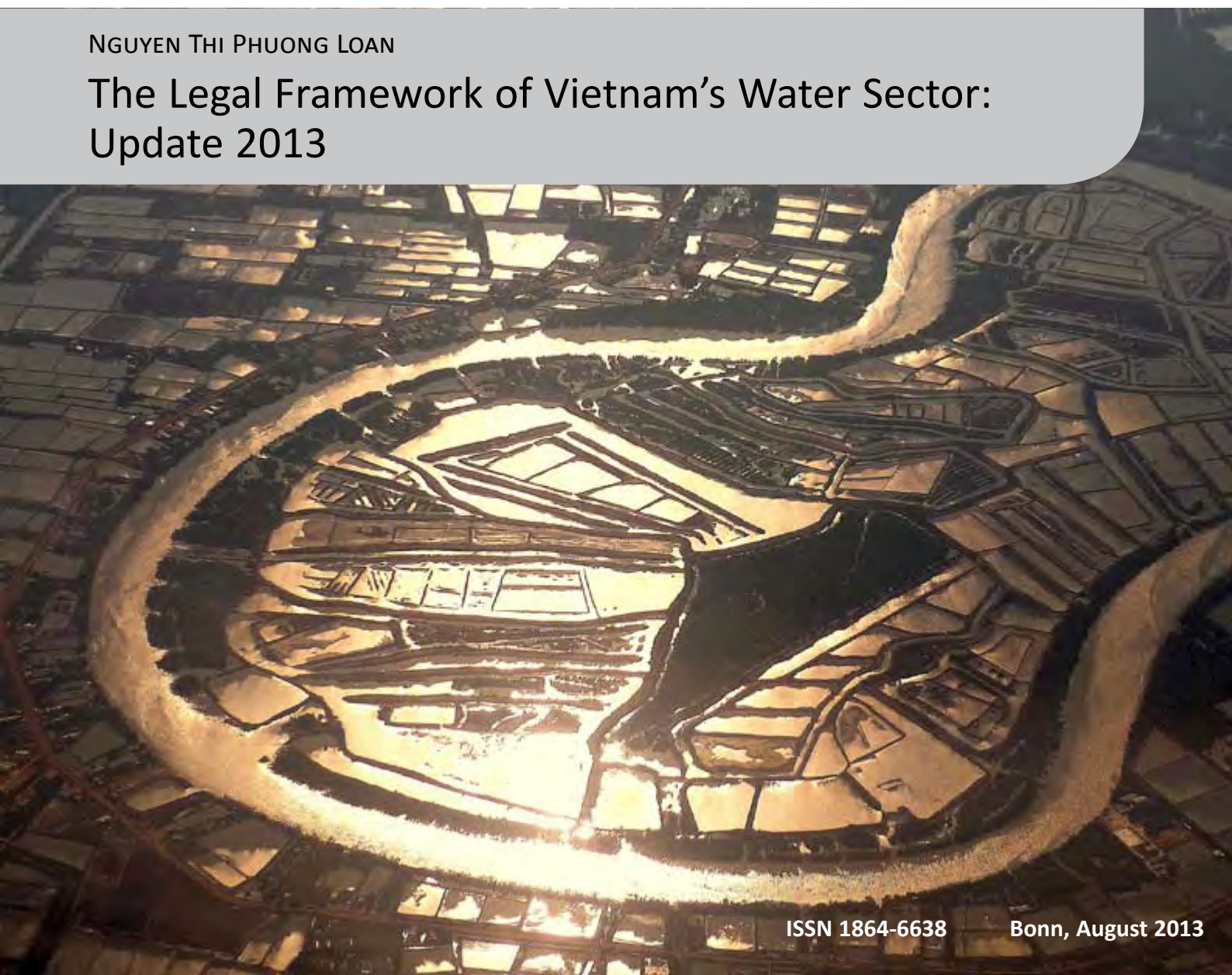




## Working Paper 116

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The Legal Framework of Vietnam's Water Sector:  
Update 2013



ZEF Working Paper Series, ISSN 1864-6638  
Department of Political and Cultural Change  
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# **The Legal Framework of Vietnam's Water Sector: Update 2013<sup>1</sup>**

Nguyen Thi Phuong Loan

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<sup>1</sup> This study was carried out within the WISDOM Project (Water-related Information System for the Sustainable Development of the Mekong Delta) at the Centre for Development Research (ZEF), University of Bonn, and Can Tho University, with support from the Vietnamese Ministry of Science and Technology (MoST), and the German Federal Ministry of Education and Research (BMBF). Information on the WISDOM project, its objectives, partner organisations and results can be accessed at: <http://www.wisdom.eoc.dlr.de>. Useful comments by Dr. Gabi Waibel are gratefully acknowledged.

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## **Abstract**

In order to deal with problems related to both water quality and quantity as well as to strengthen the sustainable and integrative management of the nation's water resources, the Vietnamese Government has adopted a wide spectrum of laws and regulations. In recent years, more than 300 water-related regulations on the guidance and implementation of the Law on Water Resources have been issued and often amended to meet the requirements of the country's development and its increasing international integration. In spite of this, the current legal framework for water resources management in Vietnam remains ineffective and does not correspond with the reality on the ground. Furthermore, law enforcement is deficient and often national regulations are ignored by local authorities, who priorities rapid growth of their communities over sustainability. Under these circumstances, the legal framework cannot properly guide sustainable use of water resources in order to achieve a degree of environmentally sustainable and, in particular, to protect the livelihoods of marginalized groups in society, such as landless fishermen, small-holders or poor people in peri-urban areas.

Despite the gaps in this legal framework, water-related policies and programs in Vietnam consistently refer back to it while, at the same time, policy advisors typically call for reform. Understanding the legal framework is therefore important for both researchers and practitioners. In this view, a previous study was carried out by the author, entitled 'Legal Framework of the Water Sector in Vietnam' (Nguyen 2010), which aimed at presenting the key dimensions and the structure of that framework. Both the Vietnamese and the English version of the book were widely disseminated. This update became necessary because the government of Vietnam recently issued a new law on water resources as well as supplementary legislation. So far, no official English version of any of these new documents exists. Therefore, a detailed presentation of the contents of the laws is particularly timely. In addition to presenting the laws, this paper aims at shedding light on some of the critical aspects of the current legislation and illustrates how the law making process proceeded.

### **Keywords:**

Environmental impact assessment (EIA), regulatory impact assessment (RIA), integrated water resource management (IWRM), law on water resources, law making process, Mekong Delta, Vietnam, water quality management, water resources management

## Abbreviations

ADB	Asian Development Bank
BOD	Biochemical Oxygen Demand
DARD	Department of Agriculture and Rural Development
DONRE	Department of Natural Resources and Environment
DOST	Department of Science and Technology
DWRM	Department of Water Resources Management
EIA	Environmental Impact Assessment
EPZs	Export Processing Zones
GoV	The Government
IPs	Industry Parks
IWRM	Integrated Water Resource Management
LEP	Law on Environmental Protection
LPLD	Law on the Promulgation of Legal Document
LWR	Law on Water Resources
MARD	Ministry of Agriculture and Rural Development
MOC	Ministry of Construction
MOF	Ministry of Finance
MOH	Ministry of Health
MOI	Ministry of Industry
MONRE	Ministry of Natural Resources and the Environment
MOST	Ministry of Science and Technology
MOT	Ministry of Transport
MPI	Ministry of Planning and Investment
NA	National Assembly of the Socialist Republic of Vietnam
NRWSSS	National Rural Water Supply and Sanitation Strategy
NWRC	National Water Resources Council
NWRS	National Water Resources Strategy
QCVN	National Technical Regulations
RWSS	Rural Water Supply and Sanitation
TCVN	National Environmental Standards

## Abbreviations of Legal Documents

.../.../QH	Law of National Assembly
.../.../PL-UBTVQH	Ordinance of Standing Committee of the National Assembly
.../.../ND-CP	Decree of Government
.../.../QD-TTg	Decision of Prime Minister
.../.../QD-BNN	Decision of Ministry of Agriculture and Rural Development
.../.../TT-BNN	Circular of Ministry of Agriculture and Rural Development
.../.../TTLT-BNN-BNV	Joint Circular of Ministry of Agriculture and Rural Development and Ministry of Interior Affairs
.../.../TTLT-BNN-BTC	Joint Circular of Ministry of Agriculture and Rural Development and Ministry of Finance
.../.../QD-BTNMT	Decision of Ministry of Natural Resources and the Environment
.../.../TT-BTNMT	Circular of Ministry of Natural Resources and the Environment
.../.../TTLT-BTNMT-BNV	Joint Circular of Ministry of Natural Resources and the Environment and Ministry of Interior Affairs
.../.../TTLT-BTNMT-BTC	Joint Circular of Ministry of Natural Resources and the Environment and Ministry of Finance
.../.../CT-BTNMT	Directive of Ministry of Natural Resources and the Environment
.../.../QD-TNN	Decision of Department of Water Resources Management
.../.../QD-BTC	Decision of Ministry of Finance
.../.../QD-BXD	Decision of Ministry of Construction
.../.../QD-BGTVT	Decision of Ministry of Transport
.../.../QD-BCA	Decision of Ministry of Public Security
.../.../QD-BKHCMNT	Decision of Ministry of Science Technology and the Environment
.../.../TT-BTC	Circular of Ministry of Finance
.../.../TT-BXD	Circular of Ministry of Construction
.../.../TT-BGTVT	Circular of Ministry of Transport
.../.../TT-BCA	Circular of Ministry of Public Security
.../.../TT-BKHCMNT	Circular of Ministry of Science Technology and the Environment

# 1 INTRODUCTION: BACKGROUND TO THE NEW LAW ON WATER RESOURCES

This paper represents an update of a previous study of the author's on Vietnam's legal framework of the water sector (Nguyen 2010). Issuing this update was necessary because the Government of Vietnam recently issued a new law on water resources as well as additional legislation. Additionally, this paper aims at shedding light on some of the critical aspects of the current legislation and illustrates how the law making process proceeded. Most of the regulations related to the law-making process are internal documents issued by the government, ministries, and other related departments. They can only be found in Vietnamese, primarily through the document collection at the official website of the National Assembly ([www.na.gov.vn](http://www.na.gov.vn)).

## 1.1 The first law and the subsequent need for amendments

In the (post)-*Đổi mới*<sup>2</sup> period, the constitutional groundwork and rationale for the development of the water policy and legal framework in Vietnam was created. More recently, Vietnam has built up and implemented additional programs and strategies<sup>3</sup> on water resources protection and development. One of the specific objectives of these programs is to control the pollution of water sources and end the use of toxic chemicals in industrial and agricultural production (including aquaculture) by putting an end to the exploration, exploitation and use of water resources, as well as the discharge of wastewater into water sources, without permission of the respective agencies (Decision No. 81/2006/QĐ-TTg<sup>4</sup>).

Built on this premise, the very first Law on Water Resources No. 08/1998/QĐ10 (LWR 1998) issued in January 1999 had provided a foundational framework for managing the water sector in Vietnam. During recent years Vietnam has started to elaborate a legal framework for the protection of water resources with the aim of following the internationally recognized principle of integrated water resource management (IWRM) and ensuring the sustainable exploitation and utilization of water resources. Over more than 300 water-related regulations on the guidance and implementation of the Law on Water Resources have been issued and often amended to meet the requirements of the country's development and its increasing international integration. This legal framework includes a large set of regulations that deals with wastewater management, such as the treatment and disposal of wastewater from industry, agriculture and households. The protection of water resources, particularly with respect to water quality and the prevention of water pollution, is a crucial and serious issue due to the country's rapid development and industrialization.

So far, however, due to the pressures of industrialization and modernization, water resources have not been developed in a sustainable and integrated manner; furthermore, socio-economic development has not been aligned with the capacity of water resources. The escalating exploitation and use of water resources as well as the discharge of untreated wastewater into water resources

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<sup>2</sup> By the mid 1980s, Vietnam was facing rapid economic decline due to the failure of the centralized and subsidized system of the command-and-control economy that the socialist government had been adhering to since 1954. In response to this severe crisis, the Vietnamese government reconsidered the country's economic system and, eventually, promulgated the Renovation Policy (*Chính sách Đổi mới*) in 1986 (at the Sixth Party Congress) as a paradigm change towards economic liberalization and integration (Waibel et al. 2012).

<sup>3</sup> The "State Plan on Environmental Pollution Control till 2010" approved by the Prime Minister's Decision No. 382/2005/QĐ-TTg of December 12, 2005; the "National Strategy on Water Resources to 2010" approved by the Prime Minister's Decision No. 81/2006/QĐ-TTg of April 14, 2006; and the "National Target Program for Clean Water and Environmental Hygiene in Rural Areas" approved by the Prime Minister's Decision No. 237/1998/QĐ-TTg on December 03, 1998.

<sup>4</sup> Decision No. 81/2006/QĐ-TTg of April 14, 2006 approving the National Strategy on Water Resources to 2020



have caused serious levels of water pollution, degradation and consumption. In general, the use of water resources is no longer harmonized with the interests of local communities (SIWRP 2007, Nguyen 2010a, Waibel et al. 2012, Reis 2012, Benedikter and Waibel 2013).

Unhelpfully, the legislation on water sector management in Vietnam consists of a complex system of legal documents mandated at many administrative levels and implemented by different state agencies. The current batch of legal documents issued by local governments do not appear to be as effective as they should in order to meet the requirements in the future. The quality of these legal documents (issued at both national and local levels) also seemingly do not correspond with the actual issues being faced. Furthermore, there are still contradictions, conflicts and overlaps within the current legislation, which cause confusion, misunderstanding and difficulties in the implementation process (Nguyen 2010a, MONRE's Report 2011). In certain fields, regulations on, for instance, wastewater management, are scattered across many legal documents with identical content, often with contradictions regarding the hierarchy of implementation (Nguyen 2010b, Genschick 2011, Tan 2012). In addition, the deficit of specific guiding regulations issued at the national level has also caused difficulties in implementation at local levels. Many areas thus face difficulties when dealing with new situations. The LWR 1998 had demonstrated its limitations and insufficiency (MONRE 2011). Moreover, conflicts between the LWR 1998 with other related laws and secondary regulations often turn up in the implementation process. This level of complication has created overlapping and contradicting regulations (Nguyen 2010a). Under these circumstances, the LWR 1998 was no longer able to properly guide the sustainable use of water resources in order to achieve some environmental sustainability and, more specifically, to protect the livelihoods of marginalized groups in society, such as landless fishermen, small-holders or poor people in peri-urban areas.

In addition, life at the local level seems to follow its own set of rules, which in many cases do not comply with regulations that are issued by the national government (Kerkvliet 2001, Koh 2004, Pike 2000). Law enforcement is sporadic and often national regulations are ignored by local authorities, who prioritize rapid growth of their communities over sustainability. Water pollution has become a serious problem and remains without any effective solutions at the local level for state managers (see for the case of Can Tho City – Nguyen 2010b). Indeed, it appears that most of the companies and individuals who have violated the water laws would rather pay fines than invest their capital in the installation and/or operation of environmentally friendly systems. Financial punishment is thus considered a “temporary solution” (*giải pháp tạm thời*), which must be replaced by a more effective sanctioning system. Besides this, many localities have trouble dealing with new situations that are not yet defined by regulation because so called “gaps of law” (*lỗ hổng pháp luật*) exist. This is further exacerbated by the fact that many local state authorities in charge of water management lack not only specialized knowledge but also legal awareness on water management (ADB 2008: 59-60, Nguyen 2010b).

In addition, the system of state management of the water sector has not proved its worth in formulating and ensuring its effectiveness in a coordinated manner. The functions and tasks of state management agencies for the water sector are still not clearly distinguished from those of agencies managing the daily operation of works for the exploitation and use of water resources and water service supplies. In other words, Vietnam has still not achieved consistency and coordination of the systems of policies, laws, standards and norms in the domain of water resources for the sustainable development of the water sector (N.C. Cong 2007, Waibel 2010, Nguyen 2010, Waibel et al. 2012, Reis 2012, Benedikter and Waibel 2013).

Last but not least, People's Committees (at provincial levels) are not only responsible for licensing wastewater discharge permits but also for dispute settlement on environmental issues (Decree No. 149/2004/ND-CP). However, so far, dispute settlement mechanisms have largely not been adapted by the People's Committees, which hold authority at the commune, district or provincial level. A recent study on the problems of law enforcement on wastewater management in Can Tho City has

shown that despite recent efforts made to improve judicial competences, the right to initiate lawsuits against Decisions/Acts issued by administrative agencies has remained unused. The People's Court in Can Tho City has not yet exercised its new competence of dispute settlement on environmental issues since July 1996 (Nguyen 2010b). At the commune level, a few small dispute cases have been solved by mediation of communal cadres who were in charge of land and construction issues. With this lack of guiding regulations, it remains unclear how licensing procedures can be made more transparent at local levels. Under these conditions, the rights of organizations and individuals exploiting and using water resources is clouded by uncertainty.

From a broad perspective, the legal framework and current law enforcement practices do not meet the ever growing challenges of water pollution. It further appears as if environmental degradation is accepted as a cost of economic growth and rising living standards, and that ultimately the future will be irreversibly compromised. Thus, the emerging question is whether the new Law on Water Resources No. 17/2012/QH13 (LWR 2012), which has been issued after a four-year long legislative process, will provide the needed directives to address the above mentioned challenges in Vietnam's water resources management.

## **1.2 The law making process**

The law making process of the Law on Water Resources is an unusual and long process. It was mentioned for the first time in the Development Programme of Law and Ordinance of 2010 (Resolution No. 48/2010/QH12 dated 19 June 2010), then in the Law Development Programme of the National Assembly for 2011 (Resolution No. 07/2011/QH13 dated 6 August 2011), and finally in the Development Programme of Law and Ordinance for 2013 (Resolution No. 23/2012/QH12 dated 12 June 2012).

Under the Development Programme of Law and Ordinance for 2012 (regulated by Resolution No. 48/2010/QH12), which was issued by the National Assembly, the Ministry of Natural Resources and the Environment (MONRE) was assigned to take the lead responsibility in drafting the new national Law on Water Resources. In the following section, the law drafting process will be described in detail.

### **❖ Phase 1: Establishment of the Drafting Board and Drafting Group**

In March 2008, the Drafting Board and Drafting Group, with representatives from 12 relevant Ministries, branches, organisations, and experts were established by MONRE. Based on the Government's Statement on the Draft (Statement No. 163/TTr-CP, of 20/09/2011), the following tasks were to be conducted by the Drafting Group:

- Review and evaluation of the implementation of the LWR 1998 and other related legal documents;
- Research, analysis, and evaluation of the achievements and difficulties of the LWR 1998 in the implementation process of the previous 12 years in order to develop suggestions for the amendment and supplementation;
- Organization of workshops and meetings to collect opinions and suggestions on the Draft; discussion about basic policies and issues related to the Draft;
- Issuing reports about potential impacts of the Draft concerning new water-related issues.
- Studying the Draft's related issues, information and data in respect to international treaties to which Vietnam is a signatory party;
- Studying model laws on water resources management (e.g. China, France, Australia, Philippines, etc.) and other national water-related laws, such as those on environmental protection, biodiversity land, minerals, forest protection, dykes, and on the prevention of flooding and other adverse impacts of water;

- Publication of the Draft on the website of the Government in order to collect comments from people and enterprises;
- Hosting a meeting of the National Water Resources Council<sup>5</sup> to discuss the Draft's content;
- Collection and study of the opinions of 21 related Ministries, 63 provincial authorities, and other related departments, branches, organisations, as well as experts regarding the 4th Draft.

In May 2011, after having many meetings and workshops, MONRE completed the 4th Draft. Subsequently, an Official Document (No. 1450/BTNMT-TNN) requesting comments on the draft Law from People's Committees and Departments of Natural Resources and the Environment (DONRE) of 63 provinces and cities was issued by MONRE in May 06, 2011. Besides these, MONRE also sent other official documents to 22 Ministries and other related departments subordinated to MONRE, in order to collect their comments on the 4th Draft (Official Document No. 1932/BTNMT-TNN, No. 1933/BTNMT-TNN of June 01, 2011).

According to the Report of MONRE (No. 151/BC-BTNMT of 09/08/2011), up to July 25, 2011 they received in total 75 comments in written form as official documents (14 from Ministries, 54 from provincial authorities, and 7 from departments subordinated to Ministries). After having thoroughly studied all comments, MONRE modified and completed the 5th Draft and sent it to the Ministry of Justice for approval.

❖ **Phase 2:** Examination of the Draft Law on Water Resources

Based on the current Law on the Promulgation of Legal Document (LPLD), the Ministry of Justice (MoJ) is responsible for the appraisal of draft laws, ordinances, and resolutions before they are submitted to the Government (Article 39 LPLD 2008). The Examination Council (which is subordinated to the MoJ) and includes representatives from related agencies, specialists and scientists was established in July 2011 (Decision No. 1233/QD-BTP of 25 July 2011). In particular, the Examination Council was mandated to assess: (i) the necessity of the new law, as well as subjects and scope of application of the Draft; (ii) the conformity of the Draft's content with the Party's policies, lines and guidelines; (iii) the constitutionality and legality of the Draft and its consistency with the national legal system, as well as its compatibility with relevant treaties to which Vietnam is a signatory; (iv) the feasibility of the Draft laws, or its attentiveness to actual requirements, the socio-economic development level, and the conditions for its enforcement; and (v) issues of language and drafting style.

In August 2011, the 5th Draft was approved by the Examination Council (Report of the Examination Council No. 132/BC-HDTD of 9 August 2011), which unanimously acknowledged that the drafting process had been conducted in conformity with the Law on the Promulgation of Legal Documents No. 17/2008/QH12.

❖ **Phase 3:** Study and amendment

In the third phase, the 5th Draft, having been approved by MoJ with the Report of the Examination Council (No. 132/BC-HDTD), was sent back to the Drafting Group for further study and amendment. In August 10, 2011, MONRE submitted its Report (No. 152/BC-BTNMT) on interpretation and solicitation of the Examination Council about the draft law on water resources to the Government. Another Report (No. 151/BC-BTNMT of 9 August 2011) on interpretation and solicitation related to other comments and modifying the draft law was also submitted to the Government for comments and debate.

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<sup>5</sup> National Water Resources Council (NWRC) is an organization established in 2000 by the Government (as regulated by the Prime Minister's Decision No. 67/2000/QD-TTg of 15 June 2000) acting as a counselor for the Government and the Prime Minister on important decisions on water resources management. The organization and operation of the NWRC is specified further in detail by Decision No. 99/2001/QD-TTg of June 28, 2001.

❖ **Phase 4:** Debate and decision-making

Based on the LPLD 2008, the Government is to collectively examine, discuss and vote by majority in order to pass on the draft law to the National Assembly. In particular, the Government's Office (an organization subordinated to the Government) is supposed to prepare basic contents of a draft law, discuss issues on which opinions are divided, and make a report to the Government (GoV). Depending on the nature and content of a draft law, the GoV may examine and debate such draft laws at one or several Government meetings of the following format:

- Representatives of the Drafting Group make a presentation on the draft law;
- Representatives of the GoV's Office present issues in the draft law's on which opinions are divided;
- Representatives of related departments and organizations attending the meeting shall present their opinions and comments;
- After having discussed all these issues, the Government votes by majority about whether to submit the draft law to the National Assembly.

In general, the Government is responsible for giving its comments on a draft law in written form within 20 days after having received the dossiers of the draft law (Article 39 LPLD 2008).

On September 15, 2011, the GoV's meeting took place to debate and give comments on the 5th Draft submitted by MONRE. Based on the Examination Council's Report (No. 132/BC-HDTD), research, interpretation, and solicitation of other Ministries, provincial authorities, and other related organizations, the Government completed its review of the dossier of the Draft law on water resources and submitted the official documents (No. 163/TTr-CP of 20 September 2011) to the National Assembly. In the end, the 6th Draft, which was modified based on the GoV's comments, was submitted to the National Assembly.

❖ **Phase 5:** Investigation of the proposed draft law

Based on the LPLD 2008, in the fifth phase, the draft law is supposed to be discussed and commented by the Council of Ethnic Nationalities and related Committees of the National Assembly (NA) before being submitted to the Standing Committee of the NA and the National Assembly itself. These subsidiary bureaus are responsible for the verification of the draft law with respect to their jurisdiction (Article 41, LPLD 2008).

On this basis, on 24 September 2011 a meeting was organized by the Economic Committee (subordinate to the NA) between representatives of the Council of Ethnic Nationalities, NA Committees and related Ministries (GoV's Office, Ministry of Planning & Investment, Ministry of Industry and Trade, Ministry of Agriculture and Rural Development, State Banks, etc.) to investigate the 6th Draft Law on water resources.

❖ **Phase 6:** Review and comments

As regulated by the LPLD 2008, NA Committees in charge of the draft law submission are supposed to send the draft law's dossier to the Standing Committee of the National Assembly (SCoNA) at least 7 days before the SCoNA's meeting has been started. The draft law, statement, and appraisal reports are to be published on the NA's website. SCoNA may take it into consideration and give its comments on the draft law once or several times depending on the complexity of the draft law's content. The NA Committees in charge of the draft law submission are required, based on the comments of the SCoNA, to study and solicit comments for further revision of the draft law (Article 48, 49, 50 LPLD 2008).

On December 16, 2011, at the 4th meeting, the SCoNA gave its comments on specific issues, which implied that there still existed a difference of opinions. Based on these comments, the Economic Committee and the Drafting Group conducted a workshop to discuss and collect further comments

on issues for further study and revision in the 6th Draft (Report No. 137/BC-UBTVQH13 of 16 May 2012 on the interpretation and solicitation of comments on the draft law on water resources).

One month later, in co-operation with the NA's Office, the Economic Committee sent its official solicitation for comments from National Assembly's representatives on January 17, 2012. By 25 March 2012, the Economic Committee received official reports from 52 delegations of the National Assembly's representatives, 4 members of the National Assembly and 1 expert who provided comments on the draft LWR. Most of the comments agreed on the scope of application and basic contents of the Draft. Besides, they also contributed their opinions on specific provisions and terms of the Draft, as well as technical issues in the legislation (Report of the Economic Council of 25/03/2012 summarizing National Assembly's members' comments on the draft law on water resources).

On May 31, 2012 the National Assembly gathered to discuss and give comments on SCoNA's Report No. 137/BC-UBTVQH13 of 16/05/2012, which covered interpretation and solicitation of comments on the draft law on water resources. According to the Report No. 179/BC-UBTVQH13 of 19 June 2012, most of the comments of the NA Members agreed with the Report 137 and gave further opinions for preparing the Draft for ratification.

❖ **Phase 7:** Ratification

As specified by the LPLD, in case there is still a difference of opinion on some issues, the Standing Committee of the National Assembly is obligated to conduct a vote before the ratification of a draft law as suggested by the Chairperson of the meeting. The day of a draft law's ratification is to be held the same day that SCoNA has conducted the voting (Clause 2e of Article 54, Article 56 LPLD 2008); thereafter, the Law on Water Resource (amended) was passed on June 21, 2012 by the 13th National Assembly at its 3rd session.

❖ **Phase 8:** Promulgation

In July 2, 2012 the State President issued an Order (No. 15/2012/L-CTN ) to officially promulgate the Law on Water Resources No. 17/2012/QH13.

Such a lengthy and complicated process, which allows so many different state organs and agencies to comment and include their views and interests, may lead to a result which, on the one hand, is positive because different perspectives can be successfully harmonized but, on the other hand, bears the risk that all critical and contested issues have to be removed. The most controversial issues centered around the application scope of the draft law (particularly the "prevention and control of flood and damages caused by water" issue); authorities empowered to ratify master plans on water resources; methods to prevent pollution, degradation, exhaustion of water resources; and the application of a water exploitation fee (Statement No. 163/TTr-CP, of 20/09/2011). The outcome of such a process tends to be a law which remains very general and lacks concrete provisions. The analysis of the content and respective changes in the new law, which is provided in the following section, will illustrate this aspect.

## **2 THE NEW LAW ON WATER RESOURCES: INNOVATIVE ASPECTS AND FUNDAMENTAL CHANGES**

The new Law on Water Resources consists of 10 Chapters with 79 Articles and has been in force since January 01, 2013. Apart from the general provisions regulated in Chapter I (scope of application, legal terms interpretation, State policies, propaganda and education, collection of communities' opinions, and prohibited acts), the LWR 2012 provides regulations on basic surveys of water resources, and preparation of strategies and master plans (Chapter II); responsibilities to protect water resources (Chapter III); the rights and obligations to exploit and use water resources (Chapter IV); the prevention, control and mitigation of harmful effects caused by water (Chapter V); water-related financial issues (Chapter VI); international relations in respect of water resources management (Chapter VII); state management of water resources (Chapter VIII); inspections and dispute settlement (Chapter IX); and implementation provisions (Chapter X). The following sections will provide further details on each of the chapters in a chronological order.

### **2.1 Adjustment of Scope (Chapter I)**

A new point found in the first chapter of the Law on Water Resources 2012 specifies terminology from previous regulations, namely the definition of the concept of "water resources", which includes underground water, surface water, rain water and sea water in the territory of the Socialist Republic of Vietnam (Clause 1, Article 2, LWR 2012).

Other paragraphs deal with the regulation of projects which might cause negative impacts on water resources; the way community members can voice their opinion about the exploitation and use of water resources and the discharge of wastewater; the jurisdiction of river basins and water sources given the decentralized administration; and propaganda and education about regulations on this subject.

Specifically, the scope of the new Law includes regulations on the management, protection, exploitation and use of water resources, as well as the prevention, control and mitigation of harmful effects caused by water in the territory of Vietnam. Not regulated by this law is groundwater and seawater existing in the exclusive economic zone and continental shelf of the Socialist Republic of Vietnam, mineral water and natural thermal water. Issues of flooding and other adverse effects caused by water are regulated by other legal documents.

Chapter I provides several new provisions, namely on: propaganda and education about water resources; solicitation of community and individual opinions about exploitation and use of water resources and discharge of wastewater; and lists of river basins. Based on this, ministries, ministerial-level agencies and People's Committees at all levels shall, within their responsibilities and powers, coordinate with mass media agencies and education and training institutions to conduct communication and education on water resources and to guide people in implementing water-related legal documents, including measures to protect and use water resources in an effective manner (Article 5).

Additional to this, investors in projects involving exploitation and use of water resources, or those discharging wastewater into water resources which affect the production and daily-life of local people, are required to coordinate with local authorities as follows: (1) consulting representatives of local communities, related organizations and individuals in affected geographical areas about the issues related to their plans on the exploitation and use of water resources and discharge of wastewater into water resources; summarizing and integrating opinions, responding with explanations, and attaching these to their projects' dossiers for submission to relevant state agencies to decide on the investment; (2) before implementing their projects, publicizing information on their projects' related to the exploitation and use of water resources or discharge of wastewater into

water resources and all possible effects; (3) expenses for these activities shall be paid by project investors (Article 6).

Management of inland water resources is regulated by river basins in Vietnam. Decree No. 120/2008/ND-CP dated 1 December 2008 provides regulations on river basin management and sets out the legal framework for management by the administrative authorities of river basins. It includes provisions for the survey of river basin environment and water resources, the establishment of river basin plans, the protection of the river basin environment, the organization of river basin coordination, etc. As regulated by the Law on Water Resources 2012, the list of river basins includes: (a) the inter-provincial river basins<sup>6</sup> and (b) the intra-provincial river basins<sup>7</sup>. The Law on Water Resources 2012 also specifies the list of water resources which includes: (a) inter-provincial water sources, (b) intra-provincial water sources; and (c) international/transboundary water sources. The lists of river basins and water sources serve as the basis for implementing water resource management plans (Article 7). MONRE is supposed to elaborate and submit the respective lists of river basins, inter-provincial water and transnational water sources to the Prime Minister for promulgation. Provincial-level People's Committees shall elaborate and promulgate the lists of intra-provincial water sources in their localities (Clause 4, Article 7, LWR 2012).

## 2.2 Basic Surveys, Strategies, and Master Plans (Chapter II)

Basic surveys of water resources, as well as related strategies and master plans are regulated by Chapter II, which consists of 14 Articles. Because planning is a major activity of all government levels in Vietnam, this chapter is quite illustrative of processes related to water resource management. Master plans are long term plans (with a minimum of 10 years), which describe the overall aim of a sector or region's development. These plans are developed on the basis of baseline surveys and other studies. Strategies, in comparison, are elaborated to facilitate implementation of the master plan.

Based on provisions in the LWR, MONRE shall elaborate plans for surveying the nation's water resources, which must be submitted to the Prime Minister for approval. As a next step, ministries, ministerial-level agencies and provincial-level People's Committees shall elaborate their own plans on how to survey their water resources (Article 10).

Basically, these new regulations aim to improve the data and knowledge base for efficient and sustainable water resources management and planning. Accordingly, the LWR 2012 embraces new regulations on basic survey master plans on water resources (Article 11 - 13); strategies on water resources (Article 14); national master plans on water resources (Article 18); master plans for inter-provincial river basins, inter-provincial water resources, as well as provinces and centrally-run cities (Article 19); and state responsibilities in preparing basic surveys, strategies and master plans for water resources (Article 10).

This is for the first time that the **master plan for basic surveys on water resources** is regulated in order to satisfy requirements on formulating strategy, master plans, plans on socio-economic development, national defense and security, regional planning, water resource strategy; and to provide a basis for the implementation of water resource basic surveys, as well as servicing for planning on water resources. The period for master plans on surveying water resource is 10 years, with an intention to expand to 20 years. These master plans on surveying water resource include the following main objectives:

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<sup>6</sup> As specified in Clause 9, Article 2 of the LWR 2012, "Inter-provincial river basin" (*Lưu vực sông liên tỉnh*) refers to river basin on area of two or more provinces or centrally-affiliated cities.

<sup>7</sup> As specified in Clause 10, Article 2 of the LWR 2012, "Intra-provincial river basins" (*Lưu vực sông nội tỉnh*) refers to river basin on area of one province or centrally-affiliated city cities.

- a. To identify requirements for information, particularly countrywide statistics about water resources, water exploitation, and uses of water resources;
- b. To review and assess the results of the basic survey as well as the results of implementing the basic survey master plan on water resource from the previous period;
- c. To instrumentalize the basic survey on water resources for river basins, and other water sources being implemented during planning term;
- d. To prioritize basic survey operations defined in point c;
- e. To develop solutions, establish funds, and outline plans and milestones of implementation.

The strategy on water resources regulated in Article 14 is a new point in this Law. It stipulates that any strategy developed must comply with other national, regional strategies and master plans, the overall national socio-economic development plan, and the nation's defense and security policies. Furthermore, the strategy on water resources must take the following issues into consideration: the demand for water for living, production, sustainable development, national defense and security; the protection of water resources and the prevention harmful impacts caused by water; the exploitation, conservation, and efficient use of water resources. The strategy on water resources is formulated for a period of 10 years, with a view to extending this to 20 years in tandem with the strategy-period for socio-economic development. MONRE is to assume the main responsibility for this, as well as to coordinate with relevant ministries, ministerial-level agencies and provincial People's Committees to draft a strategy on water resources and submit it to the Prime Minister for approval.

The master plan on water resources stipulated in the LWR 2012 deals with surface and underground water for a period of 10 years, with a view to extending to 20 years. The master plan has three sections: (1) a general master plan on water resources of the whole country; (2) a master plan on water resources of inter-provincial river basins and inter-provincial water sources; and (3) a master plan on water resources for centrally-governed cities and provinces.

Section 1, the *general master plan on water resources* of the whole country, is to involve (a) a general assessment on natural conditions, socio-economic conditions, and environment, the current status of water resources, status of exploitation, consumption, and protection of water resources, as well as the prevention of harmful impacts caused by water; (b) an assessment of the implementation of the master plan from previous period; (c) a consideration of trends in demand and exploitation of water resources, use of water for livelihoods and socio-economic development; (d) the identification of objectives and duties for the management, regulation, distribution, exploitation, use and protection of water resources, as well as the prevention of harmful impacts caused by water; (e) the identification of demand for water transfer between river basins and to identify point-sources that exploit water sources on a large scale; (f) the prioritization for making master plans for river basins and other water sources; (g) the development of solutions, funds, plans and milestones of implementation.

The allocation and protection of water resources, as well as the prevention of harmful impacts caused by water are the main subject of the master plan on water resources of inter-provincial river basins and inter-provincial water sources. This includes the following main points: (1) by **allocation of water sources**, the plan stipulates assessment of the quantity and quality of water sources, as well as the current status of exploitation and use of water resources; a forecast of changes in flow, water level of aquifers, demand for water; an identification of allocation of water resources for individuals to exploit, and the priority order and quota in case of drought or lack of water; a disclosure of standby water sources to supply for living in case of pollution; and an illustration of demand for water transfer between sub-basins, and between other river basins; (2) with **protection of water resources** is implied the identification of areas being polluted and depleted; an assessment of the current status of water quality; and an identification of a system for supervising water quality and discharges of sewage into water sources; (3) the **prevention of harmful impacts caused by water** requires an identification of areas at risk of embankment erosion, and landslide, areas of land



subsidence or risk thereof, scope of saline infiltration due to exploration and exploitation of underground water; an assessment of the current status and ongoing issues in order to facilitate zoning that limits the harmful impacts caused by water; and an identification of solutions to improve quality, and prevent the harmful impacts caused by water, as well as solutions for improving the operation and effectiveness of warning systems and forecasting capabilities about harmful impacts caused by water; defining tasks and duties, as well as the creation, approval, adjustment, and promulgation of the master plan on water resources as regulated in the LWR 2012. MONRE is to guide, inspect, and implement the master plan on water resources (Article 20 –Article 24, LWR 2012).

### 2.3 Water quality management (Chapter III)

An interesting development in the LWR 2012 is that issues covering the prevention of water pollution, as well as the degradation and depletion of water resources are noticeably present. This includes regulations in response to incidents of polluted water sources and ongoing efforts at recovery of polluted and depleted water sources (Article 27); observation and supervision of water resources (Article 28); creating a secure corridor of water sources (Article 31); quality of water sources for daily-life (Article 32); quality of water sources in agricultural industry, aquaculture, industrial manufacture, mineral exploitation and other activities (Article 33); issues of underground water (Article 35); and discharge of waste into water sources (Article 37).

Accordingly, the exploitation of water resources must comply with the master plan on water resources approved by the relevant authorities. More precisely, **hospitals, health facilities treating infectious diseases**, cemeteries, waste landfills, facilities manufacturing toxic chemicals, or any manufacturing and processing facilities discharging toxic wastes into the secure corridor of water source **are not allowed to be newly built**. Existing facilities are required to provide methods for dealing with, controlling, and monitoring of wastewater before discharge into the environment. In case operational facilities have already caused water pollution, they must prepare solutions to overcome this problem within a limited period defined by relevant state agencies; if the facility fails to resolve the water pollution, operations will be suspended or it will be moved as prescribed by law (Clause 2, Article 26, LRW 2012).

As regulated in the LWR 2012, building of economic zones, industrial zones, export processing zones, hi-tech parks, industrial clusters, urban areas, concentrated residential areas, tourist areas, concentrated recreation areas, waterway routes, roadways, underground works, works supplying water and drainage, works exploiting minerals, power plants, areas containing sewage and facilities of production, business or service, or any other works potentially causing pollution, degradation, or depletion of water sources must have a plan for preventing this. Production, business or service facilities with a potential for polluting water sources are responsible for making a plan, as well as procuring necessary devices and means to be able to implement measures to respond and overcome incidence of pollution in a timely manner.

The state management authorities' task is to **observe and supervise water resources** for different use purposes, as newly regulated in the LWR 2012 (Article 28). In particular, MONRE must oversee the quantity and quality of water sources, their exploitation and use, as well as the discharge of waste into inter-provincial and inter-country water sources. The provincial People's Committees hold the same responsibility for intra-provincial water sources. In addition, organizations and individuals who use water resources are responsible for observing the respective regulations.

In order to improve upon the protection of water resources, **secure corridors**<sup>8</sup> must be built for the following: (1) hydro-power, irrigation reservoirs and other water reservoirs; (2) natural and artificial

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<sup>8</sup> As defined in Clause 22, Article 2 of the LWR 2012, "secure corridors of water resources" (*hành lang bảo vệ nguồn nước*) is defined as the limited land bordering along water source or surrounding it, as defined by the relevant state agencies.

lakes in urban and residential areas; big ponds with the function of flow regulation in other areas; natural lagoons; (3) rivers, springs, canals, ditches which are sources of water, methods of dewatering or which play an important role in socio-economic development and environmental protection; (4) water sources having religious or spiritual importance, or those having high value for biodiversity, cultural heritage protection, and the development of natural ecologies. Organizations managing and operating reservoirs specified in point 1 are required to plant boundary markers of the secure corridor of water as prescribed and to provide boundary markers to commune People's Committees which manage and protect. People's Committees (provincial level) are essential in defining and managing secure corridors of water source specified in points 2, 3 and 4 (Article 31, LWR 2012).

Regulation on **quality of water sources for daily-life**<sup>9</sup> was also amended by the LWR 2012. Here, organizations and individuals operating water supplies are responsible for regularly observing and tracking water sources for sufficient quality for daily-life and ensuring ongoing quality of such water sources. In case of an incident of water pollution, they are supposed to have developed a plan for tapping other water sources. Provincial People's Committees are accountable (i) to identify and publicize the Hygiene Protection Zone of various areas supplying daily-life water as prescribed by MONRE; (ii) to organize the dissemination of information on the quality of daily-life water sources, warn against abnormal phenomena concerning the quality of daily-life water sources in local areas. At district and commune levels, People's Committees are responsible for the implementation of protection measures for the quality of daily-life water sources in their localities.

The master plan for the following areas are **required to provide a waste collection and treatment system**: urban areas, concentrated residential areas in the countryside, tourist areas, recreation areas, industrial areas, economic zones, export processing areas, concentrated industrial clusters, and trade villages. The wastes collection and treatment system must be approved by the relevant state agencies for their suitability regarding the scale of wastewater discharge, and the capacity of water sources to accommodate wastewater. Projects for the construction, renovation, and upgrade of manufacture and business facilities are obligated to have a collection and separation system for rain water and wastewaters; a wastewater treatment system; system for drainage, and conduits for wastewaters abiding by technical regulations and standards (Article 37, LWR 2012).

## 2.4 Exploitation and use of water resources (Chapter IV)

Based on the LWR 2012, the following **cases are exempted from having to obtain permits for exploitation and use of water resources**: (1) daily-use water of households; (2) small-scale manufacture, businesses and services; (3) manufacture of salt; (4) cultural, religious and scientific research activities; (5) fire and explosion prevention, as well as for incidents regulated by the law on emergency. That being said, permits must still be applied for in case of exploitation of underground water (specified in points 1, 2 and 4) in areas where water levels have declined excessively. All other water users are obliged to apply for permits (Article 73).

The LWR 2012 specifies additional conditions for the following types of exploitation and use of water resources: agricultural, aquaculture, and salt manufacture; hydro-power; industrial and mineral processing; waterway transport; and underground water. In the case of **hydro-power**, the operation of water reservoirs must be approved by the relevant state agencies. They have to ensure the integrated use of water resources with multiple purposes, which includes provision of water for local people living nearby (Clause 3, Article 47). The exploitation of **underground water**, however, is restricted in the areas which contain (1) surface water able to satisfy demand stably; (2) underground

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<sup>9</sup> As defined in the LWR 2012, "daily-life water" (*nước sinh hoạt*) is defined as clean water or water which can be used for everyday human activities such as eating, drinking, and personal hygiene. "Clean water" (*nước sạch*) refers to water with quality satisfying the national technical specifications on clean water (Clause 11, Clause 12, of the Article 2, LWR 2012).

water with water levels declining in consecutively periods or experiencing dramatic decline; (3) danger of land subsidence, saline infiltration, and increase in pollution due to exploitation of underground water; (4) polluted underground water sources or having sign of pollution but without technological solutions to deal with water quality management; and (5) urban areas, concentrated residential areas in the countryside, concentrated industrial areas or clusters, and trade villages which have a point-source water supply or water supply services that are already adequate for local requirements (Clause 4 and 5, Article 52).

The regulation on **reservoirs and exploitation of water from reservoirs** specified by the GoV's Decree No. 112/2008/ND-CP of 20 October 2008 on management, protection and integrated exploitation of resources and environment of hydro-power and irrigation reservoirs is now regulated as a provision of law - found in Article 52, LWR 2012. Here, the master plan on development of localities containing proposals for construction of reservoirs on rivers and streams is obligated to conform to the overall master plan on water resources. This includes the identification and prioritization of tasks for each reservoir being proposed in the master plan such that water supply is ensured for each purpose outlined. Beyond this, the master plan must specify the volume of the reservoir that can be used for the implementation of each task in normal conditions and during unusual weather conditions such as increasing climate change. In the process of making master plan, opinions must be collected from parties benefiting or being put at risk of the exploitation of water resources caused by construction of reservoirs. These opinions and comments must be explained and summarized in reports that are sent to the relevant state agencies for appraisal and consideration within the master plan.

Issues concerning the **harmonization and distribution of water resources** are now clarified with more specific regulations in the LWR 2012 (Article 54 – 57). Here, the harmonization and distribution of water resources relates to issues of food safety, ensuring a minimum flow on rivers, and thresholds of underground water exploitation. More precisely, as defined in Clause 19, Article 2 of the LWR 2012, “underground water exploitation threshold” (*ngưỡng khai thác nước dưới đất*) outlines the permissible limitation to exploitation that prevent salinization, quality degradation, water source depletion, land subsidence, and negative impacts to surface water and surrounding environment. In addition, the combined exploitation of surface, underground sources, rain water; and stored water (from the rainy season) are also subject to the planning on harmonization and distribution of water resources. MONRE is responsible for implementing the harmonization and distribution of water resources on inter-country river basins. Provincial People's Committees are liable for implementation of harmonization and distribution of water resources in their localities.

Based on the LWR 2012, projects on **water transfer between river basins** must be planned with reference to the following considerations: water resources and environmental protection strategies; master plans on water resources of the relevant river basins; the master plan, local planning on socio-economic development relating to exploitation of water from river basins; an assessment of the actual capacity of water sources to fulfil demand in both water-transferring basin and water-receipt basin; and international treaties to which Vietnam is a signatory for cases in which the water transfer relates to inter-country water sources. An appraisal opinion by MONRE on such projects is required before submitting an application to the relevant authorities for consideration and decision-making on investment permits (Article 55, LWR 2012).

In addition to that, **artificial supplementation of underground water** is newly regulated by this Law. Here, the artificial supplementation of underground water is to be conducted based on an assessment of the potential to maintain quantity and quality while preserving the capacity of supplemented aquifers, their requirements for exploitation, use, and protection; this must include a full assessment of socio-economic and environmental impacts. MONRE is responsible for identifying aquifers, zones for areas in which underground water should be artificially supplemented, guiding implementation suitable to each region, and approving plans for artificial supplementation of underground water (Article 56, LWR 2012).

## 2.5 Prevention of harmful impacts caused by water (Chapter V)

Chapter V of the LWR 2012 was amended to include additional provisions on prevention of harmful impacts caused by water that directly relate to human activities. This includes: droughts, floods, artificial water-logging due reservoirs (Article 60); saline infiltration (Article 61); land subsidence (Article 62); and landslide of river shores and banks (Article 63). The management of harmful impacts on water caused by natural disaster is not subject to this law, as complementary legislations on dykes, heavy floods, storms and others exist (Article 59, LWR 2012).

In order to effectively deal with **droughts, floods, and artificial water-logging**, reservoirs must get the approval for the operation before they can start accumulating water. Their operation is supposed to maintain the minimum flow of water, in particular in order to prevent and combat against flood, drought, and deficit of water in lowlands. Water is allocated to ensure the implementation of reservoir's function. They are to ensure water supply in the cases of normal and unusual weather conditions, changes in water quality, and increasing climate change (Clause 1 & 3, Article 60, LWR 2012).

The management and operation of reservoirs is implemented by MONRE, MARD (Ministry of Agriculture and Rural Development), the Ministry of Industry and Trade, People's Committees (provincial level), as well as other organizations and individuals. All these have responsibilities in elaborating reservoir operation plans. In addition, the managing entities of reservoirs must have response plans for any circumstance of dyke rupture threatening the safety of workers, life and assets of people (Clause 5 & 6, Article 60, LWR 2012).

Regarding the **prevention and combating of saline infiltration** (Article 61), farmers and other involved people and organizations are required to manage aluminous and saline intrusion as well as erosion, while avoiding pollution of water sources. Exploitation of brackish water or saline water for manufacture is not allowed if it causes saline infiltration to water sources and harmful impacts on agricultural industries. The management and operation of sewers preventing saline intrusion, maintaining fresh water and reservoirs, and providing flow regulation must obey certain processes, standards, technical regulations governing saline infiltration. In general, the exploration and exploitation of underground water in delta and coastal areas must be focused on ensuring the saline infiltration into underground sweet water aquifers.

In order to alleviate the current situation of land subsidence taking place in many parts of Vietnam, the goals under the **prevention and combat against land subsidence** is a special section of the LWR 2012. Here, organizations and individuals carrying out underground water drilling, geological exploration drilling, or exploring for minerals and petroleum are supposed to conform to technical regulations and standards on safety, and the prevention of land subsidence. This is done through implementation specified in permits. In case land subsidence occurs, parties are obligated to stop exploration, exploitation, while concurrently implement remedial measures and report immediately to the nearest local authorities. Organizations and individuals exploiting minerals, building underground works, implementing operations of drilling or digging are required to conduct their works in accordance with technical regulations and standards on safety and the prevention of land subsidence.

**Renovation of river bottoms, shores, banks**, the construction of water works, and the exploitation of sand, gravel and other minerals on rivers and lakes are not to cause landslides or other harmful impacts to the stability of river bottoms, shores, banks, and lakes (LWR 2012). Here, for rivers, river sections suffering from landslides or have risk thereof, the agencies responsible for management of water resources at the provincial level shall identify causes of the landslide, propose solutions to prevent them in the future, and report to the provincial People's Committees for consideration, and zoning limitations, such as areas temporarily prohibited from exploitation of sand, gravel and other minerals.

The Ministry of Transport is supposed to assume the primary responsibility for this and to coordinate with MONRE and MARD to regulate in detail the operation of vessels on waterway transport routes so that they do not contribute to landslide along river shores and banks. MONRE assumes the protection of river bottoms, shores and banks where these constitute a border line between two central-affiliated cities or provinces (Clause 3 & 4, Article 63, LWR 2012).

## 2.6 Financing for water resources (Chapter VI)

Regulations on water resources financing are specified in Chapter VI of the LWR 2012, and represent a completely new issue on water management in Vietnam. It is the first time that sources of revenue from water resources are considered as “property” by the LWR. Here, as regulated in Article 64, revenues of the state budget collected from water resources include: (1) taxes on water resources and other taxes as prescribed by Law on Taxes; (2) charges, fees as prescribed by Law on Charges and Fees; (3) charges levied for the granting of permits to exploit water resources; (4) fines from sanctions on violation of the LWR.

Organizations and individuals exploiting water resources are liable to pay **for the granting of permits** in the following cases: (a) exploiting water for power generation with the purpose of trade; (b) exploiting water for business, service, and non-agricultural manufacture; (c) exploiting underground water for planting industrial trees, breeding cattle, or concentrated aquaculture with big scale. The fee for the granting of permits to exploit water resources is identified by quality of water sources, types of water sources, conditions of exploitation, scale, time of exploitation, and the purpose of the water use (Clause 1 & 2, Article 65, LWR 2012).

## 2.7 State responsibility for water resources management (Chapter VIII)

The responsibilities of the state in water resources management is regulated concretely by the LWR 2012. Here, regulations cover the authority for granting, extension, adjustment, termination, and withdrawal of permits for water resources. They also outline responsibilities in co-ordination, supervision of exploitation, use, and protection of water resources, as well as prevention of harmful impacts caused by water on river basins; these are amended with the purpose of encouraging integrated management of water resources, and give prominence in particular to MONRE, but also to other related Ministries, as well as local authorities for dealing with water-related issues in respective river basins.

Specifically, as defined in Article 70 of the LWR 2012, the **role of MONRE** includes: issuing and implementing water-related legal documents; issuing technical regulations and norms, setting unit price in the master plan, conducting the basic survey, facilitating in exploration, exploitation, use, and protection of water resources; issuing, extending, adjusting, and withdrawing permits on water resources, including permits to transfer rights of exploitation; drafting general strategy and the master plan on basic surveys for water resources, as well as the master plan on water resources; maintaining operation of inter- provincial reservoirs, as well as lists of river basins and water sources; planning basic surveys; regulation and distribution of water resources as well as remediation of polluted or depleted water sources. MONRE also has the authority to make appraisals of water transfer projects between river basins, providing opinion on specialized master plan that contains authority over exploitation, use of water resources and other activities related to exploitation, use, and protection of water resources. Furthermore, it is now defined as a permanent agency within the National Water Resources Council, and the Vietnam National Mekong Committee, and other river basin organizations. However, its authority for dispute settlement in environmental and water-related fields remains unchanged from the previous LWR.

In addition to changes in jurisdiction, from the beginning of 1 May 2013, the functions, tasks, authorities, and organizational structure of MONRE were reorganized. **MONRE has now been given**

**the task of the state management of climate change issues.** Furthermore, MONRE is the leading government agency performing state management tasks on land, water resources, mineral and geology resources, environment, hydrometeorology, meteorology and cartography, management of sea and islands, and state management on public services (Article 1, Decree No. 21/2013/ND-CP). In particular, MONRE is responsible for guiding and examining the appraisal and approval of strategic environmental assessment reports, environmental impact assessments and registration of written commitments on environmental protection nationwide. In addition, in coordination with other related ministries, MONRE is responsible for the investigation and identification of environmentally polluted zones in inter-provincial and transnational areas, guiding the determination of damage, remediation of environmental pollution and degradation, as well as improvement of environmental quality (Article 2, Decree No. 21/2013/ND-CP).

The provincial **People's Committees**, within the scope of their duties and authorities, are responsible for the following cases: (1) issuing and implementation of legal documents on water resources; (2) making, approving, announcing and implementing the master plan on water resources and the basic survey master plan; regulating and distributing of water resources, and recovery of polluted and depleted water sources; (3) delineation and announcement of about prohibited areas, areas restricted from exploitation of underground water, and areas requiring artificially supplemented underground water; promulgation of regulations on minimum flow, underground water exploitation thresholds, prohibited areas, rivers temporarily prohibited from exploitation of sand, gravel and other minerals; publish lists of lakes, ponds, lagoons that are not permitted for levelling; (4) response to and recovery from incidents of water pollution; this includes the tracking, detection and participation in solving incidents of inter-country water pollution; developing and managing the secure corridor of water source and the Hygiene Protection Zone supplying living water; ensuring a supply of daily-use water in cases of drought, deficit of water or incidents of pollution polluted; (5) issuing, extending, adjusting, and withdrawing of permits on water resources, including permits to transfer the right of exploitation; this includes providing guidelines for the application for a permit to exploit water resources; (6) acting as a dispute settlement agency for environmental and water-related issues.

People's Committees (both district and commune levels) are responsible for implementing measures to protect water resources as prescribed by law, coordinating with agencies and organizations managing observation stations, measuring and supervising water resources as well as the works exploring and exploiting water and discharging sewage into water sources. They are also required to respond to and facilitate remediation of water pollution, as well as to track, detect and participate in solving incidents of inter-country water pollution that fall within their authority. Furthermore, they are now also tasked with carrying out the registration for exploitation, use of water resources, and discharge of wastewater into water sources. This is part of the new goal for implementing tasks on state management of water resources as part of the decentralization trend which has continued to empower provincial People's Committees (Clause 2, Article 71, LWR 2012).

**The Responsibility for co-ordination, and supervision of exploitation, use, and protection of water resources**, as well as prevention of harmful impacts caused by water on river basins is specified in Article 72 of the LWR 2012 as follows:

- River basin organizations are supposed to give proposals on co-ordination, help guide distribution of water sources, supervise exploitation, use, and protection of water resources, as well as assist in the prevention of harmful impacts caused by water on one or more inter-country river basins;
- People's Committees (provincial level) are required to implement co-ordination, help guide distribution of water sources and supervise the exploitation, use, and protection of water resources, as well as the prevention of harmful impacts caused by water on intra-country river basins;

- MONRE is responsible for uniformly guiding coordination of activities of river basin organizations, provincial People's Committees, relevant agencies, river basin organizations, distribution of water sources, supervision of exploitation, use, and protection of water resources, as well as the prevention of harmful impacts caused by water on river basins.

However, the role of the **National Water Resources Council** (NWRC) still remains unchanged under the new LWR 2012. This is an organization established in 2000 by the Government (as regulated by the Prime Minister's Decision No. 67/2000/QD-TTg of 15 June 2000) acting as a counsellor for the Government and the Prime Minister on important decisions on water resources management. The organization and operation of the NWRC is specified in further detail in Decision No. 99/2001/QD-TTg of June 28, 2001.

## 2.8 Dispute settlement in water resources fields (chapter IX)

Since the previous LWR came into force in 1998, the right to initiate lawsuits against decisions/acts issued by administrative agencies has remained unused. A recent study on the problems of law enforcement on wastewater management in Can Tho City has shown that the People's Court in Can Tho City has not yet exercised its new jurisdiction over dispute settlement on environmental issues (since July 1996). At the commune level, a few small dispute cases have been solved by mediation of communal cadres in charge of land and construction issues (Nguyen 2010b).

In many current secondary regulations on water resource management, as well as in current regulations on wastewater management, organizations and individuals have the right to complain and denunciate only. There is no mention of the right to initiate lawsuits to the courts. For instance, lawsuits are not provided for in GoV's Decree No. 67/2003/NC-CP, which was amended by Decree No. 04/2007/ND-CP, and concerns the collection, remittance, management and use of environmental protection charges for wastewater. Furthermore, according to the Decision of MONRE No. 05/2003/QD-BTNMT of September 04, 2003 promulgating the regulations on the licensing of groundwater exploration, exploitation and drilling, there is mention of the responsibilities and rights of organizations and individuals licensed to explore groundwater (Article 13) and the responsibilities and rights of organizations and individuals licensed to exploit groundwater (Article 14), but the right to complain and initiate lawsuits against acts/decisions issued by administrative agencies is not specified. As a result, the rights and interests of organizations and individuals depending on water resources cannot be guaranteed, particularly when there is a lack of participation by the judiciary.

In order to deal with the problems mentioned above, the LWR 2012 specifies this issue in further detail, focusing on the role of the courts. Here, in the case of disputes arising from exploitation, use, or discharge of wastewater into water sources, should the complainant disagree with the complaint settlement decision of the People Committees (district and/or provincial levels) and/or the MONRE, he/she has the right to initiate an administrative lawsuit before the (relevant) People's Courts as prescribed by the new law (Article 76, LWR 2012).

This new article notwithstanding, the State still encourages disputes in the water sector to be resolved between individuals and households through **mediation at the grassroots level**, which has its own law. People's Committees (at the commune level) are supposed to conduct the mediation disputes in their localities on request of the complainant (Clause 1b & 1c, Article 76, LWR 2012).

**People's Committees (at the district level)** are responsible for settling disputes about exploitation, use, discharge of wastewater into water sources in cases where permits are not required; should the complainant disagree with the settlement decision of these People Committees, he/she may bring the complaint to the provincial People's Committees or initiate an administrative lawsuit before the (relevant) People's Court (Clause 2, Article 76, LWR 2012).

**Provincial People's Committees** are supposed to settle disputes arising from exploitation, use of water resources, and discharge of wastewater into water sources for cases within their licensing

jurisdiction. Should the complainant disagree with the settlement decision of these People Committees, he/she may bring an administrative lawsuit before the (relevant) People's Court. In addition to that, disputes in regard to the water sector between different People's Committees (at the district level) have now been tasked to the provincial People's Committees (Clause 3, Article 76, LWR 2012).

**MONRE** is responsible for dispute settlement arising from exploitation, use of water resources, and discharging of wastewater into water sources for cases under its licensing authority; should the complainant disagree with the settlement decision of MONRE, he/she may bring an administrative lawsuit before the (relevant) People's Court. Furthermore, MONRE is now tasked with settling disputes on water resources within provinces and centrally-governed cities (Clause 4, Article 76, LWR 2012).

In addition, the issue of **compensation from dispute settlement** is now mentioned by the LWR 2012 as a provision of law. Here, compensation cases arising from settlements in the water sector are supposed to be implemented in accordance with provisions of civil laws, and state legislation on compensation liability (Clause 5, Article 76, LWR 2012).

To sum up, the amended LWR of 2012 confirms that water is an essential natural resource of Vietnam and aims to protect water resources effectively, use them more sensibly, prevent and overcome damages caused by water use and strengthen the Government management of water resources in the new context. It has a number of new provisions and regulations, most notably in the fields of environmental monitoring and in the introduction of a water exploitation fee. Under the LWR 2012, for the first time organizations and individuals are entitled to self-organize the environmental monitoring and survey program relating to their exploitation, and/or use of water resources. This issue is further regulated by the Decree No. 27/2013/ND-CP dated 29 March 2013 of the Government, which lays out the regulations and conditions under which organization can carry out environmental monitoring and survey activities. Another remarkable change under the LWR 2012 is the water exploitation fee. Organizations and individuals exploiting water must pay this fee, with the exception of those using water for agricultural production (instead, they pay an issuing fee for being granted the water exploitation permit under the LWR 1998). The fee level for granting of permits to exploit water resources is calculated based on the quality of water sources, types of water sources, conditions of exploitation, scale, period of exploitation, and the purpose of water use. A fee scheme for water resource exploitation is expected to be provided by the Ministry of Finance and/ or MONRE by the end of 2013. The following chapter provides an overview of the update of the legislation on water resources sector in Vietnam, particularly water-related laws and secondary regulations.



## 3 UPDATE OF THE LEGISLATION ON WATER RESOURCES SECTOR IN VIETNAM

### 3.1 Summary of water-related laws and ordinances (issued from 2010)

In order to ensure the sustainable exploitation and use of water resources, Vietnam has started to elaborate a legal framework of the water sector in recent years. From 1998 (an important point where the very first Law on Water Resources in Vietnam came into force) to the end of 2009, more than 300 legal documents have been issued to protect and sustainably develop water resources from a range of different legal viewpoints (Nguyen 2010a). However, because water quality and the prevention of water pollution have become crucial and serious issues due to the country's rapid development and industrialization, there is a need to further development legal instruments. This section shall provide an update on water-related regulations (both laws/ordinances and secondary regulations) which have been adopted since 2010 at the national level.

In order to gain a better understanding of the hierarchy of legal documents in Vietnam, a short definition of laws and ordinances shall be provided. Based on the current Law on Promulgation of Legal Document 2008, laws are defined as (national) legal documents issued by the National Assembly addressing fundamental issues and legitimate rights and interests of Vietnamese citizens. Adopted by the Standing Committee of the National Assembly, ordinances provide regulations on issues which are suggested by the National Assembly. Laws and ordinances are to be applied with the supreme legal force of the Vietnamese legal system. Secondary regulations issued by the state organizations (administrative and judicial concerns) have a lower rank than laws/ordinances in terms of the legislative hierarchy.

From 2010, most important water-related laws and ordinances were revisited in order to meet the requirements of the country's development and its international integration, with particular focus on the environment and the economic water sector.

#### ❖ **Law on Economical and Efficient Use of Energy** (No. 50/2010/QH12 of 17 June 2010)

Applied to organizations, households and individuals using energy in Vietnam, this law outlines how energy is to be used economically and efficiently; contains policies and measures to promote this; defines rights, obligations and responsibilities of organizations, households and individuals in their use of energy.

Particularly in *industrial production*, the Prime Minister's regulations stipulate how producers are to: (i) elaborate and implement annual plans on their economical and efficient use of energy; integrate energy management programs with their programs on quality control, cleaner production and environmental protection; (ii) abide by standards, technical regulations and norms on energy use provided by the relevant state agencies; select and apply advanced production management processes and models, appropriate technological measures and equipment and technologies with high energy yield; use substitute energies with higher efficiency in production lines; (iii) apply technical measures and workshop architecture to make the optimal use of lighting, ventilation and cooling systems in order to make the best use of natural light and ventilation; (iv) operate, upgrade and maintain devices and equipment along production lines to prevent energy loss; and (v) gradually eliminate devices and equipment with outdated and energy-intensive technologies.

In *agricultural production*, organizations, households and individuals are to abide by the following measures for economical and efficient use of energy: (i) applying scientific research and technological improvements to reach high energy efficiency in equipment for production, subcontract production, processing, preservation and transportation of agricultural products; (ii) using clean and renewable energy equipment and technologies in the production, subcontract production, processing, preservation and transportation of agricultural products and trade development; (iii) eliminate

agricultural and fishing means, equipment and machinery with outdated technologies and low energy yield under regulations of the relevant state agencies; (iv) propagate and disseminate knowledge and give counselling on economical and efficient use of energy.

Also based on this law are outlined measures for economical and efficient use of energy in *irrigation*: (i) rationally planning irrigation systems, including optimizing reservoirs and canals and making use of natural flows; (ii) rationally operating and exploiting capacity of pumps in pump stations for water supply and drainage.

The Ministry of Industry and Trade is supposed to assume the prime responsibility for, and coordinate with, related ministries and ministerial-level agencies in managing and promoting economical and efficient use of energy (as defined by the Government). This includes the promulgating of technical regulations and norms on energy management. At local levels, decentralization policy has empowered People's Committees, within their jurisdiction, to manage energy use and encourage efficiency.

#### ❖ **Law on Food Safety** (No. 55/2010/QH12 of 17 June 2010)

This law regulates rights and obligations of organizations and individuals in ensuring food safety, particularly conditions for food production, trade, import and export; advertisement and labelling. This involves additional tasks of food testing, risk analysis of food aimed at preventing food safety incidents; also included are measures to encourage the dissemination of food safety information, education and communication as well as clarifying state responsibilities for food safety management.

Based on this law, companies can only get a certificate of food safety when they fully meet the following conditions: (1) adequate conditions for ensuring food safety suitable to each type of food production and trade; and (2) registration as a food production and trading enterprise in their business certificate. Here, food producers and traders, apart from general conditions in the market, are supposed to have (i) suitable venues with appropriate areas and a safe distance from toxic, polluted or other harmful factors; (ii) sufficient technically qualified workers for food production and trading; and (iii) a wastewater treatment system which operates in accordance with the legislation on environmental protection (Clause 1, Article 19).

For fresh and raw food producers, the food safety law stipulates that they should (i) meet requirements for cultivation, water sources and production spaces for producing safe food; (ii) treat wastewater before discharging into the environment in accordance with the legislation on environmental protection; (iii) use detergents and disinfectants which are safe for humans and the environment.

The Ministry of Industry and Trade is to assume primary responsibility for promulgation and implementation of policies, strategies, master plans, and legal documents on food safety, which includes activities such as inspection, examination, and issuing violations. At local levels, People Committees are required to (i) issue legal documents and technical regulations about food safety within their jurisdiction; formulating and implementing master plans on safe food production zones and facilities so as to ensure management compliance along the entire food supply chain; (ii) conduct education and communication campaigns to spread information with a view toward raising awareness about food safety; beyond observing the letter of the law, to instil a sense of responsibility in food producers and traders toward communities and consumers concerning food safety; and (iii) inspect, examine and punish violations of the law on food safety in their respective localities.

Taking effect from 1 July 2011, this Law replaces the ordinance on food hygiene and safety (No. 12/2003/PL-UBTVQH11).

❖ **Law on Environmental Protection Tax** (No. 57/2010/QH12 of 15 November 2010)

Based on this law, organizations, households and individuals producing and importing specific goods are required to pay the environmental protection tax. This tax is levied indirectly on a set of products and goods (hereafter referred to as goods) which, through their consumption, produce negative environmental impacts. In particular, this tax is applied to: (1) gasoline (except ethanol), oil, grease, aircraft fuel, diesel oil, petroleum, fuel oil, and lubricants; (2) Coal (lignite, anthracite, oil coal); (3) hydrogen-chlorofluorocarbon liquid (HCFC); (4) taxable plastic bags; (5) controlled herbicides; (6) controlled pesticides; (7) controlled forest product preservatives; (8) controlled warehouse disinfectants.

Taking effect from 1 January 2012, this Law replaces the ordinance on fees and charges (No. 38/2001/PL-UBTVQH10).

❖ **Law on Minerals** (No. 60/2010/QH12 of 17 November 2010)

According to this law, organizations and individuals engaged in mineral-extraction activities are required to use environmentally friendly technologies, equipment and materials. Included in this law are requirements to prepare solutions for prevention and mitigation of adverse impacts on the environment, as well as for remediation and restoration of the environment. In addition, they are committed to apply solutions and bear all costs for environmental protection, rehabilitation and restoration. These solutions for environmental protection or remediation and their respective financial burden must be identified in the investment projects, environmental impact assessment reports and environmental protection commitments approved by the relevant state agencies. Before conducting mineral mining activities, they are supposed to pay an advance deposit for environmental rehabilitation and restoration according to the GoV's regulations.

Beyond mining itself, the use of water in mineral-extraction activities is also regulated by this law. Here, organizations and individuals engaged in mineral-extraction are liable to use water in accordance to the LWR. Water sources, the amount and methods of use, as well as wastewater discharge from mineral-extraction activities are to be outlined in exploration projects, mining investment projects and mine designs (Article 32, Law on Mineral 2010).

Taking effect from 1 July 2011, this law replaces the old versions of 1996 and 2005 (Law on Minerals 1996; Law No. 46/2005/QH11 amending and supplementing a number of articles of the Law on Minerals.)

❖ **Related legislations on dispute resolution**

In order to strengthen the role of the judiciary vis-a-vis the administrative and properly utilize the right to initiate lawsuits against decisions/acts issued by administrative agencies, the legislation on **disputes settlement** has been further developed. Since 2010, a numbers of laws have been issued to encourage a more positive “view” about the guarantee for rights and interests of organizations and individuals, particularly: (1) Law on Commercial Arbitration<sup>10</sup> (No. 54/2010/QH12 of 17 June 2010); (2) Law on Execution of Criminal Judgments<sup>11</sup> (No. 53/2010/QH12 of 17 June 2010); (3) *Law on Administrative Procedures*<sup>12</sup> (No. 64/2010/QH10 of 24 November 2010); (4) Law on amending and

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<sup>10</sup> This Law replaces the Ordinance on commercial arbitration (No. 03/2003/PL-UBTVQH11), and came into force on 1 July 2011.

<sup>11</sup> This Law replaces the Ordinance on execution of prison sentences 1993 (Ordinance No. 01/2007/PL-UBTVQH12 amending and supplementing a number of articles of the Ordinance on execution of prison sentences) and came into force on 1 July 2011.

<sup>12</sup> This Law replaces the Ordinance No. 10/1998/PL-UBTVQH10 on procedures for settlement of administrative cases and Ordinance No. 29/2006/PL-UBTVQH11 amending and supplementing a number of articles of the Ordinance on procedures for settlement of administrative cases; and came into force on 1 July 2011.

supplementing a number of articles of the Civil Procedure Code (No. 65/2011/QH12 of 29 March 2011); (5) *Law on Complaints*<sup>13</sup> (No. 02/2011/QH13 of 11 November 2011); (6) *Law on Denunciations*<sup>14</sup> (No. 03/2011/QH13 of 11 November 2011).

Besides these, the following laws also have an relationship to legislation on the water sector in Vietnam: Law on Handling Administrative Violations<sup>15</sup> (No. 15/2012/QH13 of 20 June 2012); Law on Vietnamese Sea (No. 18/2012/QH13 of 21 June 2012); Law on amending and supplementing a number of articles of the Law on Management of Taxes (No. 21/2012/QH13 of 20 November 2012); Law on Cooperatives<sup>16</sup> (No. 23/2012/QH13 of 20 November 2012); and the Law on Inspection (No. 56/2010/QH12 of 15 November 2010).

### 3.2 Summary of water-related secondary regulations

Apart from the newly-issued LWR 2012 and respective laws/ordinances, important secondary regulations have also been developed since 2010 to provide further regulation of the water sector, with a particular focus on violations and sanction. An overview of these secondary regulations shall be presented along the following key subjects: (i) regulations on water quality management; (ii) regulations on environmental protection fines and fees; (iii) regulations on violations and sanctions.

#### ❖ Regulations on water quality management

Since the protection of water resources, particularly with respect to water quality and the prevention of water pollution, has become a crucial and serious issue due to the country's rapid development and industrialization, Vietnam has further elaborated the legal framework for water quality management from 2010. This legal framework includes a large set of secondary regulations that deals with wastewater management, including the treatment and disposal of wastewater from industry, agriculture and households.

The first new point to observe is that *national technical water-related regulations* have been further refined and amended. The national technical regulation on **industrial wastewater** - QCVN 40: 2011/BTNMT – was issued by MONRE based on Circular No. 47/2011/TT-BTNMT to expand national technical regulations on the environment. On 15 February 2012, this regulation replaced the old version from 2009 (QCVN 24: 2009/BTNMT – the national technical regulation on industrial wastewater). According to the new law, organizations and individuals discharging industrial wastewater into the environment (in general) and specifically into water sources are subject to this regulation. Discharge of particular classes of industrial wastewater is specified in other regulations. For example, wastewater discharged into the collection system of a concentrated plant for

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<sup>13</sup> This Law replaces the old versions of 1998, 2004, and 2005 (Law on complaints and denunciations No. 09/1998/QH10; Law No. 26/2004/QH11, and Law No. 58/2005/QH11 amending and supplementing a number of Article of the Law on complaints and denunciations.); and comes into force from 1 July 2012.

<sup>14</sup> This Law replaces the old versions of 1998, 2004, and 2005 (Law on complaints and denunciations No. 09/1998/QH10; Law No. 26/2004/QH11, and Law No. 58/2005/QH11 amending and supplementing a number of Article of the Law on complaints and denunciations.); and comes into force from 1 July 2012. The cases of complaints and Denunciations which had been accepted before the effective date of the Law on Complaints 2011 and the Law on Denunciations 2011, and not yet completely settled are supposed to be further settled under the Law on Complaints and Denunciations 1998, and its amended version in 2004, and 2005.

<sup>15</sup> This Law replaces the Ordinance on handling of administrative violations (No. 44/2002/PL-UBTVQH10), Ordinance No. 31/2007/PL-UBTVQH11 amending a number of articles of the Ordinance from 2002, and Ordinance No. 04/2008/PL-UBTVQH12; and came into force on 1 July 2013.

<sup>16</sup> This Law replaces the old version of 2003 Law on Cooperatives No. 18/2003/QH12, and came into force on 1 July 2013.

wastewater treatment is supposed to follow the regulations and operation management for treatment plants.

Further refining this, on 16 December 2010 MONRE issued the national technical regulation on medical wastewater (QCVN 28:2010/BTNMT) based on Circular No. 39/2010/TT-BTNMT. Here, medical wastewater must be treated and sterilized before being discharged into the environment. Organizations and individuals discharging medical wastewater into the environment are subjects to this regulation. Furthermore, this regulation prescribes the maximum limits for various chemical and biological factors, as well as pollutants, allowed into the wastewater from medical facilities.

Regarding surface water quality, on 12 December 2011 MONRE adopted Circular No. 43/2011/TT-BTNMT promulgating two national technical regulations: (1) QCVN 38: 2011/BTNMT - the national technical regulation on surface water quality for the protection of aquatic life; and (2) QCVN 39: 2011/BTNMT - the national technical regulation on water quality for irrigation.

Replaced TCVN 6774: 2000 (freshwater quality guidelines for protection of aquatic life, promulgated together with the MONRE's Decision No. 35/2002/QĐ-BKHCNMT of June 25, 2002), the QCVN 38: 2011/BTNMT (see above, the national technical regulation on surface water quality for protection of aquatic life) specifies maximum limits for various parameters of surface water quality used in the protection of aquatic life (see Table 1).

Table 1: Maximum limits values for various parameters of surface water quality used in the protection of aquatic life

No.	Parameters	Unit	Limit value
1	pH		6,5 - 8,5
2	Dissolved oxygen (DO)	mg/l	≥ 4
3	Total suspended solids (TSS)	mg/l	100
4	Total dissolved solids	mg/l	1000
5	Nitrite (NO <sub>2</sub> <sup>-</sup> calculated per N)	mg/l	0,02
6	Nitrate (NO <sub>3</sub> <sup>-</sup> calculated per N)	mg/l	5
7	Ammonium (NH <sub>4</sub> <sup>+</sup> calculated per N)	mg/l	1
8	Cyanides (CN <sup>-</sup> )	mg/l	0,01
9	Arsenic (As)	mg/l	0,02
10	Cadmium (Cd)	mg/l	0,005
11	Lead (Pb)	mg/l	0,02
12	Chromium VI	mg/l	0,02
13	Copper (Cu)	mg/l	0,2
14	Mercury (Hg)	mg/l	0,001
15	Organochlorine chemical substances for plant protection	μg/l	
	Aldrin		3,0
	Chlordane		2,4
	DDT		1,1
	Dieldrin		0,24
	Endrin		0,09
	Heptachlor		0,52
Toxaphene	0,73		
16	Herbicides	mg/l	
	2,4 D		0,2
	2,4,5 T		0,1
	Paraquat		1,2
17	Total oil and petrolatum	mg/l	0,05
18	Phenol (total)	mg/l	0,005
19	Surface activators	mg/l	0,2

Layout out the maximum limits for various parameters of water quality assessment used for irrigation (see Table 2), the national technical regulation on **water quality for irrigation** (QCVN 39: 2011/BTNMT), this regulation replaced TCVN 6773:2000 (Water quality standards for irrigation, promulgated together with the MONRE's Decision No. 35/2002/QD-BKHCMNT of June 25, 2002).

Table 2: Maximum limit for various parameters of water used for irrigation

TT	Parameters	Unit	Limit values
1	pH		5,5-9
2	Dissolved oxygen (DO)		≥ 2
3	Total dissolved solids	mg/l	2000
4	Sodium absorption ratio (SAR)		9
5	Chlorine (Cl <sup>-</sup> )	mg/l	350
6	Sulfate (SO <sub>4</sub> <sup>2-</sup> )	mg/l	600
7	Bo (B)	mg/l	3
8	Arsenic (As)	mg/l	0,05
9	Cadmium (Cd)	mg/l	0,01
10	chromium (Cr)	mg/l	0,1
11	Mercury (Hg)	mg/l	0,001
12	Copper (Cu)	mg/l	0,5
13	Lead (Pb)	mg/l	0,05
14	Zinc(Zn)	mg/l	2,0
15	Fecal, Coli (only for irrigating water for vegetables and fresh serve vegetables)	Quantity of bacteria /100ml	200

Besides these two specific regulations, a number of national technical regulations on different water-related factors have been further amended and developed; such as:

- QCVN35: 2010/BTNMT<sup>17</sup> - National technical regulation on discharge for offshore oil and gas facilities
- QCVN 43: 2012/BTNMT<sup>18</sup> - National technical regulation on sediment quality
- QCVN 44: 2012/BTNMT<sup>19</sup> - National technical regulation on offshore saltwater quality

In addition, the **national technical process for water-related surveys** has been newly revised by MONRE, including the follow types of surveys:

- Technical process for survey on mainland surface water (Circular No. 29/2011/TT-BTNMT of August 01, 2011)
- Technical process for survey on underground water (Circular No. 30/2011/TT-BTNMT of August 01, 2011)
- Technical process for survey on sea water (Circular No. 31//2011/TT-BTNMT of August 01, 2011)
- Technical process for survey on rain water quality (Circular No. 32//2011/TT-BTNMT of August 01, 2011)
- Technical process for survey on land (Circular No. 33//2011/TT-BTNMT of August 01, 2011)

<sup>17</sup> This regulation was promulated together with Circular No. 42/2010/TT-BTNMT on December 29, 2010 by MONRE, and replaced the old version from 1998 (Decision No. 3951/1998/QD-BKHCMNT of April 10, 1998).

<sup>18</sup> This regulation was promulated together with Circular No. 10/2012/TT-BTNMT on October 12, 2012 providing national technical regulations on the environment.

<sup>19</sup> This regulation was promulated together with Circular No. 10/2012/TT-BTNMT on October 12, 2012 providing national technical regulations on the environment.

On the subject of waterway transportation, the national technical to prevent pollution caused by inland waterway activities was issued together with the Circular No. 70/2011/TT-BGTVT on 30 December 2011 by the Ministry of Transport.

Apart from the national technical regulations on the environment, regulations on **environmental impact assessment (EIA)**, strategic environmental assessment, and environmental protection commitment are also worth of consideration. On this issue, the Vietnamese Government has issued Decree No. 29/2011/ND-CP of 18 April 2011 providing regulations on strategic environmental assessment, environmental impact assessment and environmental protection commitment. Based on this decree, on 18 July 2011 MONRE adopted Circular No. 26/2011/TT-BTNMT detailing a number of articles of on strategic environmental assessment, EIA, and environmental protection commitments.

Based on this circular, the following projects are liable to conduct EIAs: (1) investment projects decided by the National Assembly or the Prime Minister; projects using land of nature reserves and national parks; (2) major construction projects (e.g. technical infrastructure of urban centers and residential areas; upgrading water drainage systems of urban and residential areas; dredging of canals, rivers and reservoirs; technical infrastructure of industrial parks, hi- tech zones, industrial complexes, export-processing zones, trade zones, and traditional craft villages); (3) projects producing construction materials; (4) electronics and telecommunications projects; (4) irrigation projects for forest and agricultural land; (5) mineral prospecting, exploitation and processing projects; (6) oil and gas projects; (7) food processing; (8) farm product processing projects; (9) projects producing fertilizer and plant protection agents; (10) chemicals, pharmaceuticals and cosmetics projects; and (11) other projects specified in Appendix II of Decree No. 29/2011/ND-CP.

In Appendix I of the same decree, Part A and B outline which strategies, master plans and long-term plans of five years or more are subjects to the detailed strategic environmental assessment. Initiatives of this kind conducted in domestic sectors and not found in the list in Appendix I are only subject to a brief strategic environmental assessment (Article 3, Decree No. 29/2011/ND-CP).

Investment projects of a different nature and with small scope or capacity are only required to conduct an environmental protection commitment (Article 29, Decree No. 29/2011/ND-CP). The same smaller requirement is also applied to projects that are not found in the list of Appendix II or whose operational capacity is below the level set in Appendix II, as well as to production, business and service activities that are not usually considered investment projects but that nonetheless produce waste.

Taking effect from 5 June 2011, this Decree replaced Articles 6-17 of the GoV's Decree No. 80/2006/ND-CP of 9 August 2006 detailing and guiding a number of articles of the Law on Environmental Protection, and Article 1 (clauses 3 to 10) of the Decree No. 21/2008/ND-CP of 28 February 2008 amending and supplementing a number of articles of the Decree No. 80/2006/ND-CP.

Water pollution management in **craft village<sup>20</sup> production** is also handled in an interesting way in the legislation. Based on MONRE's Circular No. 46/2011/TT-BTNMT issued on 26 December 2011 regulating environmental protection in of craft villages, projects carrying out new production, business and service activities in craft villages are liable to conduct an EIA and environmental protection commitment in accordance with Clause 1, Article 4 of this Circular and Articles 12 and 29 of the GoV's Decree No. 29/2011/ND-CP (Circular No. 26/ 2011/TT-BTNMT). For existing facilities which have EIA reports and environmental protection commitments that have not yet been approved or certified, they are to formulate environmental protection schemes either in detailed or brief form and submit them to the relevant agencies for consideration and approval.

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<sup>20</sup> Craft village refers to one or many population clusters of villages, hamlets or similar at the commune level engaged in rural production and business lines, as well as handicraft and cottage industry production (Circular No. 46/2011/TT-BTNMT dated 26 December 2011).



In general, to be recognized as a craft village, the following key environmental protection conditions must be satisfied:

- Filing EIA reports, written environmental protection commitments and detailed or brief environmental protection schemes that are approved or certified by the relevant agencies; applying noise, dust, temperature, exhaust gas, wastewater control and proper on-site wastewater treatment measures; collecting, sorting and managing solid waste and hazardous wastes (if any) according to regulations; committing to regulations on financial contributions to environmental protection in general and to waste treatment funds in particular;
- Erecting private environmental protection facilities. In case such facilities do not already exist, craft villages are supposed to have a plan for building such facilities according to a specific implementation schedule that is approved by the relevant authorities;
- Preventing occurrences of wastewater discharge, as well as issues of exhaust gas, solid and hazardous wastes, noise and vibration that affect environment sanitation and the beauty of public places in the craft village.

In order to deal with the urgent environmental problems faced by craft villages, the Prime Minister approved a general scheme on environmental protection for craft villages that continues to 2020, with vision of 2035 (Decision 577/QĐ-TTg of 11 April 2013).

Environmental management and protection in **economic zones, hi-tech parks, industrial parks and industrial complexes** specified in MONRE's Circular No. 08/2009/TT-BTNMT have been further supplemented by MONRE's Circular No. 48/2011/TT-BTNMT of 28 December 2011. Changed is now that investors operating in these locations must elaborate EIA reports or environmental protection schemes for technical infrastructure based on the GoV's Decree No. 29/2011/ND-CP from 18 April 2011, which outlines regulations on strategic environmental assessment, environmental impact assessment and environmental protection commitment.

Regarding **drilling of underground water**, the process for the granting of permits originally specified by Decision No. 17/2006/QĐ-BTNMT has now been further amended and supplemented by Circular No. 36/2011/TT-BTNMT issued by MONRE on 15 September 2011.

Recently, in order to deal with problems related to both water quality and quantity, as well as to strengthen the sustainable and integrated management of water resources, the Vietnamese Government has requested Ministries and ministerial-level agencies, related government agencies and provincial People's Committees to perform certain tasks as outlined in Resolution No. 35/NQ-CP of 18 March 2010). In doing so, the Vietnamese Government has recognized that industrial wastewater management and import of waste are urgent environmental issues. Specifically, the urgent issues mentioned in this Resolution are: (1) wastewater management at industrial parks and clusters; (2) exploitation of mineral resources; (3) water pollution caused by craft village companies; (4) water pollution in big cities and river basins; (5) import of waste; (6) degradation of eco-systems; and (7) poor state management capacity.

#### ❖ **Regulations on environmental protection fees**

Under the current Law on Environmental Protection of 2005, organizations and individuals discharging wastewater into the environment or engaging in activities causing adverse impacts on the environment have to pay environmental protection charges or fees (Article 113). For the specific type of environmental protection fees applied to wastewater, the Vietnamese Government adopted the first Decree No. 67/2003/ND-CP on 13 June 2003. This decree, however, has been continuously amended: initially in 2007 (by Decree No. 04/2007/ND-CP), later in 2010 (by Decree No. 26/2010/ND-CP), and most recently by Decree No. 25/2013/ND-CP in 29 March 2013. The goals of these shifts have been variously, to limit environmental pollution caused by wastewater, to economically use clean water and to create a funding base for the Environmental Protection Fund (*Quỹ Bảo vệ Môi trường*).

Accordingly, beginning on 1 July 2013, facilities discharging wastewater are required to pay higher environmental protection fees for discharging wastewater into the environment. Compared to the old regulations, the rate has increased by a factor of almost 10. Those subject to the environmental protection fee for wastewater are industrial wastewater discharges as well as those discharging daily-life wastewater. As defined in this Decree, “industrial wastewater” (*nước thải công nghiệp*) is defined as water discharged into the environment from industrial production companies, and companies processing agricultural, forestry and aquatic products. “Daily-life wastewater” (*nước thải sinh hoạt*) refers to water discharged into the environment from everyday human activities such as eating, drinking, bathing, washing and taking care of personal hygiene (Article 2, Decree No. 25/2013/ND-CP).

In case a company pays fees for discharging wastewater into the drainage/sewage system, the drainage/sewage system operation managers (*Đơn vị Quản lý và Vận hành hệ thống thoát nước*) are responsible for paying the environmental protection fee (Article 3, Clause 2, Decree No. 25/2013/ND-CP). Forestry and aquatic product processing companies are liable to pay the environmental protection fee for industrial wastewater (i.e. not the fee for daily-life wastewater) if the company uses water provided by the Agency of Clean Water Supply (*Đơn vị Cung cấp nước sạch*) in their production (Article 3, Clause 3, Decree No. 25/2013/ND-CP).

The **environmental protection tax**, regulated by a law from 2010, has similarly been amended by Decree No. 67/2011/ND-CP of 8 August 2011, which guides the implementation of a number of articles of the Law on Environmental Protection Tax. The decree being upgraded had already been replaced by Decree No. 78/2000/ND-CP of 26 December 2000 and Decision No. 03/2009/QĐ-TTg of 9 January 2009, which set out which entities are subject to environmental protection taxable, and detailed the basis for tax calculation, declaration, calculation, payment and refund.

A small but important amendment of this tax, on 14 September 2012, caused Clause 3 of Article 2 of the Decree No. 67/2011/ND-CP to be amended (by the Decree No. 69/2012/ND-CP). This stipulated, from 15 November 2012, that the nylon bags (plastic bags) specified in Clause 4 Article 3 of the Law on Environment Protection Tax, which includes thin bags and packages (with an opening, base, body, which can contain products) made of high density polyethylene resin (HDPE), low density polyethylene (LDPE), or linear low density polyethylene resin (LLDPE), are considered taxable. There is an exception for packages and nylon bags that satisfy the eco-friendly criteria as prescribed by MONRE.

The **environmental protection tax applied to plastic bags** was clarified by GoV’s Decree No. 69/2012/ND-CP of 14 September 2012, which stated that, from May 2013, the environmental protection tax paid from 1 January 2012 until 30 November 2012 on nylon bags used *for packing of products* will be refunded. This refund was also applicable for the period 1 January 2012 to 14 November 2012 in which producers and importers had already declared but not yet paid such tax or fines for late payment (Article 1, Circular No. 30/2013/TT-BTC of 18 March 2013 of the Ministry of Finance providing guideline for the reimbursement of the environmental protection tax for plastic bags used for packaging of imported and exported products based on the GoV’s Resolution No. 02/NQ-CP of 7 January 2013).

Concerning **irrigation**, based on the GoV’s Decree No. 67/2012/ND-CP of 10 September 2012 (amending and supplementing a number of articles of the Decree No. 143/2003/ND-CP), the charges specified in Clause 4, Article 14 of the Ordinance on exploitation and protection of irrigation works have been amended. That change led to, for example, an increase in the irrigation rate for land used for planting rice by, on average, almost a factor of 5 (VND270,000 – VND 1,200,000).

The **environmental protection charge for mineral exploitation** specified in Decree No. 74/2011/ND-CP of 25 August 2011 defined which facilities exploiting minerals (crude oil, natural gas, coal gas, metal minerals and non-metal minerals) are liable to pay environmental protection fee. With effect on January 1, 2012, this decree replaced old versions from 2008 and 2009 (Decrees No. 63/2008/ND-CP of May 13, 2008, and Decree No. 82/2009/ND-CP of 12 October 2009 on environmental

protection charges for mineral exploitation). To guide the implementation of this new decree, Circular No. 158/2011/TT-BTC was issued on 16 November 2011 by the Ministry of Finance.

#### ❖ Regulations on violations and sanctions

Based on the GoV's Decree No. 113/2010/ND-CP of 3 December 2010, organizations and individuals that commit environmental pollution or degradation in Vietnam are liable to **pay compensation for environmental damage**. These activities identified are those in which water earmarked for environmental conservation, daily life, entertainment, production and other purposes become polluted, severely polluted or very severely polluted. The determination of compensation for damage caused to human health and life, assets and lawful interests of organizations and individuals must comply with the civil code.

On 7 February 2012, Ministry of Finance issued Circular 13/2012/TT-BTC providing regulations on compulsory occupational insurance, civil liability insurance, and environmental liability insurance applicable to organizations and individuals working with radiation. Accordingly, establishments who hold a valid permit for working with radiation are compelled to purchase environmental liability insurance to potentially compensate for environmental damage if radiation works might cause severe damage to the environment as specified in Article 90 of the Law on Atomic Energy, and Article 13 of Decree No. 07/2010/ND-CP of the Government (dated 25 January 2010) detailing and guiding a number of articles of the Law on Atomic Energy. As specified in Article 25 of Circular No. 13/2012/TT-BTC, the types of environmental damage regulated are the following cases:

- a. Aquatic environments with a role in conservation, habitation, entertainment, production and other purposes, which become polluted, seriously polluted or extremely polluted.
- b. Territorial environment with a role in conservation, production and other purposes, which become polluted, seriously polluted or extremely polluted.
- c. Natural eco-systems within or bordering a nature reserve, which become degraded.
- d. Any species prioritized for protection which is under threat or already harmed.

The specific amount of the insurance deposits is not specified. Under Circular No. 13/2012/TT-BTC, the amount depends on the insurance agreement between the insurance buyer and the insurance company (Article 4).

Decision-making bodies for the list and **methods for handling facilities causing serious environmental pollution** are currently specified in the Prime Minister's Decision No. 04/2013/QĐ-TTg of 14 January 2013.

Newly, in order to deal with problems related to both water quality and quantity as well as to strengthen the sustainable and integrated management of water resources, the Vietnamese Government has requested Ministries and ministerial-level agencies, government agencies and provincial People's Committees to perform certain tasks for tackling urgent environmental, and water-related problems (Resolution No. 35/NQ-CP of 18 March 2010). The urgent environmental issues mentioned in this Resolution are: (1) wastewater management at industrial parks and clusters; (2) exploitation of mineral resources; (3) water pollution caused by craft villages companies; (4) water pollution in big cities and river basins; (5) import of waste; (6) degradation of eco-systems; and (7) poor state management capacity.

Apart from these urgent environmental protection issues, the GoV's Decree No. 140/2006/ND-CP of 22 November 2006 providing regulations on environmental protection for issues such as assessment, approval and implementation of development strategies, planning processes, plan drafting, programming and projects development, is to be amended and supplemented. In this, regulations governing violations and sanctions will be brought into focus.

## **4 REGULATORY IMPACT ASSESSMENT (RIA) ON NEW POLICIES OF THE LAW ON WATER RESOURCES**

### **4.1 Master plan on water resources**

Currently, the master plan on water resources provides the basis for the management, protection, exploitation, and utilization of water sources in Vietnam, including flood prevention and mitigation of other adverse effects caused by water. Accomplishing these goals, however, has been challenged by the fact that the renovation policy and consequent rapid economic development, as well as population growth, urbanization and changing lifestyle patterns, have put enormous pressure on Vietnam's natural resources and the country's environment over the past three decades. Among others, this has led to a decline in water quality in rural as well as urban areas, the unsustainable use and of water resources in the urban centers, and the loss of biodiversity and eco-system services. And while these have been neglected for some time, more recently, the government and other agencies, including those from civil society and the media, have increasingly raised and addressed their concerns.

Apart from the master plan on river basins developed under the former Law on Water Resources, the topics of the various master plans on water resources under the LWR 2012 have been amended. They now include: (1) a general master plan on water resources for the whole country; (2) a master plan on water resources of inter-provincial river basins and inter-provincial water sources; and (3) a master plan on water resources for central-affiliated cities and provinces. While the aim of this new law is to ensure the exploitation and use of water resources in efficient, effective and conservation-oriented manner that provides for the harmonious distribution of water use benefit among localities and sectors, and between upstream and downstream, the latest amendments to the master plan on water resources may have the following impacts.

#### *Impact on state management*

With the main goals of improving water allocation, protecting water resources, and preventing harmful effects caused by water, the supplementary master plans on water resources for inter-provincial river basins, inter-provincial water sources, and centrally-governed cities and provinces also hopes to identify (i) an improved supervision system for the exploitation and use of water resources; (ii) clearer objectives and tasks for accomplishing water resources management, regulation, and distribution; (iii) the demand for water transfer between sub-basins and between river basins; and (iv) the optimal allocation rate of water resources for exploitation and use water that considers the sector priorities and adaptation in the case of drought or short-term water deficit. Furthermore, another broad goal is render the implementation process more practical and more easily integrated with development plans for economic sectors that utilize water resources. An additional advantage of the latest amendments to the master plans on water resources is that they increase the accuracy and precision in information gathering for the examination and issuing of permits.

#### *Impact on the environment*

The national master plan on water resources supplemented in the LWR 2012 (Article 15, 18) may improve upon the general assessment on the natural, socio-economic, and environmental conditions. An important sub-goal is to further identify the trends and fluctuations in water resource use, the demand for using and exploitation of water for daily-life and socio-economic development purposes, and to elaborate priorities within the master plan for various river basins and water sources. In addition, the demand for water transfer between river basins, as well as the requirements of various facilities that regulate, exploit, and use water resources will be more clearly identified.

### *Impacts on social factors*

The current methods for the regulation and allocation of water resources are suited only for managing critical cases in which a deficit of water arises. Therefore, the supplementation of master plans on water resources in inter-provincial river basins, inter-provincial water sources, and those of centrally-governed cities and provinces aims at contributing to equity of water resource sharing (MONRE's Report 2011).

### *Negative impacts*

Obviously, higher public expenditure is required to draft and carry out additional master plans with new and different activities. In particular, this includes the costs for: the general assessment on the current status of natural, socio-economic, and environmental conditions; an assessment of the quantity and quality of water resources; forecasts on the trends in water resources; and the identification of the priorities for the development of the various making master plans for inter-provincial river basins, inter-provincial water sources, etc. In addition to this, there are expenses for soliciting and collecting opinions, analyzing them, approving master plans, disseminating and publicizing them. Then, naturally, the Vietnamese Government will have to increase state capacity to physically implement the tasks outlined in the master plans.

Due to the fact that there is lack of information and the basic survey data on water resources required for the national integrated assessment and supplementary master plans, the feasibility and potential for implementing the LWR 2012 is still questionable. According to MONRE's Report in 2011, Vietnam is still lacking the state capacity for adequately setting up and implementing the national master plan on water resources. As a result, drafting of the national master plans on water resources would only be conducted after the task of collecting basic survey data and information has outlined the scope of additional state capacity necessary.

This is not to mention the situation of the private and enterprises sectors, for which regulation through so many different kinds of master plans may cause confusion to the individuals and operations involved in using of water resources. It may cost time and money to conform to different kind of master plans.

## **4.2 Protection of water resources**

### *Positive impacts*

With regard to environmental protection, the Vietnamese Government has taken a step forward in tightening the measures for managing water resources. This includes measures of protection and development of aquatic resources (Article 29), securing the circulation of water flow (Article 30), establishing secure corridors for water sources (Article 31), ensuring the quality of water sources for daily-life (Article 32), as well as for the quality of water sources in agricultural industries, aquaculture, industrial manufacture, mineral exploitation and other types of production (Article 33), protection of underground water (Article 35), regulation of underground water drilling (Article 36), and monitoring the discharge of waste into water sources (Article 37).

The result is that individuals and operations involved in using of water resources are to conform to various tightened regulations on water resources. Above all, the exploitation and use of water resources must be implemented in compliance with the master plan on water resources approved by the relevant state authorities. In case of water pollution, land subsidence, or saline infiltration, compensation must be paid as prescribed by law. The goal is to ensure that establishments in production, business or service which have a potential for polluting water sources also have responsibility to set up plans, procure equipment devices, and respond in a timely manner, in order to mitigate or remediate water pollution.

A further advantage of the latest amendments in term of water protection measures is that the state management tasks have been further specified. This is particularly the case for regulations governing the response and mitigation of polluted water sources and the speedy recovery of polluted and depleted water sources. Here, the relevant People's Committees for the incident in question (including for inter-country situations), are required to monitor pollution incidents in localities, and report to provincial People's Committee for management instructions, as well as, for certain types of situations, to report to MONRE. Besides, the Ministry of Foreign Affairs, MONRE and other ministries, ministerial-level agencies are also supposed to coordinate with relevant agencies to implement immediately measures to prevent, and remediate harmful impacts in conformity with international law and relevant international treaties.

#### *Negative impacts*

For such a large scale of regulatory change in the management of water resources, increased expenditure might be needed. Likely, this will include the costs to identify the secure corridor of water sources and ensure the circulation of water flow, but will also include expenses to implement protection measures for water quality (i) in agricultural industries, aquaculture, industrial manufacture, mineral exploitation; (ii) for daily-life, and (iii) of sources receiving wastewater discharge; and (iv) of underground water.

### **4.3 Water-related financial issues**

One of the most notable changes under the LWR 2012 is the water exploitation fee. Organizations and individuals exploiting water must pay such a fee, except those using water for agricultural production (instead, they pay an issuing fee for being granted the water exploitation permit under the LWR 1998). The amount of the fee for the granting of permits to exploit water resources is determined by the quality of water sources, types of water sources, conditions of exploitation, scale and period of exploitation, and the purpose of the water use. A fee scheme for water resource exploitation is expected to be provided by the Ministry of Finance and/or MONRE by the end of 2013.

It is the first time that sources of revenue from water resources are considered "property" by the LWR. As regulated in Article 64 of the LWR 2012, revenues of the state budget collected from water resources include: (1) taxes on water resources and other taxes as prescribed by Law on Taxes; (2) charges, fees as prescribed by the Law on Charges and Fees; (3) fees for the granting of permits to exploit water resources; (4) compensations paid to the state deriving from fines and sanctions from violations concerning water. The main aim of the combination of financial and economic measures is to abolish the subsidy mechanism on water prices, including water used for irrigation purposes. The focus is now on economical and effective use of water resources, increasing the state revenues from water to improve the water supply system, and providing better access to drinking water. Despite losing revenue from the reduction and exemption from water use charges applied to specific cases, the implementation of many other charges, such as taxes on water resources, water use fees, permit granting fees, compensation, and fines from administrative violations, may bring to the state a considerable amount of revenues for investment into the water supply pipe system (MONRE's Report 2011). As such, the water-related financial policy may help to achieve equity between users and managers of water resources.

That being said, the abolishment of subsidies on water prices and the new application process for the granting of permits to exploit water resources may cause difficulties and confusion, particularly to poorer people and enterprises using a great amount of water resources. In order to minimize this negative impact, the Vietnamese Government should carry out a communication campaign to disseminate experiences and lesson learnt from other countries (Iponre 2009, MONRE's Report 2011).

## 5 CONCLUSION

To enhance water resource protection and improve the water supply to meet the demands of socio-economic development, environmental protection and sustainable development in the period of industrialization, modernization and international integration, Vietnam has recently amended its initial Law on Water Resources from 1998.

The amended Law on Water Resources of 2012 confirms that water is an essential natural resource of Vietnam and aims to protect water resources effectively, use them reasonably, and to prevent and remediate damages caused by water while strengthening government management of water resources. While the LWR in 1998 focused primarily on the water resource protection, the new amendments focus on the three key issues: (1) creating favourable conditions (i.e. tax incentives) that encourage organizations and individuals to adopt advanced technologies and invest capital into the development and efficient use of water resources; (2) diversifying investment resources (either capital or environmental-friendly technologies) in the protection and development of water resources and water supply; and (3) prohibiting more activities that lead to overexploitation of water resources. The most important effect in the amendments is to change water resources into a kind of public goods and provide greater opportunities to turn the management and use of water resources into an economic sector (e.g. the introduction of the water exploitation fees – Article 65).

In other words, it appears as if environmental degradation will continue to be accepted as a cost of population and economic growth and rising living standards, and that ultimately the future will be irreversibly compromised. Thus, the emerging question is whether the new LWR of 2012 will provide the needed directives to address the challenges to water resources management in Vietnam that are mentioned above.

Here, the challenge is dealing with the institutional complexity and fragmentation of state management functions with regard to water resources management in ways that facilitate the legal framework at the local level. As research on the problems of law enforcement on wastewater management in Can Tho City reveal, legal pluralism, in the sense of multiple secondary and subordinate legislations at provincial level, already exists (Nguyen 2010b). As a consequence, there will likely be enduring still confusion about the applicability of the new LWR of 2012, which would only be further exacerbated by the fact that the many local state authorities in charge of water management lack not only specialized knowledge but also basic legal awareness on water laws.

Thus, there is a need to further study the prevalence of legal pluralism (which officially does not exist in Vietnam) as well as to investigate the daily practice of law enforcement in a centralized system. Such research may serve as a key to understand the effectiveness of a legal rule, in particular to clarify the question why the legal framework on water sector in Vietnam, despite its great improvements of last decade, has not yet achieved its goals. Further, research of this type may contribute an important perspective to the relationship between state law and local law. In any case, legal pluralism is an important factor to consider in understanding what people have disputes about, how disputes emerge in social life, what choices are made about how to deal with them, and how the disposition of a particular dispute affects the way other people deal with similar problems (Griffiths 2001: 8652).

All together, the new LWR of 2012 and other recently issued water legislation address more issues and thereby definitely expand and improve the legal framework of the water sector. Notwithstanding the present gaps, it must be said that the real challenges lie in the structure and details of the operation of Vietnam's legal system, notably in the (deficit of) law enforcement. Moreover, the state agencies in charge of implementing the prescriptions of the law are not necessarily equipped or trained to do so. The fact that many local state authorities in charge of water management lack not only specialized knowledge but are still struggling to gain awareness of legal issues concerning water management confirms this problem. Last but not least, with regards to the

issue of environmental education, the new LRW states that ministries, ministerial-level agencies and People's Committees at all levels are supposed to, within their responsibilities and powers, coordinate with mass media agencies and education and training institutions in conducting communication campaigns about on water resources and guiding people in implementing water-related legal documents, as well as about measures to protect and use water resources in an efficient manner (Article 5). While this is an innovative regulatory policy with high goals of generating a better understanding among the population about the importance of water resources, serious questions about the practicality of the implementing agents as well as the procedures themselves make it unclear whether new Law on Water Resources of 2012 will prove to be a success.



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**ZEF Working Paper Series, ISSN 1864-6638**

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**Center for Development Research, University of Bonn**

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