Introduction: Socio epidemiological studies conducted since 1994 to help with the elaboration of a management plan for MSDR, the first Brazilian Sustainable Development Reserve, located in the Amazon, showed the precarious health conditions of the population living along the river banks (5277 people, in 60 communities). The inadequate disposal of human excrements in a region subject to annual 14 meter above the water levels floods, facilitate the proliferation of diseases such as diarrhea and verminosis and its consequences such as, anemia, dehydration, malnutrition and death, mainly among infants. A few communities had a health agent trained by a non government entity (Pastoral da Criança), with limited equipment, medication or medical supervision support. Informal medicine performed by witch-doctors and traditional midwives are the nearest access to health care available to these people. Research on infant mortality showed a frequent number of death caused by neonatal tetanus, diarrhea and pneumopathies. Date collected from 40 communities (1994) showed an infant mortality rate of 86/1000 after birth, and, from a sample of 202 mothers interviewed, 38% of them had lost one or more children before they reached the age of five.

Objectives:
General: To improve human capacity to adapt to the eco systems of tropical forests with the development of education actions in health with participative management, integrating the results from socio epidemiological studies with traditional health practices.
Specifics: Identify the accesses and barriers to public health services; learn about the infrastructure conditions and social resources of the communities living inland and in the flooded areas; register the social meaning of the illnesses and visual forms of treatment; strength the leaderships, in regard to health education actions aiming the improvement of quality of life of the riverside populations; invest in basic sanitary infra structure in the flooded areas and in health education actions through participative management of the natural resources in both inland and flooded areas.

Methodology: Priority to actions concerned with the health of women and children under 5, who are 25% of the population of MSDR in 1996. Education actions priorities were given to two groups: Health agents and midwives. The extensionists of MSDR started a monthly supervision of the agents. Supervision of the monthly antropometric data collected from infants under 5, instructions on how to prepare a oral rehydration, use of water taps on water containers for human use, adequate disposals for human excrements and garbage, environmental education, encourage breast feeding, feeding orientation for children no longer breast fed, topics on personal and mouth hygiene, basic inoculation against tuberculosis, tetanus and diphtheria, hepatitis B, measles, mumps and rubella, H. influenzae type B and Yellow Fever, within the national inoculation program of the Ministry of Health of Brazil for this region. At the same time, the traditional midwives of the Reserve received a continuous education program in order to encourage them to send pregnant women to prenatal medical care, providing a prior - post birth protection. The rates of infant mortality, parasitoid and polyparasitoid (through prothoparasitoid), were elected as indicators of results of the actions of health education. Ten MSDR communities located in strategic areas of the “varzea” (inundated areas) or inland were selected to implement the program. After an evaluation, using participative methodologies, the results were propagated to the other communities through videos, bulletins, radio programs, art education activities and interchange visits. Investments were made in the use of appropriate technologies to provide the communities with treated running water based solar energy and sand filters as well as cesspits adapted to the seasonal water floods. The actions took for acknowledge the results of the local use of plants as medicine.

Results:
Formation of a Nucleus of Health Care by Mamirauá Sustainable Development Institute (MSDI), (IDSM) in 1997 with extensionists and coordinators of these actions; integrated actions were formed with non
government entities (Pastoral da Criança and Grupo Curumim), State and Municipal Secretaries of Health, the Ministry of Health, to train health agents and traditional midwives every 6 months, as well as their insertion in the regional public health system.; The integrated activities with the Environmental Education Nucleus of MSDI as the consequent formation of young health educators; basic sanitation in five pilot communities by constructing flood adapted cesspits and studies and construction of water supply using solar energy and filters offering drinking water; encouragement to use taps in drinking water containers lowered contamination through water and consequently the presence of intestine parasites; incentives actions to breast feeding, incentive for post breast feeding meals; and incentive for inoculations, helped to lower infant mortality from 86% (1994) to 34% in 2000; Incentive to form women associations, currently (08 groups), and other groups of economic activities improving the family income. These integrated actions to a better use of the farming areas to provide a wider range of food supply, mainly during the major floods, and other economic activities (fishing, managed wood exploitation, handcraft and eco tourism), have contributed to increase the purchasing power of the population, and are having a good influence in the changes of behavior concerning health and serving as a basis for work in Amanã Sustainable Development Reserve, next to MSDR that with Jaú National Park integrates the Amazon Ecological Corridor.

Staff:
Lena Vânia Carneiro Peres, Master in Podiatry and Ph.D. in Medicine – Universidade Federal de São Paulo – Escola Paulista de Medicina; Medical Member of Centro de Vigilance Epidemiológica da Secretaria de Saúde de São Paulo; consultant for the Nucleus of Health Care of MSDI; Edila Arnaud Ferreira Moura, sociologist, Professor at UFPa and Coordinator of the Extension Program of MSDI; Maria Mercês Bezerra, coordinator of the Health Care Nucleus of MSDI; Otacílio Brito, coordinator of the Nucleus of Adequate Technologies of MSDI; Health Educators of MSDI.

Sponsors:
Ministry of Science and Technology- MCT
Department for International Development - DFID -UK
Humid Tropic Program / MCT

Lena Vânia Carneiro Peres
End. Rua Humberto I, 740, apto. 123, Vila Mariana – São Paulo- SP- Brasil, CEP: 04018 032
Fone/Fax: 11 – 5579.7104; Fones: 11- 9715-3409; 3082-0957; e-mail: lperes@uol.com.br