

GENDER EQUALITY IN THE WATER SUPPLY & SEWERAGE ENTERPRISES AFTER EQUITIZATION IN VIETNAM

**DEVELOPING WATER SUPPLY
AND SANITATION SECTORS IN VIETNAM
THROUGH NEW PARTNERSHIPS PROJECT**

Hanoi, December 2020



**DEVELOPING WATER SUPPLY AND SANITATION SECTORS
IN VIETNAM THROUGH NEW PARTNERSHIPS PROJECT**

**GENDER EQUALITY IN THE
WATER SUPPLY & SEWERAGE
ENTERPRISES AFTER
EQUITIZATION IN VIETNAM**

EDITORIAL BOARD:

Asso-Prof.Dr. Vu Thi Vinh (chief)

Asso-Prof.Dr Nguyen Ngoc Dung

Msc. Than Dinh Vinh

PREFACE

The “Developing the Water and Sanitation Sector in Vietnam through New Partnerships” project has been implemented by Vietnam Water Supply and Sewerage Association (VWSA) and Finnish Water Forum (FWF). The project was funded by the Government of the Republic of Finland to start in March 2017 and to finish in December 2020.

Main outcomes of the project: (1) Performance of VWSA is enhanced in the context of equitization. (2) The network of VWSA and its collaborators are enlarged. (3) Pilot utility development programs are successfully implemented through supporting 02 pilot member utilities in development and implementation of Strategic Business Development Plans toward sustainability. (4) Service quality and operation indicators of VWSA’s members are improved through popularization, replication, experience sharing and application.

Gender issues have been receiving the attention of various levels, branches and in different fields. Gender issues have been focused to integrate in socio-economic activities, developing programs and projects, production and business. Different scales of various seminars and workshops on gender issues have been organized.

The Water sector in Vietnam is under equitizing process. In order to draw attention of authorities concerned on gender issues after equitization, the project commissioned a study on “Gender equality in the water supply and sewerage enterprises after equitization in Vietnam”.

The study was carried out by a team of competent, qualified and experienced experts. The study has presented an overall picture related to gender equality of the enterprises performance after equitization, and proposed valuable recommendations.

On compilation and publication of the results of study, VWSA would like to appreciate the Government of the Republic of Finland for sponsoring the project, and the close cooperation of FWF in implementing the project and publishing the book. We would also thank the team of experts, led by Associate Professor Dr. Vu Thi Vinh who compiled and edited the book.

**ON BEHALF OF VIETNAM WATER SUPPLY
AND SEWERAGE ASSOCIATION
VICE CHAIRMAN - SECRETARY GENERAL
Associate Professor Dr. Nguyen Hong Tien**

TABLE OF CONTENTS

1. INTRODUCTION.....	10
1.1. Overview of current studies on gender in the water sector in Vietnam	10
1.2. Research objectives	11
1.3. Research object and scope	11
1.4. Methodology.	11
1.5. Legal rationale of a gender equality related research	12
2. ANALYSIS OF THE CONTEXT	14
2.1. Some concepts relating to the research.	14
2.1.1. Some gender concepts.....	14
2.1.2. Definition of the equitization of state-owned enterprises.....	15
2.1.3. Sustainable Development Goals and 2030 Agenda for sustainable development relating to gender equality.....	16
2.1.4. Implementation plan of the 2030 of Vietnam Government (Decision No.622/QĐ-TTg dated May 10 th 2017)	19
2.2. Situation of the enterprise equitization in water sector in Vietnam . 20	
2.2.1. Objectives of the equitization of businesses in the water sector.....	21
2.2.2. Common situation of the equitization in the water sector	21
2.2.3. Limitations and difficulties	22
3. RESEARCH'S RESULTS	24
3.1. Overview on gender in the water sector in Vietnam	24
3.1.1. Role of water consumers.....	24
3.1.2. Roles of man and woman in the water sector	25
3.1.3. Risk of gender inequality.	27
3.2. Results of the survey on gender in the water sector before and after equitization.	28
3.2.1. Introduction to enterprises in the water sector.....	28
3.2.2. Qualification, management and training capacity of female/male labour in enterprises before and after equitization.	39
3.2.3. Female labour's health in enterprises after equitization	47
3.2.4. The level of interest in employees of enterprise leaders after equitization	48
3.3. Human right based approach to water supply in Vietnam.	51
3.3.1. Introduction	51
3.3.2. Water, human right, roles and responsibilities of the enterprises.....	52
3.3.3. Results of the survey in Phu Tho Water Supply JSC. and Binh Duong Water Supply and Environment JSC.....	53

4. CONCLUSION	57
5. RECOMMENDATIONS	60
5.1. About capacity building in terms of professional aspects and leadership management	60
5.2. Recommendations for next steps.	60

LIST OF FIGURES

Figure 2.1: Water with girls and boys.....	18
Figure 3.1: Types of enterprises.....	29
Figure 3.2: Time of equitization.....	29
Figure 3.3: Proportion of state capital in enterprises in the water sector.....	30
Figure 3.4: Operation fields and Percentage (%) of enterprises in each field	32
Figure 3.5: Chairpersons of BOD and CEOs in enterprises of the water sector	33
Figure 3.6: Qualifications of female labour in enterprises before and after equitization (%).....	41
Figure 3.7: Average rate (%) of female leaders after equitization.....	43
Figure 3.8: The training and capacity building for female labour after equitization (%).....	45
Figure 3.9: Training need for women after equitization (%).....	47
Figure 3.10: Health of female labour in interprises (%).....	48

LIST OF TABLES

Table 2.1: Differences between Gender and Sex [2]	14
Table 3.1: Type of enterprises.....	29
Table 3.2: Equitization time of enterprises	29
Table 3.3: Summary of state-own capital proportion	30
Table 3.4: Operation fields of enterprises in the water sector	31
Table 3.5: Chairpersons of Board of Directors and CEOs of enterprises.....	32
Table 3.6: Female and male labour in 34 enterprises before and after equitization	34
Table 3.7: Proportion of indirect female labour.....	34
Table 3.8: Average income and female labour and male labour before and after equitization.....	36
Table 3.9: Average income of female labour in four companies led by female BOD Chairpersons and CEOs.....	37
Table 3.10: Nature of female labour’s employment in enterprises (%)......	38
Table 3.11: Qualifications of female labour before and after equitization.....	39
Table 3.12: Women’s management, leadership and operation capacity after equitization	42
Table 3.13: Training and capacity building for female labour after equitization	44
Table 3.14: Training needs for women after equitization.....	46
Table 3.15: Female labour’s health in enterprises	47
Table 3.16: Enterprise leaders’ interest in living standards of female labour in the enterprises.....	48
Table 3.17: Enterprise leaders’ care about health of female labour in the enterprises.....	49
Table 3.18: Enterprise leaders’ care about cultural life of female labour in the enterprises.....	49
Table 3.19: Enterprise leaders’ interest in capacity building for female labour in the enterprises	50

ABBREVIATIONS

APEC	:	Asia-Pacific Economic Cooperation Forum
BIWASE		Binh Duong Water Supply and Environment Joint Stock Company
BOO	:	Building-Own-Operate
BOD	:	Board of Directors
BOT	:	Building-Operate-Transfer
CEO	:	Chief Executive Officer
HCMC	:	Ho Chi Minh City
JSC.	:	Joint Stock Company
MDGs	:	Millennium Development Goals
MOC	:	Ministry of Construction
SDGs	:	Sustainable Development Goals
SOE	:	State-owned enterprise
UN	:	United Nations
VWSA	:	Vietnam Water Supply & Sewerage Association
WaSaPa	:	Development of water and sanitation sector in Vietnam through new Partnerships

1. INTRODUCTION

1.1. Overview of current studies on gender in the water sector in Vietnam

The project "Development of water and sanitation sector in Vietnam through new Partnerships" (WaSaPa) between the Finnish Water Forum and the Vietnam Water Supply and Sewerage Association has been implemented for nearly three years with four basic goals: Improve the operation quality and communication activities of the Association office; Expand international cooperation, attract members and improve the service quality. As an activity in 2019 of the WaSaPa project, the research topic on gender equality in the water sector after the equitization aims to provide an analysis of how to best combine gender equality in the water sector in the context of equitization.

In the 1980s, the Commission for Women's Studies of Vietnam Women's Union Central Committee was established which is considered as the first organization doing researches on Gender and development. International cooperation helps to boost the gender development in Vietnam. However, researches on gender equality still focus on hunger elimination and poverty reduction in agriculture and rural area. In 2000, the Project on Urban Management in Vietnam cooperated between Hanoi Architectural University and the University of Montreal did a study on Gender with urban development which focuses on Gender with greenery structure, Gender with solid waste management and environmental sanitation, Gender and urban housing, not water supply & sewerage field.

In the field of water supply and sewerage, the Australia-Vietnam workshop on connecting women's role in the water sector was co-organized by Vietnam Water Supply and Sewerage Association (VWSA) and Australian Water Association on 7 November 2017. The workshop's purpose is to promote gender equality in the water sector in order to enhance women's role in water sector management and employment.¹ This can be seen as a starting point for concerns to gender equality in the water sector in Vietnam.

In 2019, a study on Gender equality in post-equitized enterprises in the water

¹ Enhancing female employees in water supply sector on 8 November 2017.

sector is conducted by the Developing the Water and Sanitation Sectors of Vietnam through New Partnerships (WaSaPa) with support of Finnish Water Forum. It is planned to build capacity for VWSA and its subsidiaries in developing the water sector. The field survey in two companies of Phu Tho Water supply JSC. and BIWASE helps to understand more about water supply services to citizens.

1.2. Research objectives

The research aims to provide an analysis on how to integrate gender equality in the context of equitization in Vietnam. The research includes a overall study on gender equality in members of VWSA in the equitization context with focus on two cases of Phu Tho Water Supply Joint Stock Company and BIWASE to give lessons learnt on gender equality in the context of equitization of the water sector in Vietnam. The main research question is how to ensure gender equality basing on approach of future development of water sector in Vietnam.

The research includes analysis on gender role and evaluation of gender-based approach applied in the water sector during its equitization process. The research's priorities are:

- (i) Evaluating impact of equitization in gender equality in the view of gender equality approach to water supply and sewerage services in Vietnam by studying secondary data and consultation of stakeholders in water sector enterprises;
- (ii) Proposing how to promote gender equality based on water sector approach in the context of equitization;
- (iii) Identifying needs for next steps.

1.3. Research object and scope

- *Research object.* Focusing on gender equality in water sector enterprises after equitization.
- *Research scope.* Water sector enterprises are members of Vietnam Water Supply and Sewerage Association. In addition, two companies of BIWASE and Phu Tho Water Supply Joint Stock Company are studied in depth.

1.4. Methodology.

In order to achieve three above objectives, the following methodology is applied by the consultant:

- ***Data collection method.***

Collecting available documents about equalization of businesses in water supply sector and gender issues which were studied by VWSA in the past.

- ***Survey method.***

This is a fundamental method used for studies in different sectors. Below activities are carried out by the Consultant:

- A survey questionnaires is developed by the consultant in cooperation with VWSA and sent to water supply and sewerage companies (see Annex 1). The questionnaires are sent to 60 enterprises however only 34 of them send back their answers.
- Do survey and in-person discussion with two companies of Phu Tho Water Supply Company Jsc. and BIWASE for more information. It is proposed to have interviews with:
 - + Company leaders (both men and women)
 - + Both male and female staff
 - + Both male and female production workers

- ***Inheriting method.***

VWSA have several activities and professional studies which can be inherited by the Consultant for faster approach to new issues.

- ***Analysis and synthesis method.***

After completing questionnaire survey and field visits to the two companies, collected data is synthesized and analyzed for drafting report.

- ***Expertise method.***

VWSA is an organization of high qualified leaders and specialists, therefore, the consultant can get their comments and inputs at meetings and workshops for the best results and right direction of the research.

1.5. Legal rationale of a gender equality related research

It is regulated in the first Constitution of the Democratic Republic of Vietnam issued in 1946 that: “women are equal to men in every respect”, or “All citizens over 18 years of age without distinction of sex enjoy the right to vote...”. Then the Article 63 of the Constitution 1992 stated: All citizens

regardless of their sex have equal rights in all respects, political, economic, cultural, social and in family life. Any discrimination against women and violation of women's dignity are strictly prohibited”.

The Resolution of the 9th National Congress of the Communist Party Committee of Vietnam stated “For women, to properly obey the laws and policies on gender equality, vocational training, capacity building, knowledge enhancement; to have a mechanism and policies on women’s participation in leadership and managerial positions at all levels and sectors, maternal and child healthcare and protection, creating favourable conditions for women to well perform their motherhood, build a prosperous, equal, progressive and happy family”. Then the Resolution of the 10th National Congress of the “Capacity building in every respect and physical and spiritual life for gender equality. Creating favourable conditions for women to well perform their roles of a citizen, employee, mother, the first teacher of mankind”.

Based on the highest legal rationale of the Constitution and policies of the Communist Party Committee of Vietnam on gender equality, the Law on Gender equality was developed and approved by the National Assembly of Vietnam in 2006 for further institutionalization of gender equality rights.

Law on Gender equality no.73/2006/QH11 was approved by the 11th National Assembly of the Socialist Republic of Vietnam on 29 November 2006 which came into effect since July 1st, 2007. This Law regulates gender equality in Vietnam in respects of politics, economy and labour, education and training, public health, family and other fields.

The Article 6 of the Law on Gender equality regulates basic principles on gender equality, concretely: Man and woman are equal in all fields of social and family life; man and woman are not discriminated in terms of gender; the measures aimed at promoting gender equality are not considered the gender discrimination; policies aimed at protecting and supporting the mother are not considered gender discrimination; ensuring the gender mainstreaming in the process of development and implementation of laws; exercising gender equality is the responsibility of agencies, organizations, families and individuals.^[1]

It is desired that the Law on Gender equality helps to narrow gender gaps in

every field in general and water sector in particular.

2. ANALYSIS OF THE CONTEXT

2.1. Some concepts relating to the research.

2.1.1. Some gender concepts

a. Sex and Gender^{2,3}

It is interpreted in Article 5 of the Law on Gender equality that Sex indicates biological characteristics of man and woman. Gender indicates characteristics, position and role of a man and a woman in all social relationships.

These two concepts can be fully explained as follows:

Sex – In some documents using the term of gender, it indicates physiological difference between man and women (structure of hormone, chromosomes...). This difference mainly relates to reproductive process, concretely woman can give birth while man is one of indispensable factors in conceiving process.

Gender: is concepts, behaviours, relationships and correlation of social position of woman and man in a specific social context. *In other words, gender refers to difference between man and woman in a social perspective.*

Differences between Sex and Gender may be summarized in the Table 2.1

Table 2.1: Differences between Gender and Sex [2]

Sex	Gender
Indicates biological difference. Is popular and difficult to change. Is not impacted by history and culture.	Indicates social difference. Varies from different cultures. Is an important factor in the society and is impacted by historical and cultural factors.

The most important difference between Gender and Sex is that Sex cannot be changed, it is a born factor and similar in every region and nation. Gender can be changed though this change happens slowly and takes time, depends on our willing.

² Law on Gender equality

³ Gender in local economic development – product of the PMI-LED program funded by Canada – Asso-Prof.Dr. Vu Thi Vinh

b. Gender role^{4,5}

It refers to activities really carried out by man and woman in the family and society that often changes by time, conditions and context.

Gender role of man and woman is increasingly changing and interchangeable. Gender role includes:

Production role: includes works implemented by both man and woman in order to generate income in cash or in-kind.

Reproduction role: includes productive activities and those to maintain and regenerate labour power. This role not only includes childbirth but also taking care of children and other family members, as well as homework.

Community role: includes activities implemented by man and woman in community in order to maintain scarce resources of community such as natural resources, socio-economic infrastructure, etc.

*c. Gender equality*⁶

As interpreting in Article 5 of the Law on Gender equality: Gender equality indicates that man and woman have equal position and role; are given equal conditions and opportunities to develop their capacities for the development of the community, family and equally enjoy the achievement of that development.

The above viewpoint can be fully explained in different respects:

- Behaviors, viewpoints and different needs of woman and man are considered and evaluated equally;
- Rights, opportunities and responsibilities of woman and man do not depend on whether they were born as man or woman;
- Both woman and man are free to develop personal skill make decisions without any restriction of prejudice, gender roles and prejudices.

2.1.2. Definition of the equitization of state-owned enterprises⁷

⁴ Gender in local economic development – product of the PMI-LED program funded by Canada – Asso-Prof.Dr. Vu Thi Vinh

⁵ Guidelines on Gender equality and efficiency by UN Women Vietnam, GIZ and Care International in Vietnam 2017

⁶ Law on Gender equality and documents of PMI-LED program funded by FCM, Canada – Asso-Prof.Dr. Vu Thi Vinh

⁷ Equitization of state-owned enterprises in Vietnam – reality and solutions – National Economics

d. Definition

Equitization of a state-owned enterprise means that the State sells a part or all of its share value in the enterprise to domestic or foreign individuals or organizations, or to managers, staff and workers of the enterprise, through public auction or stock market.

e. Objectives

According to the Resolution of the 3rd Central Committee of the Communist Party (10th term) and Decree No.187/2004/NĐ-CP dated November 16th, 2004 by the Central Government on conversion of stated-owned companies into shareholding companies, in addition to mobilizing social capital for financial capacity strengthening, equitization aims to efficient use of state capital and assets, increase of competitiveness of state-owned enterprises and economy in general through change of ownership structure, to create new motivation and convert state-owned companies into a more dynamic and closer management method.

f. Nature of equitization

Equitization is a process of: re-identifying goals, business orientation, needs of charter capital, share division, re-evaluating of business assets, deciding the State's proportion of charter capital and public offering of the rest proportion. This process makes changes in ownership structure, raises fund, identifies business owners and profit receivers, shifts state-owned companies into joint-stock companies which belong to group of shareholders and are run in line with Law on enterprises. In a joint-stock company, basing on the divided charter capital, rights and responsibilities relating to business and production results are also divided into shares corresponding to ownership structure.

2.1.3. Sustainable Development Goals and 2030 Agenda for sustainable development relating to gender equality

g. Sustainable Development Goals:

In 2000, the Millenium Development Goals (MDGs) with 8 goals to be achieved by 2015 were agreed by the United Nations (UN) and its 189 member

nations. These goals were recorded in the UN Millenium Declaration at the Millenium Summit which was taken place on 6-8 September 2000 at the headquater of the UN General Assembly in New York, the United States of America.

There are several achievements and changes in development after 15 years of MDG implementation. However, nations all over the world target to sustainable development, not development at all cost.

The 2030 Agenda for sustainable development (Agenda 2030) was approved by 154 UN member nations at the 70th meetings of the United Nations organized in New York on 25-27/9/2015. The Agenda includes 17 general goals with 169 associated targets and 232 indicators for sustainable development.

Two of 17 sustainable development goals are those relating to gender, women and children in terms of clean water supply and environmental sanitation, Goal 5 and Goal 6.

** SDG Goal 5: Achieve gender equality and empower all women and girls.*

Here are details of the Goal 5:

- End all forms of discrimination against all women and girls everywhere.
- Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
- Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation.
- Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate.
- Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.
- Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development

and the Beijing Platform for Action and the outcome documents of their review conferences.

+ Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws

+ Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

+ Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

Therefore, Goal 5 covers many issues which positively impacts to women's equality in every respect.

* SDG Goal 6: Ensure availability and sustainable management of water and sanitation for all.



Figure 2.1: Water with girls and boys⁸

The Goal 6 includes six associated targets from Target 6.1 to target 6.6, concretely:

Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all (Global target 6.1).

⁸ Issuing a National Action Plan on implementation of the 2030 Agenda for Sustainable Development - May 16, 2017 - Department of Water Resources Management - Ministry of Natural Resources and Environment.

Target 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations; 100% households have hygienic latrines (Global target 6.2).

Target 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials resulted from industrial, agricultural and aquacultural production making water pollution and biodiversity reduction; treating all toxic wastewater; halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally (Global target 6.3).

Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity. Ensure exploitation of water does not exceed exploiting limit of rivers and exploitable reserves of aquifers (Global target 6.4).

Target 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate (Global target 6.5).

Target 6.6: By 2020, protect and restore water-related ecosystems (Global target 6.6).

2.1.4. Implementation plan of the 2030 of Vietnam Government (Decision No.622/QĐ-TTg dated May 10th 2017)

Decision No.622/QĐ-TTg was issued by Prime Minister Nguyen Xuan Phuc on May 10th, 2017 promulgating the National action plan for the implementation of the 2030 sustainable development agenda.

Vietnam set 17 sustainable development goals to 2030 (with 115 associated targets).

1. End all forms of poverty everywhere i;
2. Eliminate hunger, ensure food security, improve nutrition and promote sustainable agricultural development ;
3. Ensure a healthy life and enhance welfare for all citizens in all age groups;
4. Ensure a quality, equitable, and inclusive education and promote life-long

learning opportunities for all;

5. Achieve gender equality; empower and create enabling opportunities for women and girls;

6. Ensure availability and sustainable management of water and sanitation for all;

7. Ensure access to sustainable, reliable and affordable energy sources for all citizens;

8. Ensure sustainable, comprehensive and continuous economic growth; and generate full, productive and decent employment for all citizens ;

9. Develop a highly resilient infrastructure; promote inclusive and sustainable industrialization; and promote renovation;

10. Reduce social inequalities;

11. Promote sustainable, resilient urban and rural development; ensure safe living and working environments; ensure a reasonable distribution of population and workforce by region;

12. Ensure sustainable production and consumption;

13. Respond in a timely and effective manner to climate change and natural disasters;

14. Sustainably conserve and utilize the ocean, the sea and marine resources for sustainable development;

15. Sustainably protect and develop forests; conserve biodiversity; develop eco-system services; combat desertification; prevent the degradation of and rehabilitate soil resources;

16. Promote a peaceful, democratic, just, equitable and civilized society for sustainable development; ensure access to justice for all citizens; develop effective, accountable and participatory institutions at all levels;

17. Strengthen implementation modalities and promote global partnerships for sustainable development.

In which, Goals 5 and 6 are the same with UN SDGs.

2.2. Situation of the enterprise equitization in water sector in Vietnam⁹

⁹ Evaluation report on equitization results of urban daily water supply field, 11/2017

2.2.1. Objectives of the equitization of businesses in the water sector

Equitization of state-owned enterprises (SOE) in general and water supply & sewerage enterprises in particular is a great policy of the Party and the State, it is considered as a core step in process of state-owned enterprise reform and restructure in order to create favourable conditions to reasonably exploit, mobilize and use social resources; create competitive motivations for promoting business and production performance, improve competitiveness, survive and develop sustainably in the market economy mechanism.

2.2.2. Common situation of the equitization in the water sector

According to the report on equitization of urban water supply and sewerage sector in November 2017, the equitization of water sector enterprises is divided into two types:

a. For urban water supply area:

As of September 2017, there are 111 enterprises working in the area of urban clean water production and supply with total design capacity of over 8.3million m³/day (in which, 22 enterprises work in the field of constructing and operating water supply plants; 68 enterprises work in the field of water production, transportation and distribution), 1 million m³/day higher than the figure of 2014 and 1.8 million m³/day higher than those of 2011. Total length of pipelines of water transportation and distribution is about 25,000 km nationwide; meeting the water demand of 84.5% urban population, an increase of 3% compared to 2014 and 7% compared to 2011 (in which, over 90% of cities class III upwards are covered by water supply. This figure is 75% in class-IV cities and 65% in class-V cities.(1)

The rate of water leakage and loss in urban areas is about 23%, decrease of 7% in comparison with 2010.

Water supply companies started their equitization process since 2005. There are about 10 provincial/city companies which are not equitized yet (accounting for 9% of water supply companies), of which, two big companies of SAWACO – Ho Chi Minh city and HAWACOM – Hanoi are not fully equitize, just their service supply factories (distribution and service network) only. After equitization, the proportion of the State-owned shares in clean water companies is different: The State holds no share in 6 companies (100% of divestment);

the State's shares account for less than 50% in some equitized companies, more than 51% in some others, and even more than 90% of shares in some companies. Some companies have foreign investors, for example, Malina Water Investor holds 49% shares of Thu Duc Water BOO Joint Stock Company and 47% shares of Kinh Dong Water Supply Joint Stock Company.

b. For urban drainage and wastewater treatment area:

As of September 2017, there are 71 enterprises working in drainage area (inclusive of urban environmental sanitation companies), 69 urban wastewater treatment factories with total design capacity of 2,315,150 m³/day-night, in which 41 urban wastewater treatment factories are being operated with total capacity of 950,000 m³/day, 28 factories are under construction or test operation with total design capacity of 1.375.000 m³/day. Up to now, 21/63 provinces/cities and most of class-IV and V cities haven't had projects on household wastewater collection and treatment.

Enterprises in sewerage sector start their equitization process later and face more difficulties, especially in term of finance in comparison with the water sector.

It is regulated in Decree No.53/2020/ND-CP, most of households only pay environmental protection fee to sewerage which is equal to 10% of their clean water consumption price, the deficit will be covered by the State budget (about 60-70% operational expenditure of sewerage companies). Therefore, their equitization is not attractive. However, among 71 sewerage enterprises, 23 enterprises are one-member limited liability companies with full State ownership; 39 enterprises have been equitized with the State's shares of over 50%; 3 enterprises are invested in the form of BOT and BOO.

2.2.3. Limitations and difficulties¹⁰

A survey on situation of water supply companies was carried out by VWSA in 2017 showing that there are still some following difficulties and limitations in addition to results and achievements of equitization:

- Regulations on renovation are late issued, some of them are no longer appropriate with current situation of the water sector.

¹⁰ Equitization of water sector enterprises: Results and solutions – Asso-Prof.Dr. Nguyen Hong Tien – Former Director of Technical Infrastructure Agency, Vietnam Water supply & sewerage journal, 16/10/2018.

-
- There are inadequacies in evaluating enterprise's value;
 - The selection of strategic shareholders needs to have further consideration;
 - Water price is not rightly followed;
 - It is not clear in roles and responsibilities of the state management.

As a result, a research on impacts of those limitations on women working in the water sector should be carried out for an objective assessment.

3. RESEARCH'S RESULTS

3.1. Overview on gender in the water sector in Vietnam

3.1.1. Role of water consumers

At the conference on «Advancement and perspective of water: For a clean and healthy world» began the World Water Week in Stockholm, Sweden on August 18, 2016, the following messages were given:¹¹

- We all need water to survive however, clean water for women is more significant than water for drinking, cooking and irrigating. Women are often responsible for conserving enough water for daily activities of their family. Even when living condition is improved, women still have to go to a place far from their home to take water.

- Women are often responsible for raising their children, the elderly and sick people that make them at risk of being ill by bacterium. Therefore, basic hygiene and daily use of clean water are minimum but important conditions for women's health.

- Girls often face with more difficulties than boys if there is lack of clean toilets. That make girls lag behind the boys and give up their studies. It can be said that the improvement of clean water and sanitation contributes to the effort of dealing with inequality and can make positively social, political and economic impacts on women.

According to the report by the Vice Chairwoman of Vietnam Women's Union at the workshop on connecting women working in the water sector in November 2018 in HCMC, 35% of rural population lack of hygienic toilets, 15% of them don't have access to hygienic water, and 55% of them don't have access to clean water which meets the Vietnam standards QCVN02/2009 by Ministry of Health. Many women in rural and remote areas suffer from disadvantages in the life, including access to clean water as well as other difficulties such as unhygienic conditions, unsatisfactory living conditions and at risks of being ill. These figures imply a matter that it is needed to have more

¹¹ World Water Week, Stockholm 2016 – Department of Water Resources Management, Ministry of Natural Resources and Environment

policies on supporting women, especially rural women.

3.1.2. Roles of man and woman in the water sector

- For the role of producers

According to figures of VWSA, there are nearly 70,000 officials and employees working in the water supply and sewerage sector in all fields: from clean water production and business, drainage – wastewater treatment, production and trading of materials and equipment, technology transfer, design consultancy, construction contractors to managers, scientists, research institutes, training units, professors and senior experts.

At the workshop on gender equality in the water sector, Mr. Ung Quoc Dung, VWSA's Vice President said: the survey showed that female employees (many of them have university or higher qualifications) account for 32% of total employees of water sector enterprises and have contributed significantly to the development of the water sector.

- For the role of managers

The report at the workshop also indicates that women in the water sector still face with many difficulties and social prejudices. The number of successful women accounts for a very small proportion, there are only 7 women holding the position of Chairperson of Board of Directors and Chief Executive Officers (CEO) in 125 water sector enterprises. There is a strong transformation in the water sector relating to equitization along with the industrial revolution 4.0 that leads to risk of unemployment and difficulties in job finding for women, especially midde-aged women.¹²

In the context of rapid globalization and the 4th industrial revolution, gender equality topic is interested and discussed in several countries and international forums. Women have chances of access to high technology, advancement and social equity. The 4th industrial revolution makes the most of digitalization and information technology. This new technology wave varies in different countries worldwide but makes a strong and increasing impact on every aspect of socio-economic life that leads to changes in production force and method of the society. The 4th industrial revolution also brings challenges to some

¹² Report at the workshop on women in the water sector

industries and sectors, including the water sector.

In order to take opportunities and provide practical solutions on the most use of advantages as well as minimization of negative impacts of the 4th industrial revolution to Vietnam, many activities on smart water supply and drainage management have been organized by the Ministry of Construction (MOC), water sector enterprises and VWSA nationwide. The smart water supply and drainage management towards sustainable development is a big issue with interest of the whole society.

The water sector of Vietnam has been focusing on improving policies, attracting resources for investment, enhancing human resource quality, promoting the application of scientific and technical advances. Some leading enterprises in urban water supply have been applied smart water supply solutions towards the industrial revolution 4.0.

Achievements of the water sector are reflected in its increasing scope, capacity and service quality. Its expected targets and key objectives have been fully and exceedingly achieved. Concretely: As data provided by the Technical Infrastructure Agency, MOC, by July 2019, total design capacity of water supply plants has been increased by five times, from 1.67 million m³/day-night (in 1988) to 9.2 million m³/day-night. Proportion of urban population supplied with clean water is more than double, from 40% (in 1988) to 87% (in 2019). Proportion of leakage and loss of clean water decreases twice, from 40% (in 1988) to 21% (in 2019). Proportion of clean water leakage and loss of some water supply companies is less than 15%, the same to other water supply companies in the world. Water consumption per capita increases more than twice, from 50 litres/person/day-night (in 1988) to 110 litres/person/day-night (in 2019). 95% of rural population are provided with hygienic water, 94% of kindergartens and high schools and 96% of communal health stations have clean water works. There are two centralized wastewater treatment plants with total treatment capacity of 6,200 m³/day-night (in 2005) and 44 plants with total treatment capacity of nearly 1 million m³/day-night (in 2018).

Women have positive contribution to overall achievement of the water sector of Vietnam. Women in the water sector have demonstrated their roles, ability and creativity in every respect of their work and social life, adapt to integration

and common development trend of the mankind.

Therefore, it can be said that in the integration and development trend of the country, women in the water sector continue promoting and confirming their roles and positions in social development. The more the economy develops, the more women have chances which facilitate their's involvement in market economy. This is clearly shown in the equitization process of water sector enterprises, women still stand firm and promote their role in the renovation period.

3.1.3. Risk of gender inequality.

The risks of gender inequality in the water sector after equitization are shown in the following aspects:

- The reverse side of the industrial revolution 4.0 is the cause of inequality:

The industrial revolution 4.0 brings challenges to the water sector of Vietnam after equitization. Equitization of water sector enterprises bring opportunities to catch up with market oriented working environment. Risks can be seen that manual labour can be replaced by automatized systems. Low qualified employees and low-income employees will be impacted the most. The lower qualification level, the higher risk of replacement by automatic machines..

Male and female labour can only take advantage of chances from digital and integration era if they are well equipped and given equal opportunities of employment and business, as well as supported by equal and effective policies. This requires both female and male labour to adapt with new working environment, continuously study, build capacity, be active and creative in their work. The digital revolution in the context of on-going international integration will bring both positive and negative effects to Vietnam and other countries.

- *Backward traditional viewpoints and thought in the roles of men and women:*

There are still many limitations which need to be overcome in terms of gender equality, especially viewpoints and thought of both man and woman. The roles and position of women is not accepted and not correctly understood by not only men but also women themselves so they don't have right solutions

for problems relating to their gender role and position in their life. Gender inequality is still one of the main reasons leading to poverty and hunger and obstructing sustainable development. It is needed for women to be able to demonstrate their full capability, execute and enjoy their rights. Gender inequality brings a barrier to development and negative impacts on every member of the family and society.

- *Negative impacts of climate change to men and women in resource access:*

Natural disasters in the climate change context are unforecasted and extreme in both frequency and severity. Extreme impacts of climate changes like drought and big challenges such as urban population increase, limited budget, low management capacity, water pollution affect life of both men and women. Natural disasters and climate change have different effects to man and woman due to their different characteristics of gender, roles and responsibilities as well as gender inequality in approaches and management of resources.

It can be said that gender equality is not only meaningful to woman but also to social development. For women, gender equality makes their position changed, bring them opportunity to overcome constraints, try their best to contribute to development of the family and society. For society, gender equality contributes to social advance because people (both man and woman) are considered as targets and motivation of the development.

3.2. Results of the survey on gender in the water sector before and after equitization.

3.2.1. Introduction to enterprises in the water sector.

In order to understand about gender in the post-equitized water sector, the following information about enterprises are under consideration:

- Type of enterprises.
- Time of equitization
- State capital owned by enterprises
- Operation fields of enterprises
- Enterprise leaders

The survey's results are summarized in below tables:

a. About type of enterprises and equitization time.

The consultant team has cooperated with VWSA to send questionnaires to 60 water supply and sewerage companies and directly worked with 2 companies. 34/60 enterprises have feedbacks to VWSA. The collected data from those 34 enterprises shows types of enterprises and their equitization time which are detailed in the below tables 3.1 and 3.2.

Table 3.1: Type of enterprises

No.	Type of enterprises	Quantity	Percentage (%)
1	One-member limited liability company	1	2.94
2	Joint stock company	33	97.06
3	Private company	0	0

Table 3.2: Equitization time of enterprises

No.	Time of equitization	Quantity	Percentage (%)
1	Before 2010	6	18.18
2	From 2010 to 2015	16	48.48
3	After 2015	11	33.33

- Figure in the table 3.1 shows that number of joint stock companies accounts for over 97%. It means that joint stock companies account for a majority and follow the common trend on equitization of the State.
- Figure in the table 3.2 shows that nearly 49% of companies were equitized during period of 2010-2015, about 34% of them were equitized after 2015. Therefore, the equitization progress of enterprises in the water sector is in line with state's regulations.

The below figures 3.1 and 3.2 illustrated the types of enterprises and their equitization time.

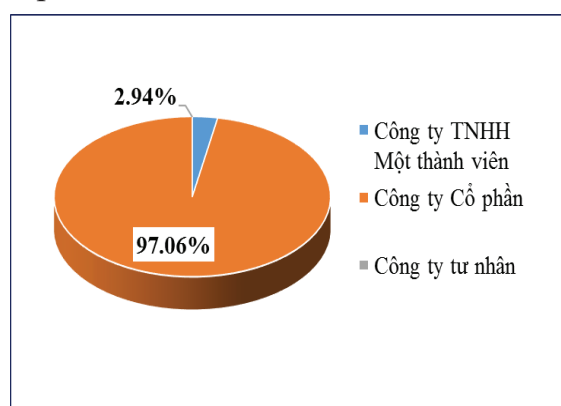


Figure 3.1: Types of enterprises

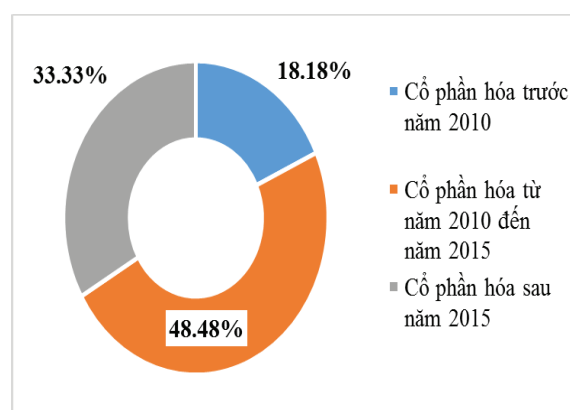


Figure 3.2: Time of equitization

b. About proportion of state-owned capital in enterprises

The proportion of state-owned capital shows the level of State's role in the operation and management of the enterprise. The survey results of 34 state-owned enterprises are shown in following table 3.3.

Table 3.3: Summary of state-own capital proportion

No.	Proportion of State-owned capital	Number of enterprises	Percentage (%)
1	$\leq 50\%$	11	34.38
2	$> 50\%$	21	65.62

The table 3.3 shows that:

- Nearly 66% of enterprises have over 50% of their capital acquired by the State.
- Over 34% of enterprises have less than half of their capital acquired by the State.

Therefore, State-owned enterprises accounts for a majority number because it is regulated that in case enterprises have 51% and above of their capital held by the State, their activities will be dominated by the State. It was planned by MOC to promote state capital divestment in 2018.¹³ Enterprises in the water sector should have further study on issue of decrease of state capital in their companies.

Proportion of state capital in 34 enterprises is illustrated in the below Figure 3.3:

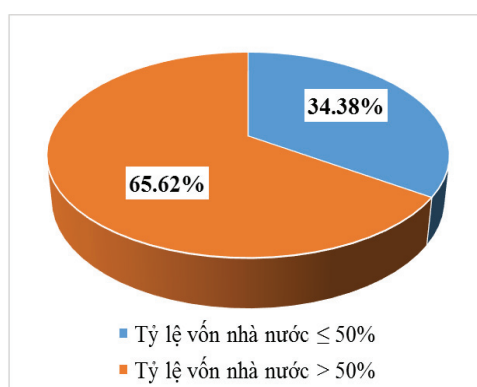


Figure 3.3: Proportion of state capital in enterprises in the water sector

¹³

c. Operation fields of enterprises

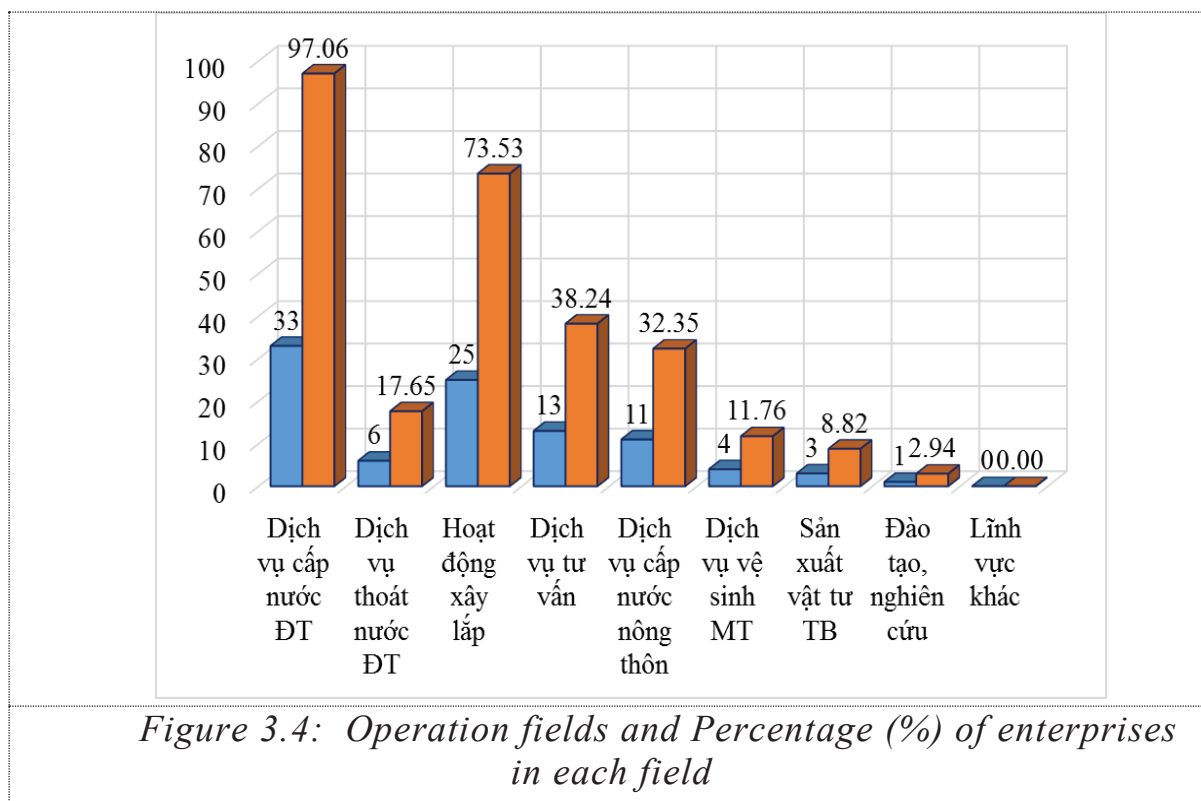
The survey results on the diversification in operation fields of enterprises are shown in table 3.4 as follows:

No.	Fields of operation	Number of enterprises	Percentage % (/34 enterprises)
1	Urban water supply service	33	97.06
2	Urban drainage service	6	17.65
3	Construction activities	25	73.53
4	Consultancy service	13	38.24
5	Rural water supply service	11	32.35
6	Environmental sanitation service	4	11.76
7	Production of materials and equipment	3	8.82
8	Training, researching	1	2.94
9	Other fields	0	0.00

The collected data shows the main operation field of the enterprises is urban water supply service which accounts for more than 97%, followed by construction activities with nearly 72%, consultancy service (34.38%) and rural water supply service (28.13%).

- There are about 15.63% of enterprises working on urban drainage such as Bac Kan Water supply and sewerage Joint Stock Company (JSC.), Tuyen Quang Water supply and sewerage JSC., Dak Nong Water supply and urban development JSC., Phu Yen Water supply and sewerage JSC., Binh Dinh Water supply and sewerage JSC., Binh Thuan Water supply and sewerage JSC. There is a little number of enterprises working in drainage field and most of them locate in the Northern mountainous region, Central Highlands and South Central region.

The operation fields of enterprises are illustrated in below Figure 3.4.



d. Enterprise leaders

Enterprise leaders including Chairpersons of Board of Directors (BOD) and CEOs are reviewed and shown in table 3.5

Table 3.5: Chairpersons of Board of Directors and CEOs of enterprises

No.	Enterprise leaders	Number of people	Percentage (%)
1	BOD Chairman	32	96.97
2	BOD Chairwoman	1	3.03
3	Male CEO	30	90.91
4	Female CEO	3	9.09

Figures in the table 3.5 show that there is one woman holding the position of Chairperson of BOD, accounting for 3.03%. That person is Ms. Nguyen Thi Hoa working for Hoa Binh Clean Water JSC.

There are only three female CEOs out of 34 persons, accounting for 9.09%. They are working for Phu Tho Water supply JSC. (Ms. Doan Thi Kim Quy), Tuyen Quang Water supply and sewerage JSC. (Ms. Nong Thi Song Van) and Dong Nai Water supply and sewerage JSC. (Ms. Pham Thi Hong). This shows the actual situation that there are a very few number of female business owners.

According to report at the conference “Policy dialogue on women and economy APEC 2017” organized in Hue on 26-29 September, proportion of female enterprise leaders is 25% comparing with 50% female labour in Vietnam. In comparison with the rate of 25% nationwide, the rates of 3.13% and 9.09% of the water sector is rather low. The rate of 25% is quite high because medium and small enterprises may be also taken into consideration. Enterprises in the water sector are often large with an average of 376 personnel per company, even more than 1,000 personnel such as Quang Ninh Clean Water JSC. with 1,128 employees and BIWASE with 1,033 employees.

Proportion of female enterprise leaders is illustrated in Figure 3.5.

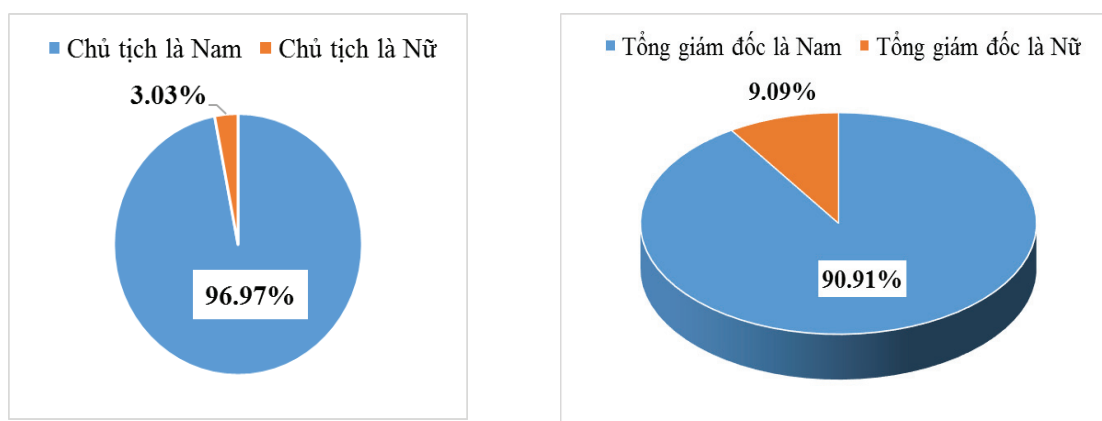


Figure 3.5: Chairpersons of BOD and CEOs in enterprises of the water sector

Human resource, income and employment of woman/man in enterprises before and after their equitization.

The survey focuses on female labour in order to evaluate gender equality in enterprises as follows:

- Female and male labour force before and after equitization.
- Income and man and woman before and after equitization
- Employment of man and woman before and after equitization.

e. Female and male labour force in enterprises before and after equitization.

The survey results of 34 enterprises on female and male labour before and after equitization are detailed in below table 3.6.

*Table 3.6: Female and male labour in 34 enterprises before and after
equitization*

No.	Pre-equitization			Post-equitization		
	Total labour in 34 enterprises (person)	Total female labour/male labour in 34 enterprises (person)	Percent age (%) of female labour/male labour	Total labour in 34 enterprises (person)	Total female labour/male labour in 34 enterprises (person)	Percentage of female labour (%)
Value	12140	4080/8060	33,61/66,39	13094	4673	35.69

The survey results in the table 3.6 on labour force of pre- and post-equitization are as follows:

- Number of total labour of post-equitized enterprises is higher than that of pre-equitized enterprises (13.094/12.140)
- There is an increase in number of female labour in post-equitized enterprises (4.673/4.080).
- Proportion of female labour comparing to male labour of post-equitized enterprises is also higher than before equitizing (35,69%/ 64, 31%) and (33,61/ 66,39).

Table 3.7 shows information about indirect female labour and direct female labour of pre- and post-equitized enterprises.

Table 3.7: Proportion of indirect female labour

Female labour force in enterprises		Unit	Value
Pre-equitization	Total female labour/Total male labour		4.080/ 8.060
	Total female labour	person	4.080
		Percentage (%)	33.61
	Indirect female labour	Person	1.436
		Percentage (%)	11.83

		Person	2338
	Direct female labour	Percentage (%)	19.26
	Total female labour/Total male labour		4673/ 8.421
Post-equitization	Total female labour	Person	4.673
		Percentage (%)	35.69
	Indirect female labour	Person	1.734
		Percentage (%)	13.24
	Direct female labour	Person	2.839
		Percentage (%)	21.68

Based on the nature of work performed by employees, labour force of an enterprise and its sections are divided into two types: Direct labour and indirect labour.

Direct labour are employees and workers who directly involve in the production of goods or services.

Indirect labour are those who direct, administer and manage business activities of enterprises.

The figure of indirect female labour of 34 enterprises in the table 3.7 shows that:

Proportion of female labour in enterprises before and after equitization are about 33 and 35% respectively which is lower than proportion of male labour of 66.39% and 64.31% respectively but it has a slight increase after equitization.

- There is an increase in the percentage of indirect female labour after equitization (13.24%) in comparison with that before equitizing (11.83%).
- There is an increase in the percentage of direct female labour after equitization (21.68%) in comparison with that before equitizing (19.26%).

f. Income and female labour and male labour in enterprises before and after

equitization.

The survey results on income of female and male labour in 34 enterprises are shown in table 3.8.

Table 3.8: Average income and female labour and male labour before and after equitization

No.	Enterprises	Average income of female/male labour (million VND/month)	
1	Pre-equitization	6.0 (female labour)	7.5 (male labour)
2	Post-equitization	8.2 (female labour)	10.3(male labour)

The table 3.8 on the income of woman and man shows that:

- Male labour's average income is VND 7.5 million and VND10.3 million before equitization and after equitization respectively. While these figures are VND 6.0 million and VND 8.5 million for female labour.

- In term of difference in average income of female labour and male labour: Before equitizing, there is a difference between income of female labour (VND 6.0 million) and male labour (VND 7.5 million). Woman's average income is equivalent to 85% of man's.

- After equitizing, there is still a difference between income of female labour (VND 8.2 million) and male labour (VND 10.3 million). Woman's average income accounts for 80% of man's. This difference seems to be higher, and average difference of female labour's income and male labour's income before equitization and after equitization is about 20%. This difference level is not high because: "Female labour earn 33% less on average than their male counterparts in all fields, with the biggest difference of 43% found in agriculture and foreign companies"¹⁴. It doesn't mean that the water sector does not need to promote for gender equality but gender equality should be cared regularly.

- Especially, in some companies, the monthly average income of female

¹⁴ Vietnam has one of the most progressive gender equality laws in Asia - Babeth Ngoc Han Lefur, Country Director of Oxfam in Vietnam, 9/2018

labour is only VND 3.2 million before equitization, and increases triple to VND 8.5 million after the companies are equitized such as Quang Ngai Water Supply Company and Thai Nguyen Water Supply Company (VND 2.27m/VND 7.2m.). Through discussion with leaders of the two companies, female labour's income is increased because labour's rights are coupled with their responsibilities, the situation of "leaving a work unfinished" or "hit-and-miss" no longer exists. On the other hand, technical renovation is implemented to reduce lost, create stable employment and increase revenue thanks to business growth.

- Income of female employees in companies led by Chairwomen of BOD and female CEOs is shown in table 3.9.

Table 3.9: Average income of female labour in four companies led by female BOD Chairpersons and CEOs

No.	Enterprise	Average income of female labour million (VND/month)	
1	Dong Nai Water Supply JSC.	10,4	12,0
2	Tuyen Quang Water Supply and Sewerage JSC.	7,84	8,0
3	Phu Tho Water Supply JSC.	8,2	13,0
4	Hoa Binh Clean Water JSC.	3,4	7,0

Monthly average income of labour in 34 post-equitized enterprises is VND8.2 million.

Based on the table 3.9, it can be said that:

- Income of female labour increases, even double after the companies are equitized.
- Income of female labour in two equitized companies of Phu Tho Water Supply JSC. (VND 13 million) and Dong Nai Water Supply JSC. (VND 12m.) is higher than an average income of VND 8.2m. of 34 enterprises. This is a really impressive figure.

g. Employment for women/men in the enterprises before and after equitization.

Reports on post equitization of different fields show that it is easier for men to have stable jobs than women. Therefore, the survey focuses on evaluation of employment for women.

The table 3.10 below shows the survey results on these issues.

Table 3.10: Nature of female labour's employment in enterprises (%)

No.	Employment nature		Average percentage (%)
1	Pre-equitization (%)	Women have stable jobs	100
2		Women have to work in shifts	5.28
3		Women have to work overtime (business' work)	0.63
4		Women have to work overtime (work outside the business)	0.36
5	Post-equitization (%)	Women have stable jobs	100
6		Women have to work in shifts	4.85
7		Women have to work overtime (business' work)	0.78
8		Women have to work overtime (work outside the business)	0.41

The survey results show that:

- All women (100%) have stable jobs. It is very important to ensure their family life.
- Before equitization implementation, number of female labour doing shift work accounts for 5.28% and it decreases to only 4.85% after companies are equitized.
- Percentage of women working overtime in business and outside the business is only 0.5% before the companies are equitized and slightly increases to 0.6% after the equitization is implemented. It is a very heartening thing because it was said by a member of the National Assembly, Mr. Cuong, that: Frankly, nobody wants to work overtime, every labour wants to have free time however, they must work overtime

for their bread and butter. We all want that our wages are enough to live on.”¹⁵

The in-depth survey in Phu Tho Water Supply JSC. and Binh Duong Water Supply and Environment JSC. shows the happiness of female labour about the company’s achievements. Living condition of both female and male employees is more stable and improved.

3.2.2. Qualification, management and training capacity of female/male labour in enterprises before and after equitization.

a. Qualifications of female labour in the pre-equitization and post-equitization period.

The survey was carried out with three groups of female labour with different educational background in order to assess qualification of female labour in water sector enterprises before and after equitization.

- Secondary school, high school, vocational training
- College or university qualifications
- Postgraduate qualifications.

The survey results are detailed in table 3.11

Table 3.11: Qualifications of female labour before and after equitization

No.	Female labour’s qualifications	Pre-equitization – average value (%)		Post-equitization – average value (%)	
		Total	Manager	Total	Manager
1	Completing secondary school, high school, vocational training	50,77	0,26	46,64	0,37
2	College or University qualifications	46,68	4,96	50,56	5,69
3	Postgraduate qualifications	0,19	0,04	0,65	0,06

The table 3.11 indicates that:

- *About secondary school, high school and vocational training leaving qualifications:* The average proportion of female labour with secondary school,

¹⁵ National Assembly members’ uneasiness about overtime working, 20/5/2019

high school and vocational training leaving qualifications is 50.77%, accounting for more than half of female labour in enterprises before equitization. This number is 46.64% after the equitization period (decrease by 4.13%); there is an average decrease of 6 female employees per enterprise after equitizing. There is a very few female labour with secondary school, high school and vocational training leaving qualifications holding managerial position, accounting for 0.26% before equitization and 0.37% in the post equitization period; there is an average of 5 female labour with secondary school, high school and vocational training leaving qualifications per enterprise holding managerial positions, mainly in mass organizations at grass root level.

- *About college and university qualifications:* The average proportion of female labour with college and university qualifications is 46.68% before equitization and 50.56% after equitization (increase by 3.88%); there is an average increase of 5 female employees having college and university qualifications per enterprise after equitizing. Female managers with college and university qualifications accounts for the highest proportion. Before equitization, average proportion of female managers is 4.96% (about 7.0 people) and 5.69% (about 8.0 people) after equitization. Most of women in this groups are leaders of departments, units, mass organizations and equivalent. Very few of them involve in Board of Directors and Board of Managers (as detailed analysis in the item 2.1 above).

- *About postgraduate qualifications:* Both female and male labour having postgraduate diplomas accounts for a very small proportion. Before equitization, there are 9 out of 34 surveyed enterprises having female labour with postgraduate qualifications, this number is 19 after equitization. Proportion of female labour having postgraduate qualifications is 0.19% and those holding managerial positions is 0.04% before equitization. Afer equitizing, proportion of female labour having postgraduate qualifications is 0.65% (0.9 female labour) and those holding managerial positions is 0.06%. Most of high qualified female labour do professional work, very few of them are business managers.

Here are comments about educational background of female labour in the enterprises before and after equitization:

After equitizing, number of female labour having secondary school, high school and vocational training qualification slightly decreases. Number of female labour with college, university and postgraduate qualifications increases in most of enterprises. However, in a comprehensive view, female and male labour in water sector enterprises are relatively stable after equitization. Qualifications of labour force in general and female labour in particular is gradually improved towards integration for implementing the industrial revolution 4.0 in the water sector of Vietnam.

- Some women with high qualifications (university and postgraduation) involved in managing enterprises and promoted their role in their managerial positions which can be seen more clearly in item 3.2.2.

The below figure 3.6 illustrates qualifications of female labour in enterprises before and after equitization at three levels as above analysis.

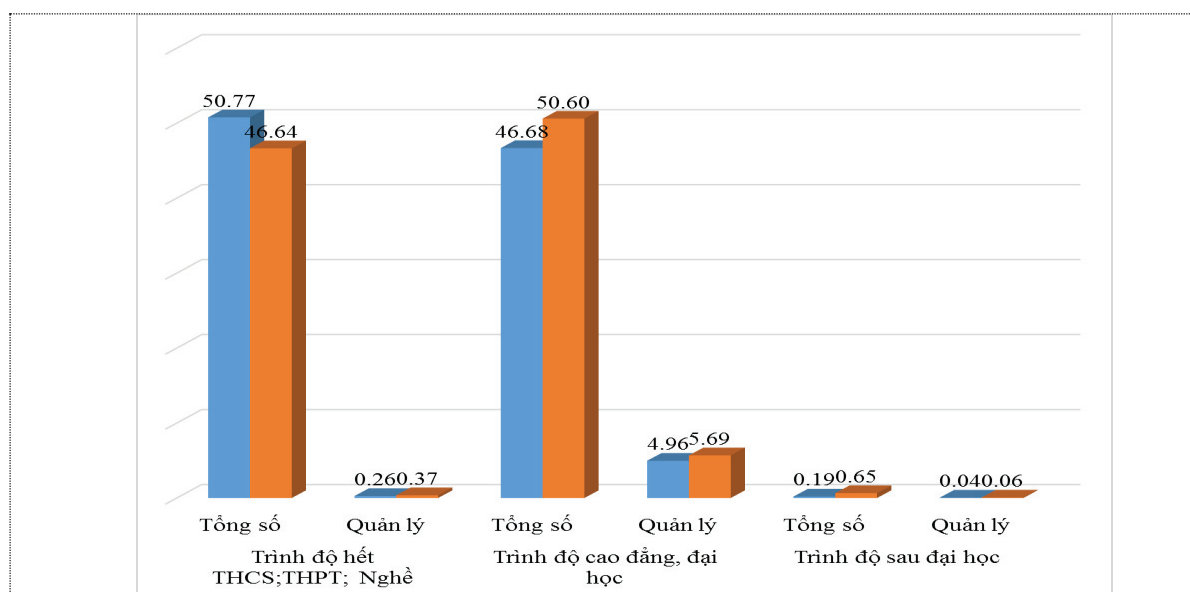


Figure 3.6 : Qualifications of female labour in enterprises before and after equitization (%)

b. Women’s management, leadership and operation capacity after equitization

In order to assess management, leadership and operation capacity of female labour in water sector enterprises before and after equitization, the survey was carried out in 7 groups of management field as follows:

- Women participate in the enterprise’s Party executive committee

- Women participate in the enterprise's BOD
- Women participate in the enterprise's Board of managers
- Women are leaders of enterprise's mass organizations
- Women are leaders of Party committee of business departments...
- Women are leaders of departments...
- Women are leaders of mass organizations of departments...

The survey results are summarized in table 3.12.

Table 3.12: Women's management, leadership and operation capacity after equitization

No.	Women's management fields	Average	
		Persons	%
1	Women participate in the enterprise's Party executive committee	1,03	0,73
2	Women participate in the enterprise's BOD	0,70	0,49
3	Women participate in the enterprise's Board of managers	0,27	0,19
4	Women are leaders of enterprise's mass organizations	2,76	1,95
5	Women are leaders of Party committee of business departments...	2,76	1,95
6	Women are leaders of departments	4,76	3,66
7	Women are leaders of mass organizations of departments...	4,42	3,12

The Table 3.12 indicates that:

- There is a very small proportion of women holding managerial and leadership positions of enterprise's **Party executive committees, BOD and Board of managers** after equitization. This proves that women are not yet competent or to be trusted in assigning important responsibilities in enterprises, especially when enterprises have been equitized.

- There is an increase in number of women holding managerial and leadership positions of **enterprise's mass organizations, party committees of**

departments however, this rate is still lower in comparison with enterprises in other sectors.

- The highest proportion (4.76%) is number of women holding managerial and leadership positions of **business departments, mass organizations of departments**. However, it is needed to have a plan on building leadership capacity for women in the water sector so that they can promote their strengths for enterprise’s sustainable development.

About the management, leadership and operation capacity of women after equitization: The total number of female leaders of all seven above groups is about 16 persons (15.7) per enterprise, accounting for an average percentage of 12.1% of leaders in each enterprise.

This rate is not high, therefore, it is needed to have a plan and itinerary on increasing proportion of female leaders in water sector enterprises with efficient solutions.

Below figure 3.7 provides a detailed illustration about the rate of female leaders in water sector enterprises after equitization:

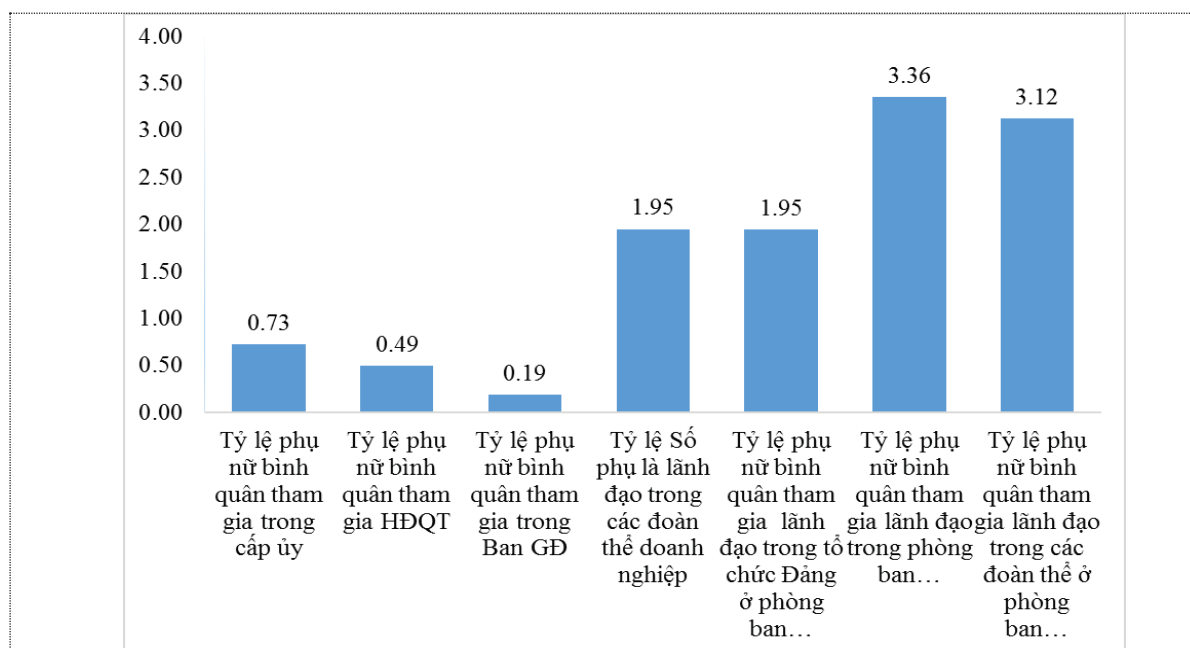


Figure 3.7: Average rate (%) of female leaders after equitization

c. Training and capacity building for women after equitization

Five following groups of training and capacity building were surveyed to

assess training and capacity building activities for female labour in water sector enterprises after equitization:

- Women are sent to vocational training and skills improvement courses
- Women are sent to college and university studies
- Women are sent to postgraduation studies
- Women are sent to short training courses
- Women are sent to overseas study tours on the water sector.

The survey results are summarized in table 3.13:

Table 3.13: Training and capacity building for female labour after equitization

No.	Women's training levels after equitization	Average	
		Persons	%
1	Women are sent to vocational training and skills improvement courses	12,88	8,82
2	Women are sent to college and university studies	2,41	1,65
3	Women are sent to postgraduation studies	0,16	0,11
4	Women are sent to short training courses	14,19	9,72
5	Women are sent to overseas study tours on the water sector	1,97	1,35

The table 3.13 shows that:

- Two groups with the highest average percentage in one enterprise are groups of vocational training and skills improvement (8.82%, equivalent to nearly 13 women), and short training courses (9.72%, equivalent to about 14 women).
- Two groups with a low average percentage in one enterprise are groups of college and university studies (1.65%, equivalent to about 2 women), and overseas study tours on the water sector (1.35%, equivalent to nearly 2 women).
- Group of postgraduation studies is the lowest (0.11%, equivalent to 0.16 women per enterprise). It means that there is only one of six enterprises sending female labour to postgraduation studies.

About the training and capacity building activities for women after equitization:

- After equitization, most of enterprises give priority to low qualified female labour and send them to vocational training and skills improvement courses to meet the needs of their current labour force.
- Enterprises are interested in sending female labour to short training courses or organizing tailored training for professional knowledge and working skills improvement in the period of post-equitization.

The training and capacity building for female labour after equitization is illustrated in below figure 3.8:

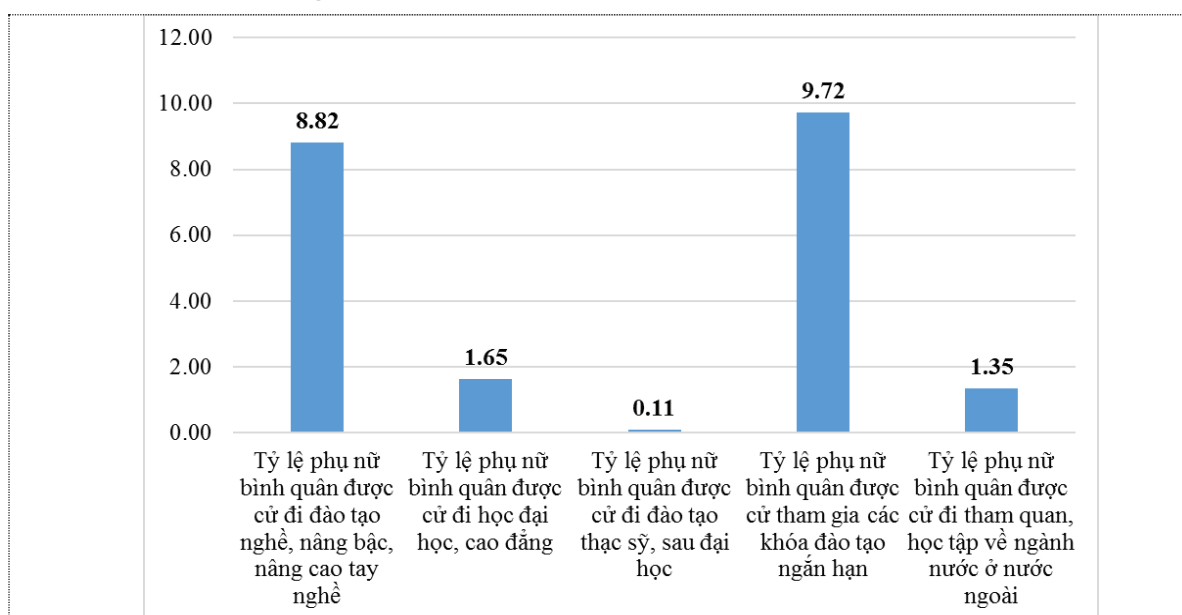


Figure 3.8: The training and capacity building for female labour after equitization (%)

d. Training needs for female labour after equitization

Training needs are divided into 5 following groups to assess training needs of water sector enterprises after equitization:

- Vocational training, skills improvement
- College and university studies
- Postgraduation studies
- Short training courses
- Overseas study tour on the water sector.

Table 3.14: Training needs for women after equitization

No.	Women's training levels after equitization	Average	
		Persons	%
1	Vocational training, skills improvement	12,22	8,37
2	College and university studies	7,84	5,37
3	Postgraduation studies	0,78	0,53
4	Short training courses	13,53	9,27
5	Overseas study tour on the water sector	2,34	1,60

The table 3.14 shows that:

- Two training needs with the highest average value is the vocational training and skills improvement (8.37%, equivalent to more than 12 femal labour per enterprise) and the short training courses (9.27%, equivalent to nearly 14 female labour per enterprise).
- Proportion of college and university studies need is 5.37%, equivalent to nearly 8 female labour per enterprise.
- The lowest percentage is the need of postgraduation studies (0.53%, equivalent to 0.78 female labour per enterprise).
- The need of overseas study tour on the water sector is also low (1.6%, equivalent to more than 2 female labour per enterprise).

About the training needs of women after equitization:

- Most of enterprises have needs of capacity building for female labour by vocational training, skills improvement and encourage them to join short training courses.
- Enterprises should have a long-term plan on capacity building for female labour, provide fresher courses and have personnel planning for them to undertake management positions of the companies.

The training needs for women after equitization are illustrated in below

Figure 3.9:

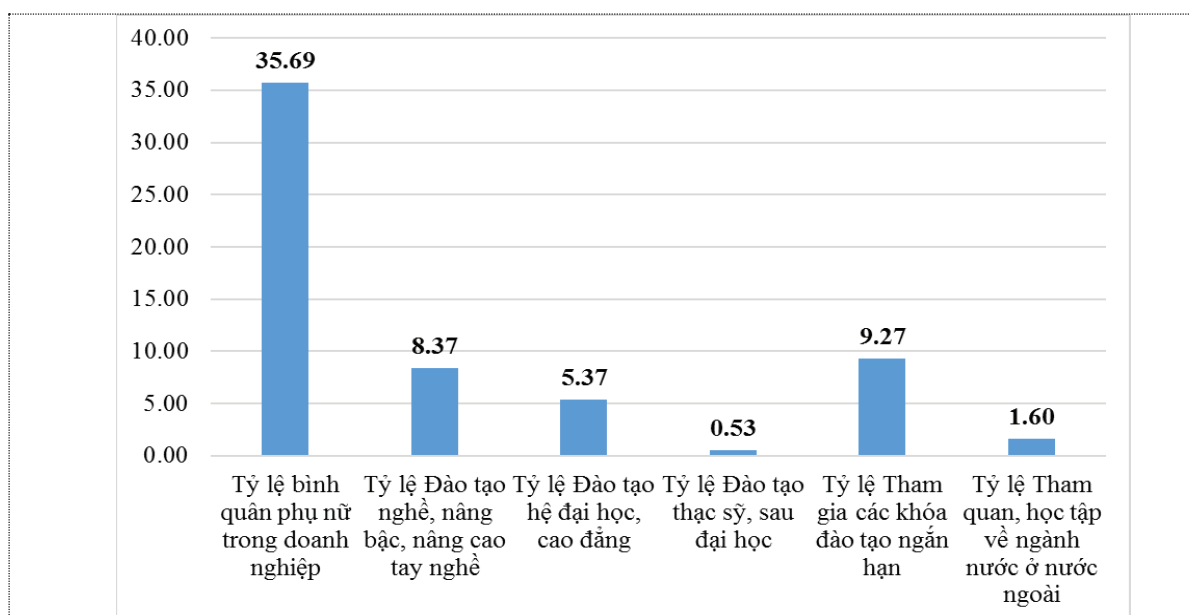


Figure 3.9: Training needs for women after equitization (%)

3.2.3. Female labour's health in enterprises after equitization

The survey focused on two following criteria which reflect level of work impact on health of female and male labour to assess their health in water sector enterprises after equitization.

- Female labour have a stable health
- Female labour suffer from occupational diseases

The survey results are shown in table 3.15

Table 3.15: Female labour's health in enterprises

No.	Female labour's health in enterprises	Average percentage (%)
1	Female labour have a stable health	99,79
2	Female labour from occupational diseases	0,21

The table 3.15 indicates that:

Most of male/female labour have stable health. However, there are a still a very low percentage (0.21%) of them suffering from occupational diseases.

In addition, all enterprises should organize periodic health check for female labour so that they can be early detected from diseases and able to be treated if any. Hai Duong Water Supply JSC. and Bac Ninh Water Supply JSC. have a high percentage of labour (2%) suffering from occupational diseases, company

leaders and mass organizations should pay more attention to employees' health and have more effectively protective measures.

Summary of labour's health is illustrated in figure 3.10:

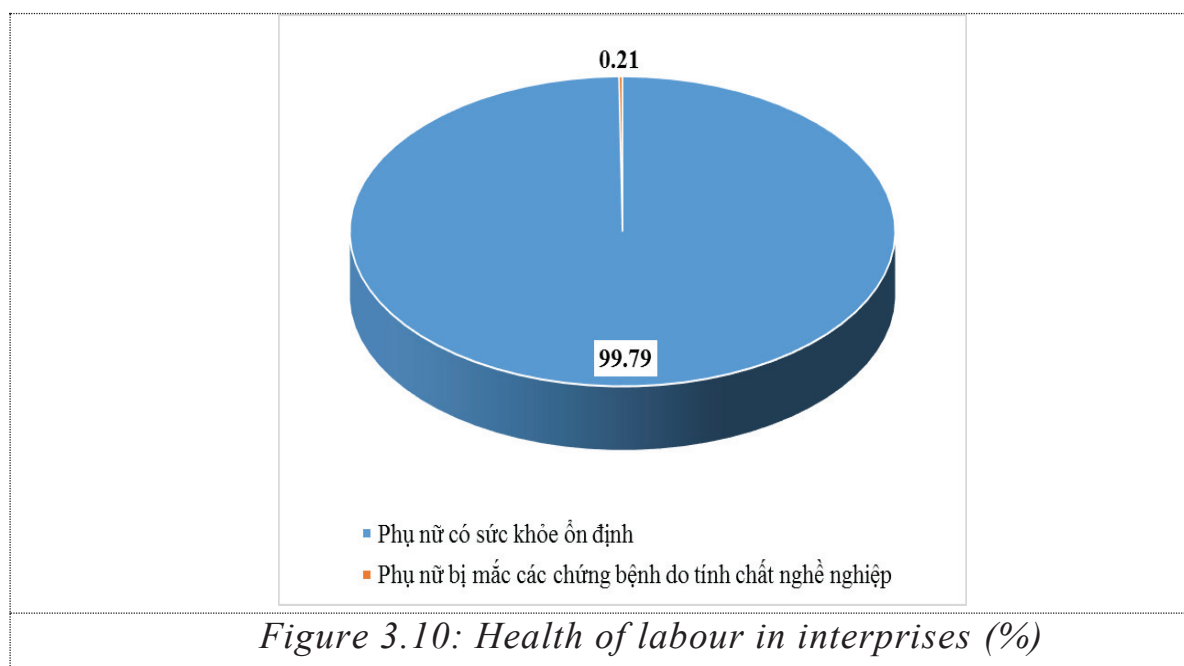


Figure 3.10: Health of labour in enterprises (%)

3.2.4. The level of interest in employees of enterprise leaders after equitization

a. Enterprise leaders' care to living standards of labour in the enterprises

Enterprise leaders' attention to employees' living standard is divided into three levels of Very interested, Interested and Not interested which is summarized in table 3.16 below:

Table 3.16: Enterprise leaders' interest in living standards of employees in the enterprises

No.	Level of interest	Number of enterprises	Percentage (%)
1	Very interested	17	50,00
2	Interested	17	50,00
3	Not interested	0	0,00

The table 3.16 demonstrates enterprise leaders' interest in living standard of their employees, especially female labour: 50% (17 enterprises) having leaders with strong interest; 50% (17 enterprises) having leaders with interest; No enterprises have leaders who don't care about employees. This indicates that

female/male labour's life is cared by the enterprise leaders

Here are some activities for women in the enterprises:

There are Yoga training rooms and trainers for female labour with three shifts per day; tennis yards, table tennis space for employees (inclusive of women); flower arranging class; allowance of cosmetics for women; gifts on the occasions of International Women's Day, Vietnam Women's Day; picnic... and some other activities depending on each enterprise.

b. Enterprise leaders' care to health of labour in the enterprises

Enterprise leaders' care to employees' health after equitization are divided into three levels of Very interested, Interested and Not interested which is summarized in table 3.17 below

Table 3.17: Enterprise leaders' care about health of labour in the enterprises

TT	Level of interest	Number of enterprises	Percentage (%)
1	Very interested	17	50,00
2	Interested	17	50,00
3	Not interested	0	0,00

The table 3.17 indicates the enterprise leaders' care about health of employees' health as follows: 50% of enterprise leaders (17 enterprises) are very interested in; the rest half (17 enterprises) are interested in; No enterprises have leaders who don't care about women.

Many activities are organized to take care of employees' health, with priority to female labour: intensive medical examinations such as ultrasound scan of neck and chesk, tartar removal, breakfast at the office and other activites.

c. Enterprise leaders' care about cultural life of labour in the enterprises

Enterprise leaders' care about female and male labour's cultural life is divided into three levels which is summarized in below table 3.18.

Table 3.18: Enterprise leaders' care about cultural life of female and male labour in the enterprises

TT	Level of interest	Number of enterprises	Percentage (%)
1	Very interested	17	50,00

2	Interested	17	50,00
3	Not interested	0	0,00

The table 3.18 indicates the enterprise leaders' care about employees' cultural life, with prefer to female labour as follows: 50% of enterprise leaders (17 enterprises) show their very interest; the rest half (17 enterprises) shows they are interested in while none of them shows they are not interested in.

It is directed by enterprise leaders to organize different annual activities such as building bookshelf for employees, inviting speakers to talks about business culture; organizing domestic and overseas tours for employees; study exchanges with other companies in the water sector and many other activities.

d. Enterprise leaders' care about capacity building for female and male labour in the enterprises

The level of interest in female and male labour's capacity building after equitization of enterprise leaders are divided into three levels of Very interested, Interested and Not interested which is summarized in table 3.19 below.

Table 3.19: Enterprise leaders' interest in capacity building for female and male labour in the enterprises

TT	Level of interest	Number of enterprises	Percentage (%)
1	Very interested	17	50,00
2	Interested	16	47,06
3	Not interested	1	2,94

There is still one company, namely Hung Yen Water Supply JSC., accounting for 2.94%, showing that it is not interested in capacity building for female and male labour that makes its employees unsatisfied. This proves their learning mind to be able to join in the integration process after equitization. Many thanks to the outspokenness of employees of Hung Yen Water Supply JSC.

Different activities are organized by enterprise leaders: sending employees to short training courses on management such as Training course on business management; human resources management, time management, organization of meetings, presentation, reporting, etc.

3.3. Human right based approach to water supply in Vietnam

3.3.1. Introduction

Water is a limited natural resource and an essential public commodity for people's life and health. A true life cannot lack of rights to access (or use) water. It is a prerequisite condition to obtain other human rights.

Right to water access ensures that everyone is able to access to a sufficient, safe, acceptable and affordable source of water for their personal and family life. Appropriate clean water supply is a necessary condition to avoid risk of death because of water decontamination, to reduce risk of having water-related diseases and supply water for personal and household consumption needs of cooking and sanitation.

According to the United Nations (UN)¹⁶, human right to water access must satisfy five following criteria:

- **Sufficient:** The water supply for each person must be sufficient and continuous for personal and domestic uses. These uses ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene.

- **Safe:** The water required for each personal or domestic use must be safe, therefore *free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person's health*. Measures of drinking-water safety are usually defined by national and/or local standards for drinking-water quality.

- **Acceptable:** Water should be of an acceptable colour, odour and taste for each personal or domestic use. All water facilities and services must be culturally appropriate and sensitive to gender, lifecycle and privacy requirements

- **Physically accessible:** Everyone has the right to a water and sanitation service that is physically accessible within, or in the immediate vicinity of the household, educational institution, workplace or health institution.

¹⁶ The Human Right to Water and Sanitation, UN 2016

- **Affordable:** Water, and water facilities and services, must be affordable for all.

3.3.2. Water, human right, roles and responsibilities of the enterprises¹⁷

Report by the Institute of Human Rights and Economy at the Conference on Human rights in Paris in December 2008 expressed a viewpoint on challenges of water resource and human right to Government, businesses and civil society that: “An area relating to water resource risk is not paid enough attention by privated enterprises – human right. Therefore, relationship between water and human rights goes beyond the closest and simplest issue of access to water. If the State cannot fulfill its mandate in this field, it will make enterprise’s roles important and relevant. Human right based approach is a useful way to allow enterprises to recognise their commitment to community, relationship with government, society’s permission to clean water related activities”.

The Article 34 of the Constitution of Vietnam 2013 states “Citizens have the right to social security”. the Decision No.2502/QĐ-TTg on adjustment of water supply development orientation of urban areas and industrial zones confirms that “Water supply is a conditional production and business activity which is controlled by the State in order to protect community’s health and social security...”. One of important content of Social security is the human right to enough water.

In terms of five above criteria, water sector enterprises of Vietnam have recently had many innovation efforts for better serving to citizens. According to VWSA, 70% of urban water supply systems supply water 24 hours/day, service and water quality has been improved, total designed capacity is 9.2 million m³/day. Many enterprises of the water sector care about governance renovation, capacity building for their human resource, especially application of scientific and technological advances which bring breakthroughs, increase in production and business performance as well service quality¹⁸.

¹⁷ Business, clean water and human rights, 16/6/2019 – Thiennhien.net

¹⁸ Clean water sector of Vietnam: Innovation for keeping up with urbanization speed – 26/10/2018 – Nguyen Minh

Water price is calculated correctly and adequately by enterprises for their service delivery and submitted to authorized agencies however a lower price is approved. Current water price is appropriate with people's income. However, it is not enough to meet the demand of safe water.

Water quality is not equal and it requires enterprises in the water sector to have strategy on protecting water resource for production. In 2016, the Decision No.1566/QD-TTg by the Prime Minister approving the National Program on ensuring safe water supply in the period of 2016-2025 in order to manage risks and solve problems caused by water sources for safe water supply. Implementing this Decision, a guidance circular was issued by MOC assigning specific tasks to localities and water production and business enterprises.

3.3.3. Results of the survey in Phu Tho Water Supply JSC. and Binh Duong Water Supply and Environment JSC.

In order to make clear about UN five criteria of right of access to water and sanitation and “Water, human rights and roles and responsibility of the enterprises”, in-depth survey was carried out in a water supply company – Phu Tho Water Supply JSC. and another multi-sector company supplying water and sanitation services – Binh Duong Water Supply and Environment JSC. with three groups of interviewees:

1. Representatives of business leaders;
2. Representatives of indirect labour in specialized departments;
3. Representatives of direct labour.

Belows are the survey results:

a. Phu Tho Water Supply JSC.

According to VWSA, Phu Tho Water Supply JSC. is one of the successful enterprises after equitization. It supplies clean water to the whole province of Phu Tho which locates in the Northern midland and mountainous area of Vietnam. At the time of equitization in 2009, it has a small chartered capital with the State-owned capital of 49%. Thanks to its effort and consensus on market expansion, proportion of the State-owned capital has been decreased to 24%.

Its total capacity of water exploitation is 120,000 m³/day, covering 90% of

water supply network. Lam Thao is the only district having no clean water supplied by the company, however, it is planning to bring clean water to this district. It supplies water 24 hours per day province-wide. Its water quality satisfies the Standard no.01/2009 of the Ministry of Health. The leakage and loss rate decreases to 14%. Nowadays, Phu Tho Water Supply JSC. is one of few companies selling clean water at one price of VND8,900/m³ (not progressive price).

Phu Tho Water Supply JSC. is one of a few enterprises having female CEO. Ms. Doan Thi Kim Quy is a competent, aggressive, resourceful and assertive female leader. Female leaders in the senior leadership apparatus of the company accounts for a high proportion. For example, 2/5 BOD members are women, accounting for 40%; 2/3 members of Supervisory Committee are women, accounting for 60%. In addition, number of female heads and deputy heads of departments and mass organizations accounts for a high rate of over 20%.

Phu Tho Water Supply JSC. always pays attention to female labour and gender equality in the company. There are only 30 direct female labour (low qualifications), 15 of these labour are assigned to be responsible for reading and recording indexes of water meter of water consumers. At present, remote reading equipment is used to record indexes of water meters. It is not necessary to go to location of water consumers and wait for them coming home. It makes the work of female labour less difficult thanks to less travelling. There are a few female labour in charge of this job, therefore there is no change in its personnel arrangement when it applies the advanced technology in production and service supplying process. Most of these labour are not young.

Some female labour with college and vocational school qualifications are assigned to directly work in factory such as lab, operation of automated water treatment complex, level-I pumping stations, level-II pumping stations and electricity management division. Female labour with these jobs have to work in shifts in order to ensure the 24/24 supply of water to people. However, the company takes care much about job assignment to women. Such employees are not busy with their housework, their children are grown up or they are cared and supported by their husband and family.

According to report by the Head of Female labour committee, the company leaders are very interested in gender equality. In addition to the appropriate job assignment, female labour are sent to refresher courses organized by the company or VWSA. Some female labour are also sent to overseas short training courses or domestic and overseas study tours. Preventive Medical Center is invited by the Female labour committee to do annual medical check for women. The Female labour committee supports some female labour with economic difficulty or those whose relatives are seriously ill...

All interviewed female labour keep their mind in their work because of stable salary, leaders' care, understanding and support of the female labour committee which make women satisfy with their job and working environment. Therefore, female labour always try their best to contribute to the enterprise's development.

b. Binh Duong Water Supply and Environment JSC.

Binh Duong Water Supply and Environment JSC. is considered by VWSA as a leading enterprise in Vietnam after equitization. It was equitized in 2016 with 25% of State-owned capital.

It operates in multi- sectors, including: water supply for the whole province; drainage and wastewater treatment service of cities, towns and townships in the province; collection and treatment of domestic and cemetery waste in the Southeast region.

Its total capacity of water exploitation is 450,000 m³/day, covering more than 97% of water supply network. It supplies water 24 hours per day province-wide. Its water quality satisfies the Standard No.01/2009 of the Ministry of Health, average water consumption is 150litres/person/day province-wide. Its leakage and loss rate after equitization is 6.1%, and decreases to 5.75% in 2019 (the lowest rate nation-wide). Nowadays, Binh Duong Water Supply and Environment JSC. is one of few companies selling clean water at one price of VND9,000/m³ (not progressive price).

Binh Duong Water Supply and Environment JSC. is one of enterprises which are successful in constructing a separated sewerage system and a wastewater treatment plant. Di An Wastewater treatment plant has an area of 6.8ha and capacity of 20,000 m³/day in the first phase (total expected capacity

is 60,000 m³/day by 2030), which is installed with advanced technology in line with A standard (QCVN 14:2008/BTNMT). Domestic wastewater collected to the factory is centrally monitored, automatically deodorized and decontaminated by advanced technology to ensure that wastewater is treated to meet A standard before discharging to environment which positively contributes to protect water resource of Dong Nai river basin. Binh Duong waste treatment complex can receive and treat 3,000 tons of domestic waste and 1,000 tons of industrial waste per day. It is noted that it is invested with several new advance technologies to make waste a source of raw materials for valuable products beside its waste collection and treatment. This project includes a domestic waste composting plant with a capacity of 840 tons/day; recycling 2,000 tons of ash and mud per day for brick production; recycling mud from water supply for brick production with a daily capacity of 100 tons. Especially, gas from unrecycled waste can be collected to run an electric generator system with a capacity of 2,000 kVA.

Binh Duong Water Supply and Environment JSC. always takes care of female labour and focuses on gender equality in the company. It has total of 1105 employees inclusive of 254 female labour, accounting for 23%. It has a female Deputy CEO, four post-graduated female labour inclusive of one master of science. Many female labour are considered by the BOD Chairman as competent, capable and responsible employees. Salary of some female labour sometimes higher than that of the BOD Chairman.

It cares much about capacity building for its employees. It cooperated with Mien Tay Construction University to organize on-the-job training courses on water supply and drainage engineers for both female and male labour.

There is no employee giving birth of the third child. Many employees have only one child, regardless of boy or girl. Female labour are allowed to have one year of maternal leave to take care of their child and health recovery. This leave is much longer than that of enterprises in other sectors in Vietnam.

Binh Duong Water Supply and Environment JSC. has a high performance bicycle racing team and funds for bicycle races. Its female labour wear good clothes and are equipped with different colour long dress per day. It makes a new face of the company and its employees wholeheartedly work for the

company.

Through the working meeting with Mr. Nguyen Van Thien, BOD Chairman, it can be said that the success in all aspects, especially gender equality of Binh Duong Water Supply and Environment JSC. thanks to deep care and support of the company leaders. Its working principles is equal pay, equal work and capacity based position, regardless of man or woman.

c. Conclusions from two Enterprises

The issues of “Water, human rights and roles and responsibilities of the enterprises” of two surveyed enterprises are that:

- Both surveyed enterprises meet all five criteria on human right to water supply such as sufficient, safe, acceptable, affordable and physical accessible water in urban areas. This is an effort by these enterprises to meet people’s needs.

- For qualified female labour in water sector enterprises after equitization: if enterprise leaders take care of female labour, they will be improved and have an important contribution to development of the enterprises and the water supply and drainage sector in Vietnam.

- It is important that female labour still stand steady after equitization. They are not affected by staff cutback or lost their job, they have more stable jobs with a higher income. All female labour are very happy and have a strong attachment to the company for its development.

- Through discussion with employees of the two companies and in-depth study about sexual discrimination or inequality in working places, ignorance of women’s ideas ... it is said that there is no such phenomenon in these companies. Female labour are respected by company leaders and male colleagues. This makes female labour to love the company..

4. CONCLUSION

Equitization of state-owned enterprises (SOE) in general and equitization of water supply and drainage enterprises in particular is a major policy of the Party and the State, which is considered as the central stage in the process of reforming and restructuring SOEs in order to create conditions to: Exploit, mobilize and use social resources in a proper way; create new impetus to

promote effective production and business activities, improve the competitiveness, sustainably maintain and develop the sector in the market economy. Equitization of water sector enterprises is not only an opportunity but also a great challenge for the female labor force of the sector.

The water sector currently has 144 companies, with nearly 70,000 officials and employees working in the water supply and drainage industry, including production and business of clean water, drainage - wastewater treatment, production and trading of materials and equipment, technology transfer, design consultancy, construction contractors. In the overall achievement of Vietnamese water sector, it can be clearly shown positive contribution of women.

A survey has been conducted in 34 enterprises to study on gender in the water sector after equitization. The survey includes the following basic contents:

- General information of enterprises in terms of:
 - + Type of enterprises
 - + Time for equitization of enterprises
 - + State capital owned by enterprises
 - + Field of operation of enterprises
 - + Enterprise leaders
- Human resources, income and employment for women/men in enterprises before and after equitization
- Qualification, management capacity and training for women/men in enterprises before and after equitization.
- Female labour's health in enterprises after equitization
- The level of interest in female labour of enterprise leaders after equitization
- Proposals and recommendations of enterprises

After conducting general survey in 34 enterprises and in-depth survey in two enterprises namely Binh Duong Water Supply and Environment JSC. and Phu Tho Water Supply JSC., it is shown results of gender quality, which are:

1. Regarding to income of women and men in enterprises before and after equitization: After the equitization, incomes of both men and women have increased, in some enterprises even 2 to 3 times. The difference in average

income is 8.2/10.3 million, so that salaries for women account for about 80% of men's. It requires enterprises to build capacity for women so that their income reaches to men's income.

2. All Employment for women and men are stable after equitization. This is a very important factor in ensuring their family lives.

- Regarding to qualification of female laborers. After equitization of enterprises, the number of female labour, who have completed secondary schools, high schools and vocational training has been decreased, but not much, while those finishing colleges, universities and postgraduate studies has been increased in most enterprises. Some women with high education levels (university- or master level) have been involved in enterprise management and promoted their roles in assigned positions.

3. Regarding to management and leadership capacity of women after equitization

The percentage of women in management and leadership after equitization in committees, in management boards or board of directors of enterprises is very low. Number of women leaders in departments and committees has increased after equitization but still small. The highest one is only 4.76%.

That the rate of women participating in leadership is still very low shows that women are not yet competent or to be trusted in assigning important responsibilities in enterprises, especially when enterprises have been equitized.

4. Regarding to training and capacity building for women after equitization

- Enterprises have been sent female labour to short training courses or organized short training courses in their enterprises with the aim to provide staff with professional knowledge as well as working skills to meet requirements of enterprises after equitization.

- Most enterprises after equitization only give priorities to low-qualified women, mainly in improving skills to meet current capacities of enterprises accordingly.

5. Regarding to women health in enterprises after equitization

Overall, the percentage of women with poor health is less than 0.5%. This must be a good signal. However, it is lacking of a regular health check for women so that they can be early detected from diseases and able to be treated if

any.

6. The level of interest in women of enterprise leaders after equitization

The level of interest of enterprise leaders to women is shown as follows: 50% (17 enterprises) having leaders with strong interest; 50% (17 enterprises) having leaders with interest; No enterprises having leaders who don't care about women.

Any enterprises with strong interest and responsibilities for women will get good gender equality, especially women have chances to be promoted, get stable jobs and their incomes are improved. However, there are still some issues that need to be further improved in order to maximize the role of women in the enterprise development.

5. RECOMMENDATIONS

After conducting general survey in 34 enterprises and in-depth survey in two enterprises, by wishes and aspirations of both male and female labour of enterprises, there are found some following recommendations.

5.1. About capacity building in terms of professional aspects and leadership management

- VWSA organizes training programs for female labour on clean water and sanitation issues as well as leadership, management, operation and supervision skills etc. for women working in the water industry.

- The water supply and drainage association organized training courses relating to water supply and drainage sector, including raising awareness on gender equality among enterprises.

- Solutions to empower women in strengthening leadership management at all levels of enterprises.

5.2. Recommendations for next steps.

1. This is the first study on gender equality in water sector enterprises after equitization, thus Finnish Water Forum and VWSA need to compile and then widely disseminate this document.

2. VWSA need to strengthen technical assistance activities with the aim to enhance knowledge for key female labour in water sector enterprises, integrate gender equality issues during the development of relevant legal documents to

the water industry. In addition, promoting water sector enterprises to supplement gender factors in their policies.

3. Enterprises should send female labour to professional training courses to get the 2nd professional degrees, master courses on urban management in order to improve knowledge and understanding, so that they can actively integrate gender equality issues in the development of legal documents relating to the water sector for sustainable development.

4. VWSA researches and develops contents of training courses to improve knowledge on water sector integrated with gender equality issues in water sector enterprises and human right of being supplied with water.

5. Water sector enterprises are necessary to implement solutions to ensure stable jobs for women working in the water sector as well as conduct training, provide jobs for women workers in the water sector, those are at risk of unemployment or become older while technology requirements are increasing day by day.

6. Through field survey in the two companies, it is shown that there are many good examples, so that Finnish Water Forum and VWSA should conduct further studies in other five or six enterprises with the aim to develop good practices and case studies for association members..

7. VWSA establishes a network and forum for women working in the water sector in Vietnam so that they could exchange their expertises and business management experiences as well as support each other in solving difficulties.

8. Based on above recommendations, the Vietnam Water Sector Forum proposes VWSA to establish a network to connect enterprises, in which women are holding positions such as Chairwoman of the Board of Directors, CEOs and Deputy CEOs with Finnish enterprises to support Vietnamese businesswomen to learn Finnish experiences. Going further, the Forum will connect with Australia and other countries, originating from the Finnish Water Forum.

REFERENCES

1. Enhancing the roles of female labour in the water sector, 08/11/2017
2. Law on Gender equality No.73/2006/QH11 dated 26 June 2006 of the National Assembly, 10th session of the XI legislature.
3. Gender in local economic development – product of PMI-LED program funded by Canada – Asso-Prof.Dr. Vu Thi Vinh
4. Guidelines on Gender equality and efficiency by UN Women Vietnam, GIZ and Care International in Vietnam 2017
5. Equitization of state-owned enterprises in Vietnam – reality and solutions – National Economics University 6/2015
6. Issuing a National Action Plan on implementation of the 2030 Agenda for Sustainable Development - May 16, 2017 - Department of Water Resources Management - Ministry of Natural Resources and Environment
7. Equitization of the water sector: Research results and recommendations, 11/2017 – Tan A My Environmental Technology and Trade Ltd. Company.
8. Equitization of water sector enterprises: Results and solutions – Asso-Prof.Dr. Nguyen Hong Tien – Former Director of Technical Infrastructure Agency, Ministry of Construction, 16/10/2018
9. World Water Week, Stockholm 2016 – Department of Water Resources Management, Ministry of Natural Resources and Environment
10. Report at the workshop on women in the water sector
11. Vietnam has one of the most progressive gender equality laws in Asia - Babeth Ngoc Han Lefur, Country Director of Oxfam in Vietnam, 9/2018
12. Many members of National Assembly are concerned about increase in extra-working hours – Thy Hat /VOV.VN
13. Human Rights to Water and Sanitation 2016
14. Business, clean water and human rights, 16/6/2019 – Thiennhien.net
15. Clean water sector of Vietnam: Innovation for keeping up with urbanization speed – 26/10/2018 – Nguyen Minh.