INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI
SHORT ABSTRACT OF THESIS

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SHORT ABSTRACT

Despite rapid urbanisation, majority of the population of Assam inhabit the remote rural areas, and out of this population, 2.5 million people live in the riverine island (popularly known as char- chapari areas in local Assamese language). Many places in riverine areas in Assam are totally inaccessible by road in spite of expanding rural road networks under Pradhan Mantri Gram Sadak Yojana (PMGSY) (Prime Minister's Rural Road Scheme). These riverine islands and many other areas are affected by floods created by the river Brahmaputra and its tributaries in monsoons. As a result, the health services for the people living in these areas are badly affected. To provide health care facilities to the riverine areas, the C-NES (Centre for North East Studies and Policy Research) first developed innovative ideas for implementation to reach the poor and marginalised group by introducing boat based health services called boat clinics. Later, when Government of India introduced NRHM (National Rural Health Mission) to make health services available to the rural population, Government of Assam based on success of boat clinic operated by C-NES, collaborated with it through expansion of boat clinic to make health services available to riverine rural communities in Assam. Although the government expanded boat clinics to cover bigger area, people found it difficult to access these in emergencies, since patients cannot be easily transported by road to these boat clinics in absence of proper road. To bridge this gap requires appropriate ambulances. It was found that, in most of the developing countries people need to travel to health care centres by walking or by taking whatever mode of transport is available including buses, rural taxis, private cars, bicycles, animal-drawn carts and local stretchers (Starkey, 2005). To facilitate access to medical services, local communities and transport service providers can work together to plan an appropriate and sustainable transport technology/system. The prototype of the proposed amphibian ambulance has been designed and developed as a part of doctoral research in the Department of Design, Indian Institute of Technology Guwahati (IITG). Workshop based prototype of the amphibian ambulance followed by refined field experiments and field trials were carried out at IIT Guwahati campus and Aminagon primary health centre, a location adjacent to IIT Guwahati beside the river Brahmaputra with participatory approach. While the field trials were carried out, it was found that the vehicle was safe for operation from the view of user friendly, comfort, easy access, protection from natural elements and also sustainable for the riverine people, which was a fully amphibian featured and worked both on land and in water.

Thus this research is contextual research endeavour for design development of sustainable amphibian ambulance for riverine people in Assam to be socially responsible in the long run.