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Project coordination:



BIBS – Exporting Vocational Training in Urban Water Management to India

Addressing the need for a skilled plant operator workforce in India

The Challenge

The well-known skill gap in the Indian economy is also a big problem in the water sector. Even if the water infrastructure is up to date there is a lack of qualified operation personnel, especially in the areas of maintenance and emergency management. The origins of this problem can be mainly found in the education and training of personnel and not as much in a non-existing demand for skilled personnel in this sector or technical factors. Most of the hired personnel is unskilled or has only theoretical process knowledge of the challenges and specifics of the water sector.

With India's pace of growth and big investments like the smart city initiative of the Government in mind, the obstacles mentioned above need to be removed soon, if India wants to provide a secure and proper water infrastructure for its growing population. The BIBS project aims at closing the skill gap in the plant operation sector and support India's development.

Our Approach

To guarantee the sustainability of this specific training programme, we conducted a local needs-analysis in the region of Mumbai and Pune in 2013-2014, to be able to provide a suitable training approach to the local employees, companies and policy makers in the water business.

The study results were the basis for setting up a flexible modular training design combining theoretical and practical elements and containing didactics and new innovative simulation models. To keep things simple, the training concept can be seen as the „German“ element of the successful system of Dual Education in Germany adapted to the specific needs of corporations and participants in the region of Maharashtra according to our need analysis.

The next step was a Train-the-Trainer programme, which took place in Germany in 2015. This year the pilot course with two courses in „Water Management“ and „Water purification“ started in Pune. First graduates will be industry-ready mid of 2016.





Photos by VESBE e.V.

The Training

For the project consortium it is very important to provide sustainable and innovative solutions in the area of education and training, which fit into the country-specific context and the local demand of companies.

The training offer is a modular course covering these areas:

- Basic water management
- Wastewater treatment
- Water purification

The total duration of the course is 720h and includes about 50% practical lessons, which are imparted via new technology applications (3D simulation model developed by Fraunhofer Institute IAT), modern teaching equipment (Environmental Discovery System by Festo Didactics) and abundant site visits.

The training modules include topics like process understanding of treatment plants, measurements, biological and chemical processes, health and safety regulations and maintenance.

Another key component of the offered programme is the training of the trainers containing expert knowledge of their subject and, most importantly, didactics. A qualified trainer can have a big impact on the later success of his/her students.

The Impact

The impact of our training activities is visible already through the pilot currently being conducted in Pune. As a next step we want to scale up the number of courses and participants. This will help to overcome the skill gap in the long run and support the development and growth of India.

Since the BIBS project has been very successful, we wish to expand and adapt our training approach to additional regions and countries. The designed training programme can be adjusted to different needs and is also an opportunity for international corporations to qualify their employees for their specific situations and tasks in the water sector.

With all these components of our project we are looking forward to further developments and the planned increase of our educational training in India not only in the water sector but also in new areas with new courses and curriculums.

The Partners

VESBE e.V.



Fraunhofer IAT

(Institute of Human Factors and Technology Management (IAT) of University Stuttgart)

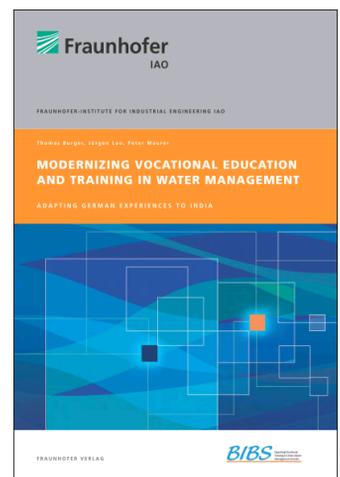


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ISWA

(Institute for Sanitary Engineering, Water Quality and Solid Waste Management of University of Stuttgart)



Study "Modernizing Vocational Education and Training in Water Management" (2015) available online: www.vesbe.com