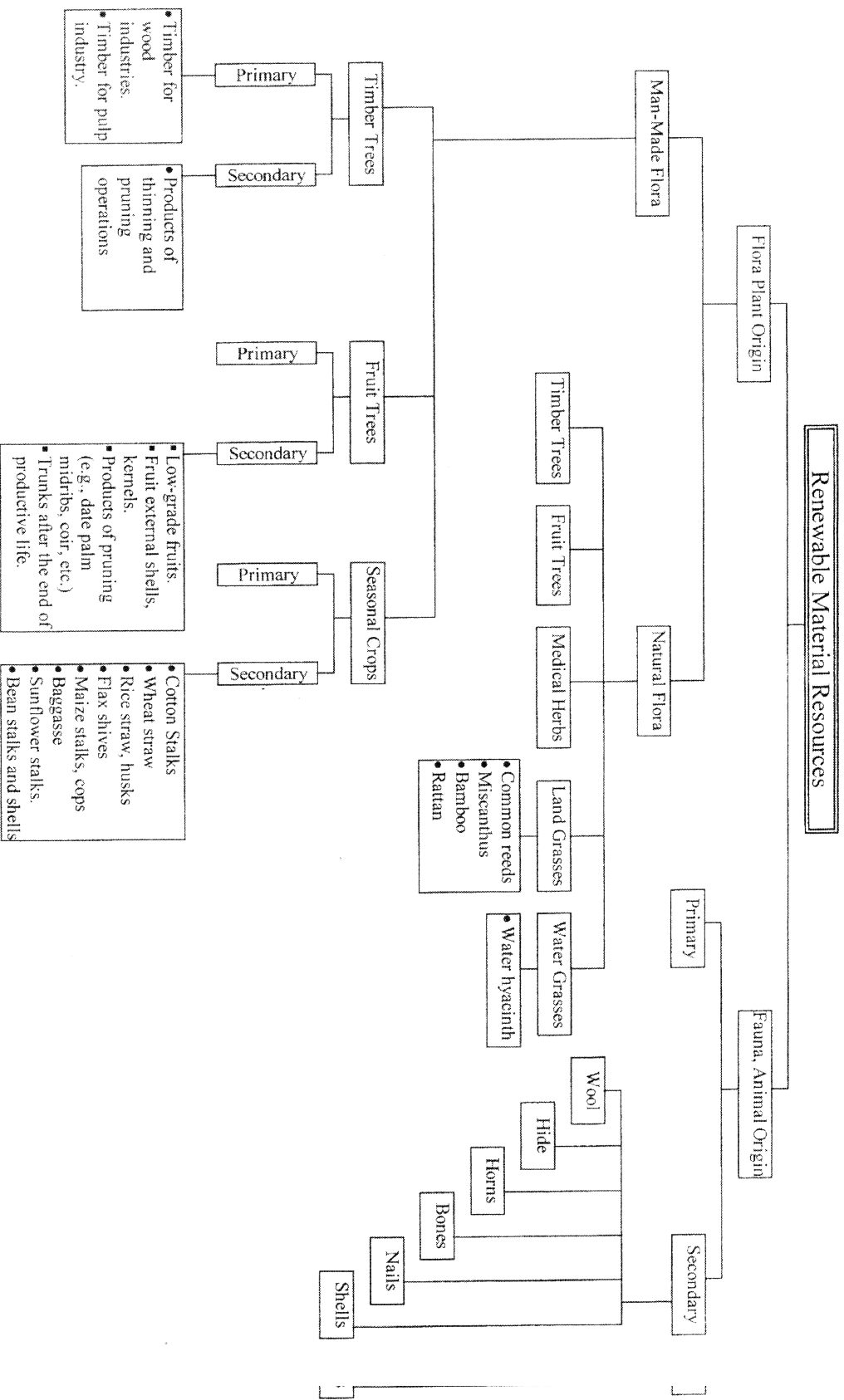


Fig. 1 A proposed simple classification of renewable material resources [7]