

**Involving Multiple Stakeholders to Solve Water
Pollution Issues in Industrial Zones in Vietnam
After the Doimoi Process**

January 2017

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Abstract

In the last several decades, the industrial manufacturing process has been regarded as one of the main causes of environmental pollution in both national and global scales. In Vietnam, environment pollution in industrial zones became serious in recent years. This study shows that the effort to solve water pollution in industrial zones in Vietnam still has several limitations that cannot be addressed only by technical improvement. The strong participation and commitment from relevant stakeholders, with the help from the mass media is key to successfully solve environment problems. This research attempts to address three questions: (1) What is the current situation of water pollution in Vietnamese's industrial zones?; (2) What is the current relationship between the mass media and stakeholders to cope with water issues in industrial zones?; (3) How can the mass media efficiently collaborate with relevant stakeholders to achieve environmental protection?

This study traces historical and political documents to analyze the way each stakeholder understood and responded to water pollution problems in industrial zones through three case studies. It discusses effective ways to establish collaboration among these stakeholders in solving or mitigating water pollution problems by evaluating the past experience. No study so far has discussed the correlation between the media and stakeholders regarding raising public awareness of water pollution issues in Vietnam. The author argues that the media has played an important role in making people become aware of environment issues and taking actions to protect the environment. This study also seeks to clarify the future outlook of better collaborative relationships among them. Based on the recommendations of this study, Vietnam policymakers can strengthen the environmental awareness of society as well as environmental protection regulations.

Through examined case studies, this study found a framework to linkaged the multiple stakeholders' collaboration to solve environmental issues in Vietnam. By this framework, the media plays the role as facilitator in connecting with other stakeholders through information dissemination and interviews. The media actively engage in collecting relevant information from the government/enterprises/peoples and disseminate the information to the public. The media

also have established mechanisms to confirm the reliability of information sources so that they remain to be credible providers of information and gain trust among the public. The mass media have rules not to give a judgment to an issues. Their role is to convey the fact with accuracy to their audiences/readers.

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Acronyms and abbreviations

ASEAN	Association of Southeast Asian Nations
CP	Cleaner Production
DOSTE	Department of Science, Technology and Environment
DONRE	Department of Natural Resources and Environment
DOSTE	Department of Science, Technology and Environment
DO	Dissolved Oxygen
EIA	Environmental Impact Assessment
GEF	Global Environment Facility
GDLA	General Department of Land Administration
GDMH	General Department of Meteorology and Hydrology
IEE	Initial Environmental Examination
IUCN	International Union for Conservation of Nature
IGOs	Intergovernmental Organizations
LEP	Law on Environmental Protection
MOH	Vietnamese Ministry of Health
MARD	Vietnamese Ministry of Agriculture and Rural Development
MIC	Vietnamese Ministry of Information and Communication
MONRE	Vietnamese Ministry of Natural Resources and Environment
MOSTE	Vietnamese Ministry of Science, Technology and Environment
MPI	Vietnamese Ministry of Planning and Investment
IZs	Industrial Zones
NPO	Non Profit Organization
NEA	National Environmental Agency
NRE	Natural Resources and Environment
UNEP	United Nations Environmental Program
ODA	Official Development Assistance
VTC	Vietnam Digital Television
VTC14	Television Channel 14, Vietnam Digital Television

Chapter 1. Introduction

1.1 Objectives of the research

This study aims to examine roles key stakeholders have played and interacted in coping with water pollution issues in the industrial areas of Vietnam after the introduction of the Doimoi policy in 1986. Past studies tend to focus on the bilateral relationships between two stakeholders such as local government and NGO/NPO or local government and local people. This study, however, attempts to place water pollution issues within a context of multiple players and their interactions. In particular, this research emphasizes the role of the mass media within this multiple relationships.

This study traces historical political documents to analyze the way each stakeholder understood and responded to water pollution problems. The ultimate aim of the dissertation is to discover the most effective ways to establish collaboration among these stakeholders in solving or mitigating water pollution problems by evaluating the past experience. As the Doimoi policy encouraged rapid industrialization of Vietnam, this policy is essential to understand the underlying problems of water pollution. This study also intends to better inform policymakers and local leaders about some effective methods of establishing multilateral collaboration in Vietnam through the use of the mass media.

1.2 Literature review

The media coverage over environmental issues changed over time. Meghan (2014) found that the media coverage over environmental issues peaked in the 1960s, then reduced in the 1970s. However, other studies have shown that the media coverage increased again in the late 1980s and 1990s (Murch, F., 1971; Top and Roos, 1971; Erksine, 1972; Parlour and Schatzow, 1978; Low and Rudig, 1986; Stocking and Leonard, 1990).

In their famous book *Mass Media & Environmental Conflict: America's Green Crusades*, Mark Neuzil and William Kovarik examine the relationship between the mass media and environmental conflicts in three areas: (1) the type and timing of media involvement; (2) the circumstances in which environmentalists' goals were met; and (3) the circumstances in which these goals were not realized. Overall, they found that the media coverage has created a virtual

community in local and national levels that share educated knowledge about environmental problems and justice. Also, the mass media have influenced environmental policy. The authors contend that the media draw stakeholders together and facilitate political negotiations over environmental issues (Mark Neuzil and Kovarik, 1996).

Jaclyn et al. (2003) argue that the media provides citizens with piecemeal information that is necessary to assess social, environmental and political conditions. In particular, environmental communication has gained much attention from scholars. A Chinese researcher, for example, shows that the internet or so-called “alternative media” has played a prominent role in environmental communication and social justice (Yang and Calhoun, 2007). In a similar study, Ji et al. demonstrated that the mass media increased transparency and public participation (Ji et al., 2008). In Japan, Yuki and Aoyagi argued that “a dramatic increase in newspaper coverage of global warming from January 2007 correlated with an increase in public concern for the issue” (Yuki et al., 2008). Shunji et al. (2011) analyzed the newspaper/television programs in Japan and found that “there is a significant correlation with anti-environmental attitudes, suggesting a negative cultivation effect of television programs on public awareness of environmental” (Shunji et al., 2011)

In other study, Mikami et al. (1999) analyzed newspaper articles in Japan and observed the role of news media in “forming the public awareness of global environmental problems and in facilitating pro-environmental behavior of individuals in Japan” (Mikami et al., 1999). They emphasized that the public awareness in Japan about global environment has been kept at “high level” with the involvement of news media since 1992.

Other than the influence on the public, some scholars have shed light on the correlation between the media coverage and other groups such as industries and scientists. Stefano et al. contended that it is “possible for mass media to occupy an influential role in fisheries and environmental management and policy” (Stefano et al., 2013). Nils (2016) discussed adversarial relationships between scientists and journalists. For journalists, scientists demand too much precision and qualification.

Studies about the media coverage on environmental issues in Vietnam are very limited. The National Institute of Occupational and Environment Health (NIOEH) under the Ministry of Health (MOH) conducted a survey about the mass media coverage on climate change issues (Pham, 2007). It found that from September to October 2006, no report on climate change was

found in 30 media products and 172 reports. From September to October 2007, however, one newspaper reported about climate change a few times, and three radio programs out of 79 reported about climate change.

No study so far has discussed the correlation between the media and stakeholders regarding raising public awareness of environmental issues. In this study, therefore, I attempt to fill out this gap. I argue that the media has played an important role in making people become aware of environment issues and taking actions to protect the environment.

1.3 Research questions

In conducting research, this research attempted to address three questions: (1) What is the current situation of water pollution in Vietnamese's industrial zones?; (2) What is the current relationship between mass media and stakeholders to cope with water issues in industrial zones?; (3) How can mass media efficiently collaborate with relevant stakeholders to achieve environmental protection?

1.4 Methodological foundations

This study combines the qualitative and quantitative research methodologies. According to Collis and Hussey (2003), a qualitative interview aims to provide in-depth findings through informal discussions with participants (Collis and Hussey, 2003). In this study, I undertook both observation and direct interview methods to obtain information. The direct observation method is based on the study by Smith et al. (2008). This helped me to examine the behaviors of corporate leaders and their attitudes toward local authorities and the mass media.

For interviews, I met with several journalists who reported about water pollution issues and a group of government officers both in state and local levels. I also interviewed by telephone. In order to manage risks of research and protect confidentiality as well as to meet the requirements of free prior informed consent in conducting researches (Nancy, 2016), I explained the right and obligations of informants' in cooperating with my interviews. In addition, when the questionnaires were distributed to environmental reporters/journalists, I explained carefully the aims and purposes of my study and assured them to keep their privacy confidential.

This study adopts a case study strategy in answering the research question. Robson (2002) asserts that the case study is useful to gain the in-depth understanding of the research topic. Three case studies are examined in this dissertation. Case study 1 examines the relationship between the mass media and stakeholders regarding Thai Nguyen Paper Export Company's water pollution. Case study 2 analyzes the roles of the media in reporting the incident of the Vedan company water pollution in the Thi Vai River. Case study 3 focuses on VTC14, a new environmental channel in Vietnam.

1.5 The significance of this study

The outcome of this study is expected to reveal the relationships between the mass media and other stakeholders in dealing with water pollution cases. This study also seeks to clarify the future outlook of better collaborative relationships among them. Based on the recommendations of this study, Vietnam policymakers can strengthen the environmental awareness of society as well as environmental protection regulations.

1.6 Structure of the dissertation

This study is organized into six chapters. The second chapter examines the relations among Vietnamese mass media with other stakeholders to solve environmental issues in industrial zones. It also attempts to develop a collaborate mechanism, in which the mass media can play important roles to connect other stakeholders. The third chapter examines the Vedan company case. It shows media's potential in rallying for the public, facilitating stakeholders' participation, informing the wider public in collaboration with scientists, and increasing the awareness about the importance of sustainable development and environmental protection in general. The fourth chapter sheds light on stakeholders' collaboration concerning Cleaner Production (hereafter CP) implementation at the Thai Nguyen Paper Export Company. This case study contributes to better understanding the media's active involvement in communicating with other stakeholders. The fifth chapter focuses on VTC14, the first specialized television channel in Vietnamese environmental problems. The final chapter provides the summary of findings and discuss the significance of these findings. It also elaborates on the possibilities of further research.

Chapter 2. The Mass Media and Environmental Pollution in Vietnam's Industrial Zones after the Doimoi Policy

This chapter traces the development of industrial zones to better understand environmental issues in Vietnam. It also shows how the Vietnamese mass media have dealt with environmental pollution issues.

2.1 The history and definition of industrial zones

The first industrial zones in the world appeared in the UK in the late 19th century, followed by other large industrialized countries such as France, Germany, Italy, and the Netherlands. After WWII, the number and scale of industrial zones rapidly increased.

According to the Council of the International Development Research (IDRC, 2014), there are more than 12,600 industrial zones in over 90 countries in the world. The U.S. has more than 8,800 industrial zones. Canada has about 1,200 industrial zones. Germany has 300 and the U.K. 200. Among Asian countries Malaysia has the largest number of industrial zones (166) due to its attractive policies for foreign investors. South Korea has 147, and Japan, 95 (IDRC, 2014).

Industrial zones are often called as economic zones, export processing zones, high-tech zones, special economic zones, and economic processing zones. According to the World Export Processing Zones Association (WEPZA), industrial zones include all areas that government sets aside as a free port, free trade zones, industrial parks or any other free trade areas (WEPZA, 1999). The establishment of industrial zones with different names closely corresponded with the different needs of the government to develop its country's economy. As each country has different development directions, different development models and policy directions have emerged. Overall, the concept of industrial zone is to give higher freedom and preferential economic policies (e.g., tax incentives, customs regulations).

2.2 The formation and development of industrial zones in Vietnam

In Vietnam, industrial zones are "concentrated areas of industrial enterprises specializing in producing industrial goods and performing services for industrial production with defined geographical boundaries, without living residents and established under the Government/the Prime Minister's Decision" (Decree No.24/CP, 1997). By October 2009, 223 industrial zones

had been established (MONRE, 2009). In 2008, these industrial zones produced over US\$33 billion, equivalent to 38% of Vietnam's GDP. In addition, the export value from industrial zones reached over US\$16 billion in 2008, nearly 26% of the total export value of the country, creating 1.2 million jobs (MONRE, 2009).

The Vietnamese government declared that industrial zones have: (1) significantly contributed to the industrial development in Vietnam, (2) created more jobs, (3) created the environment for technology transfer, (4) produced more goods for domestic consumption and export products with high competitiveness, and (5) attracted large amounts of capital investment for economic development (MONRE, 2009).

However, the ability to attract capital investment of some industrial zones still remains low, leading to insufficient infrastructure construction. Also, the construction of housing and social welfare for employees has not been sufficient in some industrial zones. A number of companies have violated the wage policy. According to the Vietnamese Ministry of Labour, Invalids and Social Affairs (MOLISA), 20% of businesses in industrial zones do not pay for overtime; 9% of businesses do not pay for night's salary; over 50% of businesses do not pay for female workers during maternity leave. These things have led to a number of strikes and destabilized production (MONRE, 2009). As several industrial zones focus too much on rapid growth, environmental pollution has become serious problems.

2.3 Wastewater treatment in industrial zones

As Chapters 4 and 5 discuss with more details, water pollution issues in Vietnam's industrial zones have become more serious recently. In 2002, the Ministry of Sciences, Technology and Environmental (MoSTE) issued Decision No.62/QD-BKHCNMT to manage environmental problems in industrial zones. In 2009, it replaced this Decision with Decision 08/2009/TT-BTNMT to strengthen regulations on environmental protection management (MONRE, 2009).

By 2013 only 10% of industrial zones in Hanoi City had built the Centralized Wastewater Treatment Systems (CWTS). However, those industrial zones with CWTS still cause serious environmental pollution serious because the capacity of these systems was not sufficient. For example, the wastewater treatment plant at Thach That, Quoc Oai's Industrial Zone in Thach That District was built with nanotechnology, but the plant's capacity is only 1,500m³/day, while

its discharge of wastewater is greater than 10,000m³/day. The Quang Minh's Industrial Zone in Me Linh District is regarded as the worst place with environmental pollution for many years. Wastewater treatment plants in this industrial zone (in Phase 1) can treat only 3,000m³/day, which does not meet the demand. The Noi Bai's Industrial Zone in Soc Son District has similar capacity problems (MONRE, 2009).

The Southeast economic area that discharges 49% of wastewater constitute 49% of Vietnam's wastewater, but only 66% of industrial zones in this area has wastewater treatment plants (MONRE, 2009). In this area, allegedly 70% of the industrial zones discharges wastewater directly into the environment (MONRE, 2009). Table 2.1 shows the total volume of wastewater and pollutants from two areas.

One reason behind these pollution problems is that the legal system for environmental protection in industrial zones is not clear. In its National Environmental Report, the MONRE admitted that the regulations are not clear, making it difficult to manage and monitor wastewater treatment operations in industrial zones (MONRE, 2009). Under these circumstances, industries do not seriously follow environmental protection directives. In fact, many companies did not cooperate with inspection activities and often refused to invest in improving their wastewater treatment systems (MONRE, 2009).

Table 2.1 Wastewater and pollutants from the Northern and Southern Areas (2009)

N	Area	Wastewater (m ³ /day)	Total of pollutants (kg/day)		
			TSS	BOD	COD
The Northern IZs Area		155.055	34.112	21.243	49.463
1	Hanoi City	36.577	8.047	5.011	11.668
2	Hai Phong City	14.026	3.086	1.922	4.474
3	Quang Ninh Province	8.050	1.771	1.103	2.568
4	Hai Duong Province	23.806	5.237	3.261	7.594
5	Hung Yen Province	12.350	2.717	1.692	3.940
6	Vinh Phuc Province	21.300	4.686	2.918	6.795
7	Bac Ninh Province	38.946	8.568	5.336	2.424
The Southern IZs Area		413.400	90.948	56.636	131.875
8	Ho Chi Minh City	57.700	12.694	7.905	18.406
9	Dong Nai Province	179.066	39.395	24.532	57.122
10	Ba Ria-Vung Tau Province	93.550	20.581	12.816	29.842
11	Binh Duong Province	45.900	10.098	6.288	14.642
12	Tay Ninh Province	11.700	2.574	1.603	3.732
13	Binh Phuoc Province	100	22	14	32
14	Long An Province	25.384	5.585	3.478	8.098

(MONRE, 2009)

2.4 Collaboration between the Vietnamese mass media and government authorities

In recent years, the Vietnamese government has regarded raising people's awareness about environmental protection as the fundamental approach to dealing with pollution problems. The relevant authorities have issued policies to enhance the effectiveness of information dissemination management. For example, the MONRE has collaborated with the mass media, promptly broadcasting about environmental management shortcomings and violations.

In fact, the mass media play effective roles in linking government environmental authorities to people and other relevant stakeholders. The environmental pollution in Vietnam is complex, sensitive and even relevant to economic interest groups. The mass media can create an open forum for dialogue and channels for people, researchers, and stakeholders to share ideas and comments. In many cases, environment reporters go to a site to study and gather information. They can quickly report about their findings in radio or television. It is very necessary for society to receive a prompt report on environmental pollution.

According to the Ministry of Information and Communication (MIC), currently Vietnam has 845 press agencies, including 199 print press agencies, 646 magazines, one national news agency, 98 newspapers and magazines as well as 67 television stations. In 2015, there were nearly 18,000 reporters/journalists with official press cards, and about other 5,000 journalists involved in the mass media activities without press cards. The mass media management's law has been effective since 1989 (MIC, 2015).

The government agencies do not usually provide information/answer to the mass media promptly despite the fact that legal provisions stipulate the responsibility of the government for providing information and interacting with the mass media (e.g., Decree 51/2002, Decree 02/2011; the Spokesman Regulation, 2007; the Spokesman Regulation, 2013). According to a study sponsored by a UK organization, 50% of journalists in Vietnam said that "most commonly" they have experienced the delay or refusal of providing information by government officials (RED, 2011). In 2013, the project, the "Level of state agency's response to proposals and criticisms of citizens through the press" emphasized that many government spokespersons tend to hide information from the mass media because they fear about making mistakes (Loi, 2013). This project conducted a survey in 19 provinces and cities in Vietnam and asked questions among 279 journalists about such issues as economics, mineral resource management,

and the investigation of corruption. Only 25% of journalists said that government agents responded to their inquiry. Among them, only 10% received information efficiently (Loi, 2013).

2.5 Survey

From November 2015 to May 2016, I conducted a survey aims to examine the satisfaction the environmental reporters/journalists are facing while they are working with relevant stakeholders in environmental issues. The sample are 252 was selected by a random sampling method. The sampling was conducted in convenient and accordance method by giving a questionnaire for each respondent. The target respondents working places are:

- The Vietnam Association of Environmental Journalists;
- The Voice of Vietnam – VOV;
- The Vietnam Television – VTV;
- The Vietnam Digital Television – VTC.

I asked the question: "What is your overall satisfaction rating with the collaboration from other relevant stakeholders?" I used the Linker scale to examine the level of respondents' satisfaction when working with other stakeholders in environmental field. The satisfaction was evaluated by scales from 1 to 5 (Table 2.2).

Table 2.2 Satisfaction level (Linker)

Very Satisfied	Somewhat Satisfied	Neither Satisfied Nor Dissatisfied	Somewhat Dissatisfied	Very Dissatisfied
5	4	3	2	1

The survey result shows that over 55% of respondents were somewhat satisfied with other stakeholders while working on environmental issues. Those who are very satisfied people consisted of 3.2%, and those who are very dissatisfied consisted of only 0.4% (Table 2.3).

Table 2.3 Overall satisfaction when collaborate with relevant stakeholders

	Frequency	Percent (%)
Very Satisfied	8	3.2
Somewhat Satisfied	139	55.2
Neither Satisfied Nor Dissatisfied	53	21.0
Somewhat Dissatisfied	51	20.2
Very Dissatisfied	1	0.4
Total	252	100.0

2.6 Summary

This chapter examined the environment status in Vietnamese IZs with several limitations from the planning - implementing and the monitoring process. The most striking problem with this situation was lead to the seriously environmental pollution in Vietnamese' IZs. These arguments indicated the need of strengthening the state' regulation systems aims to improve the water pollution issue in particular and environment protection in general in Vietnamese's IZs.

On one hand, the Vietnamese mass media actively involvement to reflect the country's socio-economic and environmental pollution issues recently. However, on the other hand, a lot of barriers should be removed to achieve a better relationship between the mass media with other relevant stakeholders, especially the government sector. On argument is, the transparency should be considered as the motivation for the government to improve communication skills. The disclosure of information, consultation and environmental monitoring for the development project is necessary for multiple parties to reach consensus before, during and after the implementation of development projects. Meanwhile, information sharing is important to deal with environmental conflicts that are rapidly increasing today.

Chapter 3. The First Communication Campaign against Environmental Violation in Vietnam: A Case Study on the Vedan Company

3.1 Introduction

In this chapter, I examined how the mass media built connection among local people, local authorities, researchers, and civil society organizations that led to a wider social awareness and learning about one of the worst water pollution cases in Vietnam. The roles of the media as facilitator and mediator of environmental awareness among stakeholders have not yet gained much attention in academic journals. This case study shows media's potential in rallying the public, facilitating stakeholders' participation, informing the wider public in collaboration with scientists, and increasing the awareness about the importance of sustainable development and environmental protection in general. This chapter also argues that the mass media still has room to improve its contribution to protecting the environment in Vietnam.

3.2 Case study area: Dong Nai Province

This case study focuses on the area in Dong Nai Province located in the east and northeast of Ho Chi Minh City with the total population of 2.8 million people in 2014 (Dong Nai Province, 2015). In the late 1980s, after the introduction of the innovation policy of the Vietnamese State at the Sixth's National Party Congress (later referred as the Doimoi policy), the People's Committee in Dong Nai Province established a research groups to conduct research and collect documents on export processing zones in other countries. The collected information was to help lay the foundation for industrial zones development. Since then, as one of the fastest growing provinces, Dong Nai Province has spearheaded industrial growth with significant investment from abroad. By 2015, Dong Nai Province had established 31 industrial zones with the total area of 9559.35 ha. The province ranked the fourth out of 63 Foreign Development Investment popular provinces in Vietnam with 1,229 valid projects with the total registered investment reaching more than US\$83.07 billion. Until October of 2014, Dong Nai Province's industrial zones have 964 valid FDI projects with the total capital exceeding US\$16.9 billion (Lap.VT, 2015).

After the introduction of the Doimoi process, and especially in the 1990s, many industries were established along the Thi Vai River, which flows from Long Thanh District of this Province through Ho Chi Minh City. Due to this rapid industrial development, the Thi Vai River has been heavily contaminated. Today, this river is no longer important for the water supply although it is still essential to maintain the mangrove ecosystem. Table 3.1 shows the sizes and types of industrial zones that were designated as of 2003.

Table 3.1 Industrial zones along the Thi Vai River

Industrial Zone	Area (ha)	Type of industrial zone
Dong Nai Province		
Go Dau	184	Light
Nhon Trach I	430	Heavy/Ligh
Nhon Trach II	350	Light
Nhon Trach III	368	Heavy/Ligh
Total	1,332	
Ba Ria – Vung Tau Province		
My Xuan (A, A2, B1)	804	Heavy/Ligh
Phu My I	1,300	Heavy/Ligh
Phu My I II	500	Heavy/Ligh
North Vung Tau	400	Heavy/Ligh
Total	3,004	
In total	4,336	

(Dong Nai and Ba Ria, 2003)

3.3 The Vedan Vietnam Company and its water pollution issues

The Vedan Vietnam Enterprise Corporation Limited (hereafter Vedan) was established in 1991 as a branch under the Vedan Enterprise Corporation (founded in 1954 in Taichung County, Taiwan). Its factory is located in Phuoc Thai Commune, Long Thanh District, Dong Nai Province with the total area of 120 ha. The Vedan's main products are (1) monosodium glutamate, (2) starch and modified starch, (3) poly glutamic acid (powder and liquid), (4) compound organic fertilizer (liquid and granules), and (5) feed additives. All those products have been exported to Europe, Japan, Korea, the USA, China, and Taiwan (Vedan, 2015).

The Company used a large amount of water from the Thi Vai River and discharged its wastewater into the river through its production process. According to its report, the Vedan use 20,000 - 25,000 m³ of water from the common water supply system each day and approximately 40,000 m³ of water taken from the Thi Vai River each day (Vedan, 2008). Although its production grew rapidly, the company did not increase the capacity of its wastewater treatment facilities (Long, 2008).

From October 1994, due to the rapid declination of fishery products, several fishermen and those operating aquaculture in the Thi Vai River started to complain about the river's water quality. They asked whether or not the Vedan's waste is the primary cause of the deteriorating river water quality. On September 8, 2008, the Environmental Police Agency and the inspection team from the Ministry of Natural Resources and Environment (MONRE) officially announced that Vedan had discharged untreated wastewater into the Thi Vai River.

From October 2008 to December 2009, the affected households of Dong Nai Province, Ba Ria-Vung Tau Province and Can Gio District (under the Ho Chi Minh City) demanded compensation for the damage. In Dong Nai, between 2,600 and 5,600 households were affected and sent the petition claims to the committee at all levels. In Can Gio District, 1,824 farmers sent their complaints to the authorities, demanding compensation up to VND325.74 billion. In Ba Ria-Vung Tau Province, after identifying the Vedan's violations, nearly 2,000 farmers requested Vedan to pay about VND216 billion.

The administrative penalty decision came on October 6, 2008, in favor of victims. The Vedan initially refused to pay compensation. The company pointed out that their operation was not the only reason causing pollution to the river. However, supermarkets and people nationwide conducted intensive boycott campaigns against Vedan products. These nation-wide activities

were widely televised and covered in newspapers. In August 2010, Vedan realized the harm to its reputation. After some negotiation, Vedan agreed to compensate VND218.9 billion (about US\$11.5 million), of which VND119.6 billion was to be paid for victims in Dong Nai Province. The Company would also pay VND 53.6 billion to victims in Ba Ria, Vung Tau Province, and VND 45.7 billion to victims in Ho Chi Minh City (VEA, 2010). The victims were those who were harmed by pollution before 2010. The compensation was on the condition that "the affected people will not sue Vedan in court, [and] the company will not responsible for other complaints" (VEA, 2010). The company was strictly prohibited to discharge untreated wastewater and ordered to install pollution control facilities (MONRE, 2009).

Since late 2008, the environmental pollution on the Thi Vai River has decreased significantly. As reported by the Vietnam Environment Administration (VEA) under MONRE in 2009, in the past, the heavily contaminated areas (Dissolved Oxygen (DO)<1 mg/l) in the Thi Vai River extended to 12 kilometers long, including about four to five kilometers of lightly polluted areas (DO around 2-3mg/l). The DO levels at all monitoring points on the Thi Vai River in March 2009 were under the standard level (the Vietnamese standard NTR 08:2008/BNTMT). It was a significant reduction from previous years (VEA, 2009).

3.4 Vietnamese mass media's response to environmental issues

In the past ten years, Vietnam's mass media has paid an increasing attention to environmental issues (UNDEF, 2010). In doing so, it also has played crucial roles in raising people's awareness about environmental problems in Vietnam. In some cases, the media discovered pollution problems that made the government and people respond quickly. The media also has monitored some environmental pollution incidents and widely distributed information among the wider public (Ausra, 2000; Nimish, 2011).

The media coverage went hand in hand with the more intensive involvement of various stakeholders, including farmers, lawyers, businesses, and politicians. From September 2008 to October 2010, nearly five thousand complaints from farmers alone were submitted to the Tan Thanh District Court with the voluntary participation from hundred lawyers nation-wide. During this period, several press agencies in Vietnam, both national and local, continually sought information and interviewed victims. These agencies strongly supported the victims' claims against Vedan. The intensive media coverage gained sympathy among businesses. Starting from

October 2008, for example, several supermarket chains such as Big C, Maximark, Coopmart decided to temporarily stop selling Vedan's products. Two years later, other major supermarkets such as Citimart, Metro, Saigon Coop, and some others joined and boycotted the Vedan products. The Vedan's case received nation-wide political interests when member of Vietnamese National Assembly criticized the failure of the MONRE in dealing with this incident at the national meeting of November 2008.

3.5 Assessing the impact of mass media

The unique advantage of the mass media this case showed was its ability to quickly respond to a problem by visually presenting information and, thus, enhancing society's awareness and understanding about the contested issue. At its highest performance, the media can combine the knowledge and opinion of scientists, critics, politicians, and other stakeholders in reporting environmental pollution issues. Therefore, the mass media can contribute to the formation of "soft power" against environmental problems. This point is especially important in Vietnam, as the government authority is not yet regarded as approachable for the public in complaining about environmental problems. For example, an UNDP report (2012) on Vietnam showed that only 12% of the total respondents (or 5,045 persons) who lived in the contaminated areas had requested the government to redress and compensate.

In assessing the impact the media played in this incident, I found that not all types of news sources played active roles in influencing the public opinion against the Vedan Company. Some conservative news sources, however, tended to be slow in responding to environmental issues. This was typically the case for major newspapers with strong political influence. In cooperation with students at the Department of Sociology, the Academy of Journalism and Communication in Hanoi, I conducted a survey on newspaper coverage about the Vedan case. We collected all articles in two major newspapers from 2007 to 2009, and examined the contents. These newspapers are *The Tuoi Tre* and *The Nhan Dan Daily*.

The purpose was to find out how the major media responded to the Vedan Company incident. *The Tuoi Tre* is known as one of the most influential daily news sources in Vietnamese society. The number of copies distributed each day in 2009 was 500,000. *The Nhan Dan Daily* was considered as the representative voice of the ruling Communist Party. It was widely sold and its opinion influenced the elite class.

Table 3.2 Total number of newspaper articles

Total of surveyed newspapers	2007	2008	2009
The Tuoi Tre Newspaper	357	358	357
The Nhandan Daily Newspaper	357	356	359

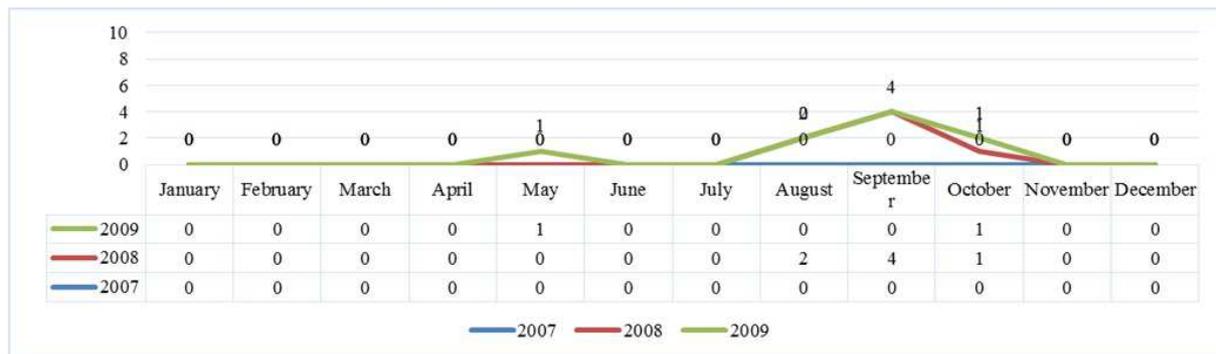


Figure 3.1 Number of articles about the Vedan incident in The Tuoi Tre Newspaper from 2007 to 2009

Figure 3.1 shows the number of articles, short news, and interviews published in *The Tuoi Tre* from 2007 to 2009. In 2007, just a year before the Vedan case was officially recognized by MONRE, there was no article regarding the incident. This shows that newspapers did not conduct original research on pollution cases at the time. In August 2008, only after the incident was discovered, *The Tuoi Tre* published several articles and interviews about the Vedan Company. In 2009, only two articles covered the story about the Vedan Company. The one in October 2009 was mainly to report the decision of the People’s Court.

Table 3.3 Number of articles about the Vedan incident in The Tuoi Tre Newspaper in 2008

Type	Numbers
Short news	4
Long news	4
Interview	1
Report	0

Table 3.4 Number of articles about the Vedan incident in The Tuoi Tre Newspaper in 2009

Type	Numbers
Short news	1
Long news	1
Interview	0
Report	0

Table 3.3 and Table 3.4 shows the number of articles in the Tuoitre Newspaper reflected to the Vedan case is limited. The number increased just right after the Vedan violent was discovered in August of 2008, then reduced a year later.

Table 3.5 Numbers of stakeholders involved in articles about the Vedan incident in The Tuoi Tre in 2008

Stakeholders	Numbers
Industries	9
Governments	9
Farmers	1
Experts	1
Others	0

Table 3.6 Numbers of stakeholders involved in articles about the Vedan incident in The Tuoi Tre in 2009

Stakeholders	Numbers
Industries	1
Governments	1
Farmers	0
Experts	0
Others	0

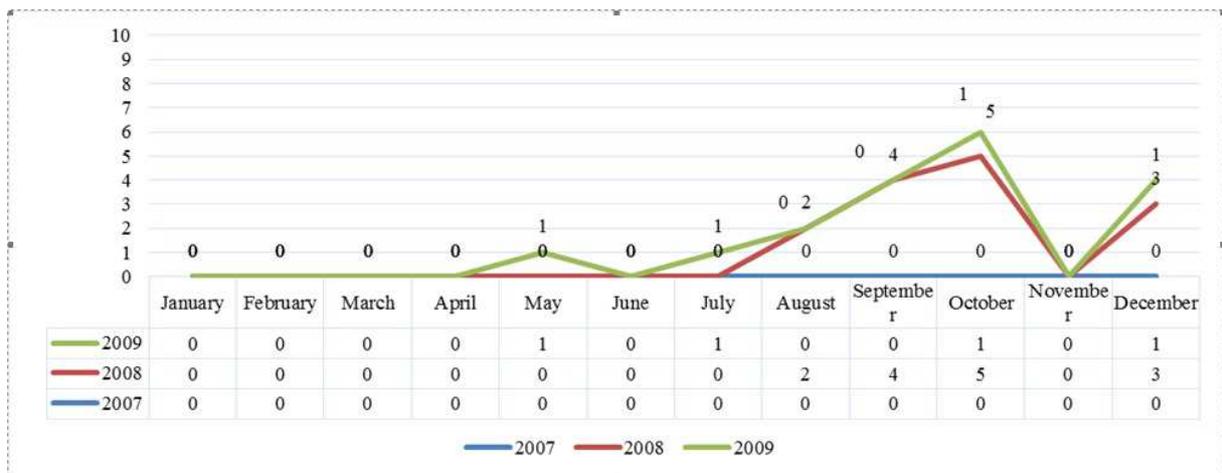


Figure 3.2 Number of articles about the Vedan incident in The Nhan Dan Daily from 2007 to 2009

The Nhan Dan Daily Newspaper paid more attention to the Vedan incident. Similar to The Tuoi Tre, this newspaper did not respond until the official action was made. In 2008, when the case was discovered, the number of articles increased rapidly.

Table 3.7. Number of articles about the Vedan incident in The Nhan Dan Daily in 2008

Type	Numbers
Short news	6
Long news	0
Interview	0
Report	7



Figure 3.3 Percentage of stakeholders involved in articles about the Vedan incident in The Nhan Dan Daily in 2008

Table 3.8 Numbers of stakeholders involved in articles about the Vedan incident in The Nhan Dan Daily in 2008

Stakeholders	Numbers
Industries	16
Governments	14
Farmers	5
Experts	1
Others	20

Table 3.9. Numbers of articles about the Vedan incident in The Nhan Dan Daily in 2009

Type	Numbers
Short news	2
Long news	2
Interview	0
Report	0

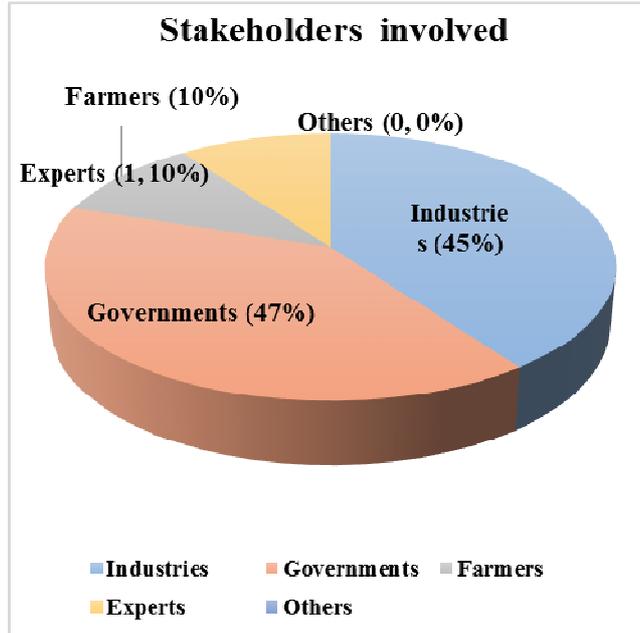


Figure 3.4 Percentage of stakeholders involved in articles about the VEDAN incident in The Nhan Dan Daily in 2009

Table 3.10 Numbers of stakeholders involved in articles about the VEDAN incident in The Nhan Dan Daily in 2009

Stakeholders	Numbers
Industries	4
Governments	4
Farmers	1
Experts	1
Others	0

3.6 Summary

Stakeholder participation and collaboration in dealing with environmental pollution have gained an increasingly attention in Vietnam. However, the question remains as to how such a collaboration mechanism among stakeholders can be efficiently and sustainably undertaken. In this study, I have argued that the mass media have played an important role in establishing an effective and sustainable linkage among major stakeholders. The media can potentially enhance the transparency of negotiation processes by providing sufficient publicly accessible information about positions and actions taken by locals, companies, and civil society organizations. It can also monitor the policy implementation status of the public sector and enterprises in taking responsibilities for improving environmental conditions for local communities and social organizations.

The media coverage about the Vedan incident shows some complicated picture of environmental disputes. On the one hand, TV programs and internet news sources have become more influential among the wider public than ever, and the mass media has increasingly played influential roles in affecting people's behaviors. On the other hand, some political newspapers were not equally actively engaged in investigating the Vedan Company or promoting environmental protection. These diversified approaches to environmental disputes may reflect diversified interests in the post-Doimoi Vietnam. It is a mixed blessing of journalism in this country, in which some political and large industrial interests have traditionally gained higher priority whereas local news sources and social media have growingly become popular and, to some extent, gone beyond political control.

Chapter 4. The Mass Media and Its Collaboration with Stakeholders: A Case on the Thai Nguyen Paper Export Company

4.1 Introduction

In the last several decades, the industrial manufacturing process has been regarded as one of the main causes of environmental problems in both national and global scales. In order to mitigate or minimize industrial pollution, the United Nations Environment Programme (UNEP) has promoted "Cleaner Production" (hereafter CP) since 1989 (UNEP, 1989). CP has increasingly gained recognition and acceptance in many parts of the world. Today, many developing countries recognize it as an efficient method for improving industries' environmental performance.

In discussing the introduction of the CP process to developing countries, researchers tend to focus on technical approaches such as improving the manufacturing process or introducing alternative materials. However, as the CP process also covers management aspects, there are still much room to be discussed about CP such as CP's management process, organizational capacity, and stakeholders' collaboration. Therefore, this chapter attempts to fill these gaps by examining the question as to how the mass media should cooperate effectively towards cleaner production in developing countries. It aims to shed light on stakeholders' collaboration concerning CP implementation in developing countries, especially Vietnam by examining one case study in Vietnam in this chapter. This case study on Vietnam contributes to a better understanding of stakeholder collaboration for CP to a great extent.

4.2 The CP policy in Vietnam

In the last twenty years of the economic reform, Vietnam's economy has made very encouraging developments; however, it has also experienced intensified industrial pollution. In order to deal with industrial pollution, the Vietnamese Government has adopted CP strategy by signing the International Declaration on Cleaner Production with the UNEP in 1999. In 2000, the Ministry of Science, Technology and Environment (from 2002 separated from the MONRE issued a National Action Plan on the CP Process. The Ministry of Industry and Trade (MOIT) also implemented policy on Cleaner Production in Industry (CPI) with financial support from the Denmark Government from 2005 to 2011.

These efforts have so far resulted into four major outcomes. First, the Government established the legal framework, including environmental regulations and standards for CP. Second, it strengthened economic instruments such as wastewater discharge fees and environment pollution penalties/compensation. Third, in order to promote awareness, it has provided information, training, and technical support about CP to both government officials and corporate employees. Fourth, the Government increased investment from foreign companies.

The implementation of CPI policy (2005-2011) also improved environmental performance of industries. It dramatically reduced industrial waste and saved natural resources (MOIT, 2012). The companies also reduced water consumption and the amount of energy and chemicals used. This meant the reduction of air and water pollution levels. According to the 2012 MOIT report, the textile and paper industries that adopted CPI reduced the fuel consumption by 50%, electricity consumption by more than 30%, and chemicals by 60% (MOIT, 2012). Subsequently, the evaluation team has observed changes in companies' attitudes.

To illustrate the successful results of adopting the CP by private companies, the following discussion introduces a case study on one paper export company called the Thai Nguyen Paper Joint Stock Company.

4.3 The Thai Nguyen Export Paper Joint Stock Company and CP

The Thai Nguyen Export Paper Joint Stock Company was established in 1993. It produces votive papers for the Taiwan market by using all kinds of bamboo and wasted chopsticks. The Company has a capacity of producing 2,500 tons of paper per year. It employs 200 people (Loi, 2009).

Prior to the adoption of the CP process, this Company used cold alkali technology, in which raw paper materials were soaked with sodium hydroxide solution. Then these soaked materials were ground into pulp. Its wastewater, which contained alkaline pulp with high levels of Biochemical Oxygen demand (BOD) and Chemical Oxygen Demand (COD), was discharged directly into the environment. In the drying process of papers, the company emitted CO₂ and SO₂.

In 2005, the Thai Nguyen Export Paper Joint Stock Company participated in the CPI policy, which was promoted by MOIT. MOIT conducted assessment reports and selected the Company as a potential case to promote CP in the province. Subsequently, MOIT sent CPI staff and experts to provide CP training along with financial support to the company every year. The

Company president and all workers collaborated for this. Their efforts were buttressed by generally positive media coverage by local and national news networks. These activities helped the Company become more aware of the importance of CP and, as a result, partly contributed to the successful implementation of the CP policy. Within five years, the Thai Nguyen Export Paper Joint Stock Company produced good results (MOIT, 2012). It increased productivity by recycling the wasted pulp of about 400 tons per year. This meant 8.6% of the 2006 output. The company also reduced 25,000 m³ per year of water consumption. This amount of water otherwise would have been discharged to the environment with BOD concentration of 360 mg/l and COD of 1,826 mg/l (MOIT, 2012).

4.4 Stakeholders' engagement with the Thai Nguyen Export Paper Joint Stock Company

One salient but challenging aspect of CP implementation is to effectively raise awareness among industry, government and the general public (Weslyne et al., 2002). The involvement of different stakeholders in the decision making process will bring a variety of ideas, experience and expertise that may lead to alternative solutions and innovations (UNEP, 2002). According to a UNEP study, the involvement of stakeholders is assessed at a "high level when the parties directly contribute to the process of policy decision" (UNEP, 2002). The practical implementation of CP strategy in Vietnam has shown that CP cannot succeed if the roles of stakeholders are not effectively coordinated. Much is not expected, either, if they do not learn from each other.

In Vietnam, the central government plays the most important role in the CP implementation process. It provides both financial and technical support. It helps build capacity for monitoring and enforcement with some incentives for participation. More importantly, the central government establishes a political or legal framework to promote collaboration among stakeholders.

At the local level, local authorities play a crucial role in directly promoting the implementation of CP strategies in situ. In fact, the national government policy has to go through local authorities to smoothly undertake policy implementation. The active participation of the local level sends a strong signal to industries and other stakeholders, urging them to be involved in the CP process. Regarding the case of the Thai Nguyen Export Paper Joint Stock Company, the Department of Trade and Industry of Thai Nguyen Province has collaboratively provided

technical advice to help the company implement CP. The province also incorporated a CP program in its socio-economic development plans. It has organized several training courses for producers to become more aware of the importance of CP.

Partly as a result of these efforts, companies like the Thai Nguyen Export Paper Joint Stock Company invested more time and effort in adopting CP. The participating companies reexamined and refined existing production mechanisms by incorporating what they had learned from training/education programs. The leaders of the Thai Nguyen Export Paper Joint Stock Company became active in collaborating with the Department of Trade and Industry especially after participating in provincial training programs. The company leaders also mobilized support from experts to educate its employees about CP. Thus the collaboration from workers was essential as they were directly involved in the implementation of CP.

The public and the media play important roles in promoting CP. Without pressure from the public and the media to fight against industrial pollution, a company may not adopt the CP process. The mass media can reach out the larger number of the population to raise awareness of the importance of adopting CP by industries. A number of newspapers and TV companies ran reports on the CP process at the Thai Nguyen Export Paper Joint Stock Company. Some reports pointed out the weaknesses of the CP process and suggested alternative options by asking experts. The media coverage increased awareness and interests among the public about the CP process, and, in turn, led the company to continue improving the CP implementation process.

Finally, the roles veterans' organizations, women's associations, farmers' associations, and trade unions play are potentially important even though they may not directly be involved in the CP process. In the case of the Thai Nguyen company, these organizations did not contribute much. However, in applying the CP processes to other industries, these organizations potentially play important roles in facilitating or promoting a wider participation in the CP process among industries.

In addition, an organization such as the Federated Union that exists in each factory and the Vietnam Fatherland Front (in local level) can also play a certain role to buttress the effort, and their influential presence in local politics should be considered as potential stakeholders or cooperators.

4.5 Mass media and its role to promote CP in Vietnam

Although it is difficult to quantify the direct impact of the mass media on the CP's implementation process, the CPI team did promote the CP's information dissemination activities through print/electronic media, especially continued organizing workshops and training courses for journalists to increase the awareness about CP process.

Table 4.1 shows how mass media engaged with the CP. Various media published to promote about CP. In particular, magazines, newspapers, and state television programs played major roles. There was also a contest for journalists that meant to raise awareness about CP.

Table 4.1 The involvement of the mass media in the CP process (2007-2011)

Media	Sources	Total Number s	Authors
By print publications	Newspapers	245	Local media
	Magazines	475	MOIT
	Annual reports	52	CPI Team
By television	State scale (video)	58	Vietnam Television VTV2 (in collaborate with MOIT)
	Local scale (video)	45	Local television
By posters		06	MOIT
By contest for journalists		02	MOIT

(CPI, 2011)

4.6 Summary

Overall, however, the state of CP implementation in Vietnam has shown modest progress. It still has several limitations that cannot be addressed only by technical improvement. As the case of the Thai Nguyen company demonstrated, strong participation and commitment by company leaders and workers are key for success. On this point, the Vietnamese Government

may re-examine the current environmental protection law. The revised policy should strengthen stakeholder collaboration in implementing the CP process.

The 2014 Environmental Protection Act enacted by the Vietnamese Government has added provisions for biodiversity conservation, climate change adaptation, rational use of resources, and waste minimization. New regulations that accompany this law designate specific agencies to manage industrial zones, export processing zones, and high-tech zones. Regarding the future implementation of the CP process, the regulations will play a key role.

Chapter 5. VTC14 –The Model of Mass Media Toward Environmental Issues in Vietnam

This chapter illustrates how one TV program, the VTC14 Channel Television Program (hereafter referred as VTC14) has facilitated interactions among stakeholders regarding environmental pollution issues. The examination of VTC14 will provide a more comprehensive view of the roles the Vietnamese mass media play in solving environmental issues.

5.1 VCT14: Background

The “National Environmental Protection Strategy until 2020, vision 2030” laid out two main solutions to strengthen environmental protection in Vietnam. First, the government would raise people’s awareness of and responsibility for protecting the environment. Second, it would promote the socialization of environmental protection (Vietnam, 2014). These options, which did not rely on technological solutions, were considered to be fundamental and less costly. Hence, the Vietnamese government has asked several mass media agencies, including television channels in both state and local levels, to produce programs that promote the protection of the environment.

Among them, VTC14 was created on January 1, 2010 under the Vietnam Digital Television Station (VTC) as the first specialized TV channel for environmental issues in Vietnam. It raised its slogan: “For a better life.” VTC is an agency initially belonged to the Vietnam Digital Multimedia Communications Corporation under the MIC. On June 2, 2015, the Ministry of Information and Communications transferred VTC to the Voice of Vietnam (VOV), another government multimedia organization in accordance with Decision No.752/QD-TTg by Prime Minister Nguyen Tan Dung (Figure 5.1).

The missions of VTC14 are to (1) improve community’s awareness about environmental protection, (2) create a social interactive forum for a better life, (3) become a solid partner for international organizations on climate change and sustainable development, (4) build a healthy society with the good environment, and (5) reduce human and economic damages.

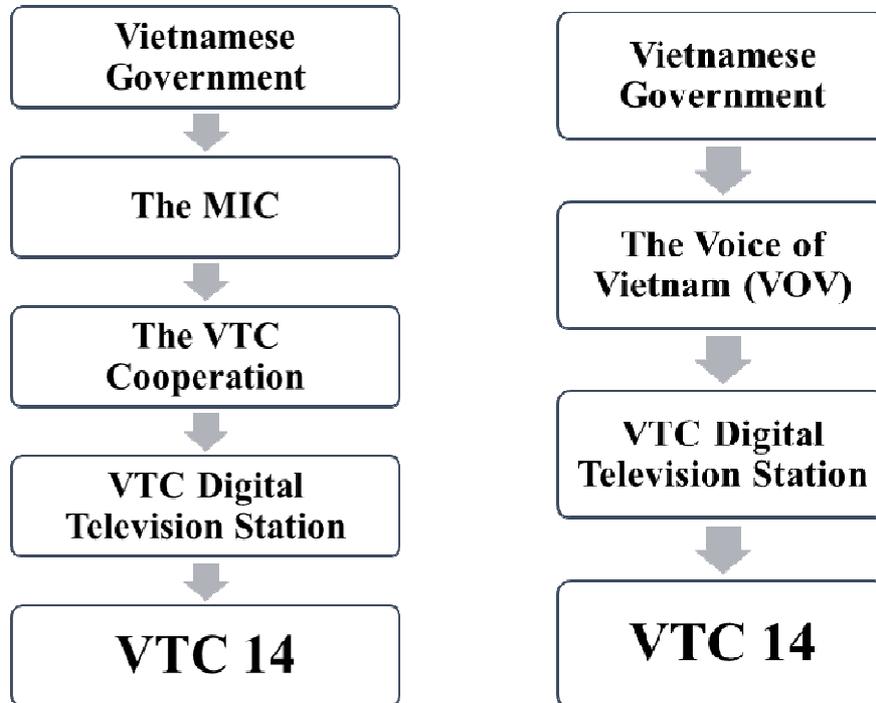


Figure 5.1. The transfer of VTC14's operation

In Vietnam, television audiences include ethnic groups and people in remote areas. In the past, these regional people faced difficulties in accessing to necessary information about natural disaster prevention and environmental pollution. Therefore, the information provided through radio and television's programs is helpful to these audiences. In particular, such a specialized channel as VTC14, which runs 24 hours a day, has shown remarkable efforts of the media community and the Vietnamese government.

Table 5.1 Number of VTC14's new programs from 2010 to 2014.

Year	Number of television programs	Total hours of new broadcasting programs (hours)
2010	27	905.7
2011	29	1.448
2012	27	1.374
2013	27	1.342
2014	26	1.326

(VTC14, 2015)

According to the table above, VTC14 has broadcasted 27 new television programs or about 906 hours in its first year of operation. One year later, the channel has improved its performance and distributed 6,410 television programs with a total length of 1,448 hours. In 2012, the total production was 1,374 hours with 5,499 programs. Subsequently, the total duration of VTC14's operation was 1,342 hours (with 5,380 television productions) in 2013 and 1,326 hours in 2014. VTC14 has accomplished more than 98% of its planned broadcasting programs (VTC14, 2015).

VTC14 broadcasts continuously for 24 hours a day by using the following transmission infrastructures: (1) the Satellite Vinasat-1; (2) on-air broadcast over terrestrial digital television DVB-T; (3) national and local cable systems in almost all the provinces/cities such as Vietnam Cable Television (VTVCab), Hanoi Cable Television (HCATV), Ho Chi Minh City Cable Television (HTVC), My TV, Next TV, and OneTV.

In 2013, VCT14 expanded its reputation through its coverage on natural disasters and unusual weather events in Vietnam. In this year fourteen storms/typhoons came. In order to provide the fastest and accurate information to the audiences, VTC14 made almost 50 live news coverages in this year. Most of these coverages focused on the impact of the Haiyan or typhoon No.14 that landed on the Vietnamese soil on October 11, 2013. This typhoon was known as one of the strongest typhoons in history with wind speed reaching level 17. VTC14 established four direct filming spots. It assigned six reporters in the area from Da Nang City to Hai Phong City (Quang Ninh Province). In addition, VTC14 was the first mass media organization in Vietnam that sent its crew to Tacloban City in the Philippines. This place was also heavily damaged by the Haiyan typhoon in 2013. Its live news reported from the Philippine received high acclaim

from audiences. This coverage was also re-broadcasted by other famous foreign mass media cooperation such as AFP (France) and KBS (Korea).

VTC14 has the popular breaking news program that is broadcast daily from 18:00 to 20:00. According to the market survey by Kantar Media in 2013, it became the most popular program among all VTC's channels. It was ranked as the 9th popular channel in Hanoi and the 11th one in Ho Chi Minh City regarding the number of viewers. The audiences watch news in VTC14's website (<http://www.vtc14.vn>). This website also includes past programs so the audience can view all programs at any time. Additionally, viewers can interact with VTC14's Editorial Board through telephone hotline and social networks (<http://facebook.com/kenhvtc14>) and receive useful information.

In covering a broad range of environmental and disaster issues in Vietnam, VTC14 faces the question as to how to broadcast technical information accurately in a publicly accessible manner. In response to this question, VTC14 has actively collaborated with related stakeholders, local observers, audiences, government agents and experts. This collaboration method has been the key to its popularity and success. In 2012, VTC14 received the National Television Festival Gold Award for its documentary, "The silence of the summer." In the same year, it won the first prize in the National Southern Region Film Festival About Occupational Safety for its documentary, "The hidden occupational accidents behind construction activities." It also received the Excellence Award for its report on "The silent savior" at the 9th National Film Festival on transportation and safety (VTC14, 2015).

5.2 VTC14's "The Audiences View" program and its unique model

Among its 19 programs (Table 5.3), "The Audiences View" has gained great popularity. One of its distinctive features is that it facilitates the participation of viewers in broadcasting about environmental and social issues. In my interview on May 2016 with Ms. Tu Anh Nguyen, the current reporter in charge of "The Audiences View," she emphasized the great potential in collecting valuable information from local people. This program started with having only 10 minutes to broadcast every day, but, due to great responses from viewers, it now has 30 minutes everyday.

Table 5.2 VTC14's main programs

No	Program	Content	Durations
1	Life In 24 hours	General program about daily news on environment, health, disaster prevention	55 minutes
2	Weather Forecast	Eight weather forecast news per day	5 minutes
3	Safe Traffic	Traffic conditions	15 minutes
4	Diary Of Life	Natural disasters and threats, public health, and community health care	30 minutes
5	Fresh And Delicious	Hygiene and food safety	14 minutes
6	Good Evening	Regional social issues	30 minutes
7	The Audiences Views	Environment and social issues.	25 minutes
8	Nature In Vietnam	Documentary films about environment, climate, nature and national environmental programs	30 minutes
9	Living With Floods	People's experiences/skills and solutions to minimize negative impact by floods	30 minutes
10	Hazards Around Us	Scientific information about hazards	30 minutes
11	4 On-Spot Focus	Commentary about environmental problems, health and disease prevention and sustainable development	30 minutes
12	The Car's Green World	Documentary films about environmentally friendly technology vehicles	30 minutes
13	Draconic Challenges	Survival skills for disasters	30 minutes
14	The Anger of Nature	Scientific research on disasters	30 minutes
15	East-West Story	Daily international events from the viewpoint of a foreign environmental channel	30 minutes

Table 5.2 VTC14's main programs (continues)

16	7 Day World	Review of the state policies on global climate change and natural disasters	30 minutes
17	The Perspective of Life	Commentary on community lives under the impacts of natural disasters, hazards, and dangerous diseases	30 minutes
18	Cool Houses	Skills to to adapt to climate conditions in Vietnam	30 minutes
19	Vietnam's Sea and Islands	The marine environment and island	30 minutes

(VTC14, 2015)

In order to highlight the distinctive aspect of viewer participation of VCT14, let us examine how traditional broadcasting works. After receiving information through other mass media agencies, its own information source, or audiences, the Television's Program Editorial Board sends the crew to the field in order to make an interview/collecting information. Subsequently, professional reporters produce the program. This classical production process guaranteed a certain quality and stability in broadcasting information. However, in this process, TV production crew may modify or reframe information acquired from local people or audiences. This is partly due to the limitation of broadcasting time and the opinion of the editorial board.

On the contrary, "The Audience View" Editorial Board receives information directly from audiences. The program's editorial board encourages audiences to use their personal electric device (such as personal camcorder/camera or smash phone) and record video clips that are related to the incident they would like to broadcast. These video clips will be carefully examined by professional reporters who are in charge of this field. Later on, the program's editorial board selects the issues to be broadcast on their daily program. Although the mass media organizations depend very much on the information provided by people, it is unusual for the news mass media to officially broadcast video clips/interviews that are taken by non-professional people. In fact, before this program, no Vietnamese TV channel had used this form of participatory news reporting. Nevertheless, this participatory reporting has become more popular among the well-known foreign mass media such as CNN (the U.S) and BBC (the U.K).

In a next step, the program editorial board will select the issues that received most responses from audiences and prepare official reports about these issues. These official reports are to be delivered to relevant government authorities. Then, the responses/feedback from the government authorities will be broadcast through “The Audiences View.” This step is the most challenging part of the program for its editorial board. According to VTC14, in 2014 the editorial board sent 153 official notes to the Vietnamese authorities regarding the issues it reported. The authorities responded to 127 notes. This shows the influence of “The Audiences View” program on government officials.

5.3 Ngoc Chien Company Case

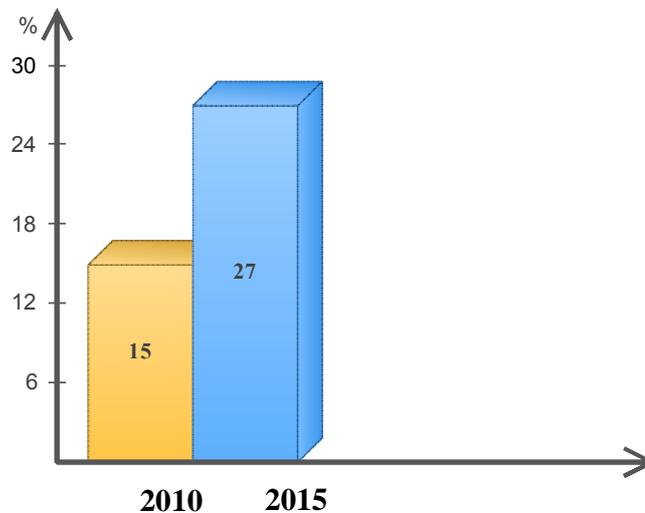
On May 5, 2016, “The Audiences View” broadcast the video clip, which showed the Ngoc Chien Paper Company discharging wastewater directly into the Kim River. The Ngoc Chien Paper Company is a medium scale paper manufacturer established in February 2014. The company facilities cover an area of 3,829 m². Every day, the company plant used approximately 70m³ of water from the Kim River. The television audience sent the video clip to “The Audiences View.”

After the broadcast, the Thai Binh People Committee authority coordinated with the police force to investigate this company’s operation. In order to assess the safety level of people’s health, the inspection team took samples from the company’s wastewater and the Kim River. On May 25, 2016, the Thai Binh City People's Committee sent an official note to the VTC14 to report about this incident. This case showed how “The Audiences View” coordinated with their audiences in investigating the violent acts to the environment.

For many reasons, the environment communication in Vietnam so far as seen as the one-sided/one-way direction from the mass media to their audiences. Hence, the VTC14 is trying to achieve an efficiency communication with following factors: (i) multi-dimensional information; (ii) access to a wide audience (iii) in-time communication, and (iv) two-way communication. Among those factors, the two-way communication can be considered as the most successful part of “The Audiences View.”

5.4 Role of VTC14 on the environmental disaster caused by the Formosa Company

Most recently, VTC14 has reported another large-scale water pollution by the Hung Nghiep Formosa Ha Tinh (hereafter referred as the Formosa Company), a subsidiary of the Formosa Cooperation of Taiwan. The company under dispute is located in the Vung Ang Economic Zone, Ha Tinh Province. This zone is regarded as one of five key economic zones in the country's coastal area and one of the largest heavy industry zones in Southeast Asia. The major products are steel, thermal power, and deepwater port services. In 2015, the Vung Ang Economic Zone produced almost 70% of Ha Tinh Province's total GDP. In the period 2010-2015, the province's industrial development growth index was over 27% while the average rate of the country is 15-17% (Figure 5.2).



(Ha Tinh Province, 2015)

Figure 5.2 The Ha Tinh Province's industrial development growth (2010-2015)

Since 2008, the Formosa Company has invested into an iron and steel complex project with a capacity of 10 million ton of steel per year in the first phase (2008-2017). It is also building Son Duong deepwater port and its own thermal plant complex with the total capacity of 650MW per year. The total amount of investment was US\$10 billion. The Formosa Company is planning

to spend additional 27 billion dollars to double its steel production in the second phase of its project. When completed, it will become the largest steel plant in Southeast Asia (Formosa, 2014). Until July 2014, the Formosa Company had recruited more than 24,000 employees, of which 22,000 people are Vietnamese. The number of foreign workers is more than 2,000 people, including 1,200 Taiwanese and 450 Chinese employees (Ha Tinh Province Economic Zone Management Board, 2015).



Figure 5.3 Location of Formosa in Vung Ang, Ha Tinh Province

Sources: <http://www/bbc.com>

The Formosa Company greatly influenced the GDP per capita in this province. In 2010, Ha Tinh Province was one of the poorest provinces with US\$480 of GDP per capita while the country's average GDP per capita was US\$1,168 (General Statistic Office of Vietnam, 2014). In 2015, its GDP per capita increased to US\$1,700 (Ha Tinh Province, 2014), while the Vietnam's GDP per capita was US\$2,030.

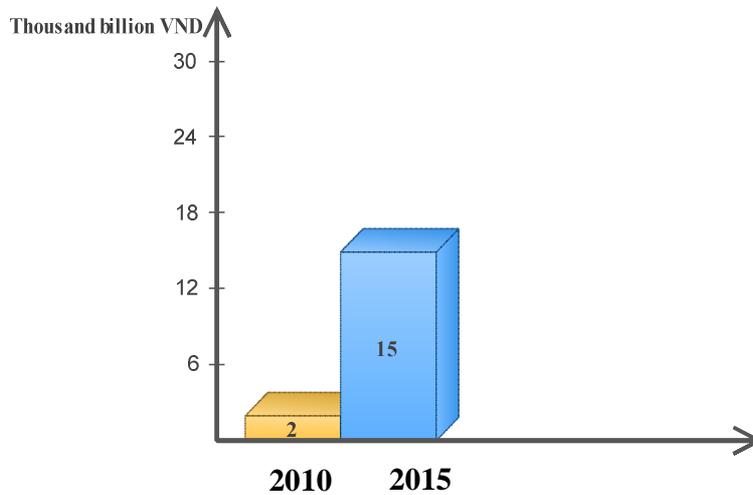


Figure 5.4 The Ha Tinh Province’s GDP growth (2010-2015)

(Ha Tinh Province, 2015)

From early April 2016, an environmental disaster happened in the middle coastline of four provinces (Ha Tinh, Quang Binh, Nghe An and Thanh Hoa Province). On April 8 and 9, 2016, a series of articles reported about the unusual mass fish deaths near the Vung Ang sea, Ha Tinh Province. Subsequently, on April 15, the mass fish deaths continued to appear in the coast of Quang Binh Province and another coastal area in the middle part of Vietnam. On April 22, a number of discussions raised in the social network (e.g., facebook, networking-based pages) indicated the Formosa’s operation was the main cause of this environmental disaster. The incident getting more seriously when one diver died and five others were hospitalized after diving in Son Duong deep water port on April 25, 2016.

The people’s criticism reached to peak on April 25, 2016, while Mr. Chou Chun Fan, the Formosa’s Public Relation Vice Director made a shocking statement: “Sometimes, we can’t have it all, we have to choose. Do we want a fish/shrimp or do we want to develop a modern steel industry? One day later, the Formosa’s leader held a press meeting to apologize about Mr.Chou Chun Fan’s statement. On April 27, 2016, Mr. Chou Chun Fan was fired.

Facing the pressure from Vietnamese society, the Formosa admitted its responsibility for the environmental disaster in the Vietnamese Middle sea on April 28, 2016. Hence, until June 2016, the Vietnamese government required the mass media to reduce its coverage of this environmental disaster when state/local authorities investigate the cause. Finally, on June 30, 2016, the Vietnamese government officially indicated Formosa Company's operation was the main cause of the mass fish deaths in four provinces. The Formosa gave an official apology to Vietnamese people and pledged to pay compensation of US\$500 million.

From the end of April 2016, a group of nearly one hundred experts/scientists from thirty domestic/foreign agencies in collaborating with the MONRE and other state ministries conducted an independent survey to discover the cause of the environmental disaster. This investigation was later reported to the National Assembly.

On July 28, 2016, the Vietnamese government officially reported to the National Assembly about the initial damage of the environmental pollution incident caused by the Formosa Company. According to the report, the Formosa's waste in the main root cause of this environmental disaster. The company's waste came from the steel-making process, containing a large amount of toxic and colloidal iron (Fe^{2+}). These wastes were discharged into the Vung Ang sea without treatment. Fe^{2+} was absorbed in the seawater and converted into Fe^{3+} . In the next step, the contaminated sea water absorbed oxygen (O_2) and suffocated fish and shrimp to deaths.

During investigation, the inspection team tried to find out if the Formosa Company applied its environmental treatment systems as registered in its investment licenses. It found that the Company changed the production method to a wet coke oven method without any notification to the responsible authorities although it initially promised to use more environmentally friendly high dry coke oven technology. The wet coke oven technology is considered as backward steel production technology, which produces a large amount of wastewater. In his interview in the Tuoi Tre Newspaper, Assoc Professor Tien, the Chair of Vietnamese Economic Environmental Association, indicated that the Formosa's act is "fraudulent" (Long, 2016).

Overall, the environmental damages the government explained include the deaths of about nine million shrimps, 110 tons of fish in Quang Binh Province, and 10 tons of fish in Ha Tinh Province, devastating the aquaculture industry. As a result, about 41,000 persons were unemployed, and hotels lost about 50% of its reservations (Vietnam, 2016). For several generations, people in these provinces have depended on fishing and tourism related businesses.

The government started to provide financial and occupational support for the victims. The media also reported that people started to question about the correctness of the government licensing process and its monitoring/inspecting on Formosa’s operation.

After the negotiation process with the state/local Vietnamese authorities, the Formosa promised to: (1) give public apologies to Vietnamese people; (2) compensate 11.5 trillion VND or about US\$500 million; (3) improve the company’s waste/wastewater treatment systems as well as its production technology; and (4) work together with the Vietnamese state/local authorities to prevent environmental pollution as well as build the trust among Vietnamese people.

Table 5.3 VTC14 and its reaction to the Formosa’s incident, April 2016

Date	Event
Early April- April 20	Broadcast several breaking news about unusual mass fish deaths in the four provinces in Middle Vietnam.
April 23	VTC14 live streaming video showed Formosa’s sewage discharge pipe located under the Vung Ang sea.
April 24	The VTC14’s Fan page in facebook shared articles/videos about the Formosa’s wastewater discharge.
April 25	Broadcast an interview session with Mr. Chou Chun Fan, Formosa’s Director of International Relation who made a shocking statement: “You cannot have both: you have to choose between fish/shrimp and the steel plant.”
April 25	VTC14 broadcast the live streaming video clip that showed the fish dead after 2 minutes swimming in the Vung Ang Sea.

In May 2016, Minister Tran Hong Ha of the MONRE admitted the government's weakness in monitoring and inspecting Formosa's operation by paying too much attention to economic investment. As the state authority for environmental monitoring, the MONRE would take responsibility for dealing with the Formosa's incident. Recognizing the need to clarify administrative jurisdictions over planning, construction, and technology evaluation, it would develop cooperation mechanisms with provincial and local authorities. The MONRE also recognized many regulatory weaknesses regarding foreign investment and environmental damages, so it would improve the evaluation and approval process by imposing environmental impact assessment reports and the license application screening system. It would place higher priority on environmentally friendly projects. Some ideas about pollution control and administrative mechanisms can be learned from more advanced countries. After going through negotiations with the Formosa Company, the MONRE recognized the need to have more effective conflict resolution methods with foreign investors.

Environmental protection cannot be a discrete activity but requires strong coordination between related stakeholders. Among the mass media organization in Vietnam, VTC14 has been active to connect with other stakeholders to deal with this incident.

5.5 VTC14 and its reaction to the Formosa's incident

During the Formosa's incident, VTC14 was one of the most active mass media agencies to report and investigate the Formosa Company's violation. It broadcast the incident in its breaking news every day. In the very first period of the Formosa incident, VTC14 sent its crew to the Vung Ang Economic Zone to report about the mass fish death along the coast. VTC14 was the only television crew to be able to interview Formosa Company's leaders. Its interview with Mr. Chou Chun Fan, Formosa's Director of International Relation, he said that "You cannot have both – you have to choose between fish/shrimp and the steel plant." Widely broadcast, this statement outraged the Vietnamese public. Drawing on this statement, Vietnamese protestors raised the slogan, "Fish/Shrimp or Steel?" The wide-spread campaigns eventually led the Formosa Company to fire Mr. Chou. VTC14's coverage also led the Formosa's leaders to make an official apology to the Vietnamese people.

5.6 Summary

The VTC14's increasing influence from 2010 has demonstrated a unique social phenomenon in Vietnam. Through its activities, VTC14 has shown the potential of the mass media in dealing with or solving environmental problems. However, only one channel may not be enough to tackle wide spread industrial pollution cases throughout Vietnam. The government of Vietnam has emphasized the importance of achieving sustainable development, the mass media can play greater roles in enhancing environmental protection and peoples' cooperation.

Chapter 6. Conclusions

6.1 How did multiple stakeholders solve water pollution in Vietnam?

Environmental pollution has been direct results of industrial production cycles with scientific and technical progress. Many scientists, educators, philosophers, and religious organizations in the world have spent much effort to solve this problem. At the same time, in order to improve its socio-economic conditions and reduce poverty Vietnam must promote industrial production. It needs more factories. To improve food productivity to satisfy growing urban people, Vietnamese farmers need to use more fertilizers and agricultural chemicals. All these factors have confused people in seeking a right direction for the future.

Today authorities in Vietnam such as those in MONRE are expected to help people better understand the relationship between economic development and inevitable destruction of the environment. Concerning environmental education, the Prime Minister approved Decision No. 1363 in October 2001 for “Bringing the environmental protection’s contents into national education's system”. Although the implementation is yet very slow and symbolic, the Vietnamese government should continue this effort and make environmental education mandatory topic for exams. At university level, some emerging disciplines like environmental ethics, the land ethic, bioethics, deep ecology should be included in curricula.

Technology solution plays an important role but not the only method to achieve environmental protection goal. The combination of technology and efficiency collaboration within multiple stakeholders will play key roles to solve the environmental issues.

In order to prevent the environmental consequences that may arise in the future, the Government should establish a special institution called "National Environment Commission". This will independently reevaluate economic projects with the participation of scientists. There should be a clear separation between scientists and politics, giving more voice to scientific evidence. This type of institution can give more objective information to the public. The media can also seek information there to better communicate with the public about water pollution issues. From this institution, the Government may receive more updated information about "green" technology. This includes develop new types of energy such as the wind and solar ones.

Also, there is an urgent need to overcome endemic corruption in Vietnamese institutions. In order to prevent water pollution cases I discussed in Chapters 3 and 5, political reform should head towards the direction of democratization in Parliament, the efficiency of the administrative system, the independence of judiciary.

The government authorities and scientists need to better understand how farmers and fishermen suffer from water pollution. With the use of visual images and on-site interviews, they can effectively inform officials about urgent pollution incidents such as the Formosa pollution case discussed in the previous chapter. "The Audiences View" has played a role in collecting and presenting information directly to the wider public. VCT14 also effectively use Facebook or other popular social networking sites to communicate with the wider public.

6.2 How can media become facilitator for multiple stakeholders to solve water pollution in IZs?

This study has shown that the mass media can encourage dialogue among different stakeholders about environmental issues. Some print journal agencies can open some pages to post information about environmental dialogues. Radio and television agencies might consider opening some periodical programs about pollution issues. These fora mobilize broad participation of government authorities (from national to local level), environmental protection organizations, NGOs, environmental experts, inhabitants and representatives of the professional media.

Today, there are more than 1,000 news articles in Vietnam about natural resources and the environment each month on the mass media. Many prints and online newspapers have developed programs and specialized pages on the environmental issues. The role of the media is clearly visible in three case studies this dissertation examined. I have also discussed how the mass media have facilitated the formation of public opinion about such polluters as the Formosa Company, instilling some ideas among a large number of people about the importance of environmental protection. The media influence played important roles in shaping the Vedan Company product boycott and mass protests against the Formosa Company.

Recognizing the importance of journalism and communications, Resolution No.41 of the Vietnam Parliament aimed to advance environmental protection measures by promoting the media propaganda and education. These measures condemned sternly the violations of

environmental protection, strengthening environmental ethics education for all people. This was confirmed again in Resolution No. 24, which enhanced Vietnam’s responses to climate change. Resolution No. 35 meant to enhance a number of other pressing environmental issues.

For many years the General Department of Environment (under MONRE) has actively collaborated with the press agencies to strengthen the propaganda of environmental protection in many varied forms, aiming at different target groups. The MONRE has actively provided information to the media. Because of these historical and indelible ties between the media and the MONRE, its officials seriously considered a number of pollution reports, resulting in expediting remedial actions against polluters. Public information that is filtered through the mass media can also force the government and polluters to respond.

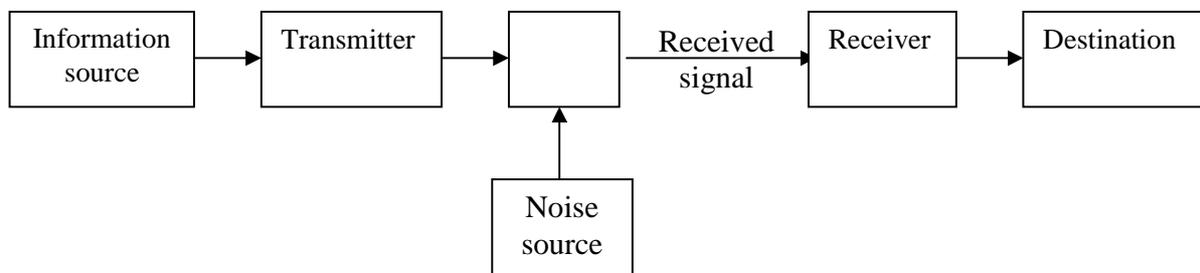


Figure 6.1 Shannon and Weaver model of communication, 1949

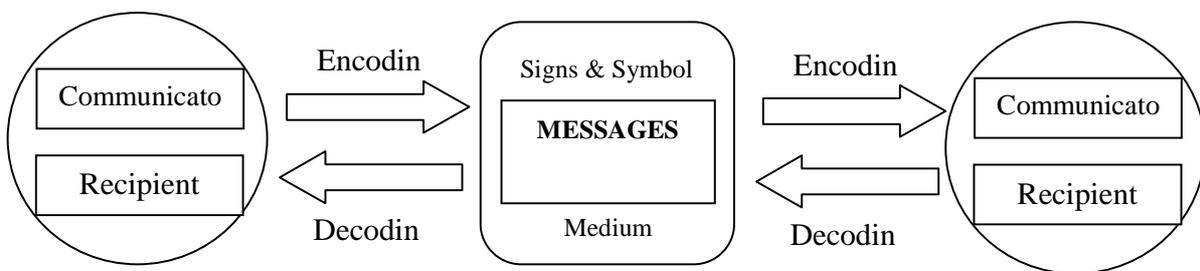


Figure 6.2: Mersham & Skinner’s Communication as Two-way Process, 1990

Through examined each case study, the author found the linkage to better understanding the multiple stakeholders’ collaboration framework to solve environmental issues in Vietnam. Here, the media plays the role as facilitator in connecting with other stakeholders through information dissemination and interviews. The media actively engage in collecting relevant information from the government/enterprises/peoples and disseminate the information to the

public. The media also have established mechanisms to confirm the reliability of information sources so that they remain to be credible providers of information and gain trust among the public. The mass media have rules not to give a judgment to issues. Their role is to convey the fact with accuracy to their audiences/readers. The stakeholders who are involved in environmental issues are connected not only by single interaction but multiple interactions. This multiple stakeholder's collaboration framework is described by Figure 6.3.

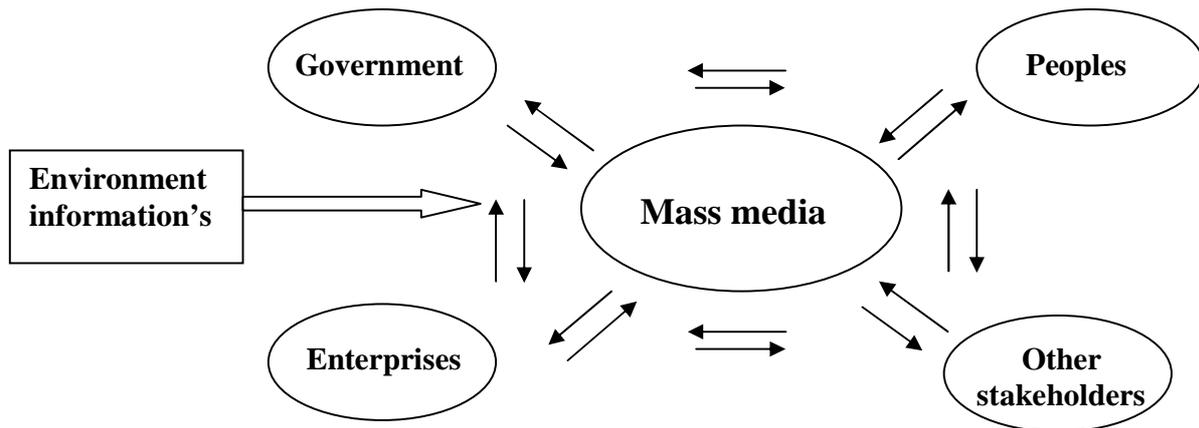


Figure 6.3 Multiple stakeholders collaboration framework

In the previous environmental studies, the researcher tends to analyze the impact of environmental pollution to find out the technical solution but not paid attention to the management solution. However, as the author mentioned, the efficiency collaboration among relevant stakeholder combine with the improvement of new technology will be key point. The case study at the Thai Nguyen Paper Joint Stock Company with the mitigated harmful to the local environment by apply CP processes combined with the efficiency collaboration from stakeholders was proved to this point.

Sharing quite similar point with the author's idea, Ramakrishnan (2010) noted by "the corporation with relevant constituencies in its industry, as well as its political, social, economic and legal environment is key success" (Ramakrishnan, 2010). In other study Ziessler et al. (2013) also indicated that the "deficient stakeholder engagement" might lead to the endanger (Ziessler et al., 2013). According to Watson (1993), the mass media impact "will be more influential if all the media are saying more or less the same thing at the same time" (Watson,

1993). This study proved this point through the Formosa case in Chapter 5. As described, the national campaign against the environmental violent could not successful without the mass media influence along with the voices from relevant stakeholders. As the author mentioned in Chapter 3, by its performance, the media can combine and public the knowledge/opinion of scientists/politicians/NGOs and other relevant stakeholders in reporting environmental pollution issues. Therefore, the mass media can regard as "soft power" to against environmental problems. This point is especially important in Vietnam, while the government authorities is not yet welcome the individual voices in complaining about environmental issues.

This study has also revealed that active involvement of the mass media in reporting environmental incidents lead to high engagement from all stakeholders. As chapter 4 discussed in the Vedan Company case, major newspapers that were relatively dormant in reporting environmental pollution played minor roles in stakeholder interactions. As a result, still several environmental violations still occurred before the public eyes, but the government and the public did not actively campaigned against this issue. However, quite contrary, the Formosa case (2016), which was examined in the Chapter 5, showed active engagement of the mass media in reporting about the violation of the Formosa company. A series of media reports raised a huge outcry against the Formosa. As a result, the Company quickly responded and agreed to pay compensation.

So, what are the future roles of the mass media in Vietnam in dealing with water pollution? Firstly, the mass media should understand positions of all stakeholders to successfully facilitate collaboration. Also, stakeholders also should encourage the mass media to improve their performance. For instance, the environmental experts should help better educate the mass media. People should be more active to provide informations. NGOs should involve with mass media's activities to give recommendations/suggestions. Moreover, as this study emphasized, the government sector should facilitate collaboration mechanisms with the mass media.

Finally, this study would like to serves for broadening and updating the perspective to more concern the multiple stakeholder interactions to cope with the wastewater pollution in Vietnamese IZs in general and environmental issues as well. Especially, with its potential to facilitate another stakeholder, the mass media have enough room to improve their performance efficiency collaborate to achieve a Vietnamese sustainable development in the future.

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