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Healthcare Facilities in Emerging Countries The Challenge for India



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Foreword

It gives me immense pleasure to recommend this book which is outcome of well-researched, innovative design for rural establishment in India. The journey of this book starts when I met the authors as researchers at Politecnico di Milano along with my coresearcher Prof. Enrico De Angelis, both of us part of Indo-Italian, International Project of Cooperation for Science and Technology. My interactions with Ph.D. research scholars gave them insight into actual situations at Kolkata, and present-day status of healthcare facility, along with architectural perspective much needed to bring about novel, modern solution, still maintaining sustainability at all possible levels. The discussions led to amalgamation of Indian and Italian ideas of maintaining cultural balance. The research work presented in book speaks of India, highly populated, developing economy, having huge back log in primary healthcare sector. This was the motivation behind the research carried out. The medical service providing establishments has typical requirements due to hot weather climate and depends on economic status of users of these establishments. The research stated in the book targets the actual local need of Kolkata, West Bengal. It gives improvised architectural solution for healthcare establishment using local materials, and local architectural and construction aspects. This integrates the solution perfectly with the local philosophy and culture.

The authors have done well-researched survey of the place of establishment. This accounts for lifestyle of people, weather, economical aspects, psychological mind set of users, technological level that can be used, maintain ace for longer duration, less recurring expenditure, etc. It was a learning experience through critical discussions during academic sessions and interactions. These sessions enriched us as researchers and also as academic supervisors. The study gave us real-time experience of international cooperation between India and Italy, both the countries with rich civilization history.

It encouraged authors as the outcome of research was well received by learned scholars. The novelty and technology used is well appreciated by academic community. Hence, the authors thought of writing book and sharing the experience with readers.

The book will establish methodologies and technology solutions of innovative construction technology in typical socio-economic situation. The readers will get through philosophy and technology of development of primary health facility in socially, environmentally, financially challenging rural establishments.

The book is intended to educate the engineers, architects, health workers, rural governance authorities who wish to bring about change and improve standard of life for people around.

I thank the authors of the book for inviting me to be part of this research team.

Pune, India

Mrudula S. Kulkarni
Project Investigator Indo–Italian POC
for Science and Technology, 2012–2015
Professor and Head of Department
of Structural Engineering
Maharashtra Institute of Technology

Preface

The development of the research work was possible thanks to Fondazione Politecnico di Milano that funded the research project “PoliSocial Award” during 2012–2013. In fact, since 2013, Politecnico di Milano, with the support of Fondazione Politecnico di Milano, promotes the *Polisocial Award* (<http://www.polisocial.polimi.it/en/home-en/>). The competition permits to develop some social research projects with the aim to give rise to several benefits for the health and the population, nationally and internationally, through research works and scientific publications.

The purpose of this initiative is to support multidisciplinary research projects, able to create synergies between several research groups of Politecnico di Milano and, also, national and international universities, companies and stakeholders. The winning projects, including *Healthcare for all: the challenge of India*, are financed with the support by 5×1000 fund raising campaign of Politecnico di Milano. Recently, Politecnico di Milano has edited a book entitled *Stories of Cooperation at PoliMI*, in which are listed several “cooperations for development” of responsible experiences and practices of sustainable and equitable development by scholars of Politecnico di Milano, through a social innovation interdisciplinary culture and related to academic cooperation (available at http://www.polisocial.polimi.it/wp-content/uploads/2016/12/libro_bianco.pdf).

Moreover, the research work was supported by the Cluster in “Design of Health Facilities”. It is a multidisciplinary group of professionals, scholars and expertise who work in the context of healthcare constructions from several points of view, from Politecnico di Milano (<http://www.polimi.it/en/scientific-research/research-structures/clusters-and-centres/design-of-health-facilities/>). The goal of this research group, born in 2008, is to rethink the hospital project and the system of social and health agencies in the regional scale analysing economic, social and technological aspects that have led to a progressive awareness and responsibility for all in health. It is well known and proven that the quality and efficiency of architectures for health are closely related to the planning, construction and maintenance of the entire building system and processes. In this context, the interdisciplinary and

interdepartmental collaboration becomes a priority approach for a correct design, planning and programming of health care. Several departments take part in the Cluster.

The research was also supported by the NGO's Project for People and Institute for Indian Mother and Child that guaranteed to analyse and study several data of the healthcare services in Kolkata and to share the know-how on the Indian reality and culture.

Project for People is a non-profit organization established in 1993 that carries out projects of cooperation and development in India, Benin and Brazil (<http://www.projectforpeople.org/en/about-us/>). Over the years, the association gave rise to many clinics, housing, educational courses for nurses and doctors, schools, banks for micro-credit and installation of equipment for potable water and sanitary facilities. In addition, it has realized education, nutrition and food education projects. The association also launched training activities for small local NGOs that are interested in self-development; also, it was responsible for development cooperation, legal advice to abused women and prevention of social diseases and sexually transmitted infections.

In particular in India, Project for People works with the Institute for Indian Mother and Child (IIMC), a local NGO which operates in the rural area of Kolkata in order to obtain a self-sustainable projects; in fact, the organization initially supports the projects with the aim that all of them become during the time independently managed by local partners. In this way, the results will be long lasting and will bring benefits in terms of populations' awareness, human growth, social and cultural knowledge.

Project for People also promotes several volunteer programs in their facilities, giving the opportunity to stay in the IIMC healthcare centres, for a minimum period of one month, during which many volunteers are required to carry out studies or researches, depending on the their attitudes, with the aim to improve the existing and plan future projects.

The Institute for Indian Mother and Child (IIMC) is a NGO that works in the south of Kolkata, and it is born with the aim to help the rural population in the health, educational and economic fields (<https://iimcmissoncal.org/>). IIMC was founded in 1989 thanks to Dr. Sujit Kumar Brahmochari, with the first attempt to improve the living conditions and health promotion for local populations. The first step took place in Thegaria where IIMC built a clinic, well known as Thegaria Outdoor, which provided primary health care until then non-existent. The action of IIMC is always especially targeted towards a particular population slot: women and children. After the intervention in Thegaria, other five clinics were realized, all with the aim of bringing health promotion and therapies in places otherwise inaccessible. These structures are Thegaria indoor clinic, Chakberia outdoor clinic, Keyadah outdoor clinic, Hogolkuria outdoor clinic e Dhaki clinic. The IIMC activities have grown in importance over the years, and it has been able to develop its intervention in the Indian territories offering news services and supports responding to the healthcare needs of population. Among these, it is important to mention: the construction of health services to private homes; the promotion of educational seminars

on hygiene and nutrition issues in far and inaccessible villages from the city centres; the formulation of hyper-caloric and hyper-protein preparations sold with low prices at the IIMC health facilities to all the mothers with babies who suffer from malnutrition.

The editors want to say thank you to all the NGOs that share their data for a detailed analysis of the state of the art. Their mission is very hard, and we are grateful for the efforts they do every day to better the world.

Thanks to ARCò (Architettura e Cooperazione), a group of young engineers and architects that operate in the world of international cooperation in order to face and to solve architectural problems in emergency situations (<http://www.ar-co.org/en/>) that have supported the research project.

In conclusion, the authors want to say thank you to Prof. Mrudula Kulkarni from Maharashtra Institute of Technology in Pune, India, who supports the research work and realizes the foreword of this publication.

Milan, Italy

Stefano Capolongo
Marco Gola
Andrea Rebecchi

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Abbreviations

AAV	Antyodaya Anna Yojana
AIDS	Acquired Immune-Deficiency Syndrome
BoD	Burden of Disease
CCS	Country Cooperation Strategy
CDs	Communicable Diseases
CMOH	Chief Medical Officer of Health
DFID	Development for International Development
EC	European Commission
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GEI	Gender Equality Index
GFATM	Global Fund against HIV virus, Tuberculosis and Malaria
GHI	Global Hunger Index
GoI	Indian Government
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
IHR	International Health Regulation
IIMC	Institute for Indian Mother and Child
IMR	Infant Mortality Rate
INEE	Inter-Agency Network for Education in Emergencies
JICA	Japan International Cooperation Agency
KMC	Kolkata Municipal Corporation
MDGs	Millennium Development Goals
MoH&FW	Ministry of Health & Family Welfare
NCDs	Non-communicable Diseases
NGOs	Non-Governmental Organizations
NHS	National Healthcare System
NRHM	National Rural Health Mission
NSSO	National Sample Survey Organization
P4P	Project for People

PHC	Primary Health Care
PHE	Public Health Engineering
PPP	Public–Private Partnerships
TB	Tuberculosis
UHC	Universal Health Coverage
UNICEF	United Nations Children’s Fund
USAID	United States Agency for International Development
WCO	WHO (World Health Organization) Country Office
WHO	World Health Organization

A New Challenge in Healthcare for India

Stefano Capolongo

Abstract This chapter is the result on the analysis of medical and social welfare in India, an emerging economy with many disparities, focusing in particular on West Bengal context. India is a country with many contradictions because, on one hand, offers many avantgarde techniques and specializations but, on the other hand, many basic facilities, currently, are not available to certain sections of its complex society. The chapter, starting from an introduction about Polisocial Award and the aims and purpose of the text, examines the social, environmental and economic aspects of Indian context and strengths and weaknesses of the Indian healthcare system.

Keywords Healthcare in India • West Bengal • Rural context • Urban context Cluster “Design of Healthcare Facilities” • PoliSocial award

Rethinking the Healthcare in India

This book is the result on the analysis of the medical and social welfare in India, an emerging economy with many disparities, focusing in particular on West Bengal context. India is a country with many contradictions: in fact, on one hand, it offers many avantgarde techniques and specializations but, on the other hand, many basic facilities, currently, are not available to certain sections of its complex society.

The aim of the text is to examine strengths and weaknesses of the Indian healthcare system, trying to find solutions to the existing criticisms. Therefore, the objective is to formulate flexible and adaptable approaches into the current socio-economic context for increasing the present “low care” models.

The research was carried out through the “PoliSocial Award”, a research project funded by Fondazione Politecnico di Milano and Politecnico di Milano. This competition permits to develop some social research projects with the aim to give

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