IOSR Journal Of Humanities And Social Science (IOSR-JHSS)
Volume 24, Issue 3, Ser. 8 (March. 2019) 49-58
e-ISSN: 2279-0837, p-ISSN: 2279-0845.
www.iosrjournals.org

Evaluating And Proposing Solutions to Promote the Implementation of Environmental Criteria in New Rural Construction of Some Communes in Can Duoc District, Long an Province

Nguyen Vinh Quy[1], Nguyễn Thị Thu Hiền[2]
[1]*Nong Lam University – HCMC – Viet nam*
[2]*Jiahsin Co., Ltd., Long An Province*

ABSTRACT: Developing new rural is the one of the important goals defined in Resolution No.26 ND/TW dated 5 August 2008 of the 7 th Conference of the Party Central Committee of Viet Nam. Folowing the Party's guidelines, the movement of the new rural construction has been lively in all localities across the country and Can Duoc district – Long An province is not exceptional. In fact, the new rural construction in Can Duoc district has got many achievements and 15 of 17 communes in the district have met environmental criteria as specified in new rural program of the Viet nam government. Anh, Long Dinh and Long Hoa are the two communes that have not yet met the requirements regarding environmental criteria. Therefore, the research: "Evaluating and proposing solutions to promote the implementation of environmental criteria in new rural construction in some communes of Can Duoc district, Long An province" has been implemented. The research results showed that these two communes have faced many difficulties in implementation of environmental criteria such as: using hygienic clean water according to national standards; environmental treatment in livestock of households and enterprises; and awareness of people in rural environment protection, and the implementation of environmental criteria related to the new rural construction in Long Hoa and Long Dinh communes could only be performed if the solutions including: social – economic, legislative – policy, management administration and propaganda – education would be applied with the help of political systems of all levels in the province.
Keyword: *Environmental criteria, new rural, construction, Can Duoc distict*

Date of Submission: 11-03-2019 Date of acceptance: 28-03-2019

I. INTRODUCTION

The new rural construction is an important goal in the policy of the Communist Party of Vietnam on agriculture, farmers and rural areas, as defined in Resolution No.26 ND/TW dated 5 August 2008 of the 7th Conference of the Party Central Committee of Viet nam. The new rural construction requires: socio-economic structure is step by step modernising; economic structure and forms of production organization is rational; linking agriculture with rapid development of industry and services, linking rural and urban development under planning; rural society is democratic, stable, rich in national cultural identity; and protecting ecological and social environment. Following the Party's guidelines, movement of the new rural construction has been lively in all localities across the country in general and in Can Duoc district, Long An province in particular. As a result, rural face in the Can Duoc district has been innovative, the movement has created a strong change in people's awareness and consciousness. However, besides the achievements, the new rural construction of the district has been facing many difficulties and challenges that affect the progress of achieving the target of the new rural construction program in accordance with the provincial plan. In the set of new rural criteria, the environmental criteria is most difficult criteria to be achieved.

According to People's Committee of Long An Province, until the end of 2017, there have been 15 of 17 communes and towns in Can Duoc district achieved environmental criteria, the rest two communes: Long Hoa and Long Dinh, still face many difficulties and reveal many weaknesses in implementing environmental criteria related to: using hygienic clean water according to national standards; environmental treatment in livestock of households and enterprises; and awareness of people in rural environment protection. Therefore, the topic: "Evaluating and proposing solutions to promote the implementation of environmental criteria in new rural construction in some communes of Can Duoc district, Long An province" is selected and this is also the main reason for the research implementation.

II. LITERATURE REVIEW

2.1. Overview of rurality and new rural model

Concept of rurality or rural areas is conceived differently in each country because of different socio-economic conditions and natural conditions in the country. So far, there has not been a commonly accepted concept of rural areas or rurality. Traditionally, rurality is a part of a country in which most of the population is farmers and production is mainly agricultural, social – economic relations are mainly based on bloodline as well as family lineage, and encapsulated in villages of bamboo with 'banyan trees and wells of water'.

Phrase 'New rurality' is new concept not only in Vietnam but also in many countries over the world. Based on the existing legal documents of Vietnam, the new rural model is the overall characteristics and structures that form a type of rural organization according to new criteria, meeting the new requirements set for rural areas. The new rural model must meet the development requirements: there are innovations in organization, operation and environmental landscape; achieving the highest efficiency in all economic, political, cultural and social aspects; more advanced than the old model; contains common characteristics, which can be popularized and applied across the country.

In order to have basics for new rural development, the Prime Minister of Viet Nam signed Decision No. 491/ND-CP, dated April 16, 2009, promulgating set of the National Criteria for new rural areas, the set includes 19 criteria, generalized into 5 groups of content: (1) planning; (2) socio-economic infrastructure; (3) economic and production organization; (4) culture - society - environment; (5) political system.

2.2. Overview of environmental criteria in Vietnam's new rural construction program

2.2.1. Concept of criteria and environmental criteria

Despite the word 'Criterion' is quite common in literature and spoken languge at present time. However, understanding meaning of this word is depending on situation as well as subjects used. The word 'Criteria' in this research is the specification of the standard by which something can be judged or decided. And, environmental criteria are standards of physical, chemical or biological, including social, aesthetic, etc. components that define a given quality of an environment.

2.2.2. Contents of environmental criteria in Vietnam's new rural construction program

Environment is the 17th criterion in 19 criteria for new rural construction and it has given out with the goal of protecting the ecological environment in rural areas, helping people improve the quality of life. However, the environment is also one of the criteria facing many difficulties in the implementation process regarding new rural construction.

October 17, 2016, the Prime Minister of Viet nam issued Decision No. 1980/QD-TTg on promulgating the National Criteria for New Rural Communes for the period of 2016-2020, these criteria are to adjust the set of criteria issued according to Decision No. 491/QD-TTg dated April 16, 2009 of the Prime Minister. The set of criteria for new rural communes has been issued with many adjustments compared to the set of criteria applied in the previous period including criteria applied to the Mekong Delta, in which environmental criteria have increased (from 5 to 8 indicators) with many new contents, as follows:

Table 2.1: Environmental criteria in the set of national criteria for new rural construction

No.	Name of criteria	Content of the criteria	General criteria	Applied to the Mekong Delta
17	Environment and food safety	17.1. Percentage of households using clean and hygienic clean water as prescribed	85%	70%
		17.2. Proportion of production - business, aquaculture and trade village establishments ensuring regulations on environmental protection.	Met the criterion	Met the criterion
		17.3. Building green landscapes - clean - beautiful and safe	Met the criterion	Met the criterion
		17.4. Burial in accordance with regulations and planning	Met the criterion	Met the criterion
		17.5. Solid waste in the area and waste water from concentrated residential areas and production - business establishments are collected and treated according to regulations.	Met the criterion	Met the criterion
		17.6. Percentage of households with hygienic latrines, bathrooms, water tanks ensuring 3 clean ones	≥85%	≥70%
		17.7. Percentage of livestock households having		

		breeding facilities to ensure environmental hygiene	100%	≥70%
		17.8. Proportion of households and food production-business establishments comply with regulations on food safety assurance.	100%	100%

Source: People's Committee of Long An Province (2016)

III. RESEARCH CONTENT AND METHODS

3.1. Aims and research contents

The research is aimed at: evaluating the current state of the environment in the studied area based on the 17th criterion stipulated in the set of national criteria regarding new rural construction in Viet nam; assessing advantages and disadvantages, opportunities and challenges related to the implementation of environmental criteria in the studied area; and thenceforward proposing solutions for promoting the implementation of contents of the 17th criterion in the area.

In order to achieve the aims given out, contents of the research which have been implemented during the research process included:

- Evaluating current status of implementing the environmental criteria in the studied area: the local current situation of clean water use and protection; the status of production and business establishments in the area; activities causing environmental degradation and the activities to develop green - clean - beautiful environment; the reality of cemetery planning in the studied area; and status of activities collecting and treating waste.
- Analysing and evaluating advantages, disadvantages, opportunities and challenges in the process of implementing environmental criteria in the studied area.
- Proposing solutions to accelerate the implementation of environmental criteria related to the new rural construction in Long Hoa and Long Dinh communes. The solutions proposed relate to: management policy; communication/propaganda – education; support mechanism including economy; and technical methods to protect the environment.

3.2. Research methods

3.2.1. Process and tasks taken during the research implementation

In order to resolve the contents mentioned above and achieve the objectives which have been set out, the research implementation has used various research methods and been taken in 4 communes: Long Hoa, Long Dinh, Long Cang and Long Son. The research implementation process includes studying documents domestically and internationally published and secondary data collection; taking field works in order to have raw data; all data collected are have been analysed and assessed; and based on the results of the assessment, some appropriate solutions have been proposed. The process and tasks taken during the research implementation are illustrated in the following figure.

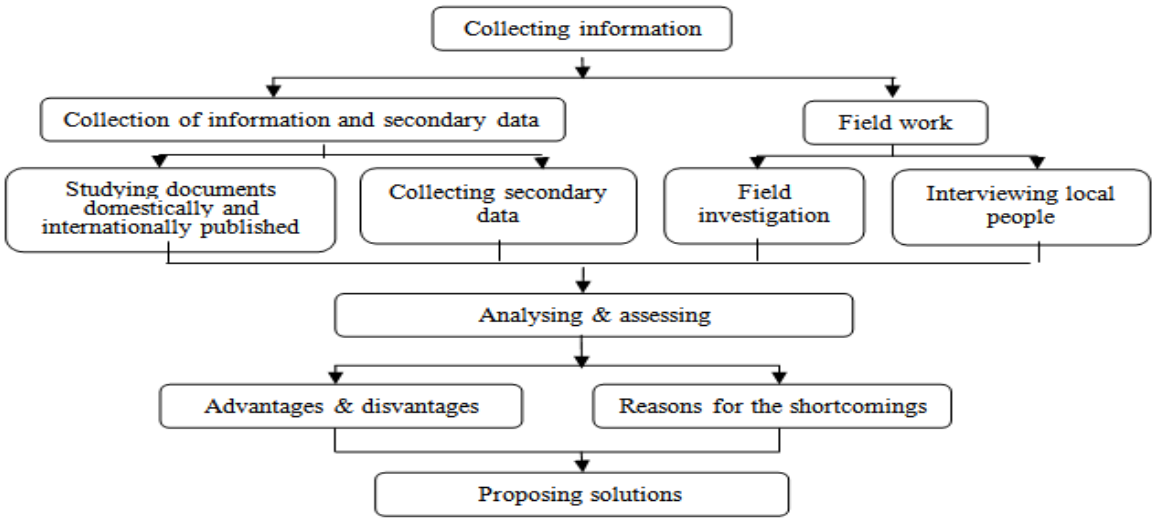

Figure 2.1: The process and tasks taken in the research implementation

3.2.2. Methods used in the research process

The methods used in the research implementation include: collecting secondary information through studying existed documents related to the research topic; collecting raw data through field investigation and

interviewing local people (households)/stakeholders, the interview has been performed by face – to – face dialogue or filling prepared questionaires, number of the housholds, which were selected to conduct survey, have been calculated by the the formula of Yamane (1973), as follows: $n = N * (1 + Ne^2)^{-1}$. As total number of households in each commune among the 4 communes surveyed varies from 2,100 to 2,800 households, level of error selected is 10%, so the number of households selected for the survey would be 383 (n = 383). The Delphi method and method of SWOT Matrix have also been used in the evalution and as well as a basic for proposing measures to accelerate the implementation of environmental criteria related to the new rural construction in Long Hoa and Long Dinh communes.

IV. RESULTS AND DISCUSSION

4.1 Generalisation of 4 communes investigated and surveyed in the studied area

All communes which have been chosen as area for investigating and survey are in a favorable position with important roads and the natural as well as socio-economic conditions of these four communes are similar. Specific of natural and cocial – economic conditions of these 4 communes is as follow:

- ***Climate and hydrology***

Climate of the area is tropical monsoon near equator, there are 02 distinct rainy and sunny seasons: avarage of sunny hours is from 5 to 9 hours per day; thermal mode is high and stable with average temperature between months from $25^0C – 29^0C$; radiation amount is abundant, averaging from 10-14 $kcal.cm^3$/month; air humidity is 3 - 6% higher than other places in the region, the lowest humidity is in September with 83%, the driest is in April with 74%; average number of rainy days is 95 days/year; and the evaporation is relatively low, averaging 120 mm/ month (the highest in April is 173 mm, the lowest in September is 83 mm).

The studied area is located in the system of intertwined rivers and lakes with relatively high flow density. The whole river is affected by irregular semi-diurnal regime with 2 times a day appear up water and 2 times a day water down. The general amplitude of tidal oscillation is quite large with tending to decrease gradually from the river mouth upstream.

- ***Land resources and land use structures***

Total natural area of the 4 communes investigated in the studied region is about 4,094.01 ha with 3 types of land use: agricultural land is about 2,764.84 ha; non- agricultural land is about 860,15 ha; and the rest is unused land and land for rural residency.

- ***Population and economic structure.***

Population of the studied area is about 21,595 people, where: Long Hoa commune – 6,800 people; Long Dinh commune – 4,600 people; Long Cang – 4,695 people; and Long Son commune – 5,500 people. Agriculture is main activity in the economic structure of the region and gross domestic product per person – year is quite low with about only 2,000 USD. Specific of economic structure and gross domestic production in the studied region is presented in the table 4.1 below**.**

Table 4.1: Economic structure anh GDP in the 4 commune studied

Parameters	Commune			
	Long Hoa	Long Dinh	Long Cang	Long Son
✓ Economic structure: (%)				
- Agriculture	70.0	26.7	22.6	70.0
- Trade - service	20.0	53.3	15.2	28.0
- Industry and handicraft	10.0	20.0	62.2	2.0
✓ GDP/person - year (Million VND/person/year)*	40.0	38.0	45.0	42.0

Note: * - Exchange rate: 22,000 VND = 01 USD

4.2 Curren status of implementing the environmental criteria in the studied area

4.2.1 Water resource and using water in the area

In the research area people have got water for living from such sources as: rainy water, public water supply system, dug wells/borehole and surface water (creek, river, pond,..). The research results regarding the status of water use in the area are presented in the following table**..**

Table 4.2: Water sources used by local people for domestic purpose in the studied area

No.	Water sources used by local people	Long Hoa commune	Long Dinh commune	Long Cang commune	Long Son commune
		Ratio of water soures used by the local people (%)			
1	Public water supply system	41.3	45.6	87.1	70.8

2	Rainy water	43.2	31.1	4.3	12.6
3	Water wells	13.5	6.8	6.5	7.8
4	Other	0	16.5	2.1	8.8
	Total	100	100	100	100

From the data presented in the table above, it can be seen that the ratio of water sources used is different in the 4 communes studied. Most of people in the research region use water supplied by public system, especially in the Long Cang commune it reached to 87,1%. Among the 4 communes studied, the ratio of people who use surface water: creek, river or pond is bigest in Long Dinh commune and the number of households using water from surface water in Long Hoa commune is zero.

In order to assess quality of water used for domestic purposes in the studied area, some water samples have been taken for analysis, the water samples were taken from water wells of households in the communes: Long Dinh, Long Hoa, Long Cang and Long Son, with one sample in each commune. The water sample was taken by random simple sampling method and the codes of the samples are: S-1 (water sample taken from well in Long Hoa); S-2 (water sample taken from well in Long Dinh); S-3 (water sample taken from well in Long Cang; and S-4 (water sample taken from well in Long Son). Parameters of the samples analysed are TDS, pH, Permanganate index, Hardness as $CaCO_3$, Clorua, Amoni, Nitrit and Nitrat; the analysed results of the samples are presented in table 4.3 below

Table 4.3: Quality of water used for domestic purpose in the studied area

No	Parameters	Unit	Results analysed				Reg. 09:2015/Monre
			S-1	S-2	S-3	S-4	
1	pH	-	6.862	6.38	6.213	7.025	5,5 – 8,5
2	Permanganate index	mg/l	2.35	3.64	2.14	2.05	4
3	TDS	mg/l	726.23	701.35	203.44	701.47	1500
4	Hardness (as $CaCO_3$)	mg/l	134.125	306.98	132.01	79.21	500
5	Clorua	mg/l	48.978	202.33	214.08	47.067	250
6	Amoni	mg/l	0.145	1.58	0.017	0.025	1
7	Nitrit (NO_2^-)	mg/l	0.276	1.426	0.029	0.031	1
8	Nitrat (NO_3^-)	mg/l	3.34	13.625	4.206	4.035	15

Based on the results presented in the table 4.3 above, it could be assessed that quality of the water is not the same in all 4 communes studied, however, index of all parameters are still under the limits compared with existing regulation of Viet Nam.

3.2.2. Criterion of production and business establishments meeting environmental standards

Based on the data gained from the research implementation, there are about 209 bussiness establishments and farms in the studied area and about 177 the establishments have well done environmental protection and met environmental standards. Detail of number and ratio of the bussiness establishments and farms which have well done environmental protection in the studied area is presented in table 4.4.

Table 4.4. Number of business establishments and farms in the studied area

No.	Name of communes	Total of establishments/farms in commune	Number of establishments/farms meeting environmental standard	Ratio (%)
1	Long Hoa	45	36	80
2	Long Dinh	91	75	82,42
3	Long Cang	63	56	88,89
4	Long Son	10	10	100

4.2.3. Criterion of non-activities affecting environment and developing green – clean - beautiful environment

One of the requirements in the 17th criterion stipulated in the set of national criteria regarding new rural construction in Viet nam is non-activities affecting the environment. However, results of the research implementation showed that in the studied area many activities are not friendly or even harmful to the environment. The activities which are harmful to the environment in the communes studied include: using herbicides on ditches and roads; discharging domestic wastewater directly into gardens, rivers and ditches; discharging livestock waste water directly into gardens, rivers and ditches. Detail of ratio of households and activities reducing quality of the environment in the four studied communes is shown in table 4.5

Table 4.5: Ratio of households having activities harmful to the environment

No.	Activities	Ratio of households having activities harmful to the environment (%)			
		Long Hoa	Long Dinh	Long Cang	Long Son
01	Using herbicides on ditches and roads	15.6	18.6	0	3.1
02	Discharging domestic wastewater directly into gardens, rivers and ditches	49.0	32.0	28.0	22.7
03	Discharging livestock waste water directly into gardens, rivers and ditches	65.6	60.8	6.5	0
04	Using 100% chemical fertilisers	66.7	70.7	11.8	5.4

It can be seen from the data presented in the table 4.5 that the ratio of households having activities harmful to the environment is quite high, especially in Long Hoa and Long Dinh communes. However, people in Long Son do not directly discharge livestock waste into gardens and rivers; in the Long Cang commune, people also do not use herbices on ditches and roads.

4.2.4. Criterion of cemeteries and graveyards

Currently, there are currently 15 cemeteries and graveyards in the 04 communes as follow: in Long Hoa – 02; In Long Dinh – 04; in Long cang – 04; and in Long Son – 05. All graveyards in Long Cang and Long Son are built according to planning, the remaining 06 cemeteries in Long Hoa and Long Dinh have not been built as planning.

4.2.5. Criterion of waste and wastewater collected and treated according to regulations

- Solid waste and collection of solid wastes: According the data and information gained from implementation of the research, solid waste in the 4 studied communes is quite large with amount of 36.4 ton/day and it is estimated that the amount of solid waste in these communes would increase on average about 7%/year. So, the volume of solid waste needed to collect in the region is very large, but the ratio of solid waste collected in the region is quite modest, especially in Long Hoa and Long Dinh communes. Detail of ratio of solid waste collected and the ways of disposing solid waste by local people in the studied region are illustrated in the table 4.6.

Table 4.6: Kind and ratio of solid waste treated in the studied area

Kind of solid waste	Treated methods	The ratio of solid waste treated in the communes (%)			
		Long Hoa	Long Dinh	Long Cang	Long Son
Domestic solid waste	Disposing to garden	54.17	23.71	6.38	5.15
	Disposing to ditches/roads	10.42	20.62	2.13	2.06
	Collecting and centralising in a place	14.58	21.65	80.85	83.51
	Burning and dumping	20.83	34.02	9.57	9.28
Solid waste from cultivation	Disposing to garden	0	0	61,76	51,35
	Disposing to ditches/roads	33.33	29.27	20.59	24.32
	Collecting and centralising in a place	66.67	70.73	17.65	24.32
	Burning and dumping	0	0	0	0
Solid waste from breeding	Disposing to garden	18.18	44.44	50.00	50.00
	Disposing to ditches/roads	18.18	0	14.29	25.00
	Collecting and centralising in a place	27.7	11.11	0	8.33
	Burning and dumping	36.36	44.44	35.71	16.67

It can be seen from the results presented in the table 4.6 that the lagest ratio of solid waste collected in the studied area is domestic and it is in Long Cang and Long Son communes. In all of the four commune studied there were no burning and dumping activities for solid waste from cultivation.

- ***Wastewater and wastewater treatment:*** Results getting from the research implementation showed that wastewater in the region is mainly domestic and wastewater generated from breeding with total volume of about

3,444 m^3/day, it is forecasted the amount of wastewater in the region would be up to 4,822 m^3/day. Currently, most of the wastewater generated in the region is treated by such ways as: through septic tanks; to leave self-absorbent; and through biogas system. The ways and ratio of wastewater treated in the four studied communes are shown in the table 4.7.

Table 4.7: The ways and ratio of wastewater treated in the studied area

Kind of wastewater	Treated methods	The ratio of wastewater treated in the communes (%)			
		Long Hoa	Long Dinh	Long Cang	Long Son
Gray wastewater	Self-absorbent	68.75	55.67	24.73	14.43
	Directly discharging in to ditches and rivers	19.79	37.11	15.05	20.62
	Discharging into public dranage	11.46	7.22	60.22	64.95
Black wastewater	Self-absorbent	32.29	24.74	11.83	4.12
	Through septic tanks	35.42	41.24	78.9	83.51
	Directly discharging in to ditches and rivers	20.83	27.84	9.68	12.37
	Discharging into public dranage	11.46	6.19	0	0
Wastewater from breeding	Through septic tanks	0	11.11	50.00	75.00
	Directly discharging in to ditches and rivers	63.64	33.33	7.14	0
	Storage for reusing	27.27	44.44	21.43	25.00
	Discharging into public dranage and others	9.09	11.11	21.43	0

4.3 People's awareness on environmental protection in the research area

In order to have data and information regarding knowledge and willingness of the local people as well as their assessment on environmental communication activities of the responsible agencies in the studied region, the research had taken surveying and interviewing the local people by direct interview and delivering questionaires to fulfil. The results gained from the implementation are as presented in the table 4.8.

Table 4.8: Knowledge and willingness of the people in the 4 communes studied

No.	Information required	Ratio (%)			
		Long Hoa	Long Dinh	Long Cang	Long Son
1.	***Concerned about environmental issues***				
1.1.	Absolutedly not interested	22.92	40.21	11.83	6.19
1.2.	Sometime interested	22.92	34.02	41.94	38.14
1.3	Regularly interested	22.92	25.77	46.24	55.67
2.	***Sources of information gained***				
2.1.	Books, radio and television	56.25	68.04	59.14	64.95
2.2.	Management officials and agencies	7.29	8.25	6.45	8.25
2.3	Community around	31.25	23.71	34.41	24.74
2.4	Local media	5.21	0	0	0
3.	***Assessment of local people on regularity of environmental communication***				
3.1.	Not yet	15.63	27.84	0	2.06
3.2.	Sometimes	73.96	55.67	36.56	30.93
3.3.	Regularity	10.42	16.49	63.44	67.01

Beside the data and information presented in the table above, the results gained from the research process had also exposed that the reasons that make the implementation of environmental criteria regarding new rural construction in the region less effective are: people's awareness in environmental protection is not high; waste collection and treatment is not thorough; State management agencies have not fully played their roles in environmental work and so on .

4.4 General assessment of the status of implementing environmental criteria in the studied region.

Based on the results gained from the research process, there are such assessments of the status of the implementation of environmental citeria in the studied area as:

- Lack of funding for construction of environmental protection facilities such as lanfill, wastewater treatment system.
- The regime of attracting resources from other economic sectors for the construction of new rural areas in general and 17th criterion in particular has not attracted the enterprises to invest in the environmental protection field.
- The people's awareness on observing the environmental protection law is not high as expected.
- Some customs and habits of the local people also make environmental protection less effective.
- Management capacity and professional qualifications of grassroots officials in the region do not sastify the requirements to the social – economic development in general and in environmental protection in particular.
- Lack of consistency in environmental management as well as environmental communication activities in the area is poor in content and less in quantity.

Despite the shortcomings mentioned above in implementing the 17th criterion, in the research region there also are some advantages as follow:

- The political and social organizations in the communes are aware of the importance of environmental criteria.
- Security and politics in the region are stable; officials, party members and people always believe in the policy guidelines of the Party and State laws
- People in the communes have a tradition of hard work and solidarity, so they are very convenient for joining hands, contributing to completing environmental criteria.

4.5 Solutions proposed to accelerating the implemention of the environmental criterion in the region

In order to accelerating the implementaion of the 17th criterion regarding new rural construction in Can Duoc district, esspecially in Long Hoa and Long Dinh communes, there need to have solutions including fields such as social – economic, legislative – policy, management administration and propaganda - education. The specific solutions could be applied in the studied region as follow:

- ***Solutions of water and water use***

- Implementing propaganda for each organization - individual about the importance of clean water and the benefits of using clean water, with specific solutions to overcome the pollution.
- Supporting poor households to build filter tanks and helping them in getting water filters.
- Proposing the higher authorities to support the construction of a headwater filter tank for households according to existing standards and upgrading the local water supply station.
- Upgrading and building a new water supply system throughout the communes and public water supply system is responsible for delivering clean water to every households in the region.
- Households are strictly prohibited from using underground water in the areas where surface water is available

- ***Solutions of production and business establishments***

- Establishing a team to supervise the implementation of environmental protection regulations of production and business establishments in the area. Regularly check and punish for violating environmental protection. The members of the monitoring team must be: people who manage the commune's environment; representatives from villages, village mass organizations, union, party and so on.
- Propagating farm owners about the meaning of application of environmental protection measures in livestock, encourage the farm owners to participate in training courses on methods of waste management..
- Requesting owners of pig farms to focus on environmental protection and strictly following the environmental protection regulations.
- Removing (if it is possible) or requiring chicken farms located in a residential area operating the livestocks so that it has not smell or odor affecting the surrounding community.
- Application of wastewater treatment model after biogas system and forcing all farmers building systems of wastewater manure treatment.

- ***Solution of waste collection and treatment.***

- Fully arranging garbage bins in all public places of the coomunes.
- In each hamlet, establishing a team to collect solid waste in residential areas and the collection should be implemented one time per day.
- Forcing households who do not follow regulations on waste disposal establishing a waste collection group responsible for collecting and transporting the wastes collected to garbage dumps of the hamlet. The responsible authorities should provide equipments and vehicles to the group.
- Raising awareness of people on not throwing garbage indiscriminately down to long roads, rivers and streams by propaganda program..

- Accelerating construction and completion of solid waste treatment/dumping facilities in the communes as planning.

- ***Solutions for drainage***

- Encouraging households to build septic tanks in accordance with technical standards.
- Using common drainage system in concentrated residential areas for collecting domestic wastewater from households and public works (after being treated locally by septic tanks).
- Encouraging households who have intensive breeding treating manure and wastewater by biogas systems in order to ensure sanitation for the residents.
- In the center area of each commune, constructing a common waste water drainage system connecting with lake or pond to monitor the local treatment (if it is necessary) before discharging into the environment.

- ***Solutions for environmental sanitation***

- Propagandising and mobilising the households to move breeding facilities away from their houses and collect as well as treat manure in accordance with regulations.
- Implement the "5 not and 3 clean" program in the hamlets.
- Promoting propaganda, education and environmental awareness.
- Improving the capacity of environmental service units, in line with the requirements of tasks and the volume of environmental protection.
- Supporting and promoting socialization of environmental protection activities, development of environmental services.

- ***Solutions of cemeteries***

- The cemetery area must be surrounded by fences and there need to have access roads, drainage ditches, especially area of trees and grass need to be larger.
- Informing people of the parameters to build cemeteries in accordance with planning.
- Establishing a group in order to propagandise and explain people how to properly bury deceased ensuring health of the community.
- Developing cremation standards and establishing a monitoring team including representatives from the local community.

- ***Solutions of infrastructure capital***

- The State needs to invest in developing commune and intra-field traffic systems, solidifying water supply and drainage canals to create favorable conditions for developing agricultural production.
- The State should keep enough 'land fund' for construction of facilities serving community life and develop policies mobilising a variety of capital sources from the central to local levels and the people contribute.
- Developing policies and mechanisms to encourage enterprises to invest in environmental protection.
- Strengthening the leadership, direction and administration of professional staffs in monitoring and controlling the production and business establishments, animal husbandry establishments in relation to environmental pollution and protection.
- Human resource training and development are carried out at all levels and with all officials and employees in the field of new rural construction, rural water supply and sanitation. The training program should focus on practical teaching rather than theory to create jobs and develop career for people.

V. CONCLUSION

Based on the results gaining from the implementation of the research: "Evaluating and proposing solutions to promote the implementation of environmental criteria in new rural construction of some communes in Can Duoc district, Long An province, it can be concluded that:

- Movement of the new rural construction has been lively in Can Duoc district, Long An province. As a result, the face of the rural in Can Duoc district has been innovative, the movement has created a strong change in people's awareness and consciousness. However, in Can Duoc district, there have still been 02 communes: Long Hoa and Long Dinh, not achieving the environmental criteria despite these two communes have many favourable conditions for socio-economic development.
- All of the communes in Can Duoc district, especially Long Hoa and Long Dinh communes still face many difficulties and reveal many weaknesses in implementing environmental criteria related to: using hygienic clean water according to national standards; environmental treatment in livestock of households and enterprises; and awareness of people in rural environment protection.
- The implementation of environmental criteria related to the new rural construction in Long Hoa and Long Dinh communes could only be performed if the solutions including: social – economic, legislative – policy, management administration and propaganda – education would be applied with the help of political systems of all levels in the province.

REFERENCES

[1]. Nguyen Hoang Anh (2016), *Improving the efficiency of implementing environmental criteria in new rural construction,* Environmental Magazine, May 2016 issue – Ha Noi – Viet nam.
[2]. People's Committee of Can Duoc district (2014). *Socio-economic development master plan of Can Duoc district, Long An province to 2020 and vision to 2030*, Tan An - 2014 .
[3]. People's Committee of Long An Province (2015), *Report on the results of implementation of the National Target Program on New Rural Development in the period of 2011-2015 and the Program Implementation Plan 2016 – 2020*, Tan An - Long An.
[4]. People's Committee of Long An Province, (2015). Report on the results of implementing the construction project of Can Duoc District is a typical cultural district of the province.
[5]. People's Committee of Long An Province (2016), *Report on the implementation of the National Target Program to build new rural areas in the first 6 months and plan for the last 6 months of 2016*, Tan An - Long An.
[6]. Vu Trong Khai (2015), Current agricultural development, rural Vietnam: Concerns and reflection. Hanoi National Political Publishing House, 212 pages.
[7]. Vu Van Phuc (2012), New rural construction with theoretical and practical issues. National Political Publishing House, Hanoi.

Nguyen Vinh Quy. " Evaluating And Proposing Solutions to Promote the Implementation of Environmental Criteria in New Rural Construction of Some Communes in Can Duoc District, Long an Province." IOSR Journal of Humanities and Social Science (IOSR-JHSS). vol. 24 no. 03, 2019, pp. 49-58.