

## Chapter 27

# Designing a Framework of Ethnomedicinal Plant Knowledge Integration Using OSS

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### ABSTRACT

*Indigenous knowledge refers to the knowledge, innovations, and practices of indigenous communities. Ethnic groups are repository knowledge of herbal medicine. Many indigenous people use several plants for medicinal preparations, and these medicines are known as ethnomedicine. It has developed from experience gained over centuries. Species of ethnomedicinal plants are threatened in most of nations due to overexploitation, habitat loss, destructive harvesting techniques, unsustainable trade, and deforestation. Documented indigenous knowledge on ethnomedicine forms part of the documentary heritage of the nation. The chapter will provide a framework for design an information retrieval system for ethnomedicine or knowledge on medicinal plants that are used to manage human ailments. The framework will be prepared, established on the open source software (OSS), and is appropriate not only for documentation but also beneficial for retrieving domain-specific knowledge. The model provides a framework for resource integration digitally using Greenstone Digital Library (GSDL) software.*

### INTRODUCTION

Development of human being as their culture and civilization has been associated and related intentionally or unintentionally with their surrounding environment, more strongly to the plant kingdom. Long-long ago man lived very much near to the nature, mainly depended on surrounding environment for their survival which becomes an integral part of lives of indigenous communities surviving in and depending on them. From the very beginning of human civilization dependency on nature, made them knowledgeable about various economic and medicinal properties of nature and natural resources by trial and error process. The

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history of medicine indicates that almost every major civilization and culture has developed their own system for curing diseases. This acquired, undocumented, unique knowledge which are very useful for their livelihood is known as Indigenous knowledge and the people associated with are called Indigenous people. Ethnomedicine is a good example of indigenous knowledge (IK) which has affected the lives of both the indigenous community as well as the global community also. Accordingly, indigenous people in India, has a rich culture of traditional medicine, well known as “tribal” or “Adivasi”, become the repository of information and knowledge, which is exclusively belongs to a specific culture or society and basically tacit knowledge that is confined in human mind and not written elsewhere. They enrich through generations and transferred on from one generation to other, without any written documents. An efficient documented information system in any discipline is very important for its development and also useful to other people who are wish to depend on their cultural believe for healthiness, Ethnomedicine is not an exception. In view of this, it becomes effective to design an information retrieval system to accumulate traditional knowledge on different plants, helpful to controlling disease and wellness, under single umbrella, through which information will reach to the hands of their potential users.

## **ETHNOMEDICINE CONCEPT**

Regardless of the advancement of synthetic chemistry and biotechnology, tribal knowledge and their use for mankind are still useful for community healthcare and drug development in the present and future era as well as for integration of cultural heritage and biodiversity. World Health Organization (WHO), stated that demand of ethnomedicine has increased in all provinces of the developing and less developed world and its use is rapidly expanding in the industrialized countries also. Today nearly 80% of the world's populace has faith in primarily on plants and plant extracts for healthcare (Modern Ghana, 2013).

Ethnomedicine, in general, the communal medicine which is concerned with the treatment and prevention of health diseases and ailment that are generally consider for play a beneficial role in health care. Ethnomedicine refers to the study of traditional medical practice which is concerned with the health, diseases and illness and also addresses the healthcare seeking process and healing practices (Krippner, 2003). Medical beliefs and practice of indigenous community is called Ethnomedicine. Indigenous community means peoples inhabitant of a specific territory or geographical region having a historical continuity belief in a specific culture that developed on their territories, consider themselves distinct from other sectors of the societies now existing on those territories (Indigenous Peoples at the UN, n.d.). They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system. The sum-total of innovation, talent and observation based on the theories, way of life and experiences of indigenous community to different cultures, where explainable or not, used in the anticipation, identification, enhancement or treatment of substantial and overall health may called ethnomedicine. Ethnomedical practitioners generally receive their education through a long apprenticeship, and may administer the therapy in a ritual and evoke the help of a deity. Ethnic medical practice is waning in cultures influenced or colonized by Western civilization.

The term ethnomedicine appears in academic literature is somewhat in a different meaning. In the American anthropological literature the medicine in ethnomedicine usually refers to knowledge and ideas about health and healthcare. In European and biological literature the medicine tends to refer to

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