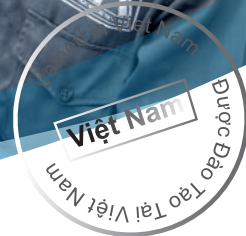


COOPERATIVE TRAINING SEWAGE ENGINEERING TECHNICIANS A BEST PRACTICE EXAMPLE IN VIET NAM



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GENERAL BACKGROUND

**SKILLED WORKERS FOR
THE WWS IN VIET NAM**

INITIAL RESULTS

SUCCESS FACTORS





GENERAL BACKGROUND

Wastewater Drainage and Treatment in Viet Nam

Situation

The Vietnamese economy has developed relatively fast over the past two decades. The annual growth rate of around 7% since 1998 led to a steady and broad recovery across the country. The extensive economic development results in an increasing consumption of energy and natural resources, higher emissions, waste and wastewater and thus endangers the ecological sustainability in the region. In 2012 Viet Nam introduced the Viet Nam Green Growth Strategy, which aims at restructuring the economy following a path of green growth with a focus on clean production, sustainable use of resources and reduction of emissions.

The sector of wastewater drainage and treatment is one of the new and growing green sectors in Viet Nam. Currently, only 10% of the country's total wastewater is treated and the treatment is usually limited to on-site pre-treatment in septic tanks. Vietnam has a total of 288 industrial zones with only 80 industrial wastewater treatment plants, many of which are operating inefficiently.

Objectives

The ambitious objectives of the Vietnamese Government until 2020 are to increase the treated wastewater to 60% and the connection of urban households to sewerage system to 80%.



Only 60% of urban households are connected to the sewerage system.



It is estimated that until 2020 only in the wastewater sector, Viet Nam will need more than 8,000 qualified workers to operate and maintain the new technical infrastructure. (Source: GIZ Viet Nam)



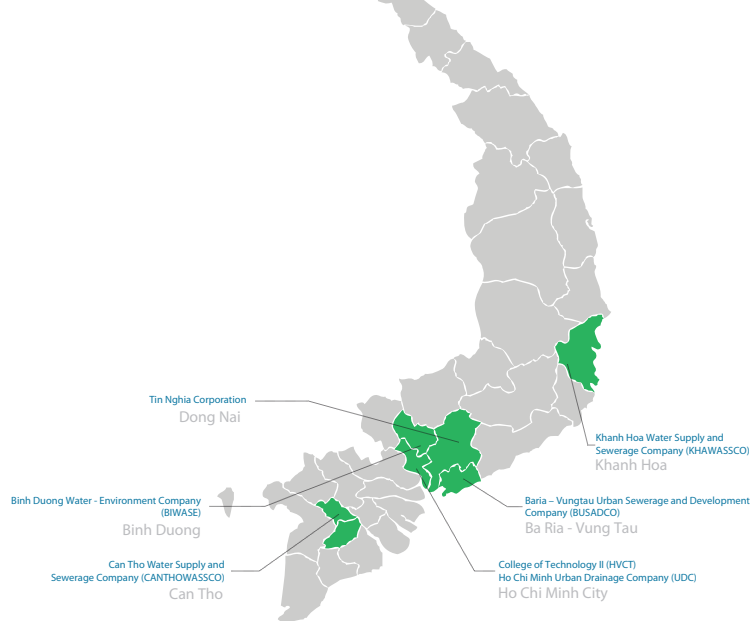
**SKILLED WORKERS FOR
THE WWS IN VIET NAM**

TVET for Skilled Workers in the Wastewater Sector

In order to ensure that graduates of technical and vocational education and training (TVET) programmes possess exactly the skills that employers require, the active participation of the business sector in TVET is crucial. 'TVET for Skilled Workers in the Wastewater Sector' supports the Vietnamese Government in developing and piloting demand-driven and practice-oriented TVET programmes for the wastewater sector and thus ensuring the employability of the graduates.

The cooperative training programme for 'Sewage Engineering Technicians' is one of the very first examples of a close cooperation of a vocational college, Vietnamese enterprises and a sector association in the development and implementation of a training programme.

Since November 2015, the pilot class for 22 trainees has been jointly implemented by the College of Technology II (HVCT) and five sewage enterprises.



More Information

'TVET for Skilled Workers in the Wastewater Sector' is an activity field of the Vietnamese-German 'Programme Reform of Technical and Vocational Education and Training (TVET) in Viet Nam' implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

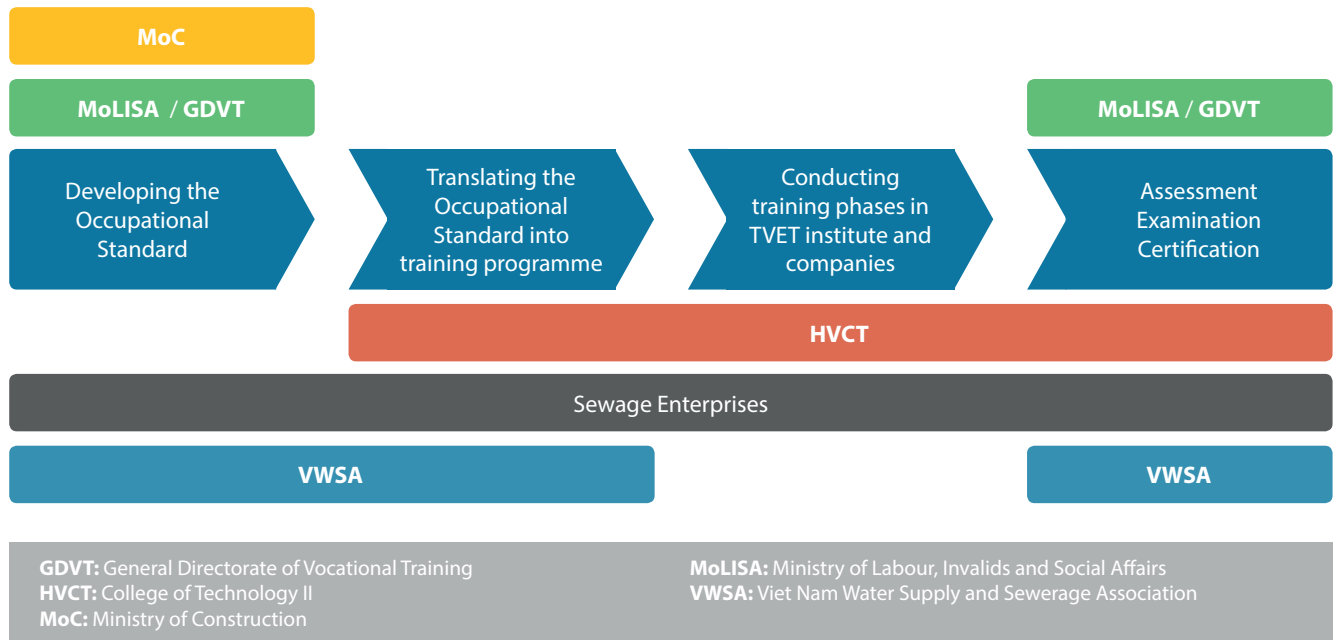


The Cooperative Training Model at a Glance

The objective of the cooperative training model is to create labour market oriented and practical vocational training, so that graduates are capable to satisfy the requirements of the enterprises and can get a job with a stable income, which ensures an improved quality of living.

In order to enhance the practicality of the training, companies are strongly involved in every decisive step of vocational training, such as developing the occupational standard, deriving the respective curriculum, as well as implementing training and conducting examination.

Trainees are being equipped with theoretical knowledge at a vocational college and the practical experiences through on-the-job training phases at a company – one of the success factors of TVET in Germany.



Only when businesses participate actively in important steps of vocational training, namely setting occupational standards, elaborating appropriate curricula, provision of in-company training phases as well as assessment and

certification, it is possible to build a strong workforce of well-trained technicians, whose professional knowledge and skills meet the demands of the business sector.



INITIAL RESULTS

Improved Competences of TVET Teachers and In-Company Trainers

In order to ensure the high quality of the new training programme, 25 vocational college teachers and in-company trainers have participated in an intensive practice-oriented qualification programme since 2014, including professional and pedagogical advanced training courses provided by GIZ and practical German experts. The teachers and in-company trainers have improved their theoretical knowledge, practical and pedagogical skills, as well as examination skills based on the German standard. Furthermore, school management staff was coached on how to organise, coordinate and implement the new cooperative training programme.



"The further training courses give me a chance to gain practical knowledge and skills, as well as to learn a professional working attitude from German companies and colleges."

Nguyen Xuan Thanh Nam,
Teacher at College of Technology II

"In the beginning I was confused with the new training model but now, with the intensive support from the German in-company trainers, I really enjoy passing on my experience and passion for our occupation to the young trainees."

Truong Thi Thu Thao, In-Company Trainer
at Binh Duong Water - Environment Company (BIWASE)





Development of a demand- and practice-oriented Occupational Standard

The occupational standard of the 'Sewage Engineering Technicians' was successfully developed based on the German standard with adaption to the Vietnamese reality. The standard defines major duties and tasks, typical tools and equipment used for performing them as well as main required occupational skills, knowledge and work attitude.

Crucial for this achievement was the proactive leading role of the Viet Nam Water Supply and Sewerage Association (VWSA) in coordinating and working together with sewage companies in order to build up the occupational standard. In the near future, the developed occupational standard will serve as reference for the assessment conducted in close cooperation among the TVET institute, VWSA, and enterprises.



"It was the first time that VWSA and its member enterprises had the opportunity to raise their voice regarding their realistic requirements on professional competence and skills."

Cao Lai Quang, Chairman of Viet Nam Water Supply and Sewerage Association, former Vice Minister of Construction

Joint Development and Implementation of the Modular Training Programme

The curriculum was derived from the jointly developed occupational standard. 30 theoretical and practical training modules are spread over three years in interlinked training phases at the TVET institute and the companies.

In the first year, 22 pilot class trainees completed two in-company training phases (total of two months) at wastewater treatment plants. By performing concrete tasks in a real working environment under the meticulous guidance of the in-company trainers, the trainees rapidly and comprehensively obtained practical knowledge and skills.

The training phases both at the college and in the companies include coaching for the trainees on the working attitude and appropriate behaviour (e.g. soft skills and occupational safety), which help them to be aware of the challenges and requirements of the occupation and to be well prepared for their future job. All five companies are providing financial support for the trainees to cover transportation and accommodation cost during the in-company training phases, which also shows their increasing interest and willingness to invest in the future technical workforce.





"The in-company training phases make me feel that I am a real technician, who works in a real environment with real tasks and duties. I have collected, in a more active way, a lot of valuable practical knowledge and experiences from enthusiastic in-company trainers. Hence, I can understand and remember them more comprehensively. I think my passion for this occupation has gradually increased."

Nguyen Thi Nhan, Trainee of the cooperative training programme for Sewage Engineering Technicians



"Thanks to in-company training phases I have the chance to work in different sewage companies, which allows me to get to know different techniques. Our in-company trainers not only transferred practical professional knowledge but also made us aware of the challenges of this occupation, so that we are better prepared for the future job."

Nguyen Thai Phuong, Trainee of the cooperative training programme for Sewage Engineering Technicians

"Cooperation with sector associations and enterprises is a vital matter for our college in order to establish demand-oriented training offers."

Dr Nguyen Thi Hang, Rector of College of Technology II



Close Cooperation of all Relevant Actors

Throughout the process of the joint development and planning of conceptual preconditions for the training programme, the collaboration among HVCT, VWSA and the five partner companies has been significantly improved and gradually became closer and stronger. A cooperation agreement was signed by the relevant actors from the state and the business sector to regulate the roles, tasks, collaboration and coordination of all main stakeholders in piloting the cooperative vocational training programme for Sewage Engineering Technicians.



"Participating in this cooperative training programme brings our company many practical benefits. First of all, we have the opportunity to directly participate in the training process of our future technical workforce. After the graduation of the trainees, we are privileged to recruit the best graduates, who surely will contribute to the company effectively. So we are always ready and willing to receive more trainees at our company."

Hoang Thi Minh Trang, Director of the Wastewater Treatment Plant Rach Ba, Ba Ria - Vung Tau Urban Drainage and Development Company





SUCCESS FACTORS

1 Piloting the cooperative training programme by focusing on a specific industry

2 Joint development of the occupational standard taking into account the needs of the business sector

3 Proactive leading role of the Viet Nam Water Supply and Sewerage Association (VWSA) in coordinating and working together with sewage companies

4 Comprehensive capacity development approach: intensive practice-oriented further training for teachers and in-company trainers, advisory on occupational standard development, training programme implementation, assessment and certification

5 Organisation of regular exchange among stakeholders at all levels, formalisation of procedures to take joint decisions

6 Commitment, capacities and resources by all stakeholders needed, especially the flexibility of the TVET institute in developing and adapting the training plan to bring it in line with the production plans of enterprises

7 Involvement of all relevant stakeholders from the business sector and government bodies in order to upscale experiences nationwide



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