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*in*

Heywood V.H. (ed.), Skoula M. (ed.).  
Identification of wild food and non-food plants of the Mediterranean region

Chania : CIHEAM  
Cahiers Options Méditerranéennes; n. 23

1997  
pages 17-21

Article available on line / Article disponible en ligne à l'adresse :

<http://om.ciheam.org/article.php?IDPDF=CI011059>

To cite this article / Pour citer cet article

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# THE OBJECTIVES OF LEAD AND THE SIGNIFICANCE OF INDIGENOUS KNOWLEDGE IN THE MEDITERRANEAN REGION

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## ABSTRACT

La présente contribution se situe dans le cadre actuel d'une réorientation universelle vers les systèmes de connaissance indigène dans des secteurs divers, particulièrement des pays de développement. Cette effort enveloppe l'étude, la documentation et l'analyse de la connaissance et de la pratique locale de l'utilisation et de la conservation des ressources naturelles en prévision de les intégrer dans le processus de développement sociale et économique. Spécifiquement, les objectifs du Programme LEAD (Leiden Ethnosystems And Development Programme) à l'Université de Leiden aux Pays Bas sont présentés en rapport avec les usages du Network Medusa pour la Région Méditerranéenne. Ici, il s'agit d'une recherche interdisciplinaire des plantes médicinales et aromatiques au moyen d'une méthodologie spéciale du '*ethnosystems approach*'. Finalement, la signification d'une recherche urgente est accentuée - pas seulement de la diversité biologique, mais surtout de la diversité culturelle - c'est à dire, de l'étude interdisciplinaire de ces systèmes de connaissance locale qui sont maintenant menacés d'extinction dans cette région importante.

## KEY-WORDS:

MEDITERRANEAN REGION, KENYA, INDONESIA, INDIGENOUS KNOWLEDGE, SOCIAL ANTHROPOLOGY

## MOTS-CLES:

REGION MEDITERRANEEENNE, KENYA, INDONESIE, CONNAISSANCE INDIGENE, ANTHROPOLOGIE SOCIALE

## REORIENTATION TOWARDS INDIGENOUS KNOWLEDGE SYSTEMS

Over the past two decades, earlier views that indigenous knowledge and practice were the domain of rather academically-oriented anthropologists and ethnoscientists have changed drastically, and an increasing number of studies in the context of development and change have recently identified, documented, and analysed numerous case studies in which systems of indigenous knowledge, practices, skills, technologies and decision-making processes have proved to be more ecologically and culturally adapted to local settings. Moreover, these local systems proved often more sustainable than many imported – Western or 'scientific' – systems of knowledge and technology.

The studies include examples of unique forms of indigenous knowledge and practice, developed and accumulated over generations in a particular culture or region in related sectors such as animal and human health, agriculture, botany, forestry, irrigation and water management, fisheries, and natural resources management. Most of these case studies highlight the potential role which these Indigenous Knowledge Systems (IKS) can play in rural development, such as in indigenous herbal medicine, veterinary medicine, mixed cropping, forest gardens, indigenous pest management, wild food and non-food plants etc. (*cf.* Richards 1989; Warren, Slikkerveer & Titilola 1989; Warren, Slikkerveer & Brokensha 1994; IK&D Monitor).

In the area of agriculture, a somewhat holistic perspective on IKS has recently been developed in the INDAKS Project in Leiden, to conceptualise not only the intellectual but also the material components of the local setting, such as:

- concepts, perceptions, beliefs, cosmologies,
- attitudes,
- practices, experiences, skills, technologies,
- artefacts,
- seeds, plants, crops,
- institutions, procedures and processes,

used by a particular group, community or society in relation to agricultural food production and natural resources management (*cf.* Slikkerveer 1994b).

As current research on complex systems of indigenous knowledge and practice in different sectors requires a rather interdisciplinary approach, encompassing anthropology, ecology, development sociology, extension science and ethnoscience – including ethnobotany, ethnohistory and ethnoecology – and the subject matter sometimes transcends empirical scientific knowledge when it comes to topics such as ‘wisdom’, ‘belief system’ and ‘cosmology’, a specific research methodology has recently been developed at LEAD in order to understand the various dimensions of IKS from an emic point of view. Such specific, in-depth research methodology is needed since IKS have largely been ignored and even ridiculed during the colonial era, in which ‘primitive peoples’ and their knowledge systems were often subordinated to Western knowledge and technology from the colonial powers. Moreover, as these systems tend to disappear rapidly in view of current processes of modernisation and westernisation, there is an urgency to document these systems for the future.

The ‘ethnosystems approach’ has specifically been designed to study indigenous knowledge systems in their dynamic context of processes of development and change, based on a combination of anthropological *cf.* sociological concepts of the ‘Historical Dimension’ (HD), the ‘Participant’s View’, (PV), and the ‘Field of Anthropological Study’ (FAS) (*cf.* Leakey & Slikkerveer 1991).

## LEAD AT LEIDEN UNIVERSITY IN THE NETHERLANDS

In 1986, the ‘Leiden Ethnosystems And Development Programme’ (LEAD) was established at the Institute of Cultural and Social Studies of Leiden University in The Netherlands, focusing on the study of IKS and the further development of the ‘ethnosystems approach’ towards local peoples’ knowledge and practices in many sectors of the community. Underlying LEAD’s objectives to study, document and analyse Indigenous Knowledge Systems still operational in many developing nations is the philosophy that humankind is to change its attitudes towards nature and the environment in order to achieve a more balanced relationship between humanity and nature.

In 1987, embarking on a diachronic (through and across time) and holistic perspective, a co-operation programme between the LEAD Programme and the East African Herbarium (EAH) of the National Museums of Kenya in Nairobi initiated joint research in this field. The related project concerning ‘*Indigenous Agricultural Knowledge Systems in Kenya, East Africa: Origins and Development*’ concentrated on the study and analysis of people’s indigenous knowledge and technology in early food production and natural resources management in Kenya and its implications for the present. Later on, in 1990 the project was officially recognised as a ‘World Decade for Culture and Development Project’ (WDCD) of UNESCO. The results in terms of a newly-developed East African ‘model of human evolution and adaptation’ was presented during the International Symposium on ‘*Origins and Development of Agriculture in East Africa*’ held in Leiden in 1990 (*cf.*

Leakey and Slikkerveer 1991). This Symposium was followed by the establishment of the 'Kenyan Resource-Centre for Indigenous Knowledge' (KENRIK) at the National Museums of Kenya in 1992, which has further been extending the research interest in this field with regard to Eastern Africa.

Subsequently, in 1993, the Pithecanthropus Centennial Foundation 1893-1993 held its international Exhibition and Congress at Leiden University on '*Human Evolution in its Ecological Context*' linking up with this new analytical framework. The Centennial commemorated the pioneering work in Indonesia and The Netherlands on early palaeo-anthropological and ecological studies of 'Human's Place in Nature' by the early Dutch anthropologist/ecologist Eugene Dubois (*cf.* Leakey and Slikkerveer 1993).

Meanwhile, joint research had also been initiated in the field of agro-ecology and herbal medicine in West Java, leading up to the '*International Congress on Indigenous Knowledge, Adaptation and Development: Interdisciplinary Perspectives on Subsistence and Sustainability in Developing Countries*' held in July 1994 to mark the inauguration of the 'Indonesian Resource-Centre for Indigenous Knowledge' (INRIK) at Universitas Padjadjaran in Bandung, Indonesia (*cf.* Adimihardja & al. 1994).

As the subsequent international call became louder for 'alternative agriculture' with a view to reducing input costs, preserving the resource base and protecting human health, and as the potential contribution from IKS to such a renewed approach became increasingly well-documented from experience around the globe, it was the Commission of the European Communities' Directorate General for Science, Research and Development, that through its *Life Sciences and Technologies for Developing Countries Programme (STD-3)* eventually enabled the International R&T Consortium in 1994 to dedicate its research and training activities to develop jointly this new perspective in sustainable agriculture and rural development in Kenya and Indonesia. By consequence, in 1994, the existing R&T Consortium including the centres of LEAD, INRIK and KENRIK was strengthened by the 'Mediterranean Agronomic Institute of Chania' in Crete (MAICH) for the execution of the present 3-years Joint Programme on '*Indigenous Knowledge Systems for Sustainable Agriculture in Developing Countries: Towards an Alternative Approach to Food Shortage Reduction in Indonesia and Kenya*' (INDAKS, *cf.* Slikkerveer 1994b).

In addition to its general academic tasks, the objectives of LEAD in the field of IKS encompass:

- the conduct of joint ventures in IKS research and training;
- the support of publication of bibliographies, monographs, journals and books;
- the hosting of Erasmus and Socrates (EU) Programmes for exchange of students and staff;
- the organization of conferences, seminars and workshops.

## THE RELEVANCE OF IKS'S RESEARCH FOR THE NETWORK

In addition to the growing concern at the threat of the loss of biodiversity since the UN Conference on Environment and Development (UNCED, Rio de Janeiro 1992), a similar concern is now emerging among anthropologists, sociologists and development experts of the approaching loss of *cultural diversity* in terms of rapidly disappearing local and regional systems of knowledge and practice of specific groups around the globe, giving a major impetus to the development of this pioneering field of study (*cf.* Slikkerveer 1994a).

Such apprehension is also manifest through the starting point of the Workshop on *Identification of Wild Food and Non-Food Plants of the Mediterranean Region* (28-29 June 1996 at MAICH, Crete), establishing that many wild plants in this significant area – one of Vavilov's Centres of Crop Diversity – not only face extinction or severe genetic loss, but also that the existing local knowledge

on the use of plant genetic resources is indeed equally threatened with extinction. Apart from the obvious theoretical implications for preserving cultural diversity, the 'ethnosystems approach' has been shown to be able to highlight the practical significance of IKS for the identification of native and naturalised plants in the region through the study and construction of extended local plant classifications and taxonomies, and research into the related local practices of plant resource management and conservation.

In the field of research and fieldwork training in the Mediterranean region, LEAD initiated in 1987 a collaboration programme with the University of Crete and the Spili Health Centre in Crete, in which specific attention was given to medical anthropological research in the use of traditional herbal medicine in rural Crete. In 1992, a joint Symposium was organised in Spili on Plural Medical Systems in Rural Crete (*cf.* Slikkerveer, Lionis and Voorhoeve, in press). This Programme, which will be continued from 1997 onwards under the auspices of Socrates of the European Union in Brussels, could link up with the research efforts of the Network in the field of the study and analysis of local knowledge and use of herbal medicine in the research area.

In this context, the interdisciplinary study of IKS – as, amongst others, developed by LEAD within the framework of the INDAKS's R&T Consortium, encompassing also MAICH, KENRIK and INRIK – links directly up with the three major objectives of the Medusa Network:

- (a) as it seeks to identify the local knowledge, practice and utilisation of medicinal and aromatic plants among participants of the Mediterranean cultures through the implementation and adaptation of the 'ethnosystems approach' as part of the newly-developing field of Indigenous Knowledge Systems Theory and Practice;
- (b) as it attempts to contribute to the creation of an Information System for the Mediterranean Region under the name MEDUSA by bringing in its experience of developing INDAKS, a computerised data base which is presently being designed at LEAD in Leiden. This database, derived from the *EndNote Plus* Enhanced Reference Database and Bibliography Maker (1988-1990), has specifically been developed for the collection and documentation of indigenous knowledge systems in agriculture and related sectors in the tropics and subtropics in order to facilitate further information exchange and utilisation in this particular field in readily available information systems, currently referred to as the 'electronic highway';
- (c) as it aspires to the evaluation, for conservation and sustainable utilisation, of wild food and non-food plants in agriculture as alternative crops by the local population within the context of prevailing socio-cultural perceptions and practices.

From this general IKS perspective, a comparative study of Ethnobotanical Knowledge Systems (EKS) among different cultures in the Mediterranean Anthropological Field of Study will focus on various kinds of knowledge and use of local resources in order to meet the development goals of the region. As Alcorn (1994) notes, such resources include ecological principles, plant uses and facts, plant-related technologies, locally adapted crops, agricultural systems, farming values and strategies, and information about local constraints, opportunities and needs. In accordance with the comprehensive orientation of the INDAKS study in Kenya and Indonesia, the research will primarily focus on the comparative study of ethnobotanical knowledge systems of wild medicinal and aromatic plants, including both intellectual *and* material components of the prevailing systems in the Mediterranean.

It is recommended that the ultimate goal of this kind of research on IKS on wild food and non-food plants in the Mediterranean Region will go beyond the purely academic interest of the scientific community, so as to contribute to the Networks' aim by proposing particular methods for the development of the economic and social base of the rural areas involved. As such, some of the significant aspects of the Network will include the execution of interdisciplinary research and subsequent exchange of its results and information among extension workers, policy makers and scientists involved in agriculture, ethnobotany, economy and community development in the region.

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