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## **Medicinal Plant Resource Management for Health and Livelihood Security in some Rural Parts of India**

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### **Introduction**

National sample survey studies show that the second biggest cause of the rural indebtedness is on account of health expenditure. With world Trade Organization regime coming into place the cost of modern drug is expected to rise significantly. There exists ecosystem specific medicinal plant based health knowledge and practices that can solve major Primary health care problems of the community. With only limited access to health care facilities for the rural people it is also estimated that the cost of health care very high in the study area. On an average a family of five members is estimated to spend at least Rs: 500/ per quarter for medical treatments out side their place of residence. These areas have a rich tradition of traditional medicine and health care systems which have been effective to meet the primary health care needs of human beings, their livestock and crops. However, these traditions are getting eroded due to various socio- political and cultural reasons. Health and lively hood issue of the rural population could be addressed to a great extent, if the rich resources and the rich knowledge of health traditions could be revived and effectively utilized through people's participation.

With a specific target group comprising ST/SC communities in the work areas in mind, has the following two major components i.e. health security programme and livelihood security programme. Health security of the target community is to be achieved through promotion of sound, effective and local health and household practices and remedies that can contribute to the primary health care of the community.

### **Materials and methods**

The project was implemented in three Talukas in Gadchiroli and Satara District of Maharashtra.. Belgaum, Tumkur and Hassan District of Karnataka, 3 Blocks in Mayurbhanj and Cuttack District of Orissa, 10 Panchayats of 4 Mandals of two districts Visakhapatnam and Vizianagaram of Andhra Pradesh (45 villages covering 1500 households as per original

plan in Araku Valley Mandal of Visakhapatnam district and 22 villages covering 510 households as additional coverage in Gantiyada and Bondapalli Mandals of Vizianagaram district and Araku Valley and Ananthagiri Mandals of Visakhapatnam district), 3 blocks Perambalur, Kanyakumari and Namakkal District, Tamil Nadu, two blocks in Bastar District of Chhattisgarh and Mananthavady block Wayanad District in Kerala. Base line survey was conducted to find out the socioeconomic profile of the target households and the current level of awareness, knowledge, attitude, practice of local health traditions and the expenditure incurred for PHC needs by the rural people in a quarter. The study is repeated at the end of the pilot phase of programme to assess the interest, acceptance and trend of impact of the programme. PRA was conducted to prioritize the primary health conditions in the villages. Participatory Documentation and rapid assessment methodology was developed to find out effective practices. This involves a judicious blend of local experience and the clinical experience of other Indian systems of medicine (viz. Ayurveda, Siddha, and Unani) and pharmacologists.

## **Result and Discussion**

The communities in the selected area for the implementation constitute 49.15 % ST, 18.40 % SC 19.40 % and 14.7 % others. 85.3 % of the population in these locations belongs to socially and economically disadvantaged people. 71 % are small and marginal farmers mostly live in remote villages of hilly and forest terrain with less access to transport, communication, education and health care facilities. 11.5 % households have leased farm land. 85.5 % of the households do not have access to the toilet. 85.1% of the households interviewed have awareness about home remedies and 83.7 % believe that medicinal plant based home remedies could provide relief for a number of primary health care related complaints such as cold, cough, fever, diarrhea and dysentery. 64% have knowledge of use of home remedies. 64% interviewed have reported the source of knowledge of home remedies as being ancestors, elders, grandparents and parents. Other sources of knowledge holders are neighbors Ayurvedic doctors/ vaidyas and institutions/ training by NGOs. The Household reportedly incurred an average expenditure of Rs.391/- for treatment of PHC related complaints during the last 3 months. This expenditure is brought down to Rs. 82.by the use of home remedies as a first response, leading to the savings of Rs.309. PRA was conducted and 10 to 15 health conditions were prioritized by 13 organization

435 local health traditions were documented for 61 prioritized health conditions. Thirteen Community Health Knowledge registers was prepared for 13 locations. The documented local health traditions were rapidly assessed for selecting the safe and efficacious practices using DRALHT methodology developed by FRLHT for selecting the safe and efficacious practices. The assessed report contains 388 safe and efficacious local remedies. These effective practices were promoted through 21,454 Home herbal Gardens (HHG). 91 Nurseries were established during three years and 5,24,418 seedlings were raised. These seedlings were used to establish 21,454 HHGs in 451 villages. 2083 Women Village Resource Persons (VRPs) were trained for establishing HHG and using the plants grown in the HHG for preparation of home remedies as the first response to any primary health care needs. These VRPs in turn trained the households to establish and use the HHG for their primary health care needs. A training manual on Home Herbal Garden was prepared in local languages and given to the VRPs.

A feedback analysis of 5% of 21,454 households that established the HHG shows 100% got complete relief from Back ache, Body ache, Cold, Irregular menstruation, Minor cuts & wound, Stomach ache, Vomiting, Weakness, 98% of patient with Tooth pain got complete relief, 97% of the patients with Diarrhoea got complete relief, 96% of patient got complete relief from Dysentery, Scanty urination, 94% of patient got complete relief from Constipation, Itching, Jaundice, 93 % of the patient got complete relief from Common fever, 92% of patients got complete relief from Cold ,cough, piles, 91 % of patients got complete relief from Joint pain, 90 % of the patient complete relief from Cough, Redness of the eye, 89% of the patients got complete relief from White discharge 86 % of the patients complete relief from Acidity, 83% of the patients got complete relief from Worm infection, 81% of the patients got complete relief from Anemia, 79% of the patients got complete relief from Abdominal pain during the menstruation, Head ache 76% of the patients got complete relief from Indigestion and 74% of the patients got complete relief, Red discharge, Scabies/eczema (Table 1).

The impact analysis indicates that the awareness of home remedies among the villages involved in the project area is increased from 85 % to 99 %. Their belief in home remedies has increased from 84 % to 99 %. At the inception of the project knowledge on how to use home remedies was only 64 %. After three years the knowledge on home remedies among the villagers in the project area had increased to 97 %. In the beginning of the project the households used to spend an average Rs. 391 per quarter for their PHC needs. An intervention feed back study showed that at the end of the project period (after 3 Years) the expenditure has come down to Rs. 82.00 and thus the family saves on an average Rs. 309.00 per quarter. On an average 70 % of the medicinal plants in the HHG are survived.

Livelihood security of the target communities is to be achieved through promotion of community owned enterprises in order to help them to undertake cultivation and sustainable collection of medicinal plants as well as value addition and marketing of the raw drugs, semi-processed or finished products in an organized manner. 29 species has undergone cultivation trial. They are *Abelmoschus moschatus*, *Acorus calamus*, *Aloe barbedensis*, *Andrographis paniculata*, *Asperagus racemosus*, *Bacopa monnieri*, *Cassia senna*, *Centella asiatica*, *Coleus amboinicus*, *Coleus forskohlii*, *Curcuma ambada*, *Curcuma angustifolia*, *Curcuma aromatica*, *Curcuma longa*, *Cymbopogon flexuosus*, *Eclipta alba*, *Eclipta prostrate*, *Emblica officinalis*, *Gymnema sylvestre*, *Phyllanthus amarus*, *Indigofera tinctoria*, *Lepidium sativum*, *Ocimum tenuiflorum*, *Phyllanthus amarus*, *Piper longam*, *Rauwolfia serpentina*, *Ruta graviolens /chelapensis*, *Vitex negundo*, *Withania somnifera* and *Zingiber officinale*. Thirteen community based enterprises were registered. 18 species of raw drug are collected and sold in the local markets and the CBE has earned about Rs. 13, 95219.00 in the last two years. There are 71 products produced in 13 community based enterprises.

**Table 1: Shows the intervention feedback on the use of HHG for some of the PHC Needs**

<b>Sl. No</b>	<b>Primary health conditions</b>	<b>% of people got complete relief</b>
1	Abdominal pain during the menstruation	89
2	Acidity	86
3	Anemia	81
4	Back ache	100
5	Body ache	100
6	Cold	100
7	Cold & cough	91
8	Common fever	92
9	Constipation	93
10	Cough	94
11	Diarrhoea	97
12	Dysentery	96
13	Ear pain	81
14	Head ache	79
15	Indigestion	78
16	Itches	94
17	Irregular menstruation	100
18	Jaundice	91
19	Joint pain	91
20	Minor cuts & wound	94
21	Piles	74
22	Red discharge	90
23	Redness of the eye	74
24	Scabies/eczema	96
25	Scanty urination	100
26	Stomach ache	98
27	Tooth pain	100
28	Vomiting	100
29	Weakness	97
30	White discharge	90
31	Worm infection	83

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