BusyBric Infrastructure and The Nataraja Foundation are the owners of this project design basis. Further development of the project is hereby assigned to "The Planning and Design Lab", which is a joint initiative of BusyBric Infrastructure and The Nataraja Foundation.

BusyBric Infrastructure is a next generation infrastructure concept, design and implementation company with an agenda to bring totally new ideas to the Infrastructure business in India. (website: www.busybric.com)

The Nataraja Foundation on the other hand is an independent organization which promotes rigorous study of issues pertaining to India and attempts to provide solutions for large social and economic challenges. (website: www.nataraja.org.in)

The Nataraja Foundation is the promoter of "The Indian Education Megaproject". The Education Megaproject is a plan to provide high quality education, totally free of cost to 126 Million Children in 28 states and 7 union territories across India. The entire financing of Rs. 6 Lakh Crores (US $ 131.38 Billion) for this project is to be raised independent of central and state budgets. A detailed plan to execute the Education Megaproject has been submitted to the Ministry of HRD and the Planning Commission, Govt. Of India. Those interested can view and download all the project documents including detailed calculations and the financing scheme from the Nataraja Foundation website: http://www.nataraja.org.in/massededucationproject.htm

Together, BusyBric Infrastructure and The Nataraja Foundation have an agenda to provide thought leadership in the areas of Education, Healthcare, Urban Infrastructure and a number of other matters of national interest.

The projects BusyBric and Nataraja promote are in the public interest for people in India and around the world. We therefore would like to share our ideas with like minded individuals and organizations globally for the service of the public with the caveat that the source of information (this report) be mentioned in each case while referring to the information and unique ideas contained herein to avoid legal action.

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Cover image: Collage based on generic pictures available on the internet. Link to the source of the pictures is provided on the website.

Designed, typeset and printed in India by "The Planning and Design Lab".
Project details will be shared with interested parties after signing of confidentiality agreement, payment of prescribed fees and signing of the initial project agreement.
About the Authors

**Amrita Puntambekar** is a designer with “The Planning and Design Lab”. She has detailed many of the concepts as regards the social equity dimensions of the Mumbai Megaproject. She leads the Nataraja Foundations initiatives on women’s issues and particularly children’s education. She is also an associate fellow at the Nataraja Foundation and a consultant for its various projects. Amrita is a freelance artist and specializes in watercolour. She is a post graduate in commerce and lives in Mumbai.

**Ashish Puntambekar** is a Mumbai based, corporate planner and infrastructure project designer. He has 20 years of experience in designing some of India’s largest infrastructure projects, the most notable and recent of which is the Indian Education Megaproject. The Education Megaproject is a plan to provide high quality education, totally free of cost to 126 Million children, 80% of who live in rural areas and come from the poorest families. Please visit: [http://www.nataraja.org.in/masseducationproject.htm](http://www.nataraja.org.in/masseducationproject.htm)

As a designer, Ashish believes in Gandhiji’s vision of “Sarvodaya” (i.e. the rise of all) and his project designs therefore focus on including the excluded among the masses. All his projects also have huge environmental dividends in that they are designed for sustainability while also deploying environmentally friendly building materials on a massive scale. Each project’s financial design also frees up large capital resources for afforestation schemes and for wildlife preservation.

The Mumbai Megaproject for instance provides US $ 300 Million for Mangroves and another US $ 1.5 Billion for the planting of dense forests in Maharashtra. Employment generation is also high on the design agenda. This is witnessed by the fact that the above mentioned two projects, alone will add 10 Million new jobs in India.

Besides designing large infrastructure and clean energy projects, the designer is also keenly interested in the geopolitics of petroleum (several published articles) and has expert level knowledge in the energy business and especially the price of crude oil which he has traded as a derivative trader on all the world’s major exchanges and OTC markets for over 5 years. He currently works as a project designer and also runs a private foundation, named the Nataraja Foundation, with a mandate to innovate on an unprecedented level in the areas of Social Infrastructure, Urban Planning and Clean Energy.

Ashish holds an MBA in international business and a bachelors degree in Mechanical Engineering.
Acknowledgments

The Mumbai Megaproject is a scheme in the interest of the Millions of citizens of Mumbai City and the 112 million inhabitants of Maharashtra. It is also a landmark project to safeguard the ecology and sustain a vast marine ecosystem around Mumbai. The project proposal itself is an exercise in the public interest and for the consideration of the State and Union Governments.

In a project proposal as wide-ranging as this with its 22 different themes, the project designers have received much help from others, starting with FICCI-FLO and Deutsche Bank who organized and sponsored the seminar in Sept ’11 at the YB Chavan Center at Nariman Point in Mumbai.

While the Marco concepts and large project ideas are our own, several individuals have contributed by providing comments on draft chapters. A few senior specialists with vast experience in project planning and execution have reviewed the whole report consisting of 22 different themes + 2 project control specifications and have provided their inputs. Some contributed in terms of ideas while others provided critical cost estimates for the various schemes within the Megaproject. It is not possible to thank everyone by naming them as one cannot rank their ideas on the basis of relative criticality or importance.

We have also borrowed ideas and concepts from other projects implemented around the world such as the palm islands in Dubai, The Semakau offshore landfill in Singapore, The Chunnel tunnel that connects the UK with France, The Cheonggyechon river re-development (Seoul, South Korea), Besos river (Spain), The Sabarmati river re-development project in Ahmedabad, The Coral Reef Alliance’s Bio Rock technology implementations around the world etc. In including these projects we acknowledge their thought leadership and would like to learn from their implementation experience. Each borrowed concept is acknowledged by source and at no point do we claim these fundamental concepts as our own. In fact we hope that the people and organizations involved in these earlier, path-breaking projects around the world see the opportunities in Mumbai and come here. The city will greatly benefit from their experience.

Several friends have provided helpful guidance as we edited the final text for publication. We have also taken a number of generic pictures from the internet and have used graphics and material for tables from various published sources and while doing so, we have taken care to quote our sources for numbers and opinions expressed by various parties in the public domain.

It is important to state here that the cost estimates within the Megaproject’s reports have been arrived at after seeking relevant advice from experts. These are however indicative costs based on current industry practices and projects commissioned within the last 3 – 5 years in India and around the world.

Based on all these inputs, we have modified the concepts in a manner that fits Mumbai’s unique requirements. This cross fertilization of ideas across industries has been our own and it is this that makes the Mumbai Megaproject unique. The estimates are critically linked to project execution structures specified in each case to achieve the most efficient project schedule and least possible cost. The project configurations and the scope of work considered in each sub-project also have had a major impact on cost and these costs could vary if project scope is changed significantly.

Finally, the authors take sole responsibility for any errors or omissions regarding opinions expressed and conclusions drawn from the various studies within the Megaproject proposals.
1. Executive Summary

As of November '2012, the Maharashtra State Government, acting through MMRDA and the Municipal Corporation of Greater Mumbai (MCGM) is officially reported to have spent a total of Rs. 900 crores on various projects along the Mithi River as part of a scheme whose total cost is estimated at Rs 1600 crores. All this money has been spent without doing a geological survey of the river basin which would have revealed rocky strata in certain parts, thereby requiring a totally different approach.

In short, an improperly designed plan is under execution, which in the view of the Mumbai Megaproject is unlikely to achieve any of the project objectives.

The important thing is that when the taxpayers sees the Mithi today, she / he wonders where the Rs 900 crores has gone because there is no noticeable difference in the area over the last 10 years. The Mithi continues to be an extremely toxic river filled with deadly chemicals such as cyanide and toxic metal salts of lead, arsenic, strontium and mercury. An agglomeration of chemicals in high concentrations which probably make the Mithi one of the most polluted and toxic rivers on earth.

The Mumbai Megaproject’s Mithi River Plan

The Mumbai Megaproject has a definitive and fully estimated plan to clean up the Mithi. This plan goes far beyond the recommendations of the Chitale Committee and other more recent plans.

The Megaproject’s plan in the form of The Mithi River Re-Juvination Project, has the following salient features:

1. A massive slum re-habilitation scheme for the Mithi river basin
2. A comprehensive dredging plan
3. A sequestration plan for poisonous chemicals (cyanides, lead & mercury salts etc) in special designated sites already identified for the purpose.
4. A re-development plan for the riverfront on the lines of the Cheonggyecheon river rejuvenation scheme in Seoul South Korea (finished look and feel as per pictures on cover page)
5. Two alternative engineering and execution options to achieve lowest possible cost

6. An innovative financing plan to achieve all the above with zero need for external / government financing

As is clear from the description above, The Mumbai Megaproject’s plan for the Mithi River is extensive and exceeds the standards and scope of all previous plans.

Project Financing

The mentioned above, the Megaproject has developed an innovative scheme with two separate options for financing the large scale re-development of the Mithi river basin.

Project details will be shared with prospective project partners and local government after going through a legally recognized and properly documented process.

Ashish Puntambekar
Project Designer
The Planning and Design Lab

Projects
The Mumbai Megaproject
& The Indian Education Megaproject ... High quality Education to 126 Million Children Totally Free of cost

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Pictures used within this document have been taken from the internet. They are therefore representative and not necessarily from a location in Mumbai or Maharashtra. The pictures used are generic and we have provided a link on the website (to be updated from time to time) where we have identified the source of the pictures. In case of any oversight on our part, please let us know and we will immediately rectify the matter.