

**SOCIALIST REPUBLIC OF VIETNAM**

**Results-based Scaling-up Rural Sanitation and Water Supply Program**

# **Environmental and Social Systems Assessment (ESSA)**

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THE WORLD BANK

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## List of Acronyms

AH	Affected Households
BCC	Behavior Change Communication
CATS	Community Approaches to Total Sanitation
CEMA	Committee for Ethnic Minority Affairs
CH	Central Highlands
CSRC	Compensation, Support, and Resettlement Committee ()
DARD	Department of Agriculture and Rural Development
DFAT	Australian Department of Foreign Affairs and Trade
DLI	Disbursement-Linked Indicator
DoET	Department of Education and Training
DoF	Department of Finance
DoH	Department of Health
DoNRE	Department of Natural Resources and Environment
DoST	Department of Culture, Sports and Tourism
DPC	District People's Committee
DPI	Department of Planning and Investment
ECOP	Environmental Code of Practice
EIA	Environmental Impact Assessment
EM	Ethnic Minorities
EPC	Environmental Protection Commitments
EPP	Environmental Protection Plans
ESSA	Environmental and Social Systems Assessment
GoV	Government of Vietnam
IDA	International Development Association
IEC	Information, Education and Communication
IVA	Independent Verification Agent
LEP	Law on Environmental Protection
M&E	Monitoring and Evaluation
MARD	Ministry of Agriculture and Rural Development
MoET	Ministry of Education and Training
MoF	Ministry of Finance
MoH	Ministry of Health
MOLISA	Ministry of Labor, Invalids and Social Affairs
MoNRE	Ministry of Natural Resources and Environment
MOST	Ministry of Culture, Sports and Tourism
MPI	Ministry of Planning and Investment
NCERWASS	National Center for Rural Water Supply and Sanitation
NM	Northern Mountains
NTP	National Target Program
PAP	Program Action Plan
PCERWASS	Provincial Center for Rural Water Supply and Sanitation
PCR	Physical Cultural Resources
PDO	Project Detailed Outline
PforR	Program for Results
PMU	Program Management Unit
PPC	Provincial People's Committee
RB-RB-SupRSWS	Results-based Scaling up Rural Sanitation and Water Supply
RWSS	Rural Water Supply and Sanitation

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SAV	State Audit of Vietnam
SEA	Strategic Environmental Assessment
SO	Standing Office
USD	United States Dollar
VIHEMA	Vietnam Health Environment Management Agency
VND	Vietnamese Dong
WASH	Water, Sanitation and Hygiene

## Executive Summary

### Purpose of the Environmental and Social Assessment (ESSA)

1. The purpose of this ESSA is to:
  - Assess the likely environmental and social risks associated with the program;
  - Document the environmental and social management procedures, standards and institutional responsibilities that will apply to the Program;
  - Evaluate the institutional capacity to manage the likely environmental and social effects in accordance with Vietnam's own requirements under the proposed Program;
  - Assess the consistency of the borrower's systems with core principles and attributes defined in the Program-for-Results (PforR) Guidance Note on Environmental and Social Assessment; and
  - Recommend specific actions for improving counterpart capacity during implementation to ensure consistency with World Bank principles.
2. Key findings of this assessment will be used to improve environmental and social management outcomes of the Program through specific actions under the overall Program Action Plan (PAP), as well as through technical assistance and capacity building activities to be implemented under the Program. The action plan will be discussed and agreed with the Government of Vietnam (GoV) and will be incorporated as relevant into legally binding agreements under the conditions of the new financing.
3. In preparing the assessment, the assessment teams have reviewed data on the third National Target Program (NTP) for Rural Water Supply and Sanitation (hereafter referred to as NTP3), associated projects and programs and have met with all related Government Ministries and representatives from the 19 provinces. In addition the teams have completed field visits and held consultations with five provinces.

### National Target Program for Rural Water Supply and Sanitation

4. The GoV gives high priority to development of rural water supply and sanitation. The National Rural Clean Water Supply and Sanitation Strategy to 2020 (developed in 2000 and updated in 2011) has set the overall vision and goals for the sector. To implement the strategy, GoV established a National Target Program for Rural Water Supply and Sanitation (RWSS NTP) which has resulted in considerable progress over the past ten years. Since 2001, rural water supply and sanitation has been financed through a dedicated National Target Program in three phases; the second RWSS NTP ran from 2006 to 2010 and upgraded water services for 5.4 million people and sanitation services for 6.8 million people.
5. This ESSA relates to NTP3 which runs from 2012 to 2015. NTP3 is specifically intended to promote investment in poor, remote, ethnic, border and island areas as well as areas where water is polluted or scarce. The NTP3 includes the following components:

- a) Construction and rehabilitation of water supply schemes, promotion of clean water use, improved control of water quality, and support to sustainable systems;
  - b) Construction and effective use of latrines at households, schools, health clinics and public places;
  - c) Information, Education and Communication (IEC) activities to raise awareness on the importance of clean water and latrines and hygiene practices;
  - d) Continued development of the legal framework for the implementation of the Rural Water Supply and Sanitation (RWSS) strategy;
  - e) Promotion of international cooperation; and
  - f) Capacity building.
6. Nationally, NTP3 aims to reach the following indicators in rural areas by 2015; 85 percent coverage of hygienic water, of which 45 percent meets water quality standards as per QCVN 02-BYT; 65 percent coverage of hygienic latrines and 100 percent of commune clinics and schools (excluding satellite schools) that have hygienic water supply and sanitation facilities. To date NTP3 has achieved 82 percent coverage of hygienic water (40 percent meeting QCVN 02-BYT) and 60 percent coverage of hygienic latrines. However, the level of achievement across the provinces is highly variable, with almost all low performing provinces in the mountainous and poor areas.
7. Following lessons learned from the first two phases, NTP3 has been structured to support both water supply and sanitation (domestic and environmental sanitation), improve sustainability and assign clear responsibilities to the Ministry of Agriculture and Rural Development (MARD) for water supply infrastructure and the Ministry of Health (MOH) for sanitation and hygiene. NTP3 had an increased focus on the sustainability of water systems and IEC activities -- and incorporated sanitation under the mandate of MOH.
8. A proposal to transfer the components of the current NTP3 to the successor program, expected to be the New Rural Area NTP in 2016, has been developed within MARD.

#### PforR (the Program)

9. The approach taken under the Program is to strengthen the Government of Vietnam's NTP3 in the 19 provinces of the Northern Mountains and Central Highlands (NM-CH) regions with the lowest sanitation coverage to support the existing efforts of the government to scale up access to sanitation and improved hygiene practices. The Results-based Scaling up Rural Sanitation and Water Supply (RB-RB-SupRSWS) Program will include interventions to support demand generation through innovative approaches in behavior change communication (BCC) at the local level, coupled with national-level interventions to build awareness of the importance of sanitation to the national economy and obtain public commitment at the highest level. Support will also

be provided to strengthen the supply chain to improve the design, availability and affordability of sanitation products and services. Participative approaches will be used at all levels in order to ensure that interventions are appropriate and effective. Construction of new sanitation facilities and rehabilitation of existing and construction of new water supply schemes will facilitate improved hygiene practices. Behavior change communication programs would work through nutrition programs as well as reinforce them. Technology used will be appropriate, cost effective and accessible for poor households. The Program will also support the provision of sanitation, hygiene and water supply services to schools and health clinics through the construction of facilities and the strengthening of the management model for sustainable operation and maintenance of the system.

10. The institutional and financing arrangements will be aligned with the structures of GoV. Funds will pass from the center to the Provincial People's Committees (PPC) in the 19 recipient provinces. Fund allocations will be made on the basis of provincial plans and within the framework of NTP3. These funds will be used to finance NTP3, including water supply, sanitation and hygiene promotion. It will be the responsibility of the PPC in each of the 19 recipient provinces to plan investments and allocate funding to the appropriate technical departments at that level in accordance with the inter-ministerial guidelines. For national-level activities, funding for the Program will be allocated by the Ministry of Finance (MoF) to the related ministries. The amount of funds allocated to different ministries under the Program will be based on the anticipated funds required to achieve the Disbursement-Linked Indicator (DLI) targets as well as the amounts corresponding to the DLI results that are verified as completed.
11. The Program will be designed in coordination with existing socio-economic, rural development programs and activities managed by other line Ministries. In order to effectively implement the Program and target remote regions, effective and multi-sectoral approaches to commune-wide sanitation will need to be developed. Linkages with the health and education programs and with nutrition will be key given the links between poor access to sanitation and stunting and the need to develop a sustained system. Schools, in particular, will be a critical focal point for developing an integrated strategy. For integration strategies with nutrition, synergies can specifically be found in the outreach programs to mothers and care-givers.
12. Learning from global and Vietnam-specific experience, the proposed program would have the following three closely interrelated elements corresponding with the projects under the RWSS NTP3 which support delivery of behavior change communication, provide basic services and infrastructure to support behavior change, support sustainable services, and build capacity:

**a. Rural domestic water supply and rural environment**

- Provision of hygienic sanitation, hand washing facilities and adequate water supply in schools – including consideration of the needs of all children – and support for putting in place the system for operation and maintenance of the facilities;



- Increasing water supply coverage for villages – using small-to-medium sized community-based systems – focusing on rehabilitation and extensions from existing systems. New water supply schemes would be constructed as required using appropriate technology. Investments would be demand responsive and would balance willingness to pay with prioritizing areas with higher levels of poverty; and
- Provision of Technical Assistance (TA) for improved operation and maintenance procedures, management and tariff collection, and accounting procedures at village/commune levels. The role of the Provincial Center for Rural Water Supply and Sanitation (PCERWASS) in supporting this process, specifically in their technical backstopping role for community-based systems, will be strengthened.

**b. Rural sanitation and hygiene**

- Provision of hygienic sanitation, hand washing facilities and adequate water supply in health clinics – along with support for putting in place the system for operation and maintenance of the facilities;
- Support for scaling up domestic hygiene and sanitation to achieve Commune Wide Sanitation:
  - (i) Demand side interventions would be implemented through existing channels, including clinics, schools, government health system staff, and traditional leadership structures. In addition, at the village level, local leaders along with the women's union and commune and village health workers would be supported with new tools and to adapt existing approaches, such as Community Approaches to Total Sanitation (CATS), which have demonstrated effectiveness. Counseling of mothers and caregivers in clinics would also support scaling up existing successful programs combating malnutrition;
  - (ii) Supply side interventions such as support to the private sector to strengthen the capacity of local builders, manufacturers and suppliers of sanitation products and services, in order to supply a menu of affordable and appropriate household sanitation and hand washing hardware options and services. The intervention will build on the work already being done by VIHEMA and other Development Partners;and
  - (iii) Additional targeted support to households for latrine construction with affordable technology options and potentially strengthening micro-financing through the Vietnam Bank of Social Policy. This intervention would also identify how to improve the delivery of the existing subsidy systems for poor households (e.g., rebates directly to households or voucher systems to be redeemed at local sanitation suppliers).

**c. Capacity building, communication and supervision, monitoring and evaluation of NTP3**

- Focused capacity building of national, provincial and local agencies involved in the Program to develop their implementation and management capacity and improve inter-sectoral collaboration, including: (i) capacity to promote hygienic behavior change and provide sustainable sanitation services; (ii) planning, monitoring, evaluation and reporting; and (iii) supporting improved environmental, social and fiduciary systems;
- Policy support where needed, for example to enhance the role of the Provincial Center for Rural Water Supply and Sanitation (PCERWASS) in supporting institutional capacity development at the commune levels, for school water supply, sanitation and hygiene (WASH), water pricing framework, and development of sanitation markets;
- Improving sustainability of access to sanitation and improved water supply through technical assistance for community management and support to PCERWASS and the Department of Health (DOH)/Department of Education and Training (DOET);
- Verification of Program Results and External Audit of the Program by the Independent Verification Agent; and
- Launch of a national and provincial high-level advocacy campaign to raise the political profile of sanitation and hygiene.

*Institutional Arrangements*

13. The institutional arrangements are described below:

- MARD will coordinate the implementation of the Program, through a national steering committee comprising MARD, MoH, MoET, the Committee for Ethnic Minority Affairs (CEMA), the Ministry of Planning and Investment (MPI) and MoF. Fully empowered teams will be established nationally in MARD and VIHEMA in order to monitor and support implementation in all Provinces under the Program;
- At the central level VIHEMA will be the technical lead for the sanitation and hygiene promotion activities. The National Center for Rural Water Supply and Sanitation (NCERWASS) will lead activities relating to community water supply. A strong coordination mechanism will be needed in order to promote integrated water and sanitation projects to support hygiene practices.
- PPCs will lead Provincial level steering committees for coordination and supervision comprising DoH, PCERWASS, the Department of Education and Training (DoET), the Department of Planning and Investment (DPI), DoF and CEMA. PCERWASS will be the program owner at the Provincial level.
- The Independent Verification Agent role is to provide independent confirmation of the results reported by the provinces through MARD. State

Audit of Vietnam (SAV) was selected to verify Program results using protocols agreed with the Bank. This choice is based on SAV's role as a constitutional body with both the independence and the mandate to conduct NTP audits. SAV has good management capacity and can sub contract verification works for which it does not have the technical expertise in-house. SAV is the IVA under the RWSS PforR and has performed satisfactorily; it has subcontracted the physical verification of sanitation and water supply connections to a specialist firm. SAV provided adequate oversight of the surveys teams and reporting process.

- The Women's Union, potentially other mass organizations, village health workers and similar groups will be critical for implementation of the hygiene promotion components. These groups will be incorporated into the institutional structure of implementation to assist in community mobilization. The Women's Union will also be engaged to support grievance redress channels. These routes are also potential channels for the effective engagement of Ethnic Minority (EM) groups in implementation.

### Environmental and Social Effects of the Program

#### *Environmental Benefits and Risks*

14. The investments under the proposed RB-SupRSWS Program are expected to have many positive environmental and public health impacts in target areas as a result of improved hygiene behavior, increased and sustained access to sanitation and rural water supply and significantly reduced open defecation. If interventions and facilities are well-designed and properly managed and maintained, such benefits are expected to be significant and long lasting. The Program will also support important improvements and strengthening of institutional capacity to implement environmental aspects of the government program.
15. The anticipated adverse environmental effects of this Program are not expected to be significant considering: (a) the small scale of physical investments; (b) that the proposed works would take place in or very close to established villages; (c) the limited geographic footprint of planned works; and (d) that mitigation measures are known -- including principally that proper care and oversight is undertaken during construction.
16. Potential adverse environmental effects of Program activities include: (a) the risk that the Program will be affected by falling groundwater levels where water is abstracted through wells, at some places in the Central Highlands such as Dak Lak where availability of water has been an issue; (b) construction-related impacts such as dust, noise and solid waste management from construction sites, loss of vegetation at construction sites, management of hazardous construction materials, and public and worker safety; (c) the development of natural springs for water supply may affect aquatic life in the existing water bodies, particularly downstream of the water intakes structure (the program will not rehabilitate or construct any new dams); and (d) operational-related impacts such as potential human and environmental exposure to waste streams from facilities (e.g., sludge and septage) resulting from poor waste management practices. The Program is not expected to contribute to the

overexploitation of groundwater in the Central Highlands given the focus on rehabilitation of water supply schemes and construction of relatively small scale rural water supply schemes.

17. The potential adverse effects are generally well known and understood by the implementing authorities. It is expected that these effects will be manageable with well-established mitigation measures. There are a number of protected areas in the Central Highlands and the Northern Mountains regions; however, the Program will not work in protected areas and, as a result, no significant impacts to these critical natural habitats or cultural resource assets are expected. The geographic footprint, scale, and volume of facilities constructed under the Program will be small and therefore any adverse impacts are expected to be limited; however, in some cases, if not properly managed and mitigated, such adverse effects may be relevant locally and efforts need to be put in place to ensure such effects are avoided or minimized. Given the pressures on water resources, especially on ground water resources in the Central Highlands, water-related activities will need to be carefully planned to ensure the sustainability of the water supply and to minimize, if not avoid, the Program contributing to further depletion of groundwater resources in the Central Highlands. Regarding sanitation schemes, final disposal of sludge from toilets would be the main environmental concern under the Program. As de-sludging service has not been available in remote areas, final disposal of sludge would either be in sealed dry toilets or onto agricultural land as currently being practiced in remote areas. To minimize environmental and health risks related to sludge, communication to the beneficiaries would include behavior change relating to personal protection and safe handling of sludge (some regulations in Vietnamese Standard QCVN 01 : 2011/BYT - National technical regulation on Hygienic conditions for Latrines can be used as reference).
18. Institutional arrangements for environmental management, including Environmental Impact Assessment (EIA), are mandated and established at all levels of government. However, a common problem is the ineffective implementation of these requirements and responsibilities due to lack of awareness, institutional capacity and resources. Compliance with the regulation, along with follow-up and monitoring of implementation of Environmental Protection Commitments (EPCs), which have recently transitioned to Environmental Protection Plans (EPPs) under the 2014 Law on Environmental Protection, is not always sufficient. It is not likely that any of the RB-SupRSWS activities will be required to prepare full EIAs as physical investments will be mostly community-based or located within existing schools or clinics. In most cases, an EPP will be applied to rural water supply schemes and District People's Committees (DPCs) will be the approval authority.
19. The Ministry of Health has a well-established system for rural drinking water quality monitoring, and has technical capacity at the central, provincial and district levels for exercising this mandate. However, a lack of available budget means that rural drinking water quality is rarely monitored as planned.

### *Social Benefits and Risks*

20. The Program is expected to have significant positive impacts on social conditions in the target areas, especially for Ethnic Minorities. Improving hygiene behavior and increasing the accessibility of hygienic sanitation and clean water will improve individual and community health, bring economic welfare gains and improve safety and security for women and girls. The Program will also support the construction of sanitation facilities in public places such schools which will improve school attendance, especially for girls. Improvements to transparency and accountability will strengthen governance, community participation and beneficiary feedback.
21. Given the scope of the proposed Program, the types and modest scale of individual investments, the geographic focus, and previous central government experience with World Bank projects, no significant adverse social impacts on affected people are anticipated. Potential adverse social effects and risks under this Program include: (a) inadequate land acquisition and compensation practices including for voluntary land donation relating to the small-scale civil works construction under the Program; (b) a lack of appropriate, inclusive and participatory operational procedures and approaches to working with Ethnic Minority communities and other marginalized groups that consider local beliefs, preferences, attitudes, knowledge and practices; (c) a lack of transparency and accountability including for grievances and grievance feedback under the Program; and (d) ensuring the sustainability of Program investments which, to a great extent, rely on social acceptability of water and sanitation technology and changes to individual and community hygiene behaviors by target communities.

### **Environmental Recommendations**

22. The following measures are recommended related to environmental management:
23. **Overall:** Program Management Units (PMUs) and the Standing Office (SO) in MARD are responsible for arranging adequate staff time to cover environmental issues under the program at every step of subproject siting, design, bidding, contract preparation and construction. Implementing agencies also need to ensure that environmental issues will be properly reflected in the relevant program reports for documentation and tracking.
24. **Recommendation 1.** Capacity building is required at a number of levels including national (NCERWASS, MoH, DoET), provincial (Department of Agriculture and Rural Development [DARD], DoH, PCERWASS), district (District PC), and commune (Commune PC) to facilitate proactive environmental management. Lessons should be incorporated from relevant projects and programs in Vietnam including the Australian Department of Foreign Affairs and Trade (DFAT) supported capacity building program under the RWSS PforR. Technical Assistance will be provided under the program to strengthen environmental management capacity; particular areas of focus include:
- Strengthening environmental screening of subprojects with simple criteria to determine environmental eligibility of subprojects;
  - Strengthening the incorporation of environmental considerations into planning and preparation of subprojects. Check lists should be developed for design consultants

- to use to incorporate environmental considerations into the siting and engineering of subproject components.
- Supporting provincial government staff to improve the quality of EPCs/EPPs and incorporate environmental recommendations into site selection, engineering design, preparation of bidding and contractual documents, construction and operation;
25. The Program will recruit a qualified Environmental Consultant to design and implement environmental management capacity building activities for PCERWASSs in the first year. From year two, the responsibility will be handed over to one staff of SO or NCERWASS who is appointed to be responsible for environmental aspects of the program.
26. **Recommendation 2.** The Program Operational Manual of the proposed Program should include detailed description of the environmental procedures that subprojects will have to follow, and technical guidance for implementation, including:
- Environmental screening form to exclude subprojects located within or affecting critical natural habitats or objects of cultural value;
  - Environmental check list for use during engineering design;
  - Details of dangerous construction materials that may not be used under the Program (such as Fibrocement which has been linked to cancer);
  - Key potential environmental impacts associated with physical investments in rural water supply and sanitation as well as measures for addressing these potential impacts;
  - ECOPs for inclusion into bidding documents and construction contracts, and some type-specific environmental solutions and mitigation measures;
  - Environmentally- and children-friendly design solutions for sanitation investments; and
  - Guidance on environmental monitoring, supervision and reporting.
27. **Recommendation 3.** Strengthen the environmental supervision during the construction phase. Construction supervisors should be assigned the task of monitoring environmental compliance of contractors in their contracts to ensure that potential adverse environmental impacts are avoided or minimized during the construction phase. Community monitoring could also be used to enhance contractor environmental performance. Through the capacity building program, technical assistance will be used to build environmental supervision for Provincial Program Management Unit (PPMU) Engineers and construction supervisors.
28. **Recommendation 4.** The communications plan and strategy for the Program should include advice on fecal sludge management, environmental and water source protection, and management of wastewater end-users. This advice should be appropriate to the context (e.g., pit closure and containment or regular desludging and proper procedures for the handling of fecal waste). The communications plan and strategy for the Program should include advice on regular desludging and proper procedures for the handling of fecal waste including treatment and re-use as appropriate. Technical Assistance should be included under the Program to develop a systematic approach to address this in all provinces – and it should include approaches

to engage farmers on the safe use of sludge in provinces where sludge is used in agriculture.

29. **Recommendation 5.** Promote community participation into subproject planning, implementation, monitoring, supervision, and maintenance to enhance sustainability of the works. This can be achieved by combining environmental issues into Community Engagement Guidelines as mentioned in Social Recommendations and Program Action Plan.

### Social Recommendations

30. The following measures are recommended related to social management:
31. **Overall:** PMUs and the SO in MARD are responsible for arranging adequate staff time to cover social issues under the program (including land acquisition, ethnic minority issues, information disclosure/consultation, gender, etc.). Implementing agencies also need to ensure that social issues will be properly reflected in the relevant program reports for documentation and tracking.
32. **Recommendation 1:** Social screening should be conducted to maximize project benefits and minimize adverse impact to local communities especially on land acquisition. Specific information on social screening processes to be used under the Program should be included in the Program Operational Manual in order to make it a condition for Program negotiation. If land acquisition is unavoidable, provinces should ensure that people affected by loss of land and assets will be compensated so that they are no worse off than before that loss. Investments that cause physical relocation should be restricted to only those limited cases that are absolutely necessary for the Program's investment. The provision in the 2013 Land Law on using independent land appraisers should be followed with an appropriate Monitoring and Evaluation (M&E) system of participating provinces.
33. **Recommendation 2:** A voluntary land donation guideline will be developed at the program level and adopted by participating provinces to guide the application of this practice in the Program's activities. Voluntary donation should only be used to support small-scale community infrastructure where the impacts are minor and where there are alternative options for the location of infrastructure.<sup>1</sup> The guidelines will ensure that potential land donors make decisions that are based on informed consent and their own choice. The guideline will be based on the recent voluntary land donation protocol (developed by the World Bank's East Asia and the Pacific [EAP] Regional Safeguard Secretariat) as well as other safeguard enhancement-related works in Vietnam. The procedure for this will be further detailed in the Program Operational Manual.
34. **Recommendation 3:** Participating Provinces will enhance transparency by maintaining databases on complaints/feedbacks and responses to those complaints/feedbacks. In

<sup>1</sup> Site-specific infrastructure may lead to additional pressures on the donor from the community and Government and should therefore be precluded.

addition, a data base on the Program's beneficiaries, disaggregated by gender and ethnicity should be maintained and monitored. Detailed guidelines for the Grievance Redress Mechanism, based on established existing systems, will be included in the Program Operational Manual.

35. **Recommendation 4:** The Program will develop community engagement guidelines (to be implemented by participating provinces) to enhance peoples' participation, especially for Ethnic Minorities, to ensure their meaningful participation and consultation in every step of the Program implementation, including planning, sub-project design and implementation, compensation, resettlement and rehabilitation measures in land acquisition. The guideline will be community-driven, transparent, gender sensitive, and in appropriate language. The Program design should ensure that BCC activities are adapted to specifically suit the EM's culture, language and practices. Given that the program will be implemented over a large geographic area with many different ethnic groups, specific guidance will be provided at the local level for each ethnic group. In addition, the guidelines shall fully operationalize existing Vietnamese Legislation with respect to Ethnic Minorities through a process of free, prior, and informed consultations. This should be included as an action in the Program Action Plan.
36. **Recommendation 5:** The Women's Union and similar groups should be incorporated into the institutional structure of implementation in order to assist in promoting gender-sensitive community mobilization, participation and grievance redress channels. The implementing agencies, particularly SO in MARD, are responsible to arrange adequate staff time to mainstream gender equality across the Program.
37. **Recommendation 6:** The Program should encourage the following social development measures: (a) ensuring unskilled (and to the extent feasible, skilled) labor is sourced locally; and (b) ensuring access to the newly-developed infrastructure for people with disabilities through more inclusive design of institutional sanitation, water supply and handwashing facilities.<sup>2</sup>
38. **Recommendation 7:** MARD and participating provinces will ensure that the Program interventions are culturally appropriate given the diversification of many ethnic groups living in the program areas. Specific guidances (likely by ethnic groups) will be included in the community engagement guidelines (defined in Recommendation 4). This will ensure that the program activities are tailored in accordance to the needs and cultural preferences of local people. These guidelines should build on the existing guidelines for working with EMs under RWSS PforR and include guidance on working in parallel with traditional EM governance structures. In addition, the guidelines shall fully operationalize existing Vietnamese Legislation with respect to Ethnic Minorities

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<sup>2</sup> Inclusive design can include: simple access improvements for latrines, hand washing points and water supply; sizing latrines appropriately for use, and so on. Guidance documents for design are available from a number of different sources including WEDC (Water and Sanitation for Disabled People and other Vulnerable Groups: designing services to improve accessibility, Jones, H.E. and Reed, R.A. WEDC, 2005), WaterAid ([http://www.sharesearch.org/LocalResources/Mainstreamingdisabilityandageinginwatersanitationandhygieneprogrammes\\_1.pdf](http://www.sharesearch.org/LocalResources/Mainstreamingdisabilityandageinginwatersanitationandhygieneprogrammes_1.pdf)) and UNICEF.



through a process of free, prior, and informed consultations. This should be included as an action in the Program Action Plan (together with recommendation 4).

#### Program Action Plan Actions

39. In addition to the recommendations above, the following action should be included in the Program Action Plan (PAP):

- *MARD and the participating Provinces will jointly develop and implement guidelines to ensure the effective participation of and consultation with local people, including EMs and vulnerable groups. The guidelines will fully operationalize existing Vietnamese Legislation with respect to EMs through a process of free, prior, and informed consultations.*

#### Environmental and Social Risk Ratings

40. Given the scope of the Program, its types and scale of investment, geographic focus, and previous experience with Bank projects of the central Government, the risk rating is *moderate* from the environmental safeguards perspective and *substantial* from the social safeguards perspective.

#### Additional Provinces

41. During negotiations, the Government of Vietnam requested the inclusion of two additional provinces in the Program; Ninh Thuan and Binh Thuan. The Bank agreed to the inclusion of these two additional provinces. Following this agreement, the Bank carried out a further desk-based Environmental and Social Systems Assessment of Ninh Thuan and Binh Thuan. The environmental and social effects of the Program including the benefits and risks of the Program to Ninh Thuan and Binh Thuan provinces were found to be consistent with the effects identified through the findings of the initial assessment of the 19 original provinces. The environmental and social recommendations, the PAP action and the risk rating of this assessment are therefore considered to be appropriate for all of the provinces under the Program including Ninh Thuan and Binh Thuan. Further details of the desk based assessment of Ninh Thuan and Binh Thuan are included as an Addendum to this ESSA.

## Program Description

### RWSS NTP3 (the “program”)

42. The GoV gives high priority to development of rural water supply and sanitation. The National Rural Clean Water Supply and Sanitation Strategy to 2020 (developed in 2000 and updated in 2011) has set the overall vision and goals for the sector. The key principles of the strategy include community participation, sustainability and cost recovery. The sector strategy also emphasizes the focus on poverty, ethnic minority groups and remote areas. The government recognizes that improving access to sanitation is a priority and has committed to eliminating open defecation (OD) in Vietnam by 2025. In the short term, the focus is to target poor communities where water and sanitation coverage is low and malnutrition is high. Improving hygiene practices has been a long term goal of the government. To implement the strategy, GoV established a National Target Program for Rural Water Supply and Sanitation which has resulted in considerable progress over the past ten years. Since 2001, rural water supply and sanitation has been financed through a dedicated National Target Program in three phases; the second RWSS NTP (NTP2) ran from 2006 to 2010, upgrading water services for 5.4 million people and sanitation services for 6.8 million people.
43. This ESSA relates to the third National Target Program for Rural Water Supply and Sanitation (NTP3) which runs from 2012 to 2015. NTP3 is specifically intended to promote investment in poor, remote, ethnic, border and island areas as well as areas where water is polluted or scarce. The NTP3 includes the following three components:
- a) Construction and rehabilitation of water supply schemes, promotion of clean water use, improved control of water quality, and support to sustainable systems;
  - b) Construction and effective use of latrines at households, schools, health clinics and public places;
  - c) Information, Education and Communication activities to raise awareness on the importance of clean water and latrines and hygiene practices;
  - d) Continued development of the legal framework for the implementation of the RWSS strategy;
  - e) Promotion of international cooperation; and
  - f) Capacity building.
44. Nationally, NTP3 aims to reach the following indicators in rural areas by 2015: 85 percent coverage of hygienic water, of which 45 percent meets water quality standards as per QCVN 02-BYT; 65 percent coverage of hygienic latrines and 100 percent of commune clinics and schools (excluding satellite schools) that have hygienic water supply and sanitation facilities. To date NTP3 has achieved 82 percent coverage of hygienic water (40 percent meeting QCVN 02-BYT) and 60 percent coverage of hygienic

latrines. However, the level of achievement across the provinces is highly variable, with almost all low performing provinces in the mountainous and poor areas.

45. Following lessons learned from the first two phases, NTP3 has been structured to support both water supply and sanitation (domestic and environmental sanitation), improve sustainability, and assign clear responsibilities to the Ministry of Agriculture and Rural Development for water supply infrastructure and the Ministry of Health for sanitation and hygiene. NTP3 had an increased focus on the sustainability of water systems and IEC activities, and it incorporated sanitation under the mandate of MoH.
46. Following the end of the NTP3 program period it is expected that the Government support to the activities under NTP3 would be continued for the period 2016-2020 with MARD as the lead agency. This support is expected to be implemented either as a stand-alone national program, or as a component under an umbrella National Target Program incorporating multiple sectors.

#### Program for Results - PforR (the “Program”)

47. The approach taken under the Program is to strengthen the Government of Vietnam’s NTP3 in the 19 provinces of the NM-CH Regions with the lowest sanitation coverage to support the existing efforts of the government to scale up access to sanitation and improved hygiene practices. The RB-SupRSWS Program will include interventions to support demand generation through innovative approaches in behavior change communication at the local level, coupled with national level interventions to build awareness of the importance of sanitation to the national economy and obtain public commitment at the highest level. Support will also be provided to strengthen the supply chain to improve the design, availability and affordability of sanitation products and services. Participative approaches will be used at all levels in order to ensure that interventions are appropriate and effective. Construction of new sanitation facilities and rehabilitation of existing and construction of new water supply schemes will facilitate improved hygiene practices. BCC programs would work through nutrition programs as well as reinforce them. Technology used will be appropriate, cost effective and accessible for poor households. The Program will also support the provision of sanitation, hygiene and water supply services to schools and health clinics through the construction of facilities and the strengthening of the management model for sustainable operation and maintenance of the system.
48. The institutional and financing arrangements will be aligned with the structures of GoV. Funds will pass from the center to the PPC in the 19 recipient provinces. Fund allocations will be made on the basis of provincial plans and within the framework of NTP3. These funds will be used to finance NTP3, including water supply, sanitation and hygiene promotion. It will be the responsibility of the Provincial People’s Committees in each of the 19 recipient provinces to plan investments and allocate funding to the appropriate technical departments at that level in accordance with the inter-ministerial guidelines. For national-level activities, funding for the Program will be allocated by the MoF to the related ministries. The amount of funds allocated to different ministries

under the Program will be based on the anticipated funds required to achieve the DLI targets as well as the amounts corresponding to the DLI results that are verified as completed.

49. The Program will be designed in coordination with existing socio-economic, rural development programs and activities managed by other line Ministries. In order to effectively implement the Program and target remote regions, effective and multi-sectoral approaches to commune-wide sanitation will need to be developed. Linkages with the health and education programs and with nutrition will be key given the links between poor access to sanitation and stunting and the need to develop a sustained system. Schools, in particular, will be a critical focal point for developing an integrated strategy. For integration strategies with nutrition, synergies can specifically be found in the outreach programs to mothers and care-givers.

#### *Institutional Arrangements*

50. Launching a national program for sanitation requires high level coordination and cooperation between Ministries and different levels of Government. Steering committees will be required at the National and Provincial level to support this process. The institutional arrangements are described below:
- MARD will coordinate the implementation of the Program, through a national steering committee comprising MARD, MoH, MoET, CEMA, MPI and MoF. Fully-empowered teams will be established nationally in MARD and VIHEMA in order to monitor and support implementation in all Provinces under the Program.
  - At the central level, VIHEMA will be the technical lead for the sanitation and hygiene promotion activities. NCERWASS will lead activities relating to community water supply. A strong coordination mechanism will be needed in order to promote integrated water and sanitation projects to support hygiene practices.
  - PPCs will lead Provincial level steering committees for coordination and supervision comprising DoH, PCERWASS, DoET, DPI, DoF and CEMA. PCERWASS will be the program owner at the Provincial level.
  - The Independent Verification Agent role is to provide independent confirmation of the results reported by the provinces through MARD. State Audit of Vietnam was selected to verify Program results using protocols agreed with the Bank. This choice is based on SAV's role as a constitutional body with both the independence and the mandate to conduct NTP audits. SAV has good management capacity and can sub contract verification works for which it does not have the technical expertise in-house. SAV is the IVA under the RWSS PforR and has performed satisfactorily; it has subcontracted the physical verification of sanitation and water supply connections to a specialist firm. SAV provided adequate oversight of the surveys teams and reporting process.
  - The Women's Union, potentially other mass organizations, village health workers and similar groups will be critical for implementation of the hygiene promotion components. These groups will be incorporated into the institutional structure of

implementation to assist in community mobilisation. The Women's Union will also be engaged to support grievance redress channels. These routes are also potential channels for the effective engagement of EM groups in implementation.

51. Learning from global and Vietnam-specific experience, the proposed Program would have the following three closely inter-related elements corresponding with the projects under the RWSS NTP3 which support delivery of behavior change communication, provide basic services and infrastructure to support behavior change, support sustainable services, and build capacity:

**a. Rural domestic water supply and rural environment**

- Provision of hygienic sanitation, hand washing facilities and adequate water supply in schools – including consideration of the needs of all children. Support in putting in place the system for operation and maintenance of the facilities;
- Increase water supply coverage for villages, using small to medium sized community based systems; focusing on rehabilitation and extensions from existing systems. New water supply schemes would be constructed as required using appropriate technology. Investments would be demand responsive and would balance willingness to pay with prioritizing areas with higher levels of poverty; and
- Technical assistance would be provided for improved operation and maintenance procedures, management and tariff collection and accounting procedures at village/commune levels. The role of PCERWASS in supporting this process, specifically in their technical backstopping role for community based systems, will be strengthened.

**b. Rural sanitation and hygiene**

- Provision of hygienic sanitation, hand washing facilities and adequate water supply in health clinics, including support for putting in place the system for operation and maintenance of the facilities;
- Support for scaling up domestic hygiene and sanitation to achieve Commune Wide Sanitation;
  - Demand side interventions would be implemented through existing channels; including clinics, schools, government health system staff, and traditional leadership structures. In addition at the village level local leaders, the women's union and commune and village health workers would be supported with new tools and to adapt existing approaches, such as CATS which have demonstrated effectiveness. Counseling of mothers and caregivers in clinics would also support scaling up existing successful programs combating malnutrition;
  - Supply side interventions; support to the private sector to build the capacity of local builders, manufacturers and suppliers of sanitation products and services, in order to supply a menu of affordable and appropriate household sanitation and hand washing hardware options

and services. The intervention will build on the work already being done by VIHEMA and other Development Partners.

- Additional targeted support to households for latrine construction with affordable technology options; potentially strengthening micro-financing through Vietnam Bank of Social Policy (VBSP). This intervention would also identify how to improve the delivery of the existing subsidy systems for poor households, for example as rebates directly to households or voucher systems to be redeemed at local sanitation suppliers (Box 3).

**c. Capacity building, communication and supervision, monitoring and evaluation of NTP3**

- Focused capacity building of national, provincial and local agencies involved in the Program to develop their implementation and management capacity and improve inter-sectoral collaboration including; (i) capacity to promote hygienic behavior change and provide sustainable sanitation services; (ii) planning, monitoring, evaluation and reporting and; (iii) supporting improved environmental, social and fiduciary systems;
- Policy support where needed, for example to enhance the role of PCERWASS in supporting institutional capacity development at the commune levels, for school WASH, water pricing framework, and development of sanitation markets;
- Improving sustainability of access to sanitation and improved water supply through technical assistance for community management and support to PCERWASS and DoH/DoET;
- Verification of Program Results and External Audit of the Program by the Independent Verification Agent; and
- Launch of a national and provincial high-level advocacy campaign to raise the political profile of sanitation and hygiene.

**Financing and program costs**

52. The budget for the NTP3 Program at the national level is VND 27,600 billion (US\$1.3billion). The main sources of funding are the central government (49 percent - directly or through the provision of concessional credit to users), provincial governments (11 percent), donors (30 percent) and users (10 percent).

53. In the 19 provinces supported by the Program, the total scale of the financing is estimated to be US\$300 million. Within this context, the GoV seeks an IDA Credit at an indicative funding level of US\$200 million, or 15 percent of the overall NTP3 Program.

## Purpose of Environmental and Social Systems Assessment (ESSA)

54. The ESSA is conducted to understand the extent to which the Program:<sup>3</sup>
- a) promotes environmental and social sustainability in the Program design; avoids, minimizes, or mitigates adverse impacts, and promotes informed decision-making relating to the Program's environmental and social impacts;
  - b) avoids, minimizes, or mitigates adverse impacts on natural habitats and physical cultural resources resulting from the Program;
  - c) protects public and worker safety from the potential risks associated with: (i) construction and/or operations of facilities or other operational practices under the Program; (ii) exposure to toxic chemicals, hazardous wastes, and other dangerous materials under the Program; and (iii) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards;
  - d) manages land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement, and assists the affected people in improving, or at the minimum restoring, their livelihoods and living standards;
  - e) gives due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of the Indigenous Peoples and to the needs or concerns of vulnerable groups; and
  - f) avoids exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.
55. Key findings of this assessment will be used to improve environmental and social management outcomes of the Program through specific actions under the overall Program Action Plan (PAP), as well as through technical assistance and capacity building activities to be implemented under the Program. The action plan will be discussed and agreed with the GoV and will be incorporated as relevant into legally binding agreements under the conditions of the new financing.
56. The ESSA was prepared in collaboration with relevant officials and technical staff members of GoV implementing agencies. The methodology included:
- a) a desk review of current related environmental and social legislations and regulations;
  - b) a desk review of relevant provincial environmental and social reports as well as central and provincial reports on the implementation of the NTP for RWSS;
  - c) a consultation workshop on the implementation of environmental and social management within the NTP for RWSS; and
  - d) a number of field visits to five provinces, and interviews/discussions with relevant central and provincial representatives.
57. A record of consultations with relevant stakeholders and the list of participants are enclosed at Annex 1.

58.

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<sup>3</sup>Paragraph 8, OP 9.00 Program-for-Results Financing, February 2012.

### Additional Provinces

59. During negotiations, the Government of Vietnam requested the inclusion of two additional provinces in the Program; Ninh Thuan and Binh Thuan. The Bank agreed to the inclusion of these two additional provinces. Following this agreement, the Bank carried out a further desk-based Environmental and Social Systems Assessment of Ninh Thuan and Binh Thuan. The environmental and social effects of the Program including the benefits and risks of the Program to Ninh Thuan and Binh Thuan provinces were found to be consistent with the effects identified through the findings of the initial assessment of the 19 original provinces. The environmental and social recommendations, the PAP action and the risk rating of this assessment are therefore considered to be appropriate for all of the provinces under the Program including Ninh Thuan and Binh Thuan. Further details of the desk based assessment of Ninh Thuan and Binh Thuan are included as an Addendum to this ESSA.



## Context

60. **Poverty:** Vietnam has an impressive record on economic growth and poverty reduction in the last twenty five years. Reforms have transformed Vietnam from one of the poorest countries in the world, with *per capita* income below US\$100, to a lower middle-income country. However, while the overall rate of poverty for the country in 2012 was 9.6 percent, the poverty rate<sup>4</sup> for the remote Northern Mountains and Central Highlands regions is significantly higher (23.8 percent and 17.8 percent, respectively).<sup>5</sup> The monthly average income *per capita* in (1,000 of Dong) is 1,258 for the Northern Mountains and 1,643 for the Central Highlands as compared to 1,955 for the whole country. In addition to the regional variation, there is a considerable difference in the poverty level between the Kinh/Hoa majority and Ethnic Minority groups. Average income among EM households is only equal to one sixth of the national average.<sup>6</sup> The Kinh are relatively evenly distributed on a social-economic scale of poorest to richest. The Tay, Thai, Muong and Khmer peoples are generally distributed between average and poorest while the majority of the H'Mong are poorest.
61. In terms of landholding, ownership of assets and access to essential public goods and services such as clean water and electricity, Ethnic Minorities are also demonstrably lagging behind. While total landholdings of Ethnic Minorities are actually larger than for the majority group, the quality of their land is generally poorer and more susceptible to weather-related stresses and shocks that in turn negatively affect traditional livelihood strategies and returns. Analysis of Ethnic Minorities living in the extremely difficult communes shows that they are far less mobile and less integrated into labor markets than their majority neighbours, and much less likely to be producing higher value or industrial crops for which the economic return is far higher.
62. **Ethnic Minorities:** There are 54 Ethnic groups that make up Vietnam's population; however, population is not evenly distributed between the 54 groups. The Kinh are the majority group accounting for 86 percent of the population. A further eight groups (Tay, Thai, Muong, Khmer, H'Mong, Nung, Hoa and Doa) represent another one million people. There are 15 groups that range in size from approximately 10,000 to a few hundred people. Some of the smallest groups are decreasing in numbers. There are high numbers of EMs in the NM and CH regions. In the NM region, the ethnic majority Kinh people make up 46 percent of the population and the majority of the remainder are Tay, Thai, Muong and H'Mong peoples. In the CH region, the Kinh make up 66 percent of the population with a relatively smaller proportion of Ethnic Minority groups present. The numbers of Khmer people are very low in both regions. The population data, including data on EMs is presented in Table 1 below. Descriptions of the main EM groups can be found in Annex 6.

**Table 1: Population data for the Northern Mountains and Central Highlands regions including EMs**

<sup>4</sup> Assessed against a threshold of 570 thousand Dong for rural areas

<sup>5</sup> General Statistics Office data for 2012

<sup>6</sup> Committee on Ethnic Minority's report to MOLISA, 2013.

Region	Province	Total Population	Rural Population	Rural Population (%)	EM Population*	EM* (%)
<b>Central Highlands</b>	Dak Lak	1,629,789	1,241,509	76	480,982	30
	Dak Nong	489,442	416,963	85	161,610	33
	Gia Lai	1,272,792	909,396	71	583,279	46
	Kon Tum	430,037	284,553	66	224,373	52
	Lam Dong	1,186,786	737,356	62	239,556	20
<b>Northern Mountains</b>	Bac Can	294,660	246,922	84	254,178	86
	Bac Giang	1,555,720	1,405,917	90	188,669	12
	Cao Bang	510,884	423,210	83	483,539	95
	Dien Bien	491,046	416,623	85	398,543	81
	Ha Giang	724,353	637,408	88	635,052	88
	Hoa Binh	786,964	667,428	85	560,944	71
	Lai Chau	324,325	279,766	86	281,571	87
	Lang Son	731,887	590,399	81	606,817	83
	Lao Cai	613,075	483,123	79	390,936	64
	Phu Tho	1,313,926	1,104,683	84	195,177	15
	Son La	1,080,641	930,400	86	899,542	83%
	Thai Nguyen	1,124,786	836,607	74	287,692	26
	Tuyen Quang	725,467	631,965	87	396,663	55
	Yen Bai	740,905	600,645	81	401,776	54
<b>Total</b>		<b>16,027,485</b>	<b>12,308,632</b>	<b>77</b>	<b>7,619,589</b>	<b>48</b>

\* Out of the total population (urban and rural)

63. **Gender:** Although the policy framework for rural water supply and sanitation does explicitly address gender, gender stereotypes persist and the quality of women's participation and voice in decision making in particular is highly constrained. The Women's Union plays a crucial role in information dissemination, mobilization of people for participation and contribution to community projects as well as in dispute/complaint resolutions at the community level.

64. **Disability:** The Vietnam Household Living Standard Survey in 2006 estimates that 15.3 percent of the population of Vietnam has difficulty or extreme difficulty in the areas of hearing, seeing, cognition, walking, self-care or communicating. In the Central Highlands the use of Agent Orange between 1969 and 1971 may also have contributed to a higher rate of disabilities among the children of those exposed. Studies in Vietnam have indicated that disability of parents reduces the prospects of children,<sup>7</sup> but also that provision of infrastructure and basic services can lessen the impact of disability on families with disabled members.<sup>8</sup>

65. The Law on Disabled Persons was issued on June 17, 2010 to guarantee the rights of people with disabilities. The Law requests that in infrastructure development,

<sup>7</sup> Does Parental Disability Matter to Child Education? Evidence from Vietnam, World Development, 2013.

<sup>8</sup> Spatial Variation in the Disability-Poverty Correlation: Evidence from Vietnam, UCL, 2013.

accessibility of disabled persons should be taken into account to ensure persons with disabilities can have access to the developed services.

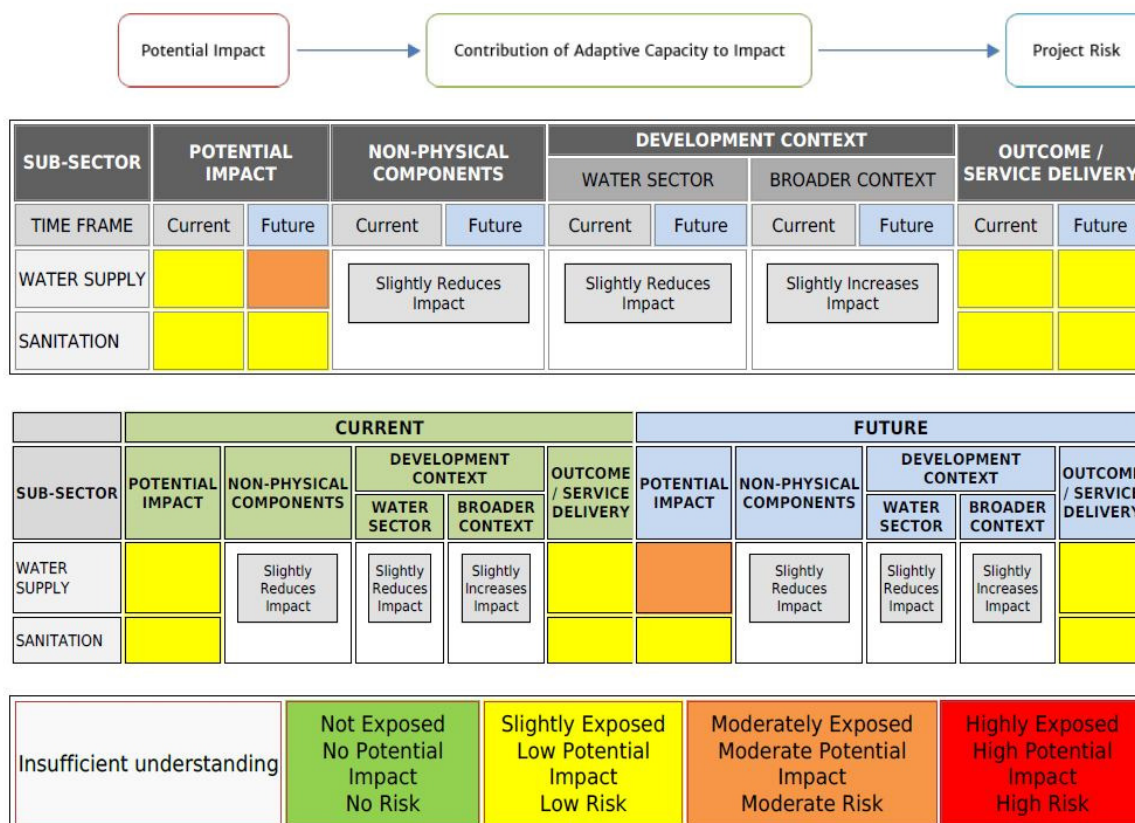
66. Vietnam recently ratified the UN Convention on Persons with Disabilities. This is an important part of the policy framework which recognizes the importance of accessibility to health and education and specifically the responsibility to ensure equal access by persons with disabilities to clean water services. A key part of this is design and construction of public water and sanitation.
67. The United Nations Children's Fund (UNICEF), as part of its "child-friendly" schools campaign in Vietnam, has worked with MoET over a number of years to design better toilet facilities. One output of this collaboration was the "Standard Latrines for kindergarten, primary and high schools" issued by MoET in 2008. The same year UNICEF worked with NCERWASS on an Assessment of water supply equipment and sanitation for children with disabilities in schools. However, the 2008 decision does not include any provision for children with disabilities.
68. **Housing:** The majority of Kinh, Tay, Thai and Muong peoples live in permanent or semi-permanent houses with a smaller number living in less permanent or simple houses. The Mong live in semi-permanent, less permanent or simple houses with a minority living in permanent houses.
69. **Education:** Approximately 28 percent of both the Kinh and the other ethnic groups have completed primary school; however, only 15 percent of non Kinh ethnic groups have completed lower secondary school and only 9 percent have completed upper secondary school and higher as compared to 25 percent and 23 percent, respectively, for Kinh people.
70. **Geography and topography.** The Central Highlands is approximately 51,800 square kilometres (km<sup>2</sup>) of rugged mountain peaks, extensive forests, and fertile soil. Comprising five relatively flat plateaus of basalt soil, the highlands account for 16 percent of the country's arable land and 22 percent of its total forested land. The Northern Mountains region is characterized by diverse and complex topographical features such as valleys, high hills, and low to medium height mountains, this region has the largest area of all the regions in Vietnam (over 101,000 km<sup>2</sup>), accounting for about 31 percent of the total land area; however, the region only makes a limited contribution to the country's agricultural land area. Of Vietnam's population of 90 million, approximately 11 million people live in the Northern Mountain region and five million live in the Central Highlands of which 84 percent and 72 percent respectively live in rural areas where the proposed Program will be implemented. Population density is below the national average; in some areas there are less than 100 persons per square kilometer.

71. **Climate**<sup>9</sup>. The highest monthly average maximum daily temperature is around 28 degrees Centigrade (°C) in both the Northern Highlands and the Central Highlands. Overall, in Vietnam the frequency of 'hot' days and nights has increased significantly since 1960 in every season, and the annual frequency of 'cold' days and nights has decreased significantly. However, the main changes have been in the south of Vietnam. Annual average temperature is expected to increase by 1°C to 2.8°C by 2060 relative to current conditions. The number of hot days is expected to increase by approximately 10 days in October by 2060. Projections indicate an increase in extreme temperature of 1-3 degrees C in future decades in both the Northern Mountains and the Central Highlands.
72. Rainy seasons correspond to monsoon circulations, which bring heavy rainfall in the north and south from May to October, and in the central regions from September to January. Mean rainfall over Vietnam does not show any increase or decrease since 1960. The proportion of rainfall falling in heavy events has not changed significantly, nor has the maximum amount falling in 1-day or 5-day events. Localized flooding occurs regularly in the Central Highlands and also, less frequently, in the Northern Mountains. Climate models do not show a clear change in average rainfall. The proportion of total rainfall that falls in heavy events is projected to increase by 2-14 percent by the 2090s, and the probability of extreme rainfall and flooding will increase, particularly in northern regions.
73. The Central Highlands have suffered from droughts, including extreme events in 1998, 2002 and 2012. Recurrent droughts have impacted on agriculture and drinking water supplies. Risk of mortality due to drought is low in the Northern Mountains and Moderate in the Central Highlands, however groundwater levels are expected to drop further in the Central Highlands due to more erratic rainfall, increased development upstream and increased local abstraction for agriculture. The Northern Mountains are also expected to be more impacted by drought in the future.
74. The frequency of tropical cyclones operating in the East Sea has been observed to have decreased over the past several decades, although the frequency of tropical cyclones that affect Vietnam has increased by 0.43 events per decade in the past 50 years. Not enough is known about the impacts of climate change on the intensity and frequency of typhoons that affect Vietnam. Cyclone mortality risk is Moderate to High in the Central Highlands and Low to Moderate in the Northern Mountains.
75. The region is mountainous, and soils are acidic and of low fertility. Intense rainfall from late May to October, combined with steep topography and frequent seismic activity make the region highly susceptible to erosion and earthquakes that cause loss of property and human lives. Landslide risks are particularly high in the NM.
76. The Bank's Climate and Disaster Risks Screening Tool has been used to identify climate and disaster risks related to the proposed Program. The tool uses an exposure-

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<sup>9</sup> World Bank Vietnam Dashboard 2014  
([http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country\\_profile&CCode=VNM](http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=VNM))

sensitivity – adaptive capacity framework that draws on numerous global data sets with historical records and future projections as well as country-specific adaptation profiles. The framework considers and characterizes risks from climate and geophysical hazards, based on key components of the proposed Program and its broader development context. The risk ratings generated by the screening tool are presented by component below.



77. The risk ratings for the sanitation component are low, both currently and in the future. The risk ratings for the water supply component are currently low but have the potential to become moderate in the future.

78. **Hydrology and Water Resources.** Vietnam's water resources are plentiful, the annual renewable water resource per capita is over 9,000 cubic meters (m<sup>3</sup>). Water withdrawals account for approximately 100,000 million m<sup>3</sup> per year. The vast majority (90 percent) of this is used for agriculture, 5 percent is consumed by industry, 3 percent is used for the cooling of thermoelectric power plants, and 2 percent is used for municipal needs.

79. Although water resources are abundant, nationally the pressures of rapid economic development, population growth, climate change and natural disasters have exceeded the capacity of the existing policy and institutional framework, and this is limiting the effectiveness of the government's efforts to effectively manage the country's water resources. Compounding this problem is the transboundary nature of water resources in Vietnam. Almost 60 percent of water is sourced from outside Vietnam, making the

country susceptible to decisions made about water resources in upstream countries. However, these pressures are less critical in the target areas given the relatively low levels of development. In addition the levels of abstraction for domestic water supply and sanitation are relatively small. Further details are given below.

80. **Surface water.** In the Northern Mountains (NM) and the Central Highlands (CH) regions, the major river catchments include the Ky Cung-Bang Giang, the Ca, Red River-Thai Binh, Ma-Chu, Sre Pok and Se San and the Ba (Table 2). There are a number of transboundary basins on most of which Vietnam is the lowest downstream riparian. Although the impacts of the program on the water quality and quantity are expected to be negligible, there are implications for OP7.50 (Projects on International Waterways). A large proportion of the works are expected to be rehabilitation, with no change in the total design capacity of the schemes; these schemes may not require notification. In addition, any works on a tributary which lies completely within Vietnam and where Vietnam is the lowest downstream riparian may not require notification. The surface runoff totals 44 and 68 billion m<sup>3</sup>/year for the NM and the CH regions, respectively; however flows are seasonal. During the 6-7 month dry season, runoff is only 15 to 30 percent of this total. This results in water courses which typically have very low water levels in the dry season but which rise very quickly in the rainy season. Within the two regions there are a number of hydropower reservoirs including at Hoa Binh, Thac Ba and Yali (Table 3).

**Table 2: Major river catchments in the NM and CH**

River Basin	Catchment Area		Upstream Riparian	Downstream Riparian
	Total area in VN (km <sup>2</sup> )	% in Vietnam		
Ky Cung-Bang Giang	11280	85	None	China
Ca	20,460	68	Lao PDR	None
Ba	13900	100	None	None
Ma & Chu	17,720	62	Lao PDR	Lao PDR
Red River – Thai Binh	86,680	51	China	None
Sre Pok	18,200	61	None	Cambodia
Se San	11,450	66	None	Cambodia

**Table 3: Hydropower reservoirs in the CH and the NM<sup>10</sup>**

Reservoir	Catchment (km <sup>2</sup> )	Volume	Hydro-power (MW)
Hoa Binh	51,700	9,450	1,920
Thac Ba	6,100	2,940	108
Yali	7,455	1,037	720

81. **Groundwater.** In the NM, the exploitable groundwater reserves are 17.4 billion m<sup>3</sup>/year and 2 billion m<sup>3</sup>/year in the CH<sup>11</sup>. Groundwater exploitation is difficult in the Northeast

<sup>10</sup>National Water Sector Profile, 2002.

of Vietnam as the reserves are scattered and diverse. By contrast, in the Central Highlands, groundwater is exploited heavily for irrigation of cash crops, resulting in falling ground water levels in this region. The groundwater storage in the CH is summarized in Table 4 below.

**Table 4 - Groundwater Storage in the CH**

Highland	Groundwater Storage <sup>3</sup> /day
Kon Na Hung	163,296
Pleiku	1,124,050
Buon Ma Thuot	920,676
M'Drak	17,543
Dak Nong	258,671
Di Linh	492,017
Da Lat	101,071
Kon Tum	92,178

82. **Water quality.** Data on surface water quality is limited; however, there is increasing evidence of pollution of Vietnam's surface and ground water resources. In general, although the quality of upstream river waters is good, the water quality in downstream sections of major rivers is poor.
83. Rivers in the NM typically have good water quality. Upstream reaches of the Red River in the Lao Cai province fulfill Class A water quality criteria. The larger tributaries (the Lo, Gam, Cau, Thuong and Luc Nam) generally meet Class B standards. Some stretches of river around urban areas, including the Red River where it flows through Viet Tri town, have Chemical Oxygen Demand (COD) and Biological Oxygen Demand (BOD) that exceed national standards by 2.3 and 3.8 times respectively. In the area of the Thai Nguyen industrial zone, the Cau river is heavily polluted with concentrations of NO<sub>2</sub> (Nitrite) NH<sub>4</sub> (Ammonium) and BOD that exceed the standards by ten, two and five times, respectively. Total suspended solids (TSS) and (H<sub>2</sub>S) Hydrogen Sulphide exceed the standards by ten to hundred times.<sup>12</sup>
84. Groundwater storage is sufficient for medium- and large-scale water supply in the Central Highlands region. In general, ground water is suitable for domestic water supply as it has low mineral contents, mostly bicarbonate, sodium bicarbonate and magnesium chloride. Calcium levels are usually very low, and iron sulphate appears only locally around Kon Tum City; however, deep boreholes in the Central Highlands are reported to face problems of high levels of calcium and iron. In some areas, particularly Dak Lak province, the groundwater is characterized as hard<sup>13</sup> and although hard water is not normally associated with adverse health effects, the actual water quality needs to be confirmed. Groundwater shows pockets of contamination including from pesticide

<sup>11</sup> National Water Sector profile, 2002

<sup>12</sup> Water Environment Partnership in Asia (<http://www.wepa-db.net/policies/state/vietnam/waterquality.htm>)

<sup>13</sup> Hydrogeological report for Central highland region, idm.gov.vn

use in paddy fields in the areas targeted by the proposed Program.<sup>14</sup> A trace of *ecoli* was found in groundwater in Da Lat (2 to 5 MPN<sup>15</sup>/100mL<sup>16</sup>). Arsenic occurs in some areas of the Central Highlands but it is not common. The RB-SupRSWSP Program should provide technical assistance to promote testing of raw water quality at source, particularly *forecoli* and heavy metals contents in groundwater during the site selection stage.<sup>17</sup>

85. **Monitoring.** The capacity of the provinces to monitor the use of water resources and water quality is limited; however, steps are being taken to improve monitoring and improve understanding of the long-term implications of the development of RWSS systems relative to many other development pressures on water resource, as described in this ESSA under the section on Program Potential Environmental Impacts and Risks.
86. **Air Quality.** Generally, air quality in the participating provinces is good. Rural areas do not suffer from the air pollution associated with industry and traffic in urban areas; however, forest fires are prevalent in the NM and CH regions where their occurrence is above the national average and has caused negative impacts on air quality. The main causes of forest fires are burning for agriculture and forest activities such as collecting honey for which fire is used to generate smoke to pacify the bees.
87. **Biological Resources.** Vietnam's diverse geography along with its varying topography and soil types and its climatic range, result in considerable regional variations in terms of the country's biological resources. Vietnam is within the Indo-Burma Biodiversity Hotspot and is ranked as the 16th most biodiversity rich country in the world. It hosts 110 Key Biodiversity Areas, 59 Important Bird Areas. The country also contains two World Natural Heritage Sites, five Ramsar wetlands, eight United Nations Education, Scientific and Cultural Organization Biosphere Reserves and two Association of Southeast Asian Nations Heritage Parks.<sup>18</sup> A list of the protected areas in the NM and the CH regions can be found in Annex 2.
88. The NM region is divided between the North Indochina subtropical forest ecoregion in the North West and the South China-Vietnam evergreen forest ecoregion in the North East. The CH region encompasses the Central Indochina dry forest, the South East Indochina dry evergreen forest and the South Annamites rainforest ecoregions.
89. Although detailed knowledge of Vietnam's biodiversity is limited, the NM and CH are clearly important regions for biodiversity. In the NM, Bac Kan is notable as one of the provinces with the highest biological diversity in Vietnam. In addition to protecting the upper watersheds of some of Vietnam's most important river systems, the forests in

<sup>14</sup> Lamers et al., 2011, Pesticide Pollution in Surface- and Groundwater by Paddy Rice Cultivation: A Case Study from Northern Vietnam

<sup>15</sup> Most Probable Number (MPN)

<sup>16</sup> Da Lat WSC, 2011: Updated Environmental Assessment Report, Da Lat Water Supply Project

<sup>17</sup> data on E-coli contamination of groundwater will be incorporated as it becomes available

<sup>18</sup> Vietnam Tropical Forest and Biodiversity Assessment, USAID 2013



the Central Highlands of Vietnam support some of Vietnam's richest remaining biodiversity.

90. Depending on their functions, existing forests are classified into three main types: specialized forests (strictly protected for gene conservation); production forests (to provide raw materials for industries); and protective forests (protect downstream areas from erosion and flooding). Biological resources are rich and diverse in undisturbed or specialized forests and in biological protected areas. Other forests have been degraded and are under threat from over-exploitation. Biodiversity has been reduced significantly due to forest fire, land use conversion, mining, and resource overexploitation. The demand for Non Timber Forest Products and other resources that leads to local overexploitation stems from both domestic and international markets. For example, there is widespread overexploitation of medicinal and aromatic plant species driven by strong demand in both China and Vietnam. Many Ethnic Minority communities in Northern Vietnam collect large quantities of these plants.<sup>19</sup> Details of the specific locations of concern are given in Annex 2; however, it should be noted that these locations will not be adversely affected as the proposed Program will not be working in these areas.
91. Overexploitation of aquatic resources is also a serious threat to biodiversity conservation in Vietnam including unsustainable fishing in freshwater systems. In the NM there are more than 200 species of fish and in the CH there are over 150 species.<sup>20</sup> The altered hydrological regime of river systems due to construction of dams for irrigation and hydropower causes loss of migrating routes for many species in various rivers.<sup>21</sup> This issue should be noted; however, the small rural water systems are not expected to impact significantly on this issue.
92. **Physical Cultural Resources (PCR).** There are a number of historical sites and/or sites with a cultural value in each of the provinces. These sites have been well-protected by local communities and government. No proposed investments will affect any of the known cultural sites. Projects will be screened for impacts on PCR based on the list provided in Annex 2.

### Sanitation and Water supply in the NM and CH

93. **Access to clean water in rural areas.** On average, 79 percent of the rural population in the NM region has access to clean water. The rate is higher in relatively more developed provinces and is lower in more remote, less developed provinces. In the CH region, 77 percent of the rural population has access to clean water and the rate is similar between the provinces in this region. Some EM groups such as the H'Mong report falling levels of household access to clean water.<sup>22</sup> The water supply sources being used in the Program area include ground water from dug wells, drilled boreholes,

<sup>19</sup> Vietnam Tropical Forest and Biodiversity Assessment, USAID 2013

<sup>20</sup> Data based on different sources compiled by the Fishery Research Institute I, 2003

<sup>21</sup> Vietnam National Hydropower Study

<sup>22</sup> Mekong Development Research Institute, 54 Ethnic Groups: Why different, 2014

treated water from rivers/streams and springs as well as rainwater supply. This water is supplied through gravity fed systems and pumped systems; However, there is a high level of failure of water supply schemes and many of the schemes installed are no longer functioning - largely due to poor maintenance. In the Central Highlands 48 percent of water schemes are operating poorly or are idle. In the NM, the figure is 33 percent.<sup>23</sup> It is therefore anticipated that the majority of schemes included under the Program will be existing schemes that are rehabilitated rather than new schemes. The issue of non-functioning water schemes is covered in more detail in the Technical Assessment.<sup>24</sup>

94. ***Access to sanitation facilities and sanitation behaviors in rural areas.*** According to the government access to water supply and sanitation in rural areas remains a significant challenge. Across the NM and CH regions, government data suggests that 21 percent of the rural population practice OD and 39 percent have unhygienic toilets. Access in Lai Chau and Dien Bien is particularly low where only 30 percent of the rural population has access to sanitation facilities. For EMs, who make up 50 percent of the population in the NM-CH, the rates for sanitation access are among the lowest in the country. OD is practiced by 31 percent of EMs and 47 percent of EMs have unhygienic toilets. The smallest EM groups are typically most lacking in access to sanitation. Amongst 12 of the smallest EM groups, less than 5 percent of households have access to a hygienic toilet.<sup>25</sup> In addition to the low rate of access to sanitation facilities, existing latrines in households are also very simple and incomplete in many cases. Observations and interviews completed by VIHEMA and UNICEF revealed that highland families rarely use any type of latrine. Approximately 41 percent of Gia Rai, 41 percent of Ba Na and 51 percent of Ede peoples said that they did not need latrines and did not like using them while 21 percent of Dao, 23 percent of Nung, 26 percent of Raglai and 29 percent of Mo Nong also responded that they did not need latrines. Among the Bru Van Kieu, 24 percent of respondents said they did not like using latrines (VIHEMA & UNICEF, 2006).
95. Detailed figures on the coverage of sanitation and water supply in the 19 provinces of the CH and the NM are included in Annex 8.
96. Knowledge among Ethnic Minority groups on sanitation is reported to be very limited, particularly among Ethnic Minority groups in upland areas of the Northern and Central Highlands. The Ba Na, Gia Rai, Raglai, Bru-Van Kieu, and H'Mong had the least knowledge on practices to prevent disease. Just 3.6 percent of the Gia Rai, 0.4 percent of the Raglai, 1.9 percent of the Van Kieu, 1.9 percent of the H'Mong, and none of the BaNa respondents knew that diarrhea and intestinal parasites could be prevented by using a hygienic latrine (VIHEMA, UNICEF 2006). More than 50 percent of the H'Mong surveyed did not know of any diseases related to human excreta or their transmission routes (CODESPA 2011) while in 2011, 73 percent of Kho Mu and 61

<sup>23</sup> NCERWASS report: Solutions for improved performance of operation and management of rural piped water schemes, 2014.

<sup>24</sup> Data on percent of schemes that use surface water vs ground water will be incorporated once received from NCERWASS.

<sup>25</sup> Mekong Development Research Institute, 54 Ethnic Groups: Why different, 2014.

percent of H'Mong respondents in Dien Bien, Son La, and Lai Chau provinces did not know any causes of diarrhea (French Red Cross 2011).

97. A study<sup>26</sup> carried out in 2010 on hygiene and sanitation perceptions and practices among four Ethnic Minority groups in rural Northern Vietnam indicated that cultural perceptions of hygiene and sanitation which inform everyday hygiene practices did not differ substantially to that found in the rural majority population elsewhere in Vietnam. However, the difficult living conditions, particularly in highland communities, reinforces a sense of marginalization among the Ethnic Minority groups, which has a great impact on how they perceive and respond to government sanitation interventions. Typically the enclosed latrines promoted by authorities are met with reluctance by the Ethnic Minority groups due to this marginalization and also cultural perceptions of the body as permeable and therefore, vulnerable to 'dirty air' such as bad smells from human feces.
98. Open defecation is widely accepted by local communities in the NM and CH regions. Defecating in streams and irrigation channels was also expressed as common practice in both lowland and highland villages, since smell and feces would vanish with the flowing water. Adults explained that they defecated in the fields during work since they spent most of their time working in the highland. In the highland, the forest was clearly preferred to the latrine for privacy reasons. The cost of a toilet is also cited as a barrier. The subsidy of 0.5 million Dong (approximately US\$28) provided by the Government for the poorest families was perceived as insufficient by all low income families who said that they had to save money and collect building materials for years to complete the construction of a latrine. Even with a subsidy, the cheapest standardized model of an enclosed composting latrine is unaffordable to the majority of people in the communities, but particularly for highlanders. In addition, the prioritization of specific sanitation hardware solutions by the central government aimed at increasing coverage creates expectations and dependency among the Ethnic Minority groups that hygiene "comes from the outside society," resulting in low levels of community-initiated actions.
99. **Toilet use in schools.** Reliable, local level data on access to water and sanitation in schools and health clinics and the practice of hygienic behaviors is sparse. Nationally, approximately 12 percent of schools and 37 percent of health centres have access to hygienic sanitation according to government standards. It is reported that 78 percent of the schools and health centers in the NM and over 90 percent of schools and health centers in the CH have access to hygienic sanitation; however, site visits have indicated that actual coverage may be lower. In a study by Xuan *et al.*<sup>27</sup> of two rural communes in the multi-ethnic Northern region of Vietnam, the main barriers for latrine use include inadequate number of latrines, limited accessibility to latrines, lack of constant water supply in latrines, and lack of latrine maintenance by school management. Programs promoting latrine use for children were not conducted in either schools or communities studied and were not established as a preferred social norm in such

<sup>26</sup> Rheinlander *et al.* 2010. Hygiene and sanitation among Ethnic Minorities in Northern Vietnam: Does government promotion match community priorities?

<sup>27</sup> Xuan *et al.* 2012. Sanitation behavior among schoolchildren in a multi-ethnic area of Northern rural Vietnam.

settings. Children perceived existing school latrines as unappealing and expressed a wish to have basic, functional, clean, and colourful school latrines with privacy. The study also found that there seemed to be no stigma associated with this traditional practice and open urination and defecation were socially acceptable at the village level.

100. Discussions and site visits during field trips to some of the provinces have shown the lack of attention by schools to proper maintenance of school toilets facilities. Some of the school water supply and/or sanitation facilities were not operating due to lack of resources for repairs. The proposed Program would cover repair of existing schemes and training on operation and maintenance.
101. Four main types of latrines have been traditionally built in schools and health centers using the models introduced by MoH, including: (a) septic tank toilet; (b) eco-latrine with two compartments; (c) underground ventilated latrine; and (d) “flush and permeable” latrine. The same four types of toilets have usually been adopted in households, although basic pit latrines are also prevalent.
102. Detailed coverage figures are provided in the Technical Assessment for the RB-SupRSWSP Program.
103. **Hygiene Practices:** A survey of selected geographical regions highlighted that only 13 percent and 15 percent of people washed their hands with soap before eating and after defecating, respectively. Even lower rates were found for poor households, the northern mountainous regions and among Ethnic Minority groups.<sup>28</sup>
104. According to the 2010 study, women say that they only invest in soap if they have money to do so. There appears to be a strong social norm in all Ethnic Minority groups and across poverty levels to present oneself and one’s children hygienic and neatly, by showering and dressing up, when visiting health clinics, authorities, or nearby towns and markets; however, these rationales are not directly related to biomedical risks. This was also true for perceptions of hand washing with soap. None of the Ethnic Minority groups perceived regular hand washing with soap to be necessary unless hands were visibly dirty. Similarly, the MoH and WSP (Water and Sanitation Program) report (2013) shows very limited evidence of the practice of hand-washing with soap in the CH and NM regions. Firstly, Ethnic Minority people are not equipped with adequate facilities including hand washing points and access to water and soap. About 16 percent of households had no specific hand-washing point and when all the criteria of a proper hand-washing place are taken into account, only 3 percent of the households in the study had adequate hand washing facilities. Secondly, according to the survey conducted by VIHEMA and UNICEF (2006), the knowledge of people in rural areas of the importance and benefits of hand-washing with soap was very limited, particularly among Ethnic Minority groups: 27 percent of respondents from the Kinh group knew that washing hands with soap could prevent diarrhea and intestinal parasites, however only 5 percent of people in other Ethnic Minority groups knew this and no respondents

<sup>28</sup> Ministry of Health (MoH), UNICEF. 2007. Summary: National Baseline Survey on the Environmental Sanitation and Hygiene Situation in Viet Nam. Hanoi: Ministry of Health and UNICEF.

from the Ba Na, Gia Rai, Mo Nong, and H'Mong groups had this knowledge. The rates of people who reported not washing their hands with soap before eating, after urinating, or after defecating were very high among the Ba Na, the Raglai, the Bru Vân Kieu, the Gia Rai, the Mo Nong, and the Ede. Rates ranged from 45 percent to more than 88 percent. (VIHEMA & UNICEF, 2006). Finally, people perceive that washing their hands with water after defecating is adequate. For them, soap is only used for "good hygiene," "removing germs," and "removing dirt."

105. **Waste Management.** Both solid waste infrastructure and collection services are very limited in rural areas. Most of the open dumps are only available at the district level. In rural areas there is no sanitary landfill and the wastes are disposed of in an uncontrolled fashion around the living areas. Communication campaigns conducted by mass groups included messages about collection and better practice on solid waste dumping. In schools and health clinics, solid wastes are usually disposed of in open shallow pits but are sometimes disposed of in the areas surrounding the toilet buildings and can easily be dispersed in the surroundings by the wind or rainwater. Medical wastes are usually separated in colored boxes and transported away by specialized medical waste collection units.
106. **Fecal sludge.** A very limited number of provinces have a desludging service, but this is almost exclusively limited to urban and peri-urban areas. Septic tanks and vaults are generally sealed once full. The People of North Vietnam sometimes use human excreta in agriculture, although open composting latrines are typically unpopular among highland people. The Government's specification and directives for composting human faeces requires at least six months for composting; however, farmers in the North often use it for agricultural crops after a shorter interval, sometimes applying nearly raw faeces in the field. The handling of untreated human feces is therefore quite a common practice in more lowland areas in the north of Vietnam and it is not believed to be harmful by the people who practice it.<sup>29</sup> MoH issued Vietnamese National technical regulation on Hygienic conditions for Latrines QCVN 01:2011/BYT in which some guidance on operation and maintenance are included
107. Drainage systems in the rural areas in the targeted provinces are very limited and only usually found along the main road or administrative centres. As part of environmental communication campaigns, local communities are also encouraged to clean up the ditches surrounding their houses to avoid stagnant water.
108. **Nutrition.** A baseline assessment of factors that affect nutrition-related behavior change in a rural northern province in Vietnam was carried out in 2002. One hundred caregivers of children 6 to 17.9 months of age from five communes were interviewed. Four behaviors were examined: feeding the child "positive deviant"<sup>30</sup> foods, feeding the child during diarrheal episodes, washing the child's hands, and taking the child to the health center when ill. Results indicate that for all four behaviors, favorable social norms distinguished those who practiced each behavior from those who did not.

<sup>29</sup> Kar, 2011. The Sanitation Profile of Vietnam and Possibilities of Scaling up of CLTS: A Trip Report.

<sup>30</sup> Departing from the norm in a beneficial way

Positive, reinforcing beliefs and attitudes were important determinants of every behavior except hand washing.<sup>31</sup>

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<sup>31</sup>Dearden et al, 2002. What influences health behavior? Learning from caregivers of young children in Viet Nam.

## Description of Program Environmental Management System

### Program Potential Environmental Impacts and Risks

The possible types of investments under the RB-SupRSWS are summarized in the Table 5 below:

**Table 5– Typology of Investments under RB-SupRSWS**

Type of Investments	Possible Technical Options and Approach
Water Supply	<ul style="list-style-type: none"> <li>• New schemes, extensions from existing schemes, connect shared water supply to individual households:               <ul style="list-style-type: none"> <li>○ gravity fed spring systems and rainwater collection in the Northern Mountain</li> <li>○ Boreholes (shallow, medium or deep with electrical pumps)</li> <li>○ Slow filtration tanks for surface and rainwater tanks</li> </ul> </li> <li>• Extensive consultation with the beneficiaries on the design, operation and maintenance options for determining technical choices</li> <li>• The selection of surface water or underground water is based on the quality and availability of water resources at each site.</li> <li>- Water Quantity: Supply sufficient water of acceptable quality to households for domestic use;</li> <li>- Water Quality should meet requirements for hygienic water as indicated at QCVN02/2009/BYT dated 1 December 2009.</li> <li>• The majority of the water supplies will have a simple design and treatment technologies will be basic and able to be maintained by community representatives.</li> </ul>
Sanitation facilities	<ul style="list-style-type: none"> <li>• Household latrines</li> <li>• Sanitation facilities in schools and health centers</li> </ul>

### Environmental benefits

109. The overall environmental impacts of the RB-SupRSWS Program would be positive as a result of improved hygiene behavior, increased and sustained access to sanitation and rural water supply and significantly reduced open defecation in the areas targeted by the Program. The Program will assist the GoV in achieving its NTP targets. Changing behaviors and reducing open defecation is expected to improve environmental sanitation and reduce environmental pollution related to spreading of pollutants including disease-transmitted vectors on the soil surface and to water sources. Therefore, the incidents of vector diseases such as diarrhoea, parasites, skin diseases, women reproductive health diseases, etc. are expected to be reduced, particularly with diseases that may become epidemic such as diarrhea. Living conditions of targeted rural communities would be improved with better access to clean water for washing, cleaning and drinking, which will reduce household reliance on potentially

hazardous water sources and exposure to critical pollutants. The most groups which would benefit most from the intervention would be women and children.

110. There are opportunities to incorporate environmental considerations into project siting, and environmental friendly options into engineering design to promote environmental sustainability of improved RWSS infrastructure.

### Potential Negative Environmental Impacts

111. The anticipated adverse environmental effects of this Program are not expected to be significant considering: (a) the small scale of physical investments; (b) the proposed works would take place in well-disturbed areas thus the effects are likely to be localized and small; (c) the limited geographic footprint of planned works; and (d) mitigation measures are known and effective provided proper care and oversight is undertaken during construction.

112. **Water resource sustainability.** Vietnam's legal system for managing water resources has been strengthened recently with the revised Law on Water Resources introduced in 2012. Decree no. 201/2013/ND-CP guiding the implementation of this Law was also issued on 27 November 2013. Decree 201 sets out the requirements to obtain a water extraction license which is applicable to non-domestic users extracting 10 cubic meters and more per day for groundwater and 100 cubic meters and more per day for surface water. A license for water extraction for domestic water supply is not required unless it is for areas where the water resource has been depleted. The impacts of RB-SupRSWS on water quality and quantity of surface raw water sources are expected to be small since the volumes extracted for each community-based scheme will be small compared to the overall surface water flow volumes as discussed earlier in the report, or groundwater storage in different parts of the CH. The use of groundwater for domestic rural water supply is very low. Agriculture accounts for 90 percent of the overall water supply demand while domestic water supply accounts for around 2 percent of total water use. Groundwater for domestic rural water supply counts for an even smaller percentage. It is currently estimated that 40 percent of the planned connections will be from new schemes; approximately 25,000 new connections in the CH. This would result in a maximum abstraction of approximately 3.6 million m<sup>3</sup>/year of groundwater which is less than 0.2 percent of the total exploitable volume of groundwater of 2 billion m<sup>3</sup>/year in the CH.<sup>32</sup> In the NM, the Program is anticipated to result in a maximum abstraction of approximately 30,000,000 m<sup>3</sup>/year of surface water<sup>33</sup> which is less than 0.1 percent of the total annual surface runoff in the NM of 44 billion m<sup>3</sup>/year.<sup>34</sup>

113. **Construction impacts.** Temporary adverse environmental impacts may result from the construction of the water treatment facilities and latrines and water pipe installations and may potentially include: noise, dust, vibration, fumes from transportation of materials; interruption of local household businesses related to pipe installation; and potential contamination of soil and water from inappropriate disposal

<sup>32</sup> National Water Sector profile, 2002.

<sup>33</sup> Based on 210,000 households, 4 persons per household and a consumption of 100 litres per capita per day.

<sup>34</sup> National Water Sector Profile, 2002.



of waste materials. These potential impacts are reversible or manageable through proper construction practices. The civil works under the proposed RB-SupRSWSProgram are not likely to cause negative impacts to sensitive cultural sites since:(a) design and siting of water supply schemes can avoid these sites easily; and (b) latrines are located within the existing boundaries of residential houses, schools and clinics. However, strict environmental and safety supervision should be applied when construction takes place in operating schools where children are studying and playing nearby. Similarly, the impacts of dust, noise, and vibration should be well-managed when civil works take place in clinics. These considerations should be specified in the Program Operational Manual, as well as in the bidding and contract documents.

114. **Impacts to sensitive natural habitat sites.** It is expected that investments under RB-SupRSWS will not cause any adverse impacts to any critical natural habitats. Activities under the Program would be screened to exclude those that potentially affect protected areas. The construction of headworks and the abstraction of spring water for water supply may affect aquatic life in the existing water bodies, particularly downstream of the works. The RB-SupRSWS Operational Manual will provide guidelines for managing such potential impact through design solutions and proper construction practices.
115. **Health and safety.** Occupational health and safety issues are concerns for sub-projects under the Program, particularly for children, where construction takes place at existing residential households, schools or clinics; measures to avoid/reduce accidents and injury for the workers, community and children should be taken during the construction and operation phases.
116. **Pest management.** The Program activities will not involve pest management practices, nor will they involve the production, storage, transport, use or disposal of hazardous pesticides.
117. **Operation Impacts.** Depending on the types and locations of physical investments, the potential impacts and risks as well as the opportunities for promoting environmental sustainability of the investments during operation phase would be different, as summarized in Table 6 below:

**Table 6: Type-specific potential environmental impacts and risks during operation phase**

Type of Investments	Specific issues, Potential Impacts and risks
<b>WATER SUPPLY</b>	<p>Water quality suitable to the long-term health of users</p> <p>Stagnant wastewater surrounding the households and/or public pipes if drainage is poor. This can lead to unhygienic conditions, attractions of vermin and form ground breeding for mosquitoes</p> <p>Water is used ineffectively/wastefully by users due to low environmental awareness</p> <p>Water Supply system should be protected from source to tap,</p>

	<p>particularly protection of raw water quality from source, this principle is applicable to all kind of water sources</p> <p>Safety related to electrical and chemical uses, if any</p> <p>Small amount of waste/sludge generated if a treatment unit is included in the headworks</p>
Spring/surface water	<p>Typically water abstractions for domestic use are unregulated. However according to the existing water resource law, a license for extraction of water for domestic water supply is required in areas where water is scarce. The Department of Natural Resources and the Environment (DoNRE) will be consulted regarding the application for a water extraction license as regulated in the Law on Water Resource and Decree 201/2013 (for extraction exceeding 10 cubic meters per day of groundwater and from 100 cubic meters per day of surface water)</p> <p>Protection of water quality and quantity along the transmission /distribution pipeline, and at taps.</p> <p>Ensure environmental flow is maintained to minimize downstream environmental impacts</p>
Rain water supply	Mosquitoes breeding related to water storage
Boreholes and water wells	<p>A license for water abstraction must be obtained if water is extracted from areas facing water scarcity</p> <p>Safety risks related to use of electricity for pumping</p> <p>Contamination of groundwater due to contaminated surface water or improper hydrological sealing. Such risks should be considered when siting boreholes and water wells, for example they should be at least 10 m from any toilets, animal cages or any other major pollution sources to avoid cross-contamination of groundwater</p>
<b>SANITATION FACILITIES</b>	<p>Odor, smell</p> <p>Safety and accessibility in weather extreme events such as heavy rain and flooding</p>
Septic tank toilet	<p>Discharge of treated wastewater</p> <p>Ventilation, safety related to desludging related to accumulation of gases in the septic tank</p>
Dry latrine	Health hazards related to waste handling
Toilets for schools, clinic	<p>Safety and suitability for children – specifically girls and children with mobility issues</p> <p>Ventilation, safety related to desludging related to accumulation of gases in the septic tank</p>

### Mitigation Measures to Reduce Environmental Impacts and Risks

118. Measures are readily available for mitigating the potential negative impacts and risks related to the Program. Standard measures are presented in detail in the Environmental Codes of Practice in Annex 5. For some sub-project specific impacts, mitigation measures would be addressed effectively through design solutions as listed in Table 7 below. The design, construction, operation and maintenance of rural water supply and sanitation facilities should also include measures for climate resilience. Inclusion of environmental requirements into bidding documents and construction contracts is compulsory under the Bidding Law of Vietnam.

**Table 7: Specific Impacts by Type of Investments and Proposed Mitigation Measures in engineering design**

Specific Impacts	Proposed Mitigation Measures
Water Supply Facilities	<ul style="list-style-type: none"> <li>• BCC will support improved behaviors and raise awareness on effective use of clean water, protection of water quality at sources and along pipelines and management of wastewater at household level etc.;</li> <li>• Technical support will promote testing of water quality during planning phase;</li> <li>• Siting and design of water supply headworks will include measures to avoid existing pollution sources, avoid or mitigate adverse environmental impacts where possible (e.g., include lids/cover for collection basins built at surface sources), site boreholes/wells away from toilets and animal cages and build concrete basements to seal the ground, choose suitable pipe materials that minimize the risks of pipes breaking during weather extreme events, include items to ensure safety and contamination prevention during operation where possible;</li> <li>• If a treatment unit is included, options for waste treatment and collection will be proposed as part of scheme engineering design;</li> <li>• Operation and management training provided including operational safety issues;</li> <li>• Water supply schemes should assess the risk from changes in the local water resource availability; and</li> <li>• Design and maintenance or management of water schemes needs to include provisions to address damage due to landslides (e.g., use of High Density</li> </ul>

Specific Impacts	Proposed Mitigation Measures
	Polyethylene (HDPE) pipes instead of uPVC (Polyvinyl Chloride) pipes in mountainous areas.
Sanitation Facility	<ul style="list-style-type: none"> <li>• Ventilation of toilets at a level above the roof;</li> <li>• Proper drainage for septic tanks;</li> <li>• Design of local drainage in parallel with water supply and sanitation in schools and clinics, to ensure no stagnant water;</li> <li>• Safety measures: non-slip easy to clean tiles;</li> <li>• Environmental friendly solutions: use energy-saving lights, water-saving bathroom equipment etc; posters with environmental/personal hygiene messages placed surrounding the water supply/toilet buildings;</li> <li>• Colorful painting and decorations for school toilets to encourage use by children;</li> <li>• Consider safe, clean and attractive access routes to school toilets if the building is separated from classroom building; and</li> <li>• Designs promoted for household latrines need to take account of local risks of flooding and pollution of the groundwater table.</li> </ul>

## Environmental Management Systems

### *Environmental Institutional Responsibilities*

#### *Central Level*

119. The Ministry of Natural Resources and Environment (MoNRE) is the environmental management authority at the central level in Vietnam. As part of its management function, MoNRE appraises and approves environmental reports and carries out post-EIA monitoring. Regarding occupational health and safety, agencies from various levels of the Ministry of Labor, Invalids and Social Affairs (MOLISA) provide guidance and carry out periodical inspections. Management of cultural resources is the responsibility of the Ministry of Culture, Sports and Tourism (MOST).

120. According to the existing Environmental Law, review and approval of environmental documents has been delegated to the district level environmental management authority.

121. At the central level, NCERWASS under MARD and VIHEMA under MoH have been the coordinators of RWSS-NTP3. Among other tasks, VIHEMA coordinates with NCERWASS on planning, budget allocation and master plan submission for approval by the steering committee of RWSS-NTP3. NCERWASS and VIHEMA also coordinate technical assistance including for strengthening the environmental management capacity of the program.

122. Drinking water quality is managed by MoH. MoH has also introduced types of hygienic latrines appropriate for each region through the model latrine building approach. The latrine types include: Brick pour-flush latrine; Double vault compost latrine; Pour-flush with brick tank/cement ring tank latrines; and Ventilated Improved Pit Latrines (two models). Under MoH, VIHEMA develops plans for rural sanitation, personal hygiene and water quality management. VIHEMA also provides advice and develops and issues guidance on the implementation of rural sanitation, construction of public toilets and household latrines, communication relating to personal hygiene and water quality. In addition, VIHEMA develops and introduces latrine options, disseminates knowledge on communication approaches and methods to mobilize community action for sanitation, and promotes sanitation effectively; undertakes capacity building for sanitation-related aspects, including organization of communication and behavior change activities at the central level, and develops training materials and organizes training courses.

#### *Province Level*

123. The Departments of Natural Resources and Environment (DoNREs) are the provincial environmental management agencies. DoNREs are responsible for environmental management, land acquisition and compensation, mineral resources management, hydrometeorology, and mapping. DoNREs support the PPCs on environmental management in accordance with the law on Environmental Protection (LEP) and related laws and regulations. DoNREs are technically managed and supported by MoNRE.

#### *District level*

124. Decree 29/2011/ND-CP regulates that EIAs must be prepared for water supply schemes capacity from 50,000m<sup>3</sup> per day of surface water or 5,000m<sup>3</sup> per day of ground water. The water supply schemes developed or rehabilitated under the RB-SupRSWS are expected to be far below those thresholds as the number of households served by each scheme is expected to range from 20 to a maximum of around 2000. Project Owners will therefore only be required to prepare EPCs for submission to the District People's Committee for review and approval. According to Decree 18/2015/ND-CP (which replaced Decree 29/2011/ND-CP) the requirements to prepare EIAs for subprojects exploiting groundwater at rate from 5000 cubic meters per day are retained, and the Environmental Protection Plan (EPP) will replace the EPC; however, as of the end of March 2015, DONRE has not yet issued a circular with detailed guidance on preparation of the EPP as stated in Decree 18/2015. .
125. At the province level, the Department of Culture, Sports and Tourism (DOST) is the authority for state management of culture, including physical cultural resources.
126. **Management of Drinking Water Quality.** The MoH is responsible for the oversight and management of domestic and drinking water quality. Decision 277/2006/Q<sub>TT</sub>g of the Prime Minister (PM) dated 11/12/2006 on the approval of the National Target Program on Rural Water Supply and Sanitation for the period 2006-2010 stipulates that MoH: (a) provides guidelines on and distributes safe rural drinking water and hygienic latrine standards; (b) provides health facilities with direction on public, household, and

personal hygiene; and (c) strengthens state management in rural drinking water quality, household and community sanitation in rural areas. For fulfilling its mandates and responsibilities, MoH has an established health management network from the central to the district and commune level used for management of drinking and domestic water quality and sanitation.

127. At the central level, VIHEMA is a sectoral management body of MoH, exercising state management of drinking and domestic water quality monitoring and surveillance nation-wide; it also develops sectoral standards on drinking and domestic water quality and hygienic latrines. Other institutes of the preventive medicine systems such as the National Institute of Occupational and Environmental Health, Tay Nguyen Institute of Hygiene and Epidemiology, Nha Trang Pasteur Institute, and the HCM Institute of Hygiene and Public Health are responsible for advising on technical issues.
128. At the provincial level, the Provincial Centers for Preventive Medicine are equipped with laboratories and can perform water quality tests of water supply sources within the province. The Centers take monthly water samples from water supply systems for water analysis and participate in appraisal and approval of safe drinking water supply projects in the province.
129. At the district and commune level, the District and Commune Health Centers carry out monitoring and checking of drinking and domestic water quality and household sanitation within their areas.

### **Legal and Regulatory Framework Applicable to Program**

130. ***Law, Decrees and Circulars*** The following laws, decrees and circulars relate to the Program:
  - The revised Law on Environmental Protection no. 55/2014/QH13 dated 23 June 2014, in effect from 1 January 2015;
  - The Law on Water Resources no. 17/2012/QH13 dated 21 June 2012;
  - The Law on Natural Disaster Prevention and Preparedness no. 33/2013/QH13, effective from 1 May 2014;
  - The Law on Labor no. 10/2012/QH13 dated 18 June 2012;
  - The Law on Cultural Heritage no. 32/2009/QH12 dated 18 June 2009 revising some articles of the Law on Cultural Heritages no. 28/2001/QH10;
  - The Law on Biodiversity no. 20/2008/QH12 dated 28 November 2012;
  - Decree 18/2015//ND-CP guiding the implementation of the Law on Environment 2014 with particular regulations on environmental planning, strategic environmental impacts assessment, environmental impacts assessment and environmental protection plans; and
  - Decree 201/2013/ND-CP guiding the implementation of the Law on Water Resources.

## National Technical Standards

131. **Water Quality Standards:** Two water quality standards from the MoH apply to the RB-SupRSWSprogram: (a) the National Technical Regulation on Drinking Water Quality (QCVN 01:2009/BYT) with 109 water quality parameters; and (b) National Technical Regulation on Domestic Water Quality (QCVN 02:2009/BYT) with 14 water quality parameters. The former standard deals with the portability of water from piped production sources, for water supply and food processing facilities that exploit water with a capacity of more than 1000 m<sup>3</sup>/day. The latter Decree pertains to the quality of water for general household or domestic use by entities or households that exploit water with a capacity of below 1000 m<sup>3</sup>/day. The QCVN 01:2009/BYT is much more stringent than the QCVN 02:2009/BYT and follows the World Health Organization (WHO)'s 2006 Drinking Water Guidelines. For example, while the maximum allowable content of arsenic in drinking water in the QCVN 01:2009/BYT is 10µg/L, the QCVN 02:2009/BYT sets a limit of 50µg/L.
132. **Standards for Sanitation Facilities.** The MoH, by its Decision 08/2005/QĐ-BYT dated 11 March 2005, issued a sector-specific technical standard on hygienic conditions for latrines. The standard covers four types of hygienic latrines that apply to households and for the purpose of monitoring and evaluation. It was applied to public and household sanitation facilities in the NTP2 for RWSS. A new national technical regulation on hygienic conditions for latrines (QCVN 01: 2011/BYT) was issued in Circular 27/2011/TT – BYT on 24 June 2011 by MOH, with more technical guidelines, to replace the 2005 standard.
133. **Laws on Environmental Protection (2005 and 2014).** In June 2014, The Government of Vietnam issued a new Law on Environmental Protection (LEP) no. 55/2014/QH13 to replace the LEP issued in 2005. The new LEP became effective from 1 January 2015. The new LEP retained the overall and fundamental legal framework for environmental regulations in Vietnam. The LEP regulates environmental protection activities, policies, measures and resources for protection of the environment; general rights, obligations and responsibilities of institutions, organizations, households and individuals with respect to protection of the environment.
134. The new 2014 LEP also addresses the gaps in the 2005 with some detail regulations that may be relevant to RB-SupRSWS:
- Chapter IV, articles 39 - 48: Adaptation to Climate Change;
  - Chapter VI, articles 52 - 64: Air, Water and Soil environmental protection;
  - Chapter VII, articles 72-74: Environmental Protection in (a) hospitals and healthcare centres; (b) construction; and (c) transport;
  - Chapter VIII, articles 80-84: Environmental Protection in residential areas;
  - Chapter XI, articles 85-103: Waste and wastewater management;
  - Chapter XIV, articles 139-143: Responsibilities of State Environmental Management Agencies; and
  - Chapter XV, articles 144: Environmental Protection responsibilities of Vietnam Father Front, Civil Organization and Communities.

135. The main revision in LEP 2014 that would have a direct impact on the Program is the transition from the preparation of Environmental Protection Commitments (EPCs) to Environmental Protection Plans (EPPs). The contents of EPCs were regulated in detail under Circular 26/TT/BTN-MT while the key contents of the EPP were stated in Article 30 of LEP 2014. .
136. The environmental assessment regulations and procedures regulated by LEP are supplemented by Decrees and Circulars. In Decree no. 18/2015/ND-CP, Article specifies the cases where EPPs are required and Article 19 describes the key rules in the EPP review and approval process, and authorizes MoNRE to issue a template for EPP documents. Decree 18 will be in effect from 1 April 2015; therefore, it is expected that a new circular guiding the preparation of EPPs would be issued before the mentioned date.
- (a) Circular 01/2012/TT-BTNMT of MoNRE regulates the preparation, appraisal, monitoring and certification for the implementation of detailed and simplified environmental protection proposals.
137. **Environmental Impact Assessments.** Under LEP, an EIA is mandatory for projects that: (a) are large scale for which investment decisions are made by the National Assembly, the Government and the Prime Minister; (b) use land falling within nature reserves, national parks, historical/cultural sites, biosphere conservation areas or classified sites with landscape values; and (c) have adverse environmental impacts and high risks. *It is not likely that any of the RB-SupRSWS activities will be required to prepare a full EIA, as physical investments will be mostly community-based or located within existing schools or clinics.* The Program Operational Manual will exclude projects that may affect environmentally or culturally sensitive sites.
138. Physical investments under the RB-SupRSWS will be required to prepare Environmental Protection Plans (EPPs) in compliance with the new LEP:
- Entities subjected to EPP preparation include: (a) investment projects where EIAs are not required; and (b) production, business, and the service establishments where investment reports are not required;
  - Contents of EPP: the LEP 2014 requires EPPs to provide information on project locations, type, technology and scale of production lines/business/services; raw materials and fuels used; predictions on the wastes generated and other environmental impacts; and measures for waste treatment and mitigation of negative environmental impacts measures and arrangements for EPP implementation; and
  - Review and Appraisal of EPPs: the LEP 2014 regulates in detail the responsibilities of government agencies to appraise and approve EPPs and of project owners to implement the approved EPPs. District Peoples Committees will review and appraise small projects implemented within the administrative boundary of the District, and Provincial DoNRE will appraise and review small projects covering two or more districts in the province.



139. In particular, the new LEP also specifies environmental management responsibilities requirements to communities and households, including:

Chapter XV Article 146 Community responsibilities	<i>...Have the rights to request state environmental management authority to implement measures to protect the rights and welfares of the community in accordance with the civil Law...</i>
Chapter VIII, Article 82 Households responsibilities	<ul style="list-style-type: none"> <li>• <i>Reduce and separate municipal wastes at source and transport to approved location;</i></li> <li>• <i>Reduce, treat and discharge domestic wastewater to approved receptors;</i></li> <li>• <i>Generation of emitted gases, noise, vibration exceeding environmental technical standards is forbidden;</i></li> <li>• <i>Pay environmental protection fees in full amount and on time; pay for waste collection and treatment services as regulated by Law;</i></li> <li>• <i>Participate in environmental protection activities in public and residential areas; and</i></li> <li>• <i>Have sanitary facilities and animal cages that are safe and hygienic.</i></li> </ul>

#### **Review of other Relevant Laws and Decree No.201/2013/ND-CP guiding the implementation of the Law on Water Resources**

140. **The Law on Natural Disaster Preparedness and Response** promulgated in June 2013 establishes fundamental principles relating to disaster preparedness and response which include proactive prevention and timely response as well as prompt and efficient recovery. Article 4 specifies that disaster preparedness and response should combine construction and non-construction solutions; environment and ecosystem protection, and climate change adaptation.

141. Article 19 specifies disaster prevention requirements for urban/rural residential areas and technical infrastructure works. Investors are required to ensure disaster prevention requirements are incorporated into proposed project preparation, including: (a) not to cause increased disaster risks, restrict to a minimum the risk of disasters, and ensure the stability of the building in case of disaster; and (b) comply with the provisions of the law on environmental protection, construction and urban planning. This article also requires the competent authority to perform a project assessment to ensure that proposed projects meet disaster prevention requirements.

142. **The revised Law on Water Resources** was promulgated in 2012 replacing some articles of the old Water Resources Law issued in 1992. While this Law is more focused on water resource planning, management and the effective use of water resources, there are some articles closely related to the environmental assessment process as described below:

- **Article 9** provides a list of the prohibited activities that would cause pollution/degradation of water resources of various types. Particularly, this article

specifies that discharge of both untreated domestic wastewater (or treated waste water that does not meet the standard) into water sources is prohibited.

- **Article 27** states that entities that may cause water pollution are required to prepare and implement plans to prevent, minimize and clean up pollution. Under the Program, small amounts of wastewater generated from construction sites should be managed through an Environmental Code of Practice (ECOP) and Workers' Codes of Conducts to be included in bidding documents and construction contracts.
- **Article 5** regulates that ministerial agencies, including the People's Committees at various levels, have the responsibility to coordinate with the mass media and educational organisations to conduct training and communication activities to raise awareness and promote the participation of people in the protection of water resources and the effective usage of water, etc. During the consultations with representatives of DoNREs and provincial mass organizations such as the Women's Unions, it was confirmed that environmental communication campaigns with water-related topics have been conducted in the provinces. This would be an advantage for community-based investments in of the Program.
- **Article 44** provides the list of cases where a license for exploitation and usage of water resources is not required, including small-scale exploitation and usage of water sources. Particularly, **Article 16** regulates in detail the cases where licenses are not required, typically: (a) extraction of groundwater at rate less than 10 cubic meter per day (cmd); and (b) extraction of surface water for non-agricultural purpose at rate of less than 100 cmd. Similarly, a discharge permit is not required for entities discharging less than 5 cmd into the environment. RB-SupRSWS projects will be screened based on such requirements and licenses for the use of water sources or discharge will be applied for those that are required by the Law.

143. **Decree No. 59/2007/ND-CP dated April 09, 2007 of the Government on Solid Waste Management.** The first three principles stated in Article 4 of this Decree will be applicable under the Proposed Program. These are: (a) organizations and individuals that discharge solid waste or are engaged in activities that generate solid waste shall pay charges for the collection, transportation and disposal of solid waste; (b) waste shall be separated at source of generation and then recycled, reused and processed to have its useful constituents recovered for use as input materials and to generate energy; (c) priority should be given to the application of technologies for the processing of hard-to-decompose solid waste, which may help reduce the volume of waste to be buried, so as to save land used for this purpose.

144. The proposed Program should also follow the requirements detailed in some items of Article 24, including: (a) "on the main streets, in business centres and in public and residential areas, facilities for storage of solid wastes must be arranged" (item 3); (b) "the volumes of waste bins within a building must suit detention time. Bins placed in public places must meet technical and aesthetical requirements" (item 4); (c) and "solid waste must not be kept on-site for more than two days" (item 5).

145. **Public and Worker Safety.** Regulations related to public worker safety are included in various laws such as the Vietnam Labor Codes 1994 and Decree 06/ND-CP dated

January 20, 1995, which elaborates some provisions of the Vietnam Labor Law on Occupational Safety and Health and stipulates that “employers provide the workers with sufficient personal protective devices and to carry out other measures ensuring occupational safety and health for them in conformity with laws and regulations.” In addition, Decree 110/2002/ND-CP dated 27 December 2002, which amends and supplements Decree 06/ND-CP, elaborates provisions of the Vietnam Labor Law on occupational safety and health.

## Program Environmental Capacity and Performance Assessment

### Environmental Management under the RB-SupRSWSP Program

146. The implementing agencies will be responsible for all aspects of the investments including surveying, detailed design, implementation, operation and maintenance. They will also be responsible for ensuring the quality, impact and effectiveness of the investments. In many cases, consultants and contractors will be hired to carry out this work.

147. Environmental Management of activities under the Program would take place in parallel with the preparation of investment proposals, bidding, construction, construction monitoring and supervision, and operation. All of the proposed physical investments under the RB-SupRSWSP Program have reduced or delegated environmental review requirements under Vietnam's regulatory framework. Table 8 below shows the tasks and responsibilities of the different stakeholders involved in the Program relating to environmental management under the Program.

**Table 8: Environmental Tasks and Responsibilities of Stakeholders under RB-SupRSWS**

<b>Project Implementation phase</b>	<b>Environmental Tasks</b>	<b>Implementation responsibilities</b>
Engineering preparation	<ul style="list-style-type: none"> <li>• Prepare Environmental Protection Commitments (EPCs) and Environmental Protection Plans (EPPs), and submit for appraisal by the district Peoples Committee (DPCs).</li> <li>• Relevant recommendations in the EPP incorporated into engineering design and cost estimation</li> <li>• Incorporation of mitigation measures into engineering design depends on environmental capability of the consultants and PMU's control; training would be necessary</li> </ul>	PMU and PCERWASS (through supervision of consultants preparing investment proposals)
Preparation of Bidding documents and contracts for - Construction - Construction Supervision	<ul style="list-style-type: none"> <li>• Environmental mitigation requirements are included in bidding and contract documents of construction contracts</li> <li>• Environmental Supervision requirements are included in bidding and contract documents of construction contracts</li> <li>• Article 25 of the Law on bidding refers to bid evaluation criteria for shopping contracts which includes environmental impacts and mitigation measures,</li> </ul>	PMU and PCERWASS (through supervision of Engineering design consultants)

	<ul style="list-style-type: none"> <li>Article 33 applicable to civil works contracts: bid evaluation based on environmental sanitation commitments, fire prevention and protection and occupational safety</li> </ul>	
Construction	<ul style="list-style-type: none"> <li>Implement the measures to ensure safety and mitigate potential negative environmental impacts and risks</li> </ul>	Contractor
	<ul style="list-style-type: none"> <li>Supervise the Contractors on environmental compliance and advise them to carry out corrective actions when there are environmental failure or complaints</li> </ul>	Construction Supervisors – with support from PCERWASS
	<ul style="list-style-type: none"> <li>Play active roles in monitoring contractors' performance, including environmental compliance</li> </ul>	Beneficiary / Affected communities
Operation	<ul style="list-style-type: none"> <li>Implement measures to ensure proper operation and maintenance including cleaning and safety issues</li> </ul>	Beneficiaries– with support from PCERWASS

### Environmental Capacity and Performance

148. A number of weaknesses regarding compliance with the existing government environmental legislation have been identified through this assessment as described below.

149. Staffing for environmental management is inadequate both in terms of the number of staff and their qualifications. Some provincial departments still lack environmental divisions and there is overlap in environmental management functions between provincial departments. At the District level, staffing has not met the requirements set out in Government Decree no. 81/2007/ND-CP dated 23 May 2007 according to which each district and town should have one to two environmental staff in their District Environmental Division. Environmental Staff at commune level normally have to carry out various functions including land administration, construction management, etc. but without an appropriate background for environmental management. In addition, the time allocated for environmental management functions has also been very limited thus affecting the quality and effectiveness of environmental management at the commune level. Under the on-going NTP3 program, NCERWASS has allocated one staff to be responsible for environmental safeguards for the Program. An Environmental Consultant was also hired to monitor and provide advice to NCERWASS and the participating provinces about environmental issues. No substantial environmental issues have been identified during the implementation of NTP3 to date. However, gaps in PCERWASS's understandings about the NTP3 program environmental requirements were identified, and staff reported that the existing NTP3 operational manual lacks detail guidance on the environmental management requirements and procedures. The Program Operation Manual should specify in detail the environmental management

requirements including staffing and the procedures to be followed in each step of subproject implementation.

150. **EPCs not prepared or not approved on time.** Article 13 of Decree 29 requires that EPCs be prepared in parallel with the preparation and submission of investment reports. Some small-scale projects have not prepared or filed EPCs properly due to the lack of awareness at the provincial level of both the legal requirements and how EPCs should be properly used. Among the 19 provinces only four provinces replied to requests for information from the ESSA team on EPC preparation practices. Yen Bai Province tests raw water quality and has prepared EPCs for all 50 RWSS schemes completed; Bac Kan has submitted one common EPC prepared for a group of six small piped water supply schemes. The remaining provinces either did not respond or stated that no EPC had been prepared. In addition it is known that, under NTP3, in some provinces, EPCs are not approved prior to the approval of the investment reports, bid plan and construction bidding documents.
151. **Limited quality of EPCs.** Where EPCs are prepared, poor staff technical skills results in EPCs that are very poor quality and do not meet the requirements specified in Annex 5.2 of circular TT 26/2011/TT-BTNMT. Some other EPCs are overly detailed, particularly in relation to monitoring of environmental quality.
152. **Inadequate incorporation of EPC recommendations into bidding documents and contracts.** Although project owners and consultants have some experience with EPCs and the integration of mitigation measures into project documents, bidding documents often only describe general workplace safety and environmental sanitation requirements. EPCs contain more specific environmental requirements; however, since these are not consistently incorporated into the bidding documents, contractors are not always aware of their existence.
153. These weaknesses in EPC development and application could be addressed through technical assistance and intense supervision of environmental issues during implementation.
154. **Inadequate attention paid to environmental mitigation measures.** There is a lack of awareness among provincial government staff of the purpose of EPCs and how to ensure that the mitigation measures relating to EPCs are incorporated into the implementation of projects. Based on experience in the Red River Delta, the majority of Provinces appear to be unclear about environmental supervision responsibilities. Environmental quality monitoring as stipulated in EPCs has typically not been implemented.
155. **Lack of staff to ensure compliance with environmental regulations.** Most PCERWASSs do not have staff responsible for environmental safeguards monitoring and implementation. The capacity of district and commune authorities is also very limited. As a result, most provincial master plans for rural water supply and sanitation omit environmental safeguards and where safeguards are included they are often not fully implemented. Due to limited resources and capacity, the District Environmental

Divisions, who have the mandate to review and appraisal environmental compliance, only carry out monitoring and supervision when issues arise. Unless specifically specified in their contracts, the role of construction supervisors in monitoring environmental compliance of contractors is limited. Ensuring environmental performance during the construction phase therefore depends on oversight by the project owner, proper supervision by the construction supervisors, and awareness and willingness on the part of contractors to comply with environmental regulations. Communities therefore have an important role to actively monitor the contractors and enforce the contractor's environmental performance.

**156. Challenges with respect to stakeholder consultation.** These include: (a) unclear guidance in terms of timing and number of consultations required by the EIA regulation; (b) no public consultation requirement in the preparation of an EPC; (c) no mechanism to ensure access to information with regards to Strategic Environmental Assessment (SEA), EIA, or EPC; and (d) no requirement for open public involvement and no requirement or detailed guidance provided on more effective consultation methods and use of local language, especially Ethnic Minority languages, for consultation and disclosure of information. The fact that consultation is conducted through the local government Commune Peoples' Committee (CPC) limits objective outcomes of consultation. Since any water supply systems to be financed under the Program will need to prepare EPCs for which public consultation is not required under the Environmental Law, these shortcomings pose accountability risks.

**157. Lack of DoNRE involvement in environmental awareness campaigns.** Environmental awareness campaigns that cover cleaning up living areas and personal hygiene practices, etc. have been conducted by mass organizations with strong grassroots networks such as the Women's Union and health workers to raise community awareness of environmental and hygiene issues. Due to the remote geographical locations of the RB-SupRSWS targeted provinces and to resource constraints, the involvement of DONRE in such activities has been very limited.

**158. Inadequate water quality monitoring.** Although MoH has an established system for domestic water quality surveillance and has some technical capacity, drinking water quality is in fact rarely monitored. DoH lacks the financial resources to carry out surveillance in rural areas and the focus is on reporting urban water quality. Sampling and testing of rural water sources is only carried out upon request from local authorities, and in case of emergencies.

## Description of Program Social Management System

### Program potential Social Impacts and Risks

159. From a social perspective, improving hygiene and sanitary conditions and access to clean water in rural populations will reduce disease incidence and improve the quality of life of the rural population, including improved nutritional status. By targeting sanitation and water supply in marginalized EM communities, the operation will ensure social inclusion. The proposed Project is designed to reinforce and strengthen the Government's own systems for delivery of sanitation and hygiene behavior change services by building sound social management practices. The burden of poor access to sanitation often falls most heavily on women. On gender, the Program will strengthen gender-based monitoring and reporting.
160. The Program will promote transparency with information on decision-making processes at all administrative levels. The capacity of government officials working in RWSS will be improved in such areas as project management planning and administration, community participation techniques, data collection and management and resettlement issues.
161. The socio-economic benefits of the water supply component include both cost savings relative to current water use and welfare improvements from increased water use. A study conducted by WSP found that improved sanitation in Vietnam has resulted in overall population welfare benefit amounting to an average 1.3 percent of annual Gross Domestic Product.

### Specific Program benefits

162. The program may yield significant social development outcomes for Ethnic Minorities living in the two targeted regions, especially improving the access to basic social services (clean water and hygienic sanitation) and the well-being of local people. Investment in rural water supply and sanitation services (RWSS) typically generates a number of social benefits. Safe water helps protect individual and community health, while improved access to safe water reduces costs that tend to be disproportionately borne by girls and women. Basic sanitation coverage is required across the whole community in order to realize the public health gains. Access to clean drinking water and sanitation frees-up time for education and other productive activities, as well as increasing the productivity of the labor force. Safe disposal of wastewater helps to improve the quality of surface waters with benefits for economic sectors that depend on water as a resource (e.g. fishing, agriculture, tourism). In addition, household-level sanitation provides private benefits through convenience and dignity.
163. **Health.** The proposed Program seeks to provide safe water and improved sanitation services and to promote healthier hygiene behaviors in rural areas. It is expected to yield positive impacts on individual health (through access to safe water and improved



personal hygiene) and community health (through the elimination of fecal contamination in communes where commune-wide sanitation is achieved).

164. ***Social and economic development.*** The improvements in health and accessibility of water supplies and sanitation are also expected to have significant social and economic benefits. Numerous studies show strong positive correlations between improvements in sanitation and water supply conditions, and economic welfare gains.
165. ***Gender.*** The benefits of the Program are also expected to be strongly gendered. Girl children will particularly benefit through reduced burdens of ill health and social pressures associated with inadequate domestic sanitation and through improved attendance at school when suitable sanitation facilities are provided. Women and girls will also benefit due to the reduced burdens associated with caring for sick family members. The approaches used in the Program will also specifically target previously-excluded social groups, women, and children, through the state-of-the-art processes of participation and promotion that will be deployed.
166. ***Community participation, engagement and feedback.*** The Program has the potential to enhance community participation, through the creation of more accountable arrangements for service delivery, management and payment and through the consultation processes. Alongside this, the focus on transparency, through the use of an IT platform developed under the RWSS PforR to make information from the M&E system available and improve beneficiary feedback, should also have a favourable impact on governance, and social accountability. Ensuring social sustainability of Program investments requires a multi-faceted approach.

### Possible Program Risks

167. ***Land Acquisition.*** In Vietnam, vacant public land is generally used for development of community water supplies and therefore only a small portion of household land is likely to be affected. The size of acquired land in water supply and treatment system heavily depends on technical design. Permanent and/or temporary land acquisition is typically related to the construction of: water supply and treatment systems; access roads; and distribution pipeline systems. According to the Vietnam Building Code (QCVN 01: 2008/BXD), the minimum land required for water supply and treatment system for schemes of 1,000 to 5,000 m<sup>3</sup>/day is 0.5 hectares.
168. Table 9 summarizes the impact on land due to the construction of water supply schemes in eight Red River Delta provinces under the RWSS PforR. A detailed table showing the breakdown by province is included in Annex 7. It should be noted that the water supply schemes under the RWSS PforR are likely to be considerably larger than the community water supply schemes that are built under the proposed RB-SupRSWS Program.

**Table 9. The impact on land due to water scheme construction in 8 Red River Delta provinces<sup>35</sup>**

No. of Investments	Acquired Land (m2)	No of AHs	AHs losing agriculture land	AHs losing residential land (or other land)	Losing more than 30% of agricultural land	Relocated Households	No. of vulnerable groups
38	375,105	544	478	298	2	0	2

169. Since schemes under the Program are likely to be smaller than this, it is unlikely that significant areas of household land will be affected under the Program. For other civil works (e.g., facilities in schools or commune health clinic, household hygiene latrine), no land acquisition is required as the construction will be within either the existing premises of the institution or household. Given the above-marginal impact on land, there is a risk that local people are mobilized to donate their land in exchange for the project's benefits. Without proper management, this practice could be abused, resulting in the affected households not being fully informed about the Program as well as the compensation package that they are entitled to receive. This issue is more important as the proposed Program will cover the two poorest regions of Vietnam with a strong presence of Ethnic Minority people. The abuse of land donation requests may lead to the forced donation of land (rather than voluntary) and worsen conditions for poor Ethnic Minority people.

170. **Social risks and participation:** These relate primarily to the potential exclusion of certain groups from the benefits of the Program, excessive burdens on the community from requirements to participate in program processes, and the risk that support will result in marginalized groups becoming passive "targets" of benefits, promoting dependency, low self-esteem and passivity among the marginalized groups.<sup>36</sup> Financial constraints among certain vulnerable groups (i.e., poor women, Ethnic Minority) might constitute a barrier to accessing clean water and domestic sanitation.

171. **Ethnic Minorities and Behavioral and Cultural Risks.**<sup>37</sup> A recent analysis of government hygiene and sanitation programs among Ethnic Minority groups in Northern Vietnam concluded that difficult living conditions confronted by remote ethnic communities contributes to their marginalization and failure to achieve intended program's objectives,<sup>38</sup> including the use or maintenance of latrines that are provided to households. The potential reasons for this may include: (a) grant for latrine construction is not fully demand responsive; (b) the type of latrine is not appropriate; and (c) the inherent habits or conceptions of Ethnic Minority people. In the NM and CH regions, a number of studies indicated behavioral and cultural barriers that prevent local people from practicing sanitation behaviors and from using hygienic latrines. However, based on the current

<sup>35</sup> The table was calculated based on Annex 7, Aide-Memoire of October 2014 Mission, Results-Based Rural Water and Sanitation under the National Target Program

<sup>36</sup> Study of Rural Water Supply Service Delivery Models In Vietnam, SNV 2010

<sup>37</sup> This section is heavily drawn from MOH and WSP (2013), Behavioral Determinants of sanitation and hand washing with soap in Vietnam: A review of current studies and behavior change communication material since 2006.

<sup>38</sup> Rheinlander et al., 2010. Hygiene and sanitation among Ethnic Minorities in Northern Vietnam: Does government promotion match community priorities?

literature, not all behavioral determinants for Ethnic Minorities have been explored, especially in terms of intangible aspects of culture, religion, attitudes, and beliefs. In general, the factors affecting behavioral patterns in these two regions appear to be similar. Unless specific attention is paid to the preferences, attitudes, knowledge and practice of Ethnic Minority communities, health and hygiene interventions are often not appropriate and fail to result in significant benefits. There is no specific guidance for stakeholders working in Ethnic Minority communities.

172. **Communication, Participation and Consultation.** As is typically the case in a national target program, the planning process follows the top-down approach. This planning process has very limited window for the participation of the Commune People's Committee and notably local people, who are direct beneficiaries of the Program. Many water supply facilities are now abandoned due to inappropriate operation and maintenance after investment. In addition, the low level of education of Ethnic Minority people in the NM and CH regions may prevent them from fully understanding the communication messages related to sanitation and hygiene behavior. In isolated communes, it is usually very difficult to communicate with Ethnic Minority people, especially the elderly.

### Social Management Systems

#### Land Acquisition

173. **Legal Framework:** In Vietnam, there is no specific regulation on land acquisition applicable exclusively to sanitation, hygiene and rural water supply. The relevant law is the Land Law No. 45/2013/QH13 dated on November 29, 2013. There are a number of decrees guiding the implementation/application of the land law, including:

- Decree No.43/2014/ND-CP dated May 15, 2014 providing guidance on detailed implementation of the Land Law 2013;
- Decree No. 44/2014/ND-CP dated 15 May 2014 providing regulations on land prices;
- Decree No. 47/2014/ND-CP dated 15 May 2014 on compensation, support, and resettlement when land acquisition is required by the State;
- Circular No. 36/2014/TT-BTNMT dated 30 June 2014, specifying detailed methods of valuation of land prices, construction, adjustment of land prices; specific land prices valuation and land prices valuation consulting service; and
- Circular No. 37/2014/TT-BTNMT dated 30 June 2014, providing detailed regulation compensation, assistance, and resettlement when the State acquires land.

174. **Institutional Arrangements.** In general, the land acquisition, compensation payment and resettlement implementation are always the responsibility of the Government, particularly at the provincial and district levels. The overall provisions are presented in the 2013 Land Law and its guiding decree, as follows:

175. Ministries (or Ministerial Agencies), governmental agencies, corporations, companies (Investor) having project investment required land acquisition shall: (a) direct, supervise, and inspect the compensation, support and resettlement; (b) coordinate with PPC and

LFDO/LRO/CRSC<sup>39</sup> during the implementation; and (c) Secure the budget for land acquisition, compensation and resettlement activities.

176. MONRE is responsible for: (a) directing, organizing, providing guidance, supervising, inspecting the implementation of land acquisition, compensation and resettlement policies; and (b) solving the emerged issues at the request of PPC.
177. The organizational arrangements at provincial level downward vary. The PPC is responsible for: (a) directing the implementation of land acquisition, compensation, support and resettlement; and (b) reporting to MONRE on the results of these activities before December 1<sup>st</sup> each year. The PPC may decide on: (a) recovery of land from organizations, religious establishments, overseas Vietnamese, diplomatic organizations, and foreign-invested enterprises (excluding the case of overseas Vietnamese who are eligible to own houses in Vietnam); and (b) recovery of agricultural land in the public land funds of communes, wards or townships. District People's Committee (DPC) may decide on recovery of land from households, individuals and communities, and overseas Vietnamese (who are eligible to own houses in Vietnam). In case where the recovered area has both subjects earlier prescribed, PPC shall decide on the land recovery or delegate it to district-level People's Committees. CPC shall coordinate with LFDO/LRO to implement land recovery plan, investigation, survey, measurement and inventory.
178. In the case of concentrated water supply systems as described above, the institutional arrangement for resettlement activities may vary across provinces according to which investors signed contracts with the District's Compensation, Support, and Resettlement Committee (CSRC). The activities are conducted in accordance with the Government's regulations (e.g., planning, disclosing, approving or paying compensation). In many cases, PCERWASS has worked directly in coordination with the CSRC (or Land Fund Development Organization) to administer compensation for affected people. Since the land acquisition task (if any) will be transferred to local competent agency, there is no dedicated staff responsible for social issues in the investments under NTP3.
179. **Voluntary donation:** According to the 2013 Land Law, donating land use rights is defined as one of the transaction forms that is the legally recognized right of land users (as stipulated in article 167, 174, and 179). The donating contract must be certified by competent entities or by the commune people's committee and must be registered at land registration offices. Land users are entitled to donating rights as long as they meet the following criteria: (a) they have a Land Use Rights Certificate (LURC) (except the cases defined in clause 3, article 186 and clause 1, article 168 of the 2013 Land Law); (b) the land is dispute-free; (c) they are not subject to distraintment (d) they have a valid land use term. In addition, to meet the land donation criteria, land users must satisfy the conditions defined in articles 189-194 of the 2013 Land Law. Regarding administrative procedures, clause 3, article 79 of decree 43/2014/ND-CP stipulates that in cases where land users wish to donate land for the purpose of public facilities

<sup>39</sup> LFDO – Land Fund Development Organization; LRO – Land Registration Office; CRSC – Compensation, Resettlement, and Support Committee.

construction, donation documents must be established in accordance to regulations. Once construction of the public facilities is completed on the given land, the Land Registration Office relies on donation documents (certified by CPCs) and actual use of land to measure and update the change in the cadastral dossier/land parcel records, and the land administration database, and to request land users to submit their LURC for revision. If the land user donates the whole area, then the LURC will be confiscated for further management.

180. **Income rehabilitation.** The 2013 Land Law and its guiding decrees have provided a number of allowances and support in order to help affected households to stabilize their life following project impacts. The allowances/support may include assistance for life stabilization, relocation transportation, income restoration, and training for new job skills. In addition, special attention is paid to poor households, who will receive special assistance through a subsistence allowance for a long period. The households eligible to receive the regular government allowance under the social policy will also receive a special allowance if they are affected by a project.

181. **People's participation.** During the land acquisition process, the legal framework mainly focuses on consultation during planning (consultation on the draft plan for compensation, support and resettlement and plan for training, career change and facilitating job searching); information sharing and disclosure. Citizens are allowed to supervise and report on breaches in land use and management on their own (or through representative organizations), including land recovery, compensation, support and resettlement (Article 199, Land Law 2013).

182. **Grievance Redress Mechanism (GRM):** The legal framework on complaints and denunciations is mainly based on the 2011 Law on Complaints (Law 02/2011/QH13) and the 2011 Law on Denunciations (Law 03/2011/QH13). The implementation of these laws is respectively guided by decree No. 75/2012/ND-CP and No. 76/2012/ND-CP all dated October 3, 2012. Land related complaints/denunciations are also regulated under these laws (as stipulated in article 204, 205 of the 2013 Land Law). The complaint procedure is described in article 7 of the Law on Complaint with the following provisions:

- Complaints must be lodged within 90 days after the reception (the awareness) of the administrative decision/act;
- Complainants may initiate administrative lawsuits at courts at any time during the complaint-settling process;
- Complainants may complain with the person issuing the administrative decision or with the organization managing the official/employee who has performed the administrative act;
- For administrative decision/act of Minister (or equivalent agencies), complainants may complain with Minister or initiate administrative lawsuit at courts. In case of disagreement with complaint resolution decision of Minister or having no official response within the allowable timeline, complainants may initiate administrative lawsuits at courts; and
- For administrative decision/act of the Chairperson of the Provincial/City's People Committee, complainants may complain with the Chairperson or initiate administrative lawsuit at courts. In case of disagreement with complaint resolution decision of the

Chairperson, complainants may complaint with line ministries or may initiate administrative lawsuits at courts. In case of disagreement with the complaint resolution decision of the Minister or having no official response within the allowable timeline, complainants may initiate administrative lawsuits at courts.

183. The denunciation procedures are described in article 18, 20 and 21 of the Law on Denunciations with the following steps: (a) receiving and handling denunciation information; (b) verifying the denunciation contents; (c) making conclusion on the denunciation contents; (d) handling the decision on the denounced contents; and (e) disclosing the conclusion on the denunciation contents and illegal act-handling decisions. The time limit for settling a denunciation is 60 days from the date of receiving such settlement. For complicated cases, such time may be longer, but must not exceed 150 days.

### **Ethnic Minorities**

184. **Legal framework:** Vietnam has a relatively good legal framework for regulating Ethnic Minority affairs. At the constitutional level, article 5 of the 2013 Constitution confirms: (a) the equality of all Ethnicities living in the territory of Vietnam; (b) prohibition against discriminated behaviors; (c) rights of Ethnic Minority people toward their languages, scripts, traditional culture and custom; and (d) comprehensive policies of Vietnam to enable the development of Ethnic Minority areas. The principles when promulgating Ethnic Minority policies are: (a) equality and solidarity among all Ethnic Minorities; and (b) mutual support for progress.

185. To date, decree No. 51/2011/ND-CP dated January 14, 2011 on Ethnic Minority affairs is the highest legal document. This decree stipulates the ethnic policies on: (a) resource investment and use; (b) sustainable development; (c) education and training; (d) Ethnic Minority human resource; (e) policies for the prestige of Ethnic Minority people; (f) culture development and preservation; (g) sport and tourism development; (h) health and population policies; (i) information and communication; (j) legal support and education; (k) environment and ecology protection; and (l) security and national defense policies. The Prime Minister has also approved the project “Cultural Preservation and Development of Ethnic Minorities in Vietnam toward 2020” with an estimated budget of 1.512 billion VND;<sup>40</sup> and the Ethnic Minority strategy to 2020.<sup>41</sup>

186. In addition to the above umbrella policies, there are many other policies that grant preferential treatment for Ethnic Minority people in the areas of tertiary education admission and the provision of special subsidies such as for cooking oil, kerosene, and iodized salt. The GoV, along with foreign development partners and many NGOs have provided assistance programs/projects that target Ethnic Minorities. The GoV has a long trajectory of development investments among the EM groups aimed at support for them to “catch-up” with the rest of lowland areas. According to the government policy, proposed projects affecting land, environment, or the life of Ethnic Minority communities, should disclose information and consultations carried out with

<sup>40</sup>For more detail, refer to decision No. 1270/QĐ-TTg dated on July 27 2011.

<sup>41</sup>For more detail, refer to decision No. 449/QĐ-TTg date on March 12, 2013

representatives of the local authorities, to ensure that the investment ensures their better life conditions, in a culturally appropriate manner (article 9, decree 05/2011/ND-CP), with specific provision in the case of involuntary resettlement.

**187. Institutional arrangements:** Other ministries and ministerial governmental agencies will assume the prime responsibility for and coordinate with the Committee for Ethnic Minorities Affairs within the ambit of their assigned functions, tasks and powers. People's committees at all levels are expected to perform the following:

- implement the Party's policy and the State's law on Ethnic Minorities work under law and this Decree in their localities;
- annually elaborate and implement plans and programs on Ethnic Minorities work; organize, direct and inspect the implementation of law and policy on Ethnic Minorities; and organize and direct the application of measures to ensure improvement of material and spiritual life for Ethnic Minority people;
- elaborate and implement local policies, programs and projects for Ethnic Minority areas and areas with socio-economic difficulties and exceptional socio-economic difficulties; and
- submit reports on Ethnic Minorities and the implementation of the Ethnic Minorities policy and Ethnic Minorities work in their localities to CEMA for summarization and reporting to the Prime Minister.

188. At the provincial level, a dedicated department, unit or staff may be created to oversee the Ethnic Minority affairs in the locality,<sup>42</sup> providing that the province meets at least two of the following conditions: (a) it has more than 20,000 Ethnic Minority people live in village or community; (b) it has more than 5,000 Ethnic Minority people needing the State's support and attention; and (c) it has Ethnic Minority people living in critical locations (in terms of security and national defense) and in border areas where there is intensive exchange between EMs in Vietnam and neighboring countries. In the case of provinces where the presence of EMs does not meet the above criteria, a dedicated unit/staff for Ethnic Minority affairs may be established within the Office of the Provincial People's Committee.

189. At the program level, the Program design has taken into account considerations related to Ethnic Minority areas, including: (a) the Ethnic Minority areas will be prioritized in program implementation; (b) higher levels of subsidy will be permitted for Ethnic Minority areas (up to 90 percent of the total investment); and (c) CEMA will be present as collaborator in the program implementation arrangements (from the central level to the actual implementation of activities).

### **Information Disclosure, Consultation and Participation**

**190. Legal framework:** Vietnam has relatively good legal framework on access to information and disclosure. These rights of citizen have been reflected in the 2013

<sup>42</sup>For further details, refer to decree No 24/2014/ND-CP dated April 4, 2014 on the organizational regulations for functional departments of Provincial/City People Committee.

Constitution (the highest legal document) as well as in Laws and their associated guiding decrees.

191. On access to information, the 2013 Constitution confirms that Vietnam is a state “of the people, for the people and by the people” in which “people know, discuss, execute and examine.”<sup>43</sup> This constitution also describes the rights of citizens, including “freedom of speech, access to information, association, protest.”<sup>44</sup> To operationalize this, on June 20, 2012, the National Assembly enacted Law No. 14/2012/QH13 on dissemination and education of legal documents. Detailed implementation of this Law has been specified in Decree No. 28/2013 / ND-CP of April 4, 2013.
192. On information disclosure, specific provisions were detailed in the grassroots democracy Decree No. 29/1998/ND-CP dated May 11, 1998, which was later revised and supplemented by Decree No. 79/2003/ND-CP dated July 7, 2003. The implementation of these Decrees has provided many positive impacts on the ability of villagers to participate and influence the work of the local communes. However, despite the Decree obliging all commune authorities to comply with the provisions of the Decree, the overwhelming impression is one of inconsistent implementation of grassroots democracy throughout the country.<sup>45</sup> In fact, individuals have no judicial or administrative avenues to enforce the rights addressed by Decree 29, which means that they function more as guidelines which cannot be enforced. These decrees have been replaced by the grassroots democracy ordinance No 34/2007/PL-UBTVQH11 dated April 20, 2007. This ordinance describes four groups of citizen’s rights, including the rights to know, to discuss and decide, to voice, and to monitor.
193. There are a number of decisions that require the CPC to keep local people informed. The ordinance also specifies that disclosure/notification forms could be used to perform this task. The information disclosure requirements are also reflected in other specialized Laws. The Environment Protection Law specifically regulates which relevant agencies must disclose environmental information in the forms of books and bulletins and through newspapers and web sites. The 2013 Land Law stipulates the minimum number of days prior to which affected households must receive land acquisition notification (90 days for agricultural land and 180 days for residential land). Compensation and resettlement plan are also subject to public disclosure within at minimum 20 days.
194. Similar to the right of access to information, participation and consultation are also citizens’ rights as stated in the 2013 Constitution. Citizens are allowed to participate in social and state management, and to discuss and provide recommendations to competent agencies on the relevant issues in their locality and in Vietnam.<sup>46</sup> The State is responsible for creating the necessary conditions to enable the execution of these rights. The 2013 Land Law and its guiding documents are designed to ensure

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<sup>43</sup> Article 2, 2013 Constitution.

<sup>44</sup> Article 25, 2013 Constitution

<sup>45</sup> Duong Minh Nhut (2005), Grassroots Democracy in Vietnamese communes, Research paper for the Centre for Democratic Institutions, Research School of Social Sciences, The Australian National University.

<sup>46</sup> Article 28, 2013 Constitution



people's participation in making decisions about land management, particularly relating to land use planning in order to ensure the principle of "democracy and transparency." The current legislation also specifies the approach for organizing public consultation at the local level. The Environmental Protection Law and regulation decrees guide the execution of public consultation – including the role of the People's Committees of communes, wards and towns in the formulation, evaluation and implementation responsibilities and in supervising compliance with the environmental impact assessment (Article 18, 21 and 23).

195. **Institutional Arrangement.** Under NTP, article 24-25 of decision no. 135/2009/QĐ-TTg of the Prime Minister on issuing regulations on the management, administration and implementation of National Target Program, the participation of community is clearly defined. According to that decision, managing agencies at the central level are responsible for disclosing information about their programs. The following information should be disclosed:

- scope and content of the program;
- approved plan and annual estimated budget plan;
- criteria and cost norm in financial allocation;
- implementation and financial report;
- monitoring and evaluation report of project under NTPs;
- inspection report on violations, corruption of officials or staff involved in managing and implementing the program;
- independent audit report;
- documents related to NTPs; and
- feedback/comments of community people.

196. Under the NTP, affected community peoples are entitled to the following: (a) access to information related to the program/project (guidelines, policies, priorities, etc.); (b) provide comments for program and sub-projects; (c) supervision (social oversight) of civil works and activities in the locality; and (d) coordinate with investors to determine ownership, benefits or use by the communities of the public service facilities.

197. For NTP3, the issues of participation/consultation and communication with communities have also been taken into account. One of the program principles is to "ensure the community participation."<sup>47</sup> Enhancing the participation of the community is important to ensure people have favorable opportunity and equal access to the benefits of the program. Under NTP, people can participate in the following ways: (a) capital contributions to the program; (b) participation in the tender process for the implementation of community projects with simple technical nature; and (c) participation in the community monitoring committee. In some national targeted programs (e.g., Program 135), the participation of the community can be started at the planning stage.

<sup>47</sup> Decision No 366/QĐ-TTg dated March 31, 2012 on the approval of National Target Program on Rural Water Supply and Environment Sanitation in 2012-2015.

198. Under NTP3, there is one project focusing on “capacity building, communication, monitoring and evaluation of program implementation.” This project will implement IEC activities in the form of: (a) direct communication at the village level; (b) newspaper, radio, and television spots; and (c) social marketing to promote the demand side of construction and the usage of hygiene latrines, hygiene behavior and the use of clean water. Among program provinces, Kon Tum has issued a specific decision guiding the implementation of democracy in land acquisition and compensation activities at the grass roots level.

## Program Social Capacity and Performance Assessment

199. This section presents the assessment of the capacity and performance of the Program social management system with respect to land acquisition, EMs and information disclosure, consultation and participation.

### ***Land Acquisition***

200. The progress report<sup>48</sup> of the Result-Based Rural Water Supply and Sanitation Program in eight provinces of Red River Delta region clearly indicates that implementing agencies are making efforts to minimize the impact on land when constructing water supply schemes. All provinces prioritize the use of public vacant land (usually managed by the local authority) or agricultural land. For investments requiring land acquisition by households, PPCs have mobilized the independent land appraiser and allocated compensation budget. There are no physical relocations envisaged under the Result-Based Rural Water Supply and Sanitation Program and very few households have lost more than 30 percent of their agricultural land or belong to a vulnerable group. During the October 2014 Result-Based Rural Water Supply and Sanitation Program mission, the Bank team confirmed their satisfaction with the compensation payment and income restoration measures.

201. The areas of land required for community based systems under the RB-SupRSWS Program are likely to be smaller than for the Results-Based Rural Water Supply and Sanitation Program. In Yen Bai, the ESSA team found that in general, the land acquisition task for investments under NTP is assigned to the Commune People's Committee (CPC). Having no budget allocated to this task, CPCs usually call for donations from affected households. This model is usually applicable for remote and mountainous areas with small-scale gravity schemes using simple technology. This approach seems workable because the impact is generally minor (less than 100m<sup>2</sup> per scheme) and the local community is ready to exchange the land for the potential benefits of having access to clean water. This practice has been adopted for other small rural infrastructure projects. In the event that land acquisition is needed, the district land development organization can be assigned to cover this task.

202. There have been a very limited number of complaints relating to resettlement under NTP3 to date. Occasionally CSRC at the district level sends an official document to the investor (PCERWASS or an enterprise) requesting an update on the progress of land clearance, or complaint resolution. Findings of a recent survey carried out at the national level indicated that over 80 percent of respondents had some degree of dissatisfaction regarding prices applied to resettlement, compensation and allowance (World Bank, 2011).<sup>49</sup> Before the 2013 Land Law became effective, the compensation rate generally fell within the pre-defined framework released annually by the Provincial

<sup>48</sup> Document No. 50/BC-TCTL-QLNN of MARD dated March 31, 2014 on the implementation results in 2013 of Rural Water Supply and Sanitation Program for Results in 8 Red River Delta Provinces.

<sup>49</sup> For more detail discussion, please refer to: The World Bank (2011), Compulsory Land Acquisition and Voluntary Land Conversion in Vietnam: The conceptual approach, land valuation and grievance redress mechanism, Ha Noi 2011.

authority. There is little evidence that compensation rates are ever adjusted after the initial decision has been made, which suggests that the complaints mechanism is limited in its effectiveness.

203. While the expected level of land acquisition under the Program is small, it is nonetheless necessary to make sure that affected households receive compensation at full replacement cost for their losses due to land acquisition and affected assets. The main challenge is to ensure that the compensation rates used adhere to the national provision that they should reflect market value. In addition, the resettlement package should also identify any other measures beyond compensation payments that may be needed to ensure no one is worse off as a result of the sub-project. The Program will need to ensure that mitigation of such impacts is fully documented and that full compensation is paid to Program-affected people.

204. The following gaps and weaknesses have been identified in the government's land acquisition system:

- The 2013 Land Law became effective on July 1, 2014 according to which the compensation rate will be defined at the time of performing land acquisition. However, the rate will be based on the price table established by the PPC applicable in a five-year period. During the implementation, independent land valuers can be used to determine land prices, which will be reviewed by the land appraisal board before official approval by PPC. This provision could be considered as evidence indicating that Vietnam's legal system is approaching the Bank's principle to assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards. However, during the program implementation, close watch is needed as this new land law has only recently become effective.
- While the law calls for aspects of livelihood and income to be taken into account, the application of this principle is not uniform. Payments which are largely only based on direct compensation for affected assets are delivered as a single payment to affected people without careful consideration of the longer term impact of livelihood and income losses. While the intention is for affected people to enjoy a better (or at least equal) standard of living, there is rarely, if ever, any additional support, programs or assistance for this, nor is it monitored.
- To be eligible for compensation for the land, affected people must be in possession of a land use rights certificate. According to the Law and its guiding decree, those who do not have land use deeds, depending on the legal status, may not be eligible for full land and attached assets compensation.
- Similar to other NTPs, the local authority may encourage community members to donate land for small rural infrastructure. While this practice is acceptable, without proper management, this practice could be abused and the related households may not be fully informed about the Program as well as the compensation package that they are supposed to receive. This issue is particularly important as the proposed PforR will cover two of the poorest regions of Vietnam with high numbers of Ethnic Minority

people. The abuse of land donation request may lead to forced donation of land (rather than voluntary) and worsen the life of poor Ethnic Minority people.

205. Although the impact is minor, the land acquisition activities (and associated complaints) are totally absent in the progress report made by the Steering Office. In the report of State Audit Office, this information is also missing. However, in the report that SO has prepared for the on-going PforR, information related to land acquisition and other mitigation measure are relatively comprehensive. Finally, there are no specific regulations to guide land acquisition procedures for cases of resettlement impacting on Ethnic Minority people although the recently approved new Land Law has a provision in it ensuring that Ethnic Minorities have land for living and agricultural production (if needed) after land acquisition.

### ***Ethnic Minorities***

206. Despite the legal framework provided for Ethnic Minority development investments and activities, operational procedures for adequate implementation are lacking. This assessment has identified a number of weaknesses and gaps that are presented below.

207. Participation of Ethnic Minorities in decision-making processes remains limited (UNDP, 2006). Overcoming prejudices constitutes a barrier for participation of EMs and brings a significant challenge for effective decentralization. In a joint mid-term review report of the 2nd program 135, the participation of EM people in this program was considered limited due to: (a) insufficient information provided for planning and budgeting processes; (b) limited skills for sound participatory planning and budgeting; and (c) limited fluency of EMs in Vietnamese, and insufficient bilingual support to overcome it.<sup>50</sup> However, the findings of the Community Driven Development projects (World Bank's Northern Mountains Poverty Reduction Project, NMPRP), confirmed that improvements in beneficiaries' participation in the project cycle yielded positive results (e.g., community participation, information transparency, and the improved influence level of community in making process)<sup>51</sup>.

208. Experience with the National Target Program on Poverty Reduction also indicated that "top-down" decisions and "one size fits all" solutions are not appropriate for EMs (e.g., providing training in Vietnamese for Ethnic Minority groups [MOLISA and UN, 2009]).<sup>52</sup> These programs characteristically use a general "one size fits all" approach to delivering access to services and state resources for the different Ethnic Minority groups, experiencing different problems in different regions and situations. Little attention has been paid to the fact that, locally, people are already dealing with their daily life realities in a certain way. They have experience and capacity – and their indigenous knowledge could solve many issues in a locally-adapted and sustainable way. The fact that teaching and training has been conducted in Vietnamese and not in local languages, has made

<sup>50</sup> CEMA and UN (2009), Reviewing the past, responding to new challenges: Mid-term review of Programme 135-II, 2006-2008, Hanoi, Vietnam.

<sup>51</sup> For more information, refer to final evaluation report of "Northern Mountains Poverty Reduction Project" (NMPRP) submitted by CIEM in June 2008.

<sup>52</sup> MOLISA and UN (2009), Reviewing the past, responding to new challenges: Mid-term review of National Target Program for Poverty Reduction, 2006-2008, Hanoi, Vietnam.

non-Vietnamese speaking groups feel inferior, as their language, their way of making a living, and their way of understanding the world have been regarded as backward and in need of change. The present delivery approach has resulted in EMs becoming passive “targets” of benefits. Ironically, dependency has resulted from the large amount of support provided by the Government. The problem is not the Government support itself, but rather the ways in which the Government has given this support, which has promoted dependency, low self-esteem and passivity, rather than promoting empowerment, social capital and capacity in the villages.

209. The design of NTP3 has translated into adequate implementation arrangements for EMs on several counts:

- CEMA and its local branches are not consistently present in the steering office of NTP3;
- other than the three key agencies, collaboration with CEMA and its local branches in planning and implementing NTP3 is relatively vague;
- NTP progress reporting fails to capture the extent to which the program benefits Ethnic Minority communities;
- the approaches used for working in EM communities are not different from those applicable to the rest of rural population; and
- the poor representation of EMs by their elected representatives and the lack of oversight of EM policies and national programs substantially limits the collection of evidence, which is necessary to prepare the detailed instructions for line ministries and provincial People’s Committees to work with EMs. Hence, it is difficult to effect policy change and improve the impact of national programs.

210. Peoples’ elected representatives often are motivated people who wish to improve the well-being and livelihoods of their constituents but they do not have the capacity to effectively carry out their mandate and represent the interests and needs of EM communities.

211. Finally, in EM communities, cohesion is enhanced through the continued practice of customary law (village constitution, conventions and regulations), and the continuing role of village elders. However, these structures have not been recognized by state law. As a result, customary law, culture, leadership and confidence of Ethnic Minority have been eroded.

### ***Other Vulnerable groups***

212. There are no explicit references in the NTP3 guidelines on increasing access for persons with disabilities. However, it is noted that the 2008 Standard latrine designs developed by the MoET do not include provisions for children with disabilities.

### ***Information Disclosure, Consultation and Participation***

213. Although Vietnam has relatively good legal framework on access to information and disclosure, there are a number of weaknesses that need to be addressed.

214. The information flow from district to commune levels is still limited, causing a lack of accountability from higher to lower levels. Commune officials have very little knowledge of budget allocation procedures, budget figures and the criteria for allocation between respective levels (central, provincial, district, and commune levels).
215. There is limited involvement of beneficiaries in the decision-making process around program support. A key issue is the lack of publicly available information which could be used by stakeholders as a basis for decision making. MARD has an M&E system that uses standardized indicators which are primarily generated from household and community surveys. After data are collected, integrated results are supposed to be disclosed to relevant stakeholders at the central and local level. However, this system is relatively new and is yet to generate significant information. There is no track record to show to what extent people at the local level have been able to make use of such information to learn, participate and be effectively consulted about the program.
216. A review of an annual report on the implementation of NTP3 in Thanh Hoa (2012) and Dak Nong (2014) indicates that the report contains no information on the disclosure of relevant program information at local level. The content is very thin on communication activities, which are very important under NTP3 as well as under the proposed RB-SupRSWS Program. The report from Thanh Hoa consists of a specific section on the implementation of the 3<sup>rd</sup> project (capacity building, communication, monitoring and evaluation of the program); however, this section is not sufficiently informative as it contains only general and repetitive information. The annual report for the whole program (prepared by MARD) faces similar issues, although it does contain a section on the communication related activities completed by MARD and other agencies (MoET, Women's Union). In these reports, there are very few examples showing the implementation of activities such as information disclosure and communication at the grassroots level.
217. Under NTP3, implementation experience shows a limited level of community participation as communities do not fully and proactively participate in the program implementing process. The planning of construction of small rural infrastructure remains predominantly top-down. Communities are mainly informed of the progress, their financial contribution. Some community supervision of site construction does take place. In hard-to-reach locations, the widespread use of Vietnamese for communication is inappropriate as local people (especially elders) can rarely understand the message unless translation into local languages is provided.

## Recommendations for the Program Environmental and Social Systems

218. The recommendations below relate to gaps and weaknesses in the borrower's social and environmental systems. Gaps will be addressed through specific actions in the PAP. Weaknesses will be addressed through capacity building and the Program Operational Manual (POM) which will describe the social and environmental management requirements and procedures, staffing requirements including training, guidance on incorporating social and environmental considerations into the Program as well as the actions to be followed. The POM will also include specific guidance for implementation. The POM is subject to the World Bank's review.

### Environmental

219. In general, the existing environmental law, related decrees and legal documents, institutional arrangements, capacity and performance of the Program provinces are adequate in relation to the environmental principles of OP 9.00 (Program-for-Results Financing). Given the scope of the Program, its types and scale of investment, geographic focus, and previous experience with World Bank projects of the central government, the overall risk from the environmental and social safeguards perspective could be rated as medium. However, the assessment shows that there are areas for improvement in delivery of the Program in terms of environmental management. Some recommended measures to address these challenges are described below. The measures include a combination of system improvements and capacity building and are based on detailed consideration of the review and analysis detailed in Annex 3.

220. The following measures are recommended related to environmental management:

Overall recommendation. PMUs and the SO in MARD are responsible to arrange adequate staff time to cover environmental related issues under the program at every steps of subproject siting, design, bidding and contract preparation, and construction. Implementing agencies also need to ensure that environmental related issues will be properly reflected in the relevant program report for documentation and tracking.

221. **Recommendation 1.** Capacity building is required at a number of levels including national (NCERWASS, MoH, DoET), provincial (DARD, DoH, PCERWASS), district (District PC), and commune (Commune PC) to facilitate proactive environmental management. Lessons should be incorporated from relevant projects and programs in Vietnam including the Australian Department of Foreign Affairs and Trade (DFAT) supported capacity building program under the RWSS PforR. Technical Assistance will be provided under the program to strengthen environmental management capacity, particular areas of focus include:

- Strengthening environmental screening of subprojects with simple criteria to determine environmental eligibility of subprojects;
- Strengthening the incorporation of environmental considerations into planning and preparation of subprojects. Check lists should be developed for design consultants



to use to incorporate environmental considerations into the siting and engineering of subproject components; and

- Supporting provincial government staff to improve the quality of EPCs/EPPs and incorporate environmental recommendations into site selection, engineering design, preparation of bidding and contractual documents, construction and operation.

The Program will recruit a qualified Environmental Consultant to design and implement environmental management capacity building activities for PCERWASSs in the first year. From year two, the responsibility will be handed over to one staff of SO or NCERWASS to be appointed to be responsible for environmental aspects of the Program.

222. **Recommendation 2.** The Operational Manual of the proposed program should include detailed description of the environmental procedures that subprojects will have to follow, and technical guidance for implementation:

- Environmental screening form to exclude subprojects located within or affect critical natural habitats or has cultural values;
- Environmental check list for use during engineering design;
- Details of dangerous construction materials that may not be used under the Program (such as Fibrocement which has been linked cancer);
- Key potential environmental impacts associated with physical investments in rural water supply and sanitation as well as measures for addressing these potential impacts;
- ECOPs for inclusion into bidding documents and construction contracts, and some type-specific environmental solutions and mitigation measures,
- Environmentally- and children-friendly design solutions for sanitation investments; and
- Guidance on environmental monitoring, supervision and reporting.

223. **Recommendation 3.** Strengthen the environmental supervision during the construction phase. Construction supervisors should be assigned the task of monitoring environmental compliance of contractors in their contracts to ensure that potential adverse environmental impacts are avoided or minimized during the construction phase. Community monitoring could also be used to enhance contractor environmental performance. Through the capacity building program, technical assistance will be used to build environmental supervision for PPMU Engineers and construction supervisors.

224. **Recommendation 4.** The communications plan and strategy for the Program should include advice on fecal sludge management, environmental and water source protection, management of wastewater end-users. This advice should be appropriate to the context (e.g., pit closure and containment or regular desludging and proper procedures for the handling of fecal waste). Technical Assistance should be included under the Program to develop a systematic approach to address this in all provinces. The communications plan and strategy for the Program should include advice on regular desludging and proper procedures for the handling of fecal waste including treatment and re-use as appropriate. Technical Assistance should be included

under the Program to develop a systematic approach to address this in all provinces including approaches to engage farmers on the safe use sludge in provinces where sludge is used in agriculture.

225. **Recommendation 5.** Promote community participation into subproject planning, implementation, monitoring, supervision, maintenance to enhance sustainability of the works. This can be achieved by combining environmental issues into Community Engagement Guidelines as mentioned in Social Recommendations and Program Action Plan.

## Social

226. **Overall.** PMUs and the SO in MARD are responsible to arrange adequate staff time to cover social related issues under the program (including land acquisition, ethnic minority, information disclosure/consultation, gender, etc.). Implementing agencies also need to ensure that social-related issues will be properly tracked, monitored and reflected in the relevant program report for documentation and tracking.

227. **Land acquisition.** The RB-SupRSWS Program is designed in such a way that land acquisition will be minimized and the majority of land utilized will be vacant public land. Nonetheless, there may be some incidences where land acquisition is required. In general GoV has a robust legal and regulatory framework governing land acquisition and Provincial authorities have established the required institutional frameworks. Experience in handling of land acquisition issues is considerable. However, as noted earlier, there are a number of weaknesses and gaps that should be addressed through the following recommendations:

228. **Recommendation 1:** Social screening should be conducted to maximize project benefits and minimize adverse impact to local communities, especially on land acquisition. Specific information on social screening processes to be used under the Program should be included in the Program Operational Manual in order to make it a condition for Program negotiation. If land acquisition is unavoidable, provinces should ensure that people affected by loss of land and assets will be compensated so that they are no worse off than before that loss. Investments that cause physical relocation should be restricted to only those limited cases that are absolutely necessary for the Program's investment. The provision in 2013 Land Law on using independent land appraiser should be followed with appropriate M&E system of participating provinces.

229. **Recommendation 2:** A voluntary land donation guideline will be developed at the program level and adopted by participating provinces to guide the application of this practice in the Program's activities. Voluntary donation should only be used to support small-scale community infrastructure where the impacts are minor and where there are alternative options for the location of infrastructure.<sup>53</sup> The guidelines will ensure that potential land donors make decisions that are based on informed consent and their own

<sup>53</sup> Site specific infrastructure may lead to additional pressures on the donor from the community and Government and should therefore be precluded.

choice. The guideline will be based on the recent voluntary land donation protocol (developed by the World Bank's East Asia and the Pacific [EAP] Regional Safeguard Secretariat) as well as other safeguard enhancement related works in Vietnam. The procedure for this will be further detailed in the Program Operational Manual.

### Information Disclosure, Consultation and Participation

230. The assessment has found that the information flow from district to commune levels is still limited. There is also limited involvement of beneficiaries in the decision making process and in implementation.

231. At the local level the Program would promote the use of state-of-the art approaches to participation. Consultations would be held with local communities on planned investments. The capacity of provinces to oversee this type of consultative planning process may however be limited and would need to be supported and built up during the period of the Program.

232. The active participation of communities and households in a feedback loop of engagement and information will be an essential tool in the development of the most appropriate strategies for behavior-change support in both the NM and CH regions.

233. The following recommendations are made:

234. **Recommendation 3:** Participating Provinces will enhance transparency by maintaining databases on complaints/feedbacks and responses to those complaints/feedbacks. In addition, a data base on the program's beneficiaries, disaggregated by gender and ethnicity should be maintained and monitored. Detailed guidelines for the grievance redress mechanism, based on established existing systems, will be included in the Program Operational Manual.

235. **Recommendation 4:** The Program will develop community engagement guidelines (to be implemented by participating provinces) to enhance people's participation, especially for Ethnic Minorities to ensure their meaningful participation and consultation in every step of the Program implementation, including planning, sub-project design and implementation, compensation, resettlement and rehabilitation measures in land acquisition. The guideline will be community-driven, transparent, gender sensitive and in appropriate language. The Program design should ensure that BCC activities are adapted to specifically suit the EM's culture, language and practices. Given that the program will be implemented over a large geographic area with many different ethnic groups, specific guidance will be provided at the local level for each ethnic group. In addition, the guidelines shall fully operationalize existing Vietnamese Legislation with respect to Ethnic Minorities through a process of free, prior, and informed consultations. This should be included as an action in the Program Action Plan.

236. **Recommendation 5:** The Women's Union and similar groups should be incorporated into the institutional structure of implementation in order to assist in promoting gender-sensitive community mobilization, participation and grievance redress channels. The

implementing agencies, particularly the SO in MARD, are responsible to arrange adequate staff time to mainstream gender equality across the Program.

237. **Recommendation 6:** The Program should encourage the following social development measures: (a) ensuring unskilled (and to the extent feasible, skilled) labor is sourced locally; and (b) ensuring access to the newly developed infrastructure for people with disabilities, through inclusive design of institutional sanitation, water supply and handwashing facilities.<sup>54</sup>

## Ethnic Minorities

238. The core principles require that due consideration is given to the cultural appropriateness of, and equitable access to, program benefits with special emphasis provided for the rights and interest of indigenous peoples, as well as the needs or concerns of vulnerable groups. The assessment suggests that the regulations covering this aspect are relatively well structured but there are some doubts relating to the capacity to implement those regulations.

239. Specifically, free, prior, and informed consultation must be undertaken if indigenous people are potentially affected (positively or negatively). This consultation should determine whether there is broad community support for program activities and ensure that indigenous people can participate actively. Participation will also help in identifying opportunities to benefit from exploitation of customary resources or indigenous knowledge, with the consent of indigenous people. While the legal framework is robust, the implementation of the regulations related to Ethnic Minorities, information disclosure, information and social participation at the local level is not consistent with the policy in place. There is a lack of accountability due to the limited information flowing to communes and participation of Ethnic Minorities in decision making remains limited. Specific actions are needed to close these gaps.

240. In addition, Program planning and implementation includes attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, the elderly, or marginalized ethnic groups. If necessary, special measures are taken to promote equitable access to program benefits. This element is fully covered under the current policies framework of Vietnam.

241. In addition to recommendations 3 and 4 above, the following specific recommendation is made in relation to EMs:

<sup>54</sup> Inclusive design can include; simple access improvements for latrines, hand washing points and water supply; sizing latrines appropriately for use and so on. Guidance documents for design are available from a number of different sources including WEDC (Water and Sanitation for Disabled People and other Vulnerable Groups: designing services to improve accessibility, Jones, H.E. and Reed, R.A. WEDC, 2005), WaterAid ([http://www.sharesearch.org/LocalResources/Mainstreamingdisabilityandageinginwatersanitationandhygieneprogrammes\\_1.pdf](http://www.sharesearch.org/LocalResources/Mainstreamingdisabilityandageinginwatersanitationandhygieneprogrammes_1.pdf)) and UNICEF.

**242. Recommendation 7:** MARD and participating provinces will ensure that the program interventions are culturally appropriate given the diversification of many ethnic groups living in the Program areas. Specific guidances (likely by ethnic groups) will be included in the community engagement guidelines (defined in recommendation 4). This will ensure that the program activities are tailored in accordance to the needs and cultural patterns of local people. These guidelines should build on the existing guidelines for working with EMs under RWSS PforR and include guidance on working in parallel with traditional EM governance structures. In addition, the guidelines shall fully operationalize existing Vietnamese Legislation with respect to Ethnic Minorities through a process of free, prior, and informed consultations. This should be included as an action in the Program Action Plan (together with recommendation 4).

#### Inputs to the Program Action Plan

243. The following action should be included in the Program Action Plan:

- *MARD and the participating Provinces will jointly develop and implement guidelines to ensure the effective participation of and consultation with local people, including EMs and vulnerable groups. The guidelines will fully operationalize existing Vietnamese Legislation with respect to EMs through a process of free, prior, and informed consultations.*

#### Environmental and Social Risk Ratings

244. Given the scope of the Program, its types and scale of investment, geographic focus, and previous experience with World Bank projects of the central Government, the risk rating is *moderate* from the environmental perspective and *substantial* from the social perspective.

#### Inputs to the Program Implementation Support Plan

245. It is critical that adequate staff time be allocated during the first year of the Program, including specialists to strengthen the capacity of the implementing agencies, building on the ongoing support being provided through the implementation of the RWSS PforR. Capacity building activities will be included in Program Technical Assistance which will be embedded in the Disbursement Linked Indicators (DLIs) in order to incentivize the timely delivery. In the first RWSS PforR, the technical assistance was financed through a recipient-executed grant, resulting in some delays in preparation of the various TA packages for support including on environmental and social issues. Recommendations on the strengthening of agencies should be included in the POM. The key areas where support to develop capacity is required include: improving the technical, financial, environmental and water quality development of new community water supply schemes; strengthening compliance with existing environmental laws and regulations including compliance with the Law on Environmental Protection; supporting provincial government staff to improve

environmental screening of rural water supply schemes, and improve the quality of Environmental Protection Plans; incorporating climate change resilience and environmental mitigation measures into site selection, engineering design and documentation, construction and operation of rural water and sanitation facilities; and improving capacity at the provincial level for water quality monitoring by DoH, PCERWASSs, other rural water suppliers, and district health centers.

246. The below Table 10 indicates environment and social activities to be undertaken within the program implementation support plan.

**Table 10: Environmental and Social Support Plan for the implementation of the program**

Activity	Timing
Capacity building activities for the Program and its social and environmental implications	Program launching workshop; Refresher training to be delivered annually.
Review implementation guideline and associated documents in order to operationalize recommendations	During the program preparation and early stages of implementation.
Review and monitor the implementation progress of social related actions and associated indicators	As needed. Atleast twice peryear during supervision missions.
Join the supervision mission and field visits to selected sites.	
Support client to resolve implementation issues and carry out institutional capacity building	

## Addendum: Desk-based assessment of Binh Thuan and Ninh Thuan Provinces

247. Following the addition of Binh Thuan and Ninh Thuan provinces to the Program, a desk-based environmental and social systems assessment of the two provinces was carried out.

### Environmental

248. The findings of the desk-based assessment are that the environmental benefits and risks to the Binh Thuan and Ninh Thuan provinces are not expected to be significantly different to those identified in the other 19 provinces. Two nature reserves are located in Binh Thuan and two national parks in Ninh Thuan (see Table 11 below). These protected areas will not be worked in under the Program.

**Table 11: Protected Areas in Binh Thuan and Ninh Thuan**

Province	No.	Name of Protected area	Years formed	Land Area (Ha)	Type of protected area
Binh Thuan	1	Núi Ông		23.834	Nature Reserve
	2	Tà Kóu		8.047	Nature Reserve
	3	Hòn Cau		12.500	Nature Reserve
Ninh Thuan	1	Núi Chúa	2015	29.865	National Park
	2	Phước Bình	2015	19.814	National Park

### Social

249. From a social perspective regarding land acquisition practices, both Ninh Thuan and Binh Thuan generally follow the same system as the original 19 provinces. Ethnic Minorities make up 23.5% of the population of Ninh Thuan and 7.4% of the population of Binh Thuan (Table 12 below).

**Table 12: Population data for Binh Thuan and Ninh Thuan provinces including EMs**

Province	Total Population	Rural Population	Rural Population (%)	EM Population*	EM* (%)
Binh Thuan	1,167,023	708,503	60.7	86,299	7.4
Ninh Thuan	564,993	361,211	64	132,594	23.5

\* Out of the total population (urban and rural)

However, these two provinces have two ethnic groups (Raglai and Cham) that are different from those in the other 19 provinces. In Cham communities, religion plays an important role with a strong influence of Indian and Islamic civilization. Both Cham and Raglai people follow a matriarchal system, with the absolute power of women in the household. In these two ethnic groups, informal institutions still exist which regulate the daily relationships amongst villagers. They also follow a number of spiritual rituals

that require particular attention during the consultation or community engagement process.

250. Similarly to the environmental assessment, the social assessment of Binh Thuan and Ninh Thuan has not identified any significantly different social risks to those identified in the other 19 provinces. The Program is expected to have significant positive impacts on social conditions in Binh Thuan and Ninh Thuan.
251. Given that no significant differences were found between Binh Thuan and Ninh Thuan and the other 19 provinces, the environmental and social recommendations, the PAP action and the risk rating of this assessment are therefore considered to be appropriate for all of the provinces under the Program including Ninh Thuan and Binh Thuan.



### Annex 1 – Summary of Public Consultations

252. The following consultations were completed, with the facilitation of the RWSS Partnership:

Location	Attendees	Date
Hanoi	Civil society consultations: MoET students affairs coordinator, EMW foundation, RWSS PforR consultants, PSI, CEMA, UNICEF, NTP-SO, World Vision, VIHEMA. NCERWASS	26 January 2015
Kon Tum	PPC, DARD, DOET, DPI,	02 February 2015
Lao Cai	PPC, DARD, DOET, DPI,	04 February 2015
Hanoi	DARD, DOH from the 19 target Provinces	06 February 2015



Pictures of consultation meetings in Hanoi, Kon Tum and Lao Cai

List of participants:

Name	Position
<b>Lao Cai</b>	
Nguyễn Chính Cường	Director, water resource management and natural disaster prevention
Đoãn Văn Hoàng	Chairman, PPC
Nông Đình Hùng	Vice director, Dept. of Health
Đỗ Lê Tín	Vice director,
Lý Bình Minh	Vice director,
Lê Thanh Đức	
Đinh Văn Sơn	
Nguyễn Duy Hòa	Vice director,
Đoàn Thanh Bình	Officer, PPC Office
Vũ Thùy Linh	
Ma Quang Hải	Director,
Đặng Quốc Anh	Vice director,
Nguyễn Phú Cường Thọ	Provincial CERWASS
Đinh Văn Hữu	Officer, Department of Planning and Investment
Tô Xuân Tùng	Officer, Department of Finance
Đặng Thái Hiệp	Officer, Provincial Department of Health
Nguyễn Thị Thu Thủy	Officer, Provincial preventive Health Centre

Đặng Thị Kiều Oanh	Officer, Provincial preventive Health Centre
<b>Kon Tum</b>	
Nguyễn Hữu Hải	Vice Chairman
Bùi Thanh Bình	Head of PPC Office
Nguyễn Trần Tiến	Officer, PPC
Văn Tật Cường	Deputy Director, DARD
Hà Hải Hằng	Deputy Director, pCERWASS
Lê Đăng Lợi	Technician, pCERWASS
Đào Duy Khánh	Deputy Director, DOH
Nguyễn Lạc Vĩnh	Director, Preventive Health Centre
Nguyễn Thị Thúy Quỳnh	DOH, Community Health Division
Nguyễn Hóa	Deputy Director, DOET
Trần Văn Thanh	Officer, DOET

253. The draft ESSA was disclosed on line and shared with participants before the consultation workshop. Additional comments were requested from all participants within two weeks from the workshop. The recommended PAP actions were also presented. The key recommendations were as follows:

- The legal framework for environmental and social controls is strong, but implementation is often weak. Support is needed at the province level for implementation of environmental and social protection measures;
- Participation of Ethnic Minorities in the decision making process needs to be strengthened; administration is very top down and interventions are not always appropriate and tailored to local cultures. Local languages should be used and a diversified menu of options should be used to allow for different interventions in different areas;
- Full participation by all beneficiary groups should be supported, using mass unions as a route for engagement and engaging local groups in implementation as far as possible;
- Cooperation with CEMA needs to be improved; CEMA should be included in the NTP3 steering committee at the national and provincial levels;
- Land acquisition is expected to be minimal, however guidance will be provided to support compliance with the new land law; and
- Guidance will be provided in the POM on identification of mitigation measures, including how to integrate environmental protection measures into implementation, guidance on voluntary land donation and working with Ethnic Minorities. The POM will also provide guidance on information sharing and beneficiary monitoring (including disaggregation by ethnicity and gender).

254. In all consultations, the participants concurred with the overall environmental and social impacts identified and the key risks and recommendations. In addition, the issues around a Program-for-Results instrument and the implications for planning and programming were discussed. The additional issues and concerns raised by Civil Society organizations and Provincial Agencies are summarized below.

**Civil Society Consultations.** The key concerns raised are summarized below:

- Interventions need to be adapted to the cultures and customs of Ethnic Minorities; however, this is a very difficult area for intervention – the ESSA should be used to also guide the overall design of the program in this respect;
- At the Provincial level awareness of principles laid out in the environmental and social legal regulations can be low. In addition there are rarely finances available to monitor compliance;
- Increasing accountability and participation is critical. Beneficiary feedback should not be limited to a complaints database, but should incorporate wider approaches for beneficiary feedback. Similarly consultation should be part of Project design rather than simply information provision, the importance of engaging village heads and the Women’s Union was highlighted;
- The Land law regulation is very new and a thorough training for Provincial level staff is needed to support implementation. Although land acquisition impact is not expected to be large special attention should be paid to sensitive issues such as the location of graves;
- The failure rate of water supply schemes in the target area is very high. Additional information should be included on actions to be taken to address this issue, including
  - improved operation and maintenance;
  - designing for resilience to typical local impacts, such as landslides and flash floods in the Northern Mountains and dropping groundwater in the Central Highlands;
- Standards and monitoring for water quality need to be clarified; and
- Fecal sludge management arrangements need clarifying, as currently there are no regulations or established good practices for rural areas.

255. It was agreed that these issues would be integrated or clarified further in the ESSA. It was also highlighted that issues such as sustainability of infrastructure and design of the BCC campaign were being informed by the ESSA and were detailed under the Technical Assessment.

256. **Provincial Consultations:** Provincial agencies confirmed their needs under the project, including addressing the difficulties in maintaining overloaded school facilities, managing seasonal water sources, and addressing the high failure rate of water supply schemes. Overall Provincial agencies confirmed the findings of the ESSA in terms of the shortcomings of staff, policies and mechanisms to encourage good environmental and social management. Some Provinces highlighted that they needed a mechanism to help them monitor environmental and social issues and impose sanctions for non-compliance. The use of banned materials in the construction of water supply schemes was also highlighted as an issue in one province following problems of high iron levels discoloring the water supply due to damaged pipe work. The application of the new Land Law was raised as a potential concern; provincial agencies will need to work rapidly to develop a five-year plan for the works and then an annual plan for site acquisition and clearance. The need to preserve protected land (protected forest,s etc.) was raised as an issue for implementation. The issues related to voluntary land donation were also discussed further and some provinces highlighted their willingness to recognize the contribution of the families who donate land through certificates, titles and so on. Detailed guidance was requested in the POM.

257. Apart from the points raised above key concerns were predominantly related to implementation and the sustainability of infrastructure as follows:

- The project needs to include investment to improve operation and maintenance (O&M) of water supply schemes. Provinces are prioritizing rehabilitation, but the Program also needs to support communication to improve awareness of the community to participate in management post investment, financial management, assessing affordability of schemes, and consolidation or amalgamation of support services. Some Provinces also highlighted the need to have an O&M specialist at the Provincial level to provide guidance;
- Given the size and scale of the single village schemes it will be difficult to meet official Government standards;
- Provinces implementing CLTS with the support of UNICEF highlighted the time taken to develop a quality intervention and noted that the first intervention resulted in very low levels of Open Defecation Free villages. The role of coordinators at the commune and district level was noted to be key and recommended to be full time, in addition to any support provided by the mass unions;
- Some Provinces are introducing new approaches for hygiene promotion and sanitation, including diversifying communication, engaging the Women's and Youth Unions, using mass media, providing communications in schools and clinics, and passing resolutions on the responsibilities of staff working in RWSS.

## Annex 2: List of protected areas in the Program provinces

BC = Biosphere Conservations Areas

HE = Historical Environmental Conservation Sites

SC = Species Conservation Areas

Province	No.	Name of Protected area	Years formed	Land Area (Ha)	Type of protected area
Bắc Giang	1	West Yên Tử	2002	13,023	BC
Bắc Kạn	1	Ba Bể	1992	7,610	National Park (lake is RAMSAR)
	2	Kim Hông	2003	14,772	BC
	3	Nam Xuân Lũng Area for species, landscape and ecosystem conservation		1,788	SC
Cao Bằng	1	Pia Oắc Mountain		10,261	BC
	2	Cao vít Trùng Khánh monkey conservation area		2,261	SC
	3	Bến Dục		566	HE
	4	Thăng Hen Lake		372	HE
	5	Lam Sơn		75	HE
	6	Lăng Đôn mountain		1,149	HE
	7	Trần Hưng Đạo forest		1,143	HE
	8	Pác Bó		1,137	HE
Đak Lăk	1	Yok Đôn	1991	115,545	National Park
	2	Chợ Yang Sin	2001	58,947	National Park
	3	Ea Sô		24,017	BC
	4	Nam Kar		21,912	BC
	5	Ea Ral		49	SC
	6	Khu bảo tồn Tráp Ksô		100	SC
	7	Hồ Lắk		9,478.3	HE
Đak Nông	1	Yok Đôn	1991	115,545	National Park
	2	Nam Nung		10,912	BC
	3	Tà Đùng		17,915	BC
	4	Thác Đray Sáp - Gia Long		1,515.2	HE
Điện Biên	1	Mường Nhé	1996	44,940	BC
	2	Mường Phăng		935.88	HE
Gia Lai	1	Kon Ka Kinh	2002	41,780	National Park
	2	Kon Cha Răng (Kon Chơ Răng)		15,446	BC
Hà Giang	1	Bắc Mê	1994	9,043	BC
	2	Bát Đạt Sơn	2000	4,531	BC
	3	Du Già	1994	11,540	BC
	4	Phong Quang	1998	7,911	BC
	5	Tây Côn Lĩnh	2002	14,489	BC
Hà Giang	6	Khu Ca Area for species, landscape and ecosystem		2,010	SC

		conservation of monkey voọc mũi hếch			
Hoà Bình	1	Hang Kia-Pà Cò		5,258	BC
	2	Ngọc Sơn-Ngọc Luông		15,891	BC
	3	Phu Canh		5,647	BC
	4	Thị trấn Tiên		5,873	BC
Kon Tum	1	Chợ Mom Ray	2002	56,621	National Park
	2	Ngọc Linh		38,109	BC
	3	Độc Uy		660	SC
Lai Châu	1	Mường Tè		33,775	BC
	2	Hoàng Liên	1996	38,724	National Park
Lâm Đồng	1	Bidoup Núi Bà	2004	64,800	National Park
	2	Cat Tien	1978	71,920	National Park (and RAMSAR)
Lào Cai	1	Văn Bàn		25,173	BC
	2	Hoàng Liên	1996	38,724	National Park
Phú Thọ	1	Đền Hùng		538	HE
	2	Núi Núi		670	HE
	3	Yên Lập		330	HE
Sơn La	1	Copia		11,996	BC
	2	Sốp Cộp		17,369	BC
	3	Tà Xùa		13,412	BC
	4	Xuân Nha		16,317	BC
Thái Nguyên	1	Thị trấn Sa-Phong Hoàng		18,859	BC
	2	Đình Hoá Safe Security Area		8,728	HE
	3	Tam Đảo	1986	36,883	National Park
Tuyên Quang	1	Chợ Chu	2001	15,902	BC
	2	Na Hang		22,402	BC
	3	Tam Đảo	1986	36,883	National Park
Yên Bái	1	Nà Hieu		16,400	BC
Yên Bái	2	Chợ Tào		20,293	SC

### Annex 3: Comparison of EIA requirements of World Bank and Vietnam

WB EA requirements	Vietnamese EIA requirements	Comments /Applicability of Vietnamese requirements to RB-SupRSWS
<b>Guiding principles</b>  Activities must be environmentally sound and sustainable, and thus improve decision making	<b><i>The Law on Environmental Protection (LEP)</i></b>  <b>Article 1:</b> This Law provide regulations on environmental protection activities, on policies, measures and resources for environmental protection; rights and responsibilities of entities regarding environmental protection. <b>Article 3:</b> Environmental protection activities refers to the activities that keep the environment clean and beautiful, that prevent and reduce negative environmental impacts, that respond to environmental hazards that rehabilitate the environment from pollution / degradation, and environmental improvement, biodiversity protection etc... <b>Article 4.</b> “Environmental protection should be combined with socio-economic development to ensure sustainable development; environmental protection for the country should adhere to regional and global environmental protection”.	WB requirements and the Environmental Law statements agree on sustainable development and environmental protection principles.  It is an obligation for the RB-SupRSWS to comply with the Environmental Law of Vietnam which follows sustainable development principles.
EA must be a process whose breadth, depth, and type of analysis depend on the nature, scale, and potential environmental impact of the proposed project	<b><i>LEP 2014- Decree 18/2015/ND-CP</i></b>  <b>Article 12:</b> “Projects that EA is required for are listed in Annex II of this Decree”; “Investment Projects with Characteristics, scale, capacity not listed or below the threshold specified in Annex II of this Decree” are required to prepare EPP .	<ul style="list-style-type: none"> <li>- WB requirements and Decree 18/2015 are in agreement that all sub-projects are required to prepare EA based on the level of impacts and risks.</li> <li>- Project design – physical investments on rural water supply and sanitation - shown that affected areas of sub-projects will be existing rural land and possibly some agricultural land.</li> <li>-</li> </ul>

WB EA requirements	Vietnamese EIA requirements	Comments /Applicability of Vietnamese requirements to RB-SupRSWS
EA must evaluate a project's potential environmental <b>risks and impacts</b> in its <b>areas of influence</b>	<p><i>LEP 2014</i></p> <p><i>Article 22 of the LEP 2014 regulates the key contents of EAs including the requirements to “assess, predict and identify the measures to manage the impacts and risks on the environment and public health of the project”</i></p>	<p>WB requirements are general requirements from a broad perspective while Vietnamese requirements tend to give detailed instructions.</p> <p>LEP 2014, Decree 18 give sufficient details to guide the understanding of the concepts related to risks, impacts and areas of influence.</p> <p>EPPs of sub-projects will follow the instructions given in LEP 2014 for impacts and risks assessment for the areas potentially affected by the project.</p>
There is a need to <b>prevent, minimize, mitigate</b> , or compensate for adverse environmental impacts and enhance positive impacts; .... includes the process of mitigating and managing adverse environmental impacts <b>throughout project implementation</b> .	<p><i>LEP 2014</i></p> <p><i>Article 29 of the LEP 2014 regulates the key contents of EPP, including:</i></p> <ul style="list-style-type: none"> <li>• <i>Project location</i></li> <li>• <i>Type, technology, and scale of investments</i></li> <li>• <i>Raw materials and fuels used</i></li> <li>• <i>Predictions on the impacts related to waste generation, and those not related to waste generation</i></li> <li>• <i>Measures to minimize the predicted impacts</i></li> <li>• <i>Implementation arrangements</i></li> </ul>	<p>Vietnamese legislation is limited to preventive and mitigation measures while WB requirements also cover minimising, compensatory measures and positive impact enhancement.</p> <p>The preventive and mitigation principles cover all phases throughout project implementation as required by the WB and LEP 2014.</p> <p>EPPs of RB-SupRSWS sub-projects will follow the instructions given in LEP 2014 which requires that the prevention and mitigation measures are considered for all stages of project implementation</p>



WB EA requirements	Vietnamese EIA requirements	Comments /Applicability of Vietnamese requirements to RB-SupRSWS
EA must take into account the natural environment (air, water, and soil); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources);	<p><i>Revised LEP 2014</i></p> <p><i>Articles 52 to 64 cover the regulations on the protection or water, air and soil quality.</i></p> <p><i>Articles 65 to 79 cover regulations on sectoral environmental protection</i></p> <p><i>Environmental protection in public areas, residential including households and public areas are covered in articles 80 to 82</i></p> <p><i>Workers health and safety, workplace sanitation issues are covered in Chapter IX of the law on labour</i></p>	<p>WB requirements and LEP 2014 covers all aspects of the environment including physical, socio-economic and cultural.</p> <p>EPPs of RB-SupRSWS sub-projects will follow the instructions given in LEP 2014, Decree 18/2015/ND-CP and corresponding circular</p>
The borrower must <b>address impacts on physical cultural resources...as an integral part of the environmental assessment (EA) process.</b> The steps elaborated below follow the EA sequence of: <b>screening; developing terms of reference (TORs); collecting baseline data; impact assessment; and formulating mitigating measures and a management plan.</b>	<p><i>LEP 2014</i></p> <p>While the issuance of a new circular guiding in details the preparation of EPPs Dec is being awaited (to replace Circular 26 guiding the preparation of EPCs), it is anticipated that the key requirements will be remained.</p> <p><b>Annexes 5.2</b> of circular 26 (contents of EPC document) requires screening for the presence of known physical cultural resources in the project area as part of discussions on geographical characteristics of the project area "...cultural, historical, religious structures and objects etc..." were explicitly spelled out.</p> <p><b>The Law on Cultural Heritage</b></p> <p><b>Article 8:</b> cultural heritages present within the territory of Vietnam, regardless of in-country or external origin, regardless of ownership, all are protected and values are promoted</p> <p><b>Article 32</b> specifies zoning of protected areas for PCRs</p> <p><b>Article 36</b> specifies that at appraisal stage for projects located outside the protection zone of PCR with potential environmental impacts including impacts on the landscape of</p>	<p>EPPs of RB-SupRSWS sub-projects will follow the instructions relevant Circular to be issued to replace circular 26, which allows PCRs to be screened at the environmental assessment stage so that potential impacts can be avoided, assessed and mitigated in a timely manner</p>

WB EA requirements	Vietnamese EIA requirements	Comments /Applicability of Vietnamese requirements to RB-SupRSWS
	the area, written appraisal documentation prepared by the relevant cultural management authorities is required.	
<p>The Bank does not support projects that, in the Bank's opinion, involve the significant conversion or degradation of critical natural habitats.</p> <p>Wherever feasible, Bank-financed projects are sited on lands already converted (excluding any lands that in the Bank's opinion were converted in anticipation of the project).</p> <p>If the environmental assessment<sup>4</sup> indicates that a project would significantly convert or degrade natural habitats, the project includes mitigation measures acceptable to the Bank. Such mitigation measures include, as appropriate, minimizing</p>	<p><b>The revised Law on Biodiversity Protection (2008)</b></p> <p>78 Articles presented under 8 Chapters provide detailed regulations on biodiversity conservation and the rights and responsibilities of individuals and entities on biodiversity conservation and promotion.</p> <p><b>Article 3:</b> <i>Biodiversity conservation</i> means the protection for the diversity of critical, typical or representative ecological systems, to protect permanent or seasonal natural habitats of wildlife, environmental landscape, unique natural beauty etc.</p> <p><b>Article 16:</b> Conservation areas include national parks, biosphere conservation area, areas for species and habitat and landscape conservation.</p> <p><b>LEP - Decree 18/2015/ND-CP –Annex 3</b></p> <p>Projects with EA subjected to MONRE appraisal</p> <p>"2. Projects using land within national parks, nature reserves, world heritage sites, classified historical/cultural/landscape conservation sites, and areas within biosphere conservation areas"</p>	<p>The locations of projects are unknown during program preparation, however it is verylikely that no sub-projects would affect any legally protected areas specified in the revised Law on Biodiversity Protection. Therefore, no projects would be required to prepare EIAs, only EPPs would be sufficient.</p> <p>Project design shown that affected areas of sub-projects will be existing rural land and agricultural land.</p> <p>WB requires a focus on the risks, impacts and areas of influence of sub-projects while Decree 29 considers the types of projects. Therefore, the OM should include a mechanism for impacts screening for sub-projects, particularly for sub-projects where there is a higher uncertainty over the potential impacts such as new roads or bridges</p>

WB EA requirements	Vietnamese EIA requirements	Comments /Applicability of Vietnamese requirements to RB-SupRSWS
habitat loss (e.g., strategic habitat retention and post-development restoration) and establishing and maintaining an ecologically similar protected area.	<b>The Law on Forest Protection and Management</b> also covers protection of specialised forests, which was defined as forests for biodiversity, ecological and landscape protection purposes.	

### Annex 4: Environmental and Social Assessment and Action Plan Summary

**Core Principle 1: Environmental and social management procedures and processes are designed to: (a) avoid, minimize or mitigate against adverse impacts; (b) promote environmental and social sustainability in program design; and (c) promote informed decision making relating to a program's environmental and social effects.**

Key Elements	System Requirements	Key Findings	Recommendations
1.1 Bank Program procedures are backed by an adequate legal framework and regulatory authority to guide environmental and social impact assessments at the programmatic level	The Constitution (Articles 29 and 31) and various laws, including the 2014 LEP, which provides provisions relevant to the core principles. The new LEP stipulates: (a) Environmental Protection Planning, strategic environmental assessment, environmental impact assessment, and environmental protection plans (Chapter II, Articles 8-34); (b) Environmental Protection in the usage and exploitation of natural resources including during the survey, assessment and planning for natural resources use and biodiversity (Article 29), protection and sustainable development of forestry forest (Article 36), environmental protection during the survey, exploration, exploitation and usage of natural resources and mineral resources (Articles 37, 38); (c) adaptation to climate change (Chapter IV), general regulations on climate change adaptation (article 39), produce and consume environmental friendly products (Article 44); (d) protection of water, air, soil environments (Chapter VI, articles 52 to 64), environmental protection in production, services and businesses (articles 65 to 79, environmental	Low capacity of proponents including consultants in this area. This results in limited integration of environmental considerations in strategies and master plans, including provincial rural water supply and sanitation master plans.	Formulate and implement a capacity building program for the implementing agencies on the government regulations on environmental management and environmental safeguard procedures applicable to the program, particularly document preparation, integration of environmental considerations into technical proposals, and post EPP monitoring. The stake holders subjected to environmental capacity building program including central level (the NTP for RWSS office, NCERWASS, MoH/ VIHEMA, DoET), provincial (DARD, DoH, PCERWASS), district (District PC), commune (Commune PC), consultants and contractors National experienced environmental assessment institutions can be mobilized for supporting implementation of this capacity building program.

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<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
	protection in urban and residential areas (articles 80 to 84), environmental protection in; (e) Waste Management including hazardous waste, municipal waste, wastewater, dust, noise and vibration management (Chapter IX); (f) regulations on Environmental Standard, monitoring and reporting, (Chapter XI to XIII); (g) responsibilities of various stake holders on environmental management, including governmental authorities, civil and mass organisations, communities; (h) resources for environmental protection, articles (Articles 147 to 155); (i) international cooperation on environmental protection; and (j) inspection, handling of violation, settlement of complaints and denunciation related to environment, and compensation for environmental damage (Articles 125-134)		
1.2. Incorporate recognized elements of environmental and social assessment good practice, including:  1.2a Early screening of potential effects	A screening process is in place and based on the list of projects contained in Decree 29/2011, and consists of three categories: (a) strategies, planning subject to detailed strategic environmental assessment Appendix I, Decree 29/2011); (b) projects that require the preparation of a full EIA (Appendix II, Decree 29); (c) projects subject to EPP with limited environmental analysis; and (d) projects that	Although the list of sub-projects allows for screening of projects that can be key national works, projects affecting protected areas and projects with potential impacts on river basins, coastal areas and areas with protected ecology are more difficult to	The program OM should include a simple environmental screening criteria for the projects under the Program. All projects will be required to do screening and early stage of project preparation.

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<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
	<p>do not require an environmental assessment. EA is conducted early - at the same time as the feasibility study. proposals.</p> <p>Decree 29/2011, and Circular 26/2011. Competent environmental authorities review all category A, B and C projects for their potential impacts and the scope of the EIA, or a limited environmental analysis. SEA is mandatory (Article 14, of the LEP); EIA is mandatory (Article 18, LEP); EPC is required for household- based production, business or service establishments and entities not defined in Articles 14 and 18.</p>	screen for as there is no clear guidance on the interpretation or application of these criteria	
1.2b consideration of strategic, technical, and site alternatives (including the "no action alternative)		There is often a high degree of reluctance to critically evaluate alternatives from an environmental point of view or carry out any significant modifications to project location or design at this stage.	Design specifications includes environmental considerations such as alternatives for water source selection, transmission, treatment process, and siting of sanitation facility and system.
1.2c explicit assessment of potential induced, cumulative and trans-boundary impacts;		Important cumulative impact assessments have not been explicitly required in the LEP and Decree 29/2011. Experiences indicate that most projects usually overlooked or inadequately assessed	The Program investments are mostly community-based or individually, cumulatively will be very small. Where water extraction rate is equal to or exceeding a threshold regulated by the water resources law, license will be applied for so that project

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<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
		cumulative effects.	implementation will be under the supervision of the water management authority. The total water withdrawal from all systems should be negligible compared to the low flow volumes in the relevant river basins
1.2d Identification of measures to mitigate adverse environmental or social impacts that cannot be otherwise avoided or minimized	Circular 26/2011 provides guidance on the required scope of EIA documents. It is rather comprehensive and expects typical EIA reports to cover: description of the existing environment; description of the project; environmental impact scoping and assessment; and environmental management and monitoring program including responsibilities and budget.	<p>The 26/2011 does not include requirements for: (a) the detailed consideration of socio-economic impacts; (b) analysis of project alternatives, though description of site selection options is required; and (c) consideration of cumulative and strategic impacts.</p> <p>Practice shows that in many cases, site selection was decided before EIA or EPP is initiated.</p> <p>Construction impacts of project are known, Environmental Codes of Practices for small civil works have been well developed and being applied in a number of Bank-financed projects in Vietnam</p>	<p>The technical assistance program, as noted above, will contain guidance on proper implementation of government guidelines.</p> <p>Project size is typically far below the minimum size that would trigger an EIA. The use of EPP is appropriate in these circumstances.</p> <p>ECOP should be included in the Project OM for inclusion into bidding and construction contracts.</p> <p>Potential social impacts will be handled through the land acquisition and Ethnic Minority guidelines and implementation.</p>

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<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
1.2e Clear articulation of institutional responsibilities and resources to support implementation of plans	Institutional responsibilities and resources for preparation, implementation monitoring, and inspection are clearly spelled out by relevant regulations (Articles 147-155, LEP and Article 37, Decree 29/2011).		<p>1. The technical assistance will strengthen the capacity on environmental monitoring and inspection in the program. Environmental performance indicators can be developed to enforce environmental safeguard implementation. Mitigation measures to be included in the design, cost estimation, bidding documents and contracts for the detailed design and construction.</p> <p>2. Develop mechanisms to strengthen environmental compliance of the project owners such as monitoring and reporting with compliance indicators. Contractors failing to fully comply with the environmental obligations stated in the contract could subject to performance penalties.</p> <p>3. The technical assistance program includes strengthening management and control of drinking water quality by enhancing capacity of DoH, PCERWASSs, other rural water suppliers, and district health centers. This can be done by enhancing their capacity in sampling and testing water quality from rural water</p>



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<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
			supply sources with subsequent technical advice on improving water quality.
1.2f Responsiveness and accountability through stakeholder consultation, timely dissemination of program information, and through responsive grievance redress measures	Public consultation with relevant stakeholders, local authorities, representatives of communities and organizations directly affected by projects is required (Article 1, LEP, Article 5 for SEA, and Article 14, Decree 29/20110 for EIA,). Guideline on public consultation is provided by the regulation (Article 15, Decree 2009/2011). Disclosure of environmental management plan is only granted after approval of EIA or EPP.	The timing and number of consultations are not clearly stated in the EIA regulation. No public consultation is required in preparation of EPP. Consultation conducted through the local government (commune Peoples' Committee) limits objective outcomes of consultation because in most cases CPC is under pressure from the higher level of government to with projects. It has become more common practice that community are trained to monitor engineering compliance of contractors, meanwhile affected people are aware of their rights to complaints and get compensations for the damaged caused by construction. It is also a motivation to push contractor to comply with environmental obligations.	<p>The Program Action Plan and technical assistance both put a strong focus on increasing transparency and public consultation for all Program aspects, including environment and social measures.</p> <p>Furthermore, projects will go forward only after the commune members benefitting from the project have individually agreed to make the needed financial contributions and actively participate in construction monitoring and supervision. Meanwhile, the project OM and TORs for engineering designs also require public consultation during design phase.</p> <p>This is one aspect of improving the screening criteria for the projects under the Program. As explained above, initial simple screening criteria will be developed to facilitate this process. More detailed initial guidance will be developed for the Program in which the project type, scale, location, sensitivity, and the nature and magnitude of</p>

**Core Principle 1: Environmental and social management procedures and processes are designed to: (a) avoid, minimize or mitigate against adverse impacts; (b) promote environmental and social sustainability in program design; and (c) promote informed decision making relating to a program's environmental and social effects.**

Key Elements	System Requirements	Key Findings	Recommendations
			potential impacts will be identified to classify the proposals.

<b>Core Principle 2: Environmental and social management procedures and processes are designed to avoid, minimize and mitigate against adverse effects on natural habitats and physical cultural resources resulting from program.</b>			
<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
2.1 Includes appropriate measures for early identification and screening of potentially important biodiversity and cultural resource areas.		This ESSA, in Annex 2, provides the list of protected areas with importance for biodiversity or cultural resources in each province. Preliminary identification of sub- projects within the Program can be screened against the very limited areas of potential interest.	This is one aspect of improving the screening criteria for the projects under the Program. As explained above, initial simple screening criteria will be developed to facilitate this process. More detailed initial guidance will be developed for the Program in which the project type, scale, location, sensitivity, and the nature and magnitude of potential impacts will be identified to classify the proposals.
2.2 Supports and promotes the conservation, maintenance, and rehabilitation of natural habitats; avoids the significant conversion or degradation of critical natural habitats, and if avoiding the significant conversion of natural habitats is not technically feasible, includes measures to mitigate or offset impacts or program activities.		The scope and nature of the sub-projects under the Program will not impinge on natural habitats.	
2.3 Takes into account potential adverse effects on physical cultural property and, as warranted, provides adequate measures to avoid, minimize, or mitigate such effects		The scope and nature of the sub-projects under the Program is such that adverse effects on physical cultural property can be avoided.	The OM requires that ECOP which include chance find procedures would be included in all construction contracts

<b>Core Principle 3: Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with: (a) construction and/or operations of facilities or other operational practices developed or promoted under the program; and (b) exposure to toxic chemicals, hazardous wastes and otherwise dangerous materials.</b>			
<b>Key Elements</b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
3.1 Ensures adequate community, individual and worker safety through the safe design, construction, operation and maintenance of physical infrastructure, or in carrying out activities that may be dependent on such infrastructure with safety measures, inspections or remedial works incorporated as needed.	There is adequate legal framework for the protection of public and worker safety against potential risks. Regulations related to these issues available in various Laws such as Vietnam Labor Law 2012.	<p>Incorporation of legal requirements into contracts and contract supervision to mitigate against the associated risks.</p> <p>Sub-project design, will mitigate the risk of exposure to hazardous wastes and otherwise dangerous materials.</p>	

<b>Key Social Elements<sup>55</sup></b>	<b>System Requirements</b>	<b>Key Findings</b>	<b>Recommendations</b>
Avoid or minimize land acquisition and related adverse impacts;	<p>No specific article addressing this issue</p> <p>The program may have minor land acquisition impact at the household level. No physical relocation is anticipated. The program may experience voluntary land donation practice.</p>	No significant gaps	The participating provinces will develop a voluntary donation (land or other assets) guideline applicable to the Program's activities. The guidelines will ensure that potential land donors make

<sup>55</sup> Paragraph 20, BP 9.00 Program-for-Results Financing, February 2012.

Key Social Elements <sup>55</sup>	System Requirements	Key Findings	Recommendations
			decisions that are based on informed consent and their own choice. The procedure for this will be further detailed in the Operational Manual.
Identify and address economic and social impacts caused by land acquisition or loss of access to natural resources, including those affecting people lacking full legal rights to resources they use or occupy;			
Provide compensation sufficient to purchase replacement assets of equivalent value and to meet any necessary transitional expenses, paid before taking land or restricting access;	Socio-economic impacts of a given program could be identified through the procedures and guidelines described in the 2013 Land Law and decree 47/2013/ND-CP. These documents laid out very detailed contents of compensation and resettlement plan (including inventory of losses, compensation, resettlement, relocation of public infrastructures, information	Compensation for lost assets is calculated at the price of transferring the assets in local markets or the cost of newly-built structures. Local authorities are responsible to identify compensation prices for different categories of assets. Independent land valuers can be used to determine land prices, which will be reviewed by the land appraisal board before official	The provision in 2013 Land Law on using independent land appraiser should be followed with appropriate M&E system of participating provinces.

Key Social Elements <sup>55</sup>	System Requirements	Key Findings	Recommendations
	disclosure and finalization of such plan).	approval by PPC.	
Provide supplemental livelihood improvement or restoration measures if taking of land causes loss of income-generating opportunity (e.g., loss of crop production or employment);	In principle, the 2013 Land Law required that resettlement condition of affected people must be better or at least equal to the original living condition and the resettlement area must be planned as part of the whole provincial plan with access to good infrastructure.  The proposed Program does not severely impact household's livelihood, so this element might not apply.	No significant gaps	
Restore or replace public infrastructure and community services that may be adversely affected by the Program;	The 2013 Land Law provided that affected technical and social infrastructures will be compensated as newly built ones in accordance with the standard of competent ministries.	No significant gaps	
Undertake free, prior, and informed consultations if the Indigenous Peoples are potentially	The Decree No. 05/2011/ND-CP of January 14 <sup>th</sup> 2011 on	Implementation of the regulations related to Ethnic	In addition to the enforcement of

Key Social Elements <sup>55</sup>	System Requirements	Key Findings	Recommendations
affected (positively or negatively), to determine whether there is broad community support for the Program activities;	activities related to ethnic minorities specified various supports to the maintenance of language, culture, customs and identities of these groups (article 3).	Minorities, information disclosure, information and social participation at the local level is not consistent with the policy (lack of accountability due to limited information flowing to communes).	existing law, MARD and participating provinces will develop guidelines to enhance people's participation, especially for Ethnic Minorities to ensure their meaningful participation and consultation in every step of the Program implementation. This should be included as an action in the Program Action Plan.
Ensure that the Indigenous Peoples can participate in devising opportunities to benefit from exploitation of customary resources or indigenous knowledge, the latter (indigenous knowledge) to include the consent of the Indigenous Peoples;	All projects affecting land, environment, life of Ethnic Minority communities, to perform information disclosure and consultations with representatives of the local authorities, affected people, ensuring that affected people will be resettled (where unavoidable) in a better condition and in a culturally appropriate manner (article 9).	Participation of ethnic minorities in decision making remains limited.	
Give attention to groups vulnerable to hardship or disadvantage, including as relevant the poor, the disabled, women and children, the elderly, or marginalized ethnic groups; and, if necessary, take special measures to promote equitable access to Program benefits;	This element is fully covered under current policies framework of Vietnam. This program itself also targets the poor and Ethnic Minority communes to enhance their	No significant gaps	Enforcement of existing legislation with appropriate M&E and reporting systems.

Key Social Elements <sup>55</sup>	System Requirements	Key Findings	Recommendations
	accessibility to the basic social services such as piped water. In addition, poor and Ethnic Minority people are also benefiting from various Program-funded programs such as: Program 134, 135; New Rural Development Program 2010-2020; Program for most difficulty districts (program 30a).		

Core Principle 6: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.			
Key elements	System Requirements	Key Findings	Recommendations
6.1 Considers conflict risks, including distributional equity and cultural sensitivities	N/A	N/A	N/A



## Annex 5: Environmental Considerations, Mitigation Measures for RWSS developments

**Table 5.1 Environmental Considerations during FS and detail design**

Phase	Content implementation	Monitoring method	Who and when to monitor
Siting	<p><b><u>Environmental Criteria for Site Selection</u></b></p> <p>Siting of the headwork, treatment unit, pipe trenches will avoid the followings, where possible:</p> <ul style="list-style-type: none"> <li>- high productivity crop land, particularly rice fields</li> <li>- trees cuttings</li> <li>- existing infrastructure such as drainage, power line, telephone cables, or damages to existing roads or irrigation canals</li> <li>- cultural, historical objects potentially affected, including graves, churches, temples, pagodas, sack trees, historical sites etc</li> <li>- Siting of WTP ancillary items will satisfy the followings, if possible: <ul style="list-style-type: none"> <li>- siting water intakes as far as possible from downstream of landfill, toilets, or wastewater discharge points</li> <li>- Siting the water intake point (distance from river bank, depth) taking into account pumping rate to minimise impacts on river bed/river bank</li> <li>- pumping station is located at least 200 m from the nearest building</li> <li>- siting concrete mixing plant as far as possible from noise-sensitive sites such as classrooms, clinics, offices, religion practices</li> <li>- Waste disposal sites, construction materials temporary loading sites, concrete mixing sites must be at least 50 m from any surface water source.</li> </ul> </li> </ul>	Check the maps, visit the sites, check meeting minutes, written agreements maintained by the Design Consultant	PPMU CPO
Engineering design	<p><b><i>Environmental Criteria incorporated into Engineering Design</i></b></p> <p>Construction sites and treatment units in general: Cost Estimation include the followings:</p> <ul style="list-style-type: none"> <li>-Include measure to protect water quality at source such as retaining walls to allow sediments to settle, or lid to cover headwork compartment to prevent soils, leaves etc. from falling into the compartment</li> <li>- Do not use harmful materials such as Fibrocement</li> <li>- Length of drainage pipes must be long enough to convey water to receiving body, not to cause stagnant water build</li> </ul>	Check draft and final versions of drawings, Bill of Quantities, Cost Estimation Tables	PPMU CPO

Phase	Content implementation	Monitoring method	Who and when to monitor
	<p>up near standpipe during operation phase</p> <ul style="list-style-type: none"> <li>- Planting trees included in cost table, the quantity aiming at one-to-one compensation to the trees chopped down during construction phase</li> <li>- Costs for reinstatement /compensation for the disturbed sites, objects and services including storage of top soils, levelling, compacting; rehabilitate roads, irrigation canals, drains; revegetation, tree plantings etc where applicable</li> <li>- Design slopes protection as necessary</li> </ul> <p><b><i>Specific environmental requirements for engineering design: the items listed below shall be included</i></b></p> <ul style="list-style-type: none"> <li>- Water Intake (surface water): signaling system to inform waterway traffic drivers</li> <li>- Water Treatment System <ul style="list-style-type: none"> <li>+ Fence, restriction, safety signboards</li> <li>+ Sedimentation basin and sludge drying beds are included for wastewater treatment</li> </ul> </li> <li>- Pumping Station <ul style="list-style-type: none"> <li>+ direction of the gates, doors and placement of pumping machines is optimised to minimise the level, and frequency of the noise reaching the nearest buildings</li> <li>+ noise barriers such as double layer doors or planting trees</li> </ul> </li> <li>- Chemical House <ul style="list-style-type: none"> <li>+ ventilation holes and exhaust fence</li> <li>+ hand washing / shower and sanitation facility</li> <li>+ auto-rescue system such as auto water dripping when chemical concentration in the air exceeding limits detected</li> <li>+ equipped with portable fire fighting equipment</li> <li>+ The tiles on the floor in the chemical house should not be slippery. The floor and the walls of the chemical house should be lined with materials that allow easy cleaning</li> </ul> </li> </ul>		
Bidding document preparation	<p>Specific environmental requirements for Cost Estimations and Bidding documents:</p> <ul style="list-style-type: none"> <li>- Relevant information to environmental impacts and mitigation measures during preparation and construction projects must be presented in the bids</li> </ul>	Check cost estimation and bidding document	CPO, PPMU
Operation	<p>Sludge from water treatment plant, if any, must not be reused for food tree planting as may contain heavy chemicals such as aluminium from water treatment chemical. Can only be used for filling the ground or making bricks etc.</p> <p>Households must clean up drains regularly, ensuring that</p>		

Phase	Content implementation	Monitoring method	Who and when to monitor
	there is no stagnant water surrounding the washing areas		

**Table 5.2 - Environmental Codes of Practice, Workers Codes of Conducts****Construction Phase**

Issues/Risks	Mitigation Measures
<b>Dust generation</b>	<ul style="list-style-type: none"> <li>The Contractor is responsible for compliance with relevant Vietnamese legislation with respect to ambient air quality.</li> <li>The Contractor shall ensure that the generation of dust is minimized and is not perceived as a nuisance by local residents and shall implement a dust control program to maintain a safe working environment and minimize disturbances for surrounding residential areas/dwellings.</li> <li>The Contractor shall implement dust suppression measures (e.g. use water spraying vehicles to water roads, covering of material stockpiles, etc.) as required.</li> <li>Material loads shall be suitably covered and secured during transportation to prevent the scattering of soil, sand, materials, or dust.</li> <li>Exposed soil and material stockpiles shall be protected against wind erosion and the location of stockpiles shall take into consideration the prevailing wind directions and locations of sensitive receptors.</li> </ul>
<b>Air pollution</b>	<ul style="list-style-type: none"> <li>All vehicles must comply with Vietnamese regulations controlling allowable emission limits of exhaust gases.</li> <li>Vehicles in Vietnam must undergo a regular emissions check and get certified named: <i>"Certificate of conformity from inspection of quality, technical safety and environmental protection"</i> following Decision No. 35/2005/QD-BGTVT;</li> <li>There should be no burning of waste or materials on site.</li> </ul>
<b>Impacts from noise and vibration</b>	<ul style="list-style-type: none"> <li>The contractor is responsible for compliance with the relevant Vietnamese legislation with respect to noise and vibration.</li> <li>All vehicles must have appropriate <i>"Certificate of conformity from inspection of quality, technical safety and environmental protection"</i> following Decision No. 35/2005/QD-BGTVT; to avoid exceeding noise emission from poorly maintained machines.</li> <li>When needed, measures to reduce noise to acceptable levels must be implemented and could include silencers, mufflers, acoustically dampened panels or placement of noisy machines in acoustically protected areas.</li> </ul>
<b>Water pollution</b>	<ul style="list-style-type: none"> <li>The Contractor must be responsible for compliance with the relevant Vietnamese legislation relevant to wastewater discharges into watercourses.</li> <li>Portable or constructed toilets must be provided on site for construction workers. Wastewater from toilets as well as kitchens, showers, sinks, etc. shall be discharged into a conservancy tank for removal from the site or discharged into municipal sewerage systems; there should be no direct discharges to any water body.</li> </ul>

Issues/Risks	Mitigation Measures
	<ul style="list-style-type: none"> <li>Wastewater over permissible values set by relevant Vietnam technical standards/regulations must be collected in a conservancy tank and removed from site by licensed waste collectors.</li> <li>Before construction, all necessary wastewater disposal permits/licenses and/or wastewater disposal contract have been obtained</li> <li>At completion of construction works, water collection tanks and septic tanks shall be covered and effectively sealed off.</li> </ul>
<b>Drainage and sedimentation control</b>	<ul style="list-style-type: none"> <li>The Contractor shall follow the detailed drainage design included in the construction plans, intended to prevent storm water from causing local flooding or scouring slopes and areas of unprotected soil resulting in heavy sediment loads affecting local watercourses.</li> <li>Ensure drainage system is always maintained cleared of mud and other obstructions.</li> <li>Areas of the site not disturbed by construction activities shall be maintained in their existing conditions.</li> <li>Earthworks, cuts, and fill slopes shall be properly maintained, in accordance with the construction specifications, including measures such as installation of drains, use of plant cover.</li> <li>To avoid sediment-laden runoff that could adversely impact watercourses, install sediment control structures where needed to slow or redirect runoff and trap sediment until vegetation is established. Sediment control structures could include windrows of logging slash, rock berms, sediment catchment basins, straw bales, storm drain inlet protection systems, or brush fences.</li> <li>Site de-watering and water diversions: In the case that construction activities require that work be carried out within the watercourse (e.g. culvert or bridge crossing construction, retaining wall construction, erosion protection works), the work area must be dewatered to provide for construction in dry conditions. The sediment laden water pumped from the work area must be discharged to an appropriate sediment control measure for treatment before re-release to the stream.</li> <li>Stream diversions or construction of cofferdams would require site-specific mitigation measures in the EMP.</li> </ul>
<b>Management of stockpiles, quarries, and borrow pits</b>	<ul style="list-style-type: none"> <li>Large scale borrow pits or stockpiles will need site-specific measures that go beyond those in these ECOPs.</li> <li>All locations to be used must be previously identified in the approved construction specifications. Sensitive sites such as scenic spots, areas of natural habitat, areas near sensitive receptors, or areas near water should be avoided.</li> <li>An open ditch shall be built around the stockpile site to intercept wastewater.</li> <li>Stockpile topsoil when first opening a borrow pit and use it later to restore the area to near natural conditions.</li> <li>If needed, disposal sites shall include a retaining wall.</li> <li>If the need for new sites arises during construction, they must be pre-approved by the Construction Engineer.</li> <li>If landowners are affected by use of their areas for stockpiles or borrow pits, they must be included in the project resettlement plan.</li> <li>If access roads are needed, they must have been considered in the environmental assessment.</li> </ul>
<b>Solid waste</b>	<ul style="list-style-type: none"> <li>Before construction, a solid waste control procedure (storage, provision of bins, site clean-up schedule, bin clean-out schedule, etc.) must be prepared by</li> </ul>

Issues/Risks	Mitigation Measures
	<p>Contractors and it must be carefully followed during construction activities.</p> <ul style="list-style-type: none"> <li>• Before construction, all necessary waste disposal permits or licenses must be obtained.</li> <li>• Measures shall be taken to reduce the potential for litter and negligent behaviour with regard to the disposal of all refuse. At all places of work, the Contractor shall provide litter bins, containers and refuse collection facilities.</li> <li>• Solid waste may be temporarily stored on site in a designated area approved by the Construction Supervision Consultant and relevant local authorities prior to collection and disposal through a licensed waste collector, for example, URENCO.</li> <li>• Waste storage containers shall be covered, tip-proof, weatherproof and scavenger proof.</li> <li>• No burning, on-site burying or dumping of solid waste shall occur.</li> <li>• Recyclable materials such as wooden plates for trench works, steel, scaffolding material, site holding, packaging material, etc. shall be collected and separated on-site from other waste sources for reuse, for use as fill, or for sale.</li> <li>• If not removed off site, solid waste or construction debris shall be disposed of only at sites identified and approved by the Construction Supervision Consultant and included in the solid waste plan. Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas, such as in areas of natural habitat or in watercourses.</li> </ul>
<b>Chemical or hazardous wastes</b>	<ul style="list-style-type: none"> <li>• Chemical waste of any kind shall be disposed of at an approved appropriate landfill site and in accordance with local legislative requirements. The Contractor shall obtain needed disposal certificates.</li> <li>• The removal of asbestos-containing materials or other toxic substances shall be performed and disposed of by specially trained and certified workers.</li> <li>• Used oil and grease shall be removed from site and sold to an approved used oil recycling company.</li> <li>• Used oil, lubricants, cleaning materials, etc. from the maintenance of vehicles and machinery shall be collected in holding tanks and removed from site by a specialized oil recycling company for disposal at an approved hazardous waste site.</li> <li>• Used oil or oil-contaminated materials that could potentially contain PCBs shall be securely stored to avoid any leakage or affecting workers. The local DONRE must be contacted for further guidance.</li> <li>• Unused or rejected tar or bituminous products shall be returned to the supplier's production plant.</li> <li>• Relevant agencies shall be promptly informed of any accidental spill or incident.</li> <li>• Store chemicals appropriately and with appropriate labelling</li> <li>• Appropriate communication and training programs should be put in place to prepare workers to recognize and respond to workplace chemical hazards</li> </ul> <p>Prepare and initiate a remedial action following any spill or incident. In this case, the contractor shall provide a report explaining the reasons for the spill or incident, remedial action taken, consequences/damage from the spill, and proposed corrective actions.</p>
<b>Management of small amounts</b>	<ul style="list-style-type: none"> <li>• Dredging plan should be established including time schedule, method statement to meet the requirements of traffic safety, public health and environmental sanitation. In order to ensure dredging that is consistent with</li> </ul>

Issues/Risks	Mitigation Measures
<b>of sludge</b>	<p>environmental regulations, key decision makers (local authority, DONRE, utility company, CSC, etc.) must be involved and concur in each key decision point in the process leading to preparation and implementation of a plan.</p> <ul style="list-style-type: none"> <li>• Characteristics of sludge/sediment should be determined by sampling and analysis if not already fully evaluated during the EIA. Sludge that is heavily contaminated would require measures that go beyond the scope of these ECOPs.</li> <li>• Ensure that dredged material management plans incorporate environmental considerations in the identification of short-term and long-term disposal alternatives, consider methods to reduce dredging, and maximize the beneficial use of dredged materials.</li> <li>• Dredging work should be conducted when water flow is high to allow the dredged materials can be separated into the sediment and the supernatant water (i.e., spoil) by settling.</li> <li>• Lixivate from dredged materials should not be allowed to enter watercourses without appropriate filtering or treatment.</li> <li>• Collected dredged materials have to be processed, as per Vietnamese regulations on waste collection, to ensure safe and environmentally secure transportation, storage, treatment and management</li> <li>• Those involved in handling of sludge should be specialized and have certification of sludge handling. Guidelines for certification of sludge handling is in the Circular No. 12/2011/TT-BTNMT on management of hazardous substance</li> <li>• Sanitary landfill site should meet technical requirements, based on level of potential contamination.</li> </ul>
<b>Vegetation Cover Management</b>	<ul style="list-style-type: none"> <li>• The Contractor shall prepare a Clearance, Revegetation and Restoration Management Plan for prior approval by the Construction Engineer, following relevant regulations. The Clearance Plan shall be approved by Construction Supervision Consultant and followed strictly by contractor. Areas to be cleared should be minimized as much as possible.</li> <li>• The Contractor shall remove topsoil from all areas where topsoil will be impacted on by rehabilitation activities, including temporary activities such as storage and stockpiling, etc.; the stripped topsoil shall be stockpiled in areas agreed with the Construction Supervision Consultant for later use in re-vegetation and shall be adequately protected.</li> <li>• The application of chemicals for vegetation clearing is not permitted.</li> <li>• Prohibit cutting of any tree unless explicitly authorized in the vegetation clearing plan.</li> <li>• When needed, erect temporary protective fencing to efficiently protect the preserved trees before commencement of any works within the site.</li> <li>• No area of potential importance as an ecological resource should be disturbed unless there is prior authorization from CMS. This could include areas of breeding or feeding of birds or animals, fish spawning areas, or any area that is protected as a green space.</li> <li>• The Contractor shall ensure that no hunting, trapping shooting, poisoning of fauna takes place.</li> </ul>
<b>Traffic Management</b>	<ul style="list-style-type: none"> <li>• Before construction, carry out consultations with local government and community and with traffic police.</li> <li>• Significant increases in number of vehicle trips must be covered in a</li> </ul>

Issues/Risks	Mitigation Measures
	<p>construction plan previously approved. Routing, especially of heavy vehicles, needs to take into account sensitive sites such as schools, hospitals, and markets.</p> <ul style="list-style-type: none"> <li>• Installation of lighting at night must be done if this is necessary to ensure safe traffic circulation.</li> <li>• Place signs around the construction areas to facilitate traffic movement, provide directions to various components of the works, and provide safety advice and warning.</li> <li>• Employing safe traffic control measures, including road/rivers/canal signs and flag persons to warn of dangerous conditions.</li> <li>• Avoid material transportation for construction during rush hour.</li> <li>• Passageways for pedestrians and vehicles within and outside construction areas should be segregated and provide for easy, safe, and appropriate access. Signpost shall be installed appropriately in both water-ways and roads where necessary.</li> </ul>
<b>Restoration of affected areas</b>	<ul style="list-style-type: none"> <li>• Cleared areas such as borrow pits no longer in use, disposal areas, site facilities, workers' camps, stockpiles areas, working platforms and any areas temporarily occupied during construction of the project works shall be restored using landscaping, adequate drainage and revegetation.</li> <li>• Start revegetation at the earliest opportunity. Appropriate local native species of vegetation shall be selected for the planting and restoration of the natural landforms.</li> <li>• Spoil heaps and excavated slopes shall be re-profiled to stable batters, and grassed to prevent erosion;</li> <li>• All affected areas shall be landscaped and any necessary remedial works shall be undertaken without delay, including green-spacing, roads, bridges and other existing works</li> <li>• Trees shall be planted at exposed land and on slopes to prevent or reduce land collapse and keep stability of slopes</li> <li>• Soil contaminated with chemicals or hazardous substances shall be removed and transported and buried in waste disposal areas.</li> <li>• Restore all damaged road and bridges caused by project activities</li> </ul>
<b>Worker and public Safety</b>	<ul style="list-style-type: none"> <li>• Contractor shall comply with all Vietnamese regulations regarding worker safety.</li> <li>• Prepare and implement action plan to cope with risk and emergency</li> <li>• Preparation of emergency aid service at construction site</li> <li>• Training workers on occupational safety regulations</li> <li>• If blasting is to be used, additional mitigation measures and safety precautions must be outlined in the EMP.</li> <li>• Ensure that ear pieces are provided to and used by workers who must use noisy machines such as piling, explosion, mixing, etc., for noise control and workers protection.</li> <li>• During demolition of existing infrastructure, workers and the general public must be protected from falling debris by measures such as chutes, traffic control, and use of restricted access zones.</li> <li>• Install fences, barriers, dangerous warning/prohibition site around the construction area which showing potential danger to public people</li> <li>• The contractor shall provide safety measures as installation of fences, barriers warning signs, lighting system against traffic accidents as well as other risk to</li> </ul>

Issues/Risks	Mitigation Measures
	<p>people and sensitive areas.</p> <ul style="list-style-type: none"> <li>If previous assessments indicate there could be unexploded ordnance (UXO), clearance must be done by qualified personnel and as per detailed plans approved by the Construction Engineer.</li> </ul>
<b>Chance Find Procedures</b>	<p>If the Contractor discovers archaeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:</p> <ul style="list-style-type: none"> <li>Stop the construction activities in the area of the chance find;</li> <li>Delineate the discovered site or area;</li> <li>Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the National Culture Administration take over;</li> <li>Notify the Project Environmental Officer who in turn will notify the responsible local authorities and the Ministry of Culture, Sports and Tourism immediately (within 24 hours or less);</li> <li>Responsible local authorities and the Ministry of Culture, Sports and Tourism would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of Ministry of Culture, Sports and Tourism. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;</li> <li>Decisions on how to handle the finding shall be taken by the responsible authorities and by Ministry of Culture, Sports and Tourism. This could include changes in the layout (such as when finding an irremovable remain of cultural or archaeological importance) conservation, preservation, restoration and salvage;</li> <li>Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and</li> <li>Construction works could resume only after permission is granted from the responsible local authorities or the Ministry of Culture, Sports and Tourism concerning safeguard of the heritage.</li> </ul>

### Worker Codes of Conduct

1. All workers and subcontractors shall abide by the laws and regulations of Vietnam.
2. Illegal substances, weapons and firearms shall be prohibited.
3. Pornographic material and gambling shall be prohibited.
4. Fighting (physical or verbal) shall be prohibited.
5. Workers shall not be allowed to hunt, fish or trade in wild animals.
6. No consumption of bush meat shall be allowed in camp.
7. No pets shall be allowed in camp.
8. Creating nuisances and disturbances in or near communities shall be prohibited.
9. Disrespecting local customs and traditions shall be prohibited.
10. Smoking shall be prohibited in the workplace.
11. Maintenance of appropriate standards of dress and personal hygiene shall be in effect.



12. Maintenance of appropriate hygiene standards in accommodation quarters shall be set in place.
13. Residing camp workforce visiting the local communities shall behave in a manner consistent with the Code of Conduct; and
14. Failure to comply with the Code of Conduct, or the rules, regulations, and procedures implemented at the construction camp will result in disciplinary actions.

## QCVN 01 : 2011/BYT - National technical regulation on Hygienic conditions for Latrines

## Abstracts

3.2. Hygienic latrines are those that allow isolation of human feces, prevention of untreated feces from being in contact with animals and insects, removal of disease organisms that present in feces, and do not cause bad smell or environmental pollution

3.11. Mixing materials are those that are used to cover, mix with feces for absorbing liquid and smell, increase porosity of the mixture which facilitate decomposition of organic matters, removal of disease-causing agents within feces. Mixing materials can be one of mixture of the followings: ash from fibre or rice husk burning, barks, leaves, fruit covers, residual food etc..

**II. Technical Regulations****1. DRY LATRINES****1.1. Underground type:****1.1.1. Siting and design:**

DO NOT build in areas frequently flooded; Must be at least 10 from the nearest domestic water source; the top must be at least 20 cm above the ground; do not let rainwater coming into the compartment; Floor and drain must be smooth and continuous, do not allow stagnant water, urine must be led to a separate compartment; has lid; Has roof and door to prevent rain water and for aesthetic reason; internal diameter of Ventilation pipe must be at least 90mm, installed at least 40 cm higher than the top of toilet building, screen is included to prevent insects and cover to protect from rainwater.

**1.1.2. Operation and Maintenance:**

Floor must be dry and clean, no bad smell, no insects and cockroach; do not allow animals disturb the feces; there is no mosquito larvae in urine container, feces are fully covered after each time used, paper must be placed inside the compartment or in a separate covered container. For off-site composting latrines, hygienic rules must be followed during the handling and transportation

**1.2. Above ground****1.1.1. Siting and design:**

- a) DO NOT build in areas frequently flooded;
- b) Must be at least 10 from the nearest domestic water source;
- c) do not let rainwater coming into the compartment;
- d) wall and bottom must be sealed properly, no leakage
- e) outlet must always be closed
- f) has lid;
- g) Has roof and door to prevent rain water and for aesthetic reason;
- h) internal diameter of Ventilation pipe must be at least 90mm, installed at least 40 cm higher than the top of toilet building, screen is included to prevent insects and cover to protect from rainwater.

**1.2.2. Operation and Maintenance:**

Floor must be dry and clean, no bad smell, no insects and cockroach; do not allow animals disturb the feces; there is no mosquito larvae in urine container, feces are fully covered after each time used, paper must be placed inside the compartment or in a separate covered container. For latrines having more than one compartment, the one being in use must be fully covered all the time, the composting compartments must be sealed; For off-site composting latrines, hygienic rules must be followed during the handling and transportation

## 2. FLUSING LATRINES

### 2.1. Septic tank toilets:

#### 2.1.1. Siting, design and construction:

Compartments must be stable, no crack/leakage/subsident; Lids/covers must be sealed and not cracks. Floor must be smooth, flat, must not be slippery. has close water lid; Has roof and door to prevent rain water and for aesthetic reason; internal diameter of Ventilation pipe must be at least 20mm, installed at least 40 cm higher than the top of toilet building; wastewater discharged from septic tank toilet must be led to drain or infiltration chamber, not overflow on the ground

#### 2.1.2. Operation and maintenance:

đ) Nước sát trùng không được đổ vào lỗ tiêu;

e) Phân bùn phải được lấy khi đầy; bảo đảm vệ sinh trong quá trình lấy, vận chuyển phân bùn.

Floor must be dry and clean, no bad smell, no insects and cockroach; there is enough water for flushing, there is no mosquito larvae in water containers; paper must be place inside the compartment or in a separate covered container. DO NOT flush disinfectants into the toilet; Sludges must be removed when it is full, hygienic rules must be followed during the handling and transportation of sludges.

### 2.2. Flushing and infiltration latrines:

#### 2.1.1. Siting, design and construction:

DO NOT build in areas frequently flooded; Must be at least 10 from the nearest domestic water source; Floor must be smooth, flat and not slippery, there must be a close water valve for the base, Has roof and door to prevent rain water and for aesthetic reason; internal diameter of Ventilation pipe must be at least 20mm, installed at least 40 cm higher than the top of toilet building, wastewater must not be overflow on the ground

#### 2.1.2. Operation and maintenance:

Floor must be dry and clean, no bad smell, no insects and cockroach; there is enough water for flushing, there is no mosquito larvae in water containers; paper must be place inside the compartment or in a separate covered container. Sludges must be removed when it is full, hygienic rules must be followed during the handling and transportation of sludges, If sludges are not taken out for continued usage of the toilet, the compartment must be sealed properly.

## Annex 6: Ethnic groups in the Northern Mountains and Central Highlands regions<sup>56</sup>

258. **Kinh:** The Vietnamese people or the Kinh people are an Asian ethnic group originating from present-day northern Vietnam and southern China. They are the majority ethnic group of Vietnam and are officially known as Kinh to distinguish them from other ethnic groups in Vietnam. Although geographically and linguistically labelled as Southeast Asians, long periods of Chinese domination and influence have placed the Vietnamese culturally closer to East Asians, or more specifically their immediate northern neighbours, the Southern Chinese and other tribes within the South China. The Kinh live in families that are generally more well balanced than other groups in terms of decision making between men and women. Households are small in size and have a low dependency ratio. Access to education is good amongst the Kinh group. In 2011, 55.7 percent of the Kinh group had access to a hygienic toilet and 89.8% had access to clean water, amongst the highest access levels of the ethnic groups.
259. **Tay:** The Tay Ethnic Group have been present in Vietnam for millennia, perhaps as early as 500BC. They are the second largest group after the Kinh. The Tay are farmers who have a long tradition of wet rice cultivation. They have settled in valleys in the North Eastern part of the country: Quang Ninh, Bac Giang, Lang Son, Cao Bang, Bac Can, Thai Nguyen, Ha Giang, Tuyen Quang, Lao Cai and Yen Bai. Their villages are characteristically large and crowded, and some contain hundreds of houses. The Tay practice ancestor worship and live in small patriarchal families with men as the key decision makers. Access to education amongst the Tay is good. In 2011, 21.4 percent of Tay households had access to a hygienic toilet and 56.3 percent of Tay households used safe water.
260. **Thai:** The Thai originated from inland Southeast Asia where their ancestors lived in ancient times. The Black Thai are concentrated in Son La and southern Lai Chau Provinces whilst the White Thai are found predominantly in northern Lai Chau and Lao Cai provinces. Since early in their history, the Thai have farmed using irrigation based wet rice cultivation. Like the Tay, the Thai live in small patriarchal families. They are amongst the top ten groups with the lowest dependency ratio. The proportion of households with access to a hygienic toilet was 13.1 percent in 2011 at which time 34.4 percent of Thai households had access to clean water.
261. **Muong:** The Muong are the fourth largest of Vietnam's 53 minority groups, with an estimated population of 1.3 million. The Muong people inhabit the mountainous region of northern Vietnam, concentrated in Hoa Binh, Thanh Hoa, Son La and Phu Tho Provinces. Small groups also inhabit the provinces of the Central Highlands. While the Muong are believed to be related to the Vietnamese, the Muong and the Tai have had a mutual influence on each other's culture, so today the Muong are ethnically and linguistically

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<sup>56</sup>Many sections in this annex were taken directly from *Mekong Development Research Institute, 54 Ethnic Groups: Why different, 2014*

close to the Vietnamese, but culturally and socially similar to the Tai. The Muong have relatively small household sizes and a low dependency ratio as compared to other groups. The Munong worship their ancestors. In 2011, 19.4 percent of Muong households were using a hygienic toilet.

262. **H'Mong:** The H'Mong are an Asian ethnic group from the mountainous regions of China, Vietnam, Laos, and Thailand. They live mainly in the Northern Mountains region in Vietnam. The H'Mong are also one of the sub-groups of the Miao ethnicity in southern China. The H'Mong live in self-governing village units and have strong community bonds. They practice ancestor worship. As a group they are characterised by a high dependency ratio and are among the least developed of the EM groups in terms of education and training. The H'Mong are lagging in access to sanitation and only 4.1 percent of H'Mong used hygienic toilets in 2011. Access to clean water is a critical problem with access decreasing from 12.8 percent in 2006 to 6.3 percent in 2011.
263. **Giarai:** Giarai language belongs to the Malayo-Polynesian language group (Austronesian language family). Giarai people now use an alphabet based on the Latin script. The Giarai mainly concentrate in Gia Lai province, the western Kontum province and the Northern of Dak Lak province. The Giarai were among the earliest inhabitants of Central Highland region. The Giarai are polytheism. They worship different kinds of spirits (Yang) such as: Spirit Protector of the house (Yang sang), Spirit of the village (Yang ala bon) and Spirit of Kings (Yang Po Tao). Village is the core organizational unit; each village has its self-governing system led by a council of the village old men (Phun po but). The society follows matrilineal regime. The Giarai are the largest upland ethnic group of the Central Highland. Giarai's household is characterized by large household size and high dependency ratio. It is among the ten ethnic groups with the highest dependency ratio (5.2 members on average). With regard to sanitation and healthcare, clean water has become more accessible for the Giarai people. In 2011, the proportion of households using clean water was 77.9 percent. However, the proportion of households using hygienic toilets remained low at around 6.2 percent in 2011. The proportion of Giarai's household having health insurance was quite high at 91.4 percent.
264. **Ede:** The Ede language belongs to the Malayo-Polynesian language group (Austronesian language family). Until 1923, they had their script based on the Latin system. The Ede primarily live in Dak Lak province in the south of Gia Lai and east of Phu Yen and Khanh Hoa provinces. The Ede people have long lived in the Central Highland region. The Ede practice many worshipping rituals to pray for good luck and health, and especially bumper crops. The most important festival is buffalo sacrifice ceremony. Ede society follows matrilineal regime. Village is a self-governing unit based on its own custom. The Ede is the 11<sup>th</sup> largest ethnic groups in Vietnam. Ede's household size decreased from 6.3 members in 1999 to 5.2 member in 2009. With regard to sanitation and health care, the Ede have seen obvious improvements in their access to clean water and hygienic toilets. The proportion of Ede households using clean water increased from 60.7 percent in 2006 to 92.5 percent in 2011 while that with hygienic toilets went up from 1.7 to 20.1 percent over

the period. On the other hand, with only 81.5 percent of people having health insurance, the Ede was ranked among ten groups with the lowest health insurance coverage.

265. **Ba Na:** Ba Na language belongs to the Mon-Khmer group of the Austro-Asiatic language family. The Ba Na do not have a writing system. The Ba Na mainly live in the provinces of Gia Lai and Kon Tum and in the Western parts of Binh Dinh and Phu Yen provinces. The Ba Na have been long-term inhabitants of Truong Son. The Ba Na venerates the spirits. There are many rituals related to agriculture. Rice spirit is highly respected. The Catholicism and Protestantism influence as part of the Ba Na who live along the national highway. Village is a self-governing unit. There are still some remains of matrilineal regime. Social classes in the past included the rich, the poor and slave. The Ba Na was still among the 15 poorest groups in Vietnam. The proportion of the Ba Na households using clean water went up from 40.7 percent in 2006 to 56.5 percent in 2011. The proportion of Ba Na households using hygienic toilets was still modest at 6.6 percent. Improvement in access to clean water and hygienic toilets can be witnessed as the general trend around the country but the progress recorded for Ba Na was slower than national level.

266. **Xo Dang:** The language of the Xo Dang belongs to the Mon-Khmer group, with similarities with the language of H're, Bana, and Gie Trieng. The script of the Xo Dang uses Latin letters and has just been established for a few decades. The Xo Dang concentrate in Kon Tum and the bordering areas of Kon Tum with Quang Nam and Quang Ngai. They also live in scattered groups in the middle of Dak Lak and Quang Nam. The Xo Dang have long lived in the area of the Annamite Range and Central Highland. The Xo Dang believe in supernatural forces. Genies are called Kiask, Kia, Ong, Ba or sometime Yang. Important genies are the Thunder God, Sun God, Mountain God, Rice God and Water God. There are a lot of rites in living and farming activities to worship genies for happiness, bumper crops or safety. The village of the Xo Dang is self-managed by an old chief. The territory of the village belongs to all of its members. Community relationships are strongly emphasized. The proportion of households using clean water was 27.4 percent in 2011 and the proportion of households using hygiene toilets was 4.4 percent. On the health contrary, the health insurance coverage of the Xo Dang was quite large with the proportion of people having health insurance reaching 96.6 percent.

267. **H're:** The language of the H're belongs to the Mon-Khmer group. The H're reside mainly in Quang Ngai and scatter in the bordering area of Quang Ngai with Kon Tum and Binh Dinh. A small group of the H're can also be found in Dak Lak. The H're were among the earliest inhabitants in the area of the Annamite Range and Central Highlands. The H're have a number of religion rites and taboos, originated from the thoughts that everything has its own spirit and humans are controlled by supernatural forces. Village communities only organize the rites of worship to pray for security and avoid diseases. In village of the H're, the village head has strong reputation and significant influence. The H're had relatively good access to clean water but their access to sanitation remains poor. In 2011, the proportion of households using clean water was 58.8 percent, recording a growth of

13.9 percent points compared to that of 2006. However, the proportion of households using hygienic toilets was just 4.7 percent.

268. **M'nong:** The language of the M'nong belongs to the Mon-Khmer group. The M'nong concentrate in Dak Nong and the neighboring areas of Dak Nong with Dak Lak, Lam Dong and Binh Phuoc. They also live in scattered groups in Quang Nam. The M'nong have lived in concentration for long in the middle of the Central Highlands. The M'nong believe in the existence of a number of genies. The most important genie is the Mother Rice. The village of the M'nong is called Bon, the hamlet is called Uon. The village head is called Rnut of Kroanh bon. The society of M'nong is managed by customs. The characteristics of the matriarchal system remain strong in all social relationship. The M'nong had made encouraging progress with improved access to water supply and sanitation. By 2011, the proportion of households using clean water rose dramatically to 81.4 percent. the proportion of households using hygienic toilet accelerated to 18.6 percent.

**Annex 7: Table showing the social impact of water supply investments in the Red River Delta under the Result-based Rural Water Supply and Sanitation program.**

Province	No of Investments	Acquired Land (m <sup>2</sup> )	No of Ahs*	AHs losing agricultural land	AHs losing residential land (or other land)	Losing more than 30% of agricultural land	Relocated Household	Vulnerable group
Bac Ninh	07	43,978	58	57	01	None	None	None
Ha Nam	10	111,980	256	257	248	None	None	None
Ha Noi	07	60,415	46	29	19	None	None	None
Hung Yen	03	12,327	None	None	None	None	None	None
Phu Tho	02	29,014	56	27	26	None	None	None
Quang Ninh	04	33,104	35	33	2	2	None	2
Thanh Hoa	03	75,958	81	65	02	None	None	None
Vinh Phuc	02	8,329	12	10	25 <sup>57</sup>	None	None	None

\*AH = Affected households





### Annex 8: Baseline data on access to sanitation and water supply in the 19 provinces of the CH and NM

Province	Total No. Communes	No. Clinics	No. Schools	No. Households without sanitation	Population needing new water supply	Population needing rehabilitated water supply <sup>1</sup>	Clinics without hygienic sanitation <sup>2</sup>	Clinics without water supply <sup>3</sup>	Schools without hygienic sanitation <sup>5</sup>	Schools without water supply <sup>4</sup>
Dak Nong	61	61	183	14,082	90,176	703	40	9	151	151
Kon Tum	81	81	243	11,207	94,332	1,030	53	12	119	119
Lai Chau	96	108	427	28,500	100,983	47,712	70	16	134	134
Bac Can	112	122	356	66,428	8,450	48,337	79	18	30	30
Dien Bien	116	99	405	47,945	114,134	57,282	64	15	53	53
Tuyen Quang	129	129	425	21,421	180,092	89,943	84	19	79	79
Lao Cai	143	147	1,649	35,725	85,680	82,131	96	22	745	745
Dak Lak	152	152	748	35,343	222,553	209,318	99	23	107	107
Yen Bai	159	159	464	4,113	128,599	94,728	103	24	25	25
Ha Giang	177	207	623	77,904	254,053	90,437	135	31	132	132
Cao Bang	177	199	653	28,945	83,007	80,591	129	30	335	335
Gia Lai	186	186	1,550	77,858	166,840	155,341	121	28	771	771
Son La	188	178	1,559	39,279	211,292	114,642	116	27	757	757
Hoa Binh	191	191	573	10,017	182,252	122,880	124	29	458	280
Lang Son	207	207	628	32,072	112,139	90,966	135	31	213	213
Lam Dong	207	207	621	25,862	160,744	2,722	135	31	497	304
Thai Nguyen	229	147	571	17,716	175,258	129,250	96	22	371	280
Bac Giang	229	223	1,008	13,120	160,559	246,416	145	33	39	39
Phu Tho	263	260	913	15,315	169,870	198,377	17	17	101	101

Where data is not available the following assumptions are made: <sup>1</sup>19% need rehabilitated water supply, <sup>2</sup>65% do not have hygienic sanitation, <sup>3</sup>15% do not have access to water supply, <sup>4</sup>49% do not have access to water. <sup>5</sup>Satellite schools are excluded

**Annex 9 – Facilities observed during site visits**  
(existing structures, not necessarily under NTP3)

 <p>Headwork of a Community-based rural water supply using groundwater</p>	<p>Handwashing area in a school</p> 
 	
<p>Shallow and deep groundwater wells. Proper ground sealing is important to prevent groundwater pollution caused by polluted surface water. Safety related to electrical wires would also be considered during operation</p>	
	
<p>Drainage surrounding houses should be considered when households have better access to clean water. Drains should be best covered, or cleaned up regularly to prevent mosquito breeding and collection of other disease-transferred agents</p>	
	
	

Poor toilet design developed by household, least pollution control	Dry latrine with simple building structure made of locally available materials	Permanent toilet building within the boundary of a households but without proper roof
Handling of feces pose health risks, awareness raising should cover protective cloths and bodywash after handling		
		
IEC materials placed at clinics: dengue fever prevention, hygiene behaviors and house cleaning to prevent diseases		