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Addressing industrial pollution in Indonesia: The nexus between regulation and redress seeking

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1 | Analysing how pollution is addressed

Introduction, research question and methodology

1 INTRODUCTION

This book is about river pollution in Indonesia, and how citizens and government institutions deal with addressing it. Approximately 80 per cent of Indonesians depend on rivers for bathing and drinking water because they do not have access to piped water. However, industrial and domestic waste severely pollutes Indonesia's rivers (see for example WEPA, 2018 and UNICEF, n.d). The Ministry of Environment and Forestry acknowledged that 98 per cent of the country's rivers are polluted, and 68 per cent are even severely polluted (Ministry of Environment and Forestry, 2015, cited by ICEL, 2016; and Kosasih, 2016). The river water pollution causes diseases, affects harvests and forces households to buy their drinking water (UNICEF, n.d, Factsofindonesia.com, 2018 and Indonesia-investments.com, 2015).

The pollution also has more indirect consequences. The Citarum River in West Java province, for example, is one of the dirtiest rivers in the world. Downstream, it supplies the country's capital, Jakarta, with drinking water (see for example Yallop, 2014). However, drinking water companies have to make considerable efforts to purify the polluted river water. Water consumers such as individual households and companies do not want to rely on the poor public drinking water supply system. Therefore, excessive extraction of groundwater takes place. Such extraction is one of the reasons why Jakarta is sinking below sea level, and why floods threaten millions of people (Abidin et al., 2012; Hooimeijer, 2014; Deltares, 2015).

This book takes these issues upstream, to the places where industries discharge their wastewater into the rivers. It looks at how citizens living in the vicinity of the industries and government institutions deal with these pollution issues by trying to regulate the industries' behaviour and seek redress for the pollution.

1.1 Environmental challenges of all times

Industrial pollution is not a new phenomenon in Indonesia. The sudden demise of Batavia around 1730 can be attributed to river pollution. The rapid development of sugar cultivation and sugar factories in the city's hinterland caused the pollution. Despite the increase in mortality, the leadership of the Dutch

East India Company (VOC) refused to close the sugar mills. The rulers denied Batavia's inhabitants any decision-making powers, which prevented the development of a real town community that would promote interests other than those focused merely on short-term economic stakes (Blusse, 1985). They did not acknowledge the correlation between poor environmental governance and short- and long-term social and economic interests.

The Dutch colonial regime bequeathed Indonesia with several laws on nature conservation, wildlife protection and nuisance (Cribb, 1997). However, as in many other countries, in Indonesia the government has a relatively short history of paying serious attention to the promotion of public environmental interests, including the regulation of industries' environmental impact. In the 1970s and 1980s, the country was confronted with the environmental consequences of its rapid industrialisation under the authoritarian Suharto regime (Cribb, 2003: 37). As international attention on environmental issues grew and the Indonesian government desired to be taken seriously at the international level, it took some measures to protect public environmental interests. Addressing environmental problems also became a relatively accepted way for activists to criticise the regime. Under the umbrella of the environmental campaigns, activists could raise awareness of other issues, such as human rights violations (Cribb, 2003).

Indonesia appointed its first Minister of Environment in 1978, and in 1982 it promulgated the first Environmental Management Act. Indonesia was considered a frontrunner among developing countries. Over time, the legal and institutional framework developed as the Minister gained administrative power, environmental agencies were established, and the Environmental Management Act was revised (Niessen, 2003: 66; Bedner, 2008: 189). The Acts revisions in 1997 and 2009 led to a better implementable legal framework as well as the adoption of innovative approaches to enhance public environmental interests more effectively, such as granting a more significant role to market actors and civil society.

Nevertheless, 'environment' is a relatively new policy field and the use of environmental resources always runs the risk of turning into a 'tragedy of the commons'.¹ It is not easy to integrate the regulation of environmental issues into existing institutional and legal structures and to raise public awareness. Environmental problems are often 'wicked problems'; a straightforward solution does not exist because a solution to one problem can cause a problem in another area in potentially complex ways. For example, closing a factory to halt pollution can lead to increased unemployment rates (Rittel and Webber, 1973). The actors in a particular case – such as government institutions, citizens

1 'Tragedy of the commons' refers to a situation in which individuals strive for their maximum advantage, while acting against the public interest of the whole society by over- or under exploitation (Hardin, 1968; see also Cribb, 2003).

and non-governmental organisations (NGOs) – are faced with dilemmas related to these conflicting economic, social and environmental interests.

1.2 Industrial water pollution and other environmental problems in Indonesia

Indonesia faces large environmental problems today. High on the agenda is the prevention of deforestation and peatland destruction. The international attention to climate change and the reduction of CO₂ emissions resulted in Western countries offering financial resources to countries that have rainforests and peatlands within their territory to stimulate them to make preservation efforts. Indonesia is one of the countries that receive considerable funding to do so, notably through the Reduced Emissions from Deforestation and Forest Degradation (REDD) mechanism.² Some say the financial incentives for forest and peatland preservation divert attention away from other environmental issues, such as reducing industrial pollution. In contrast to the REDD initiatives, measures against industrial pollution often do not have short-term financial benefits. On the contrary, they require investments that can be costly.

Government institutions, industries and citizens living near industries may easily choose a dirty river over a cleaner one when considering the economic interests related to addressing the pollution. Furthermore, reliable data on the extent and effects of pollution is often lacking, which decreases the empirical visibility of the problems (Lucas, 1998: 181; Lucas and Djati, 2000: 6-9). Such data is notably lacking when it comes to addressing industrial pollution.

In Indonesia, current discussions about river pollution often focus more on reducing domestic (rather than industrial) pollution. Addressing this so-called non-source pollution requires creating awareness among the population. Therefore, addressing industrial pollution is – in theory – easier. The sources of pollution are known and limited in number. The sources are subject to the basic regulatory mechanism, since they require certain licenses. Therefore, they are – or should be – ‘on the radar’ of the government institution that issued the license.

This book will demonstrate that regulating the industries’ environmental behaviour is nevertheless difficult. Taking measures against industries may decrease regional government revenues and reduce local employment opportunities. Environmental institutions often lack the financial resources and knowledgeable staff necessary to properly regulate industries. However, this study shows that the poor regulation of industries’ environmental impacts is also related to the common understanding that the government should rely

2 REDD (Reduced Emissions from Deforestation and Forest Degradation) is a mechanism which rewards countries with rain forests, such as Indonesia, for preserving them.

on alternative (rather than enforcement-based) regulation and that citizens should play an important role in addressing industrial pollution.

2 RESEARCH QUESTION AND APPROACH

Considering cases of industrial water pollution in Indonesia, this research seeks to answer the following three questions: How, if at all, do affected citizens and interest groups, as well as authorised government institutions, engage in processes of regulation and redress seeking for industrial pollution? If so, why do they do so? What effect does this have on the environment and on social relations within affected communities?

This thesis places a central focus on processes of regulation and redress seeking. When citizens affected by pollution and institutions have the common goal of promoting a clean environment, the two aforementioned processes can be closely linked. The government tries to achieve a clean environment through regulation, and citizens try to achieve the same through redress seeking. This study finds that environmental policies and regulatory practices in Indonesia are informed by the assumption that both regulation and redress seeking are inevitably geared towards a clean environment, and consequently that they can be easily interchanged. However, the processes differ in many respects, and the goals of citizens and institutions can differ. For example, when citizens accept the pollution if they can get a job in the polluting industry, citizen participation in regulation may not contribute to reducing pollution. It may even legitimize it and have a negative effect on the social relations within the affected community.

To be able to better understand how citizens, government institutions and interest groups deal with industrial water pollution in Indonesia, to what extent these practices contribute to a cleaner environment and how they impact the social relations within affected communities, it is essential to look at both processes in conjunction.

2.1 Two angles of analysis: redress seeking and regulation

At the beginning of this research, I focused on the redress seeking process. The research projects in which I took part departed from the citizens' perspectives as redress seekers, and aimed instead to identify the barriers hindering victims of pollution from achieve a more just situation.³

3 In 2008, I worked as a researcher in a programme titled, 'Access to Justice in Indonesia'. It was part of the project, 'Building Demand for Legal and Judicial Reform 2007-2010: Strengthening Access to Justice'. The programme was a collaboration between the Indonesian National Development Planning Agency (BAPPENAS), the United Nations Development

Academic literature and policies usually refer to the process of seeking redress as 'Access to Justice'. Nevertheless, I prefer to use the former term. 'Redress' is less normatively charged because it does not imply that what citizens want is per definition 'just'. It furthermore avoids the suggestion that difficulties in accessing a redress forum are the main barrier to citizens achieving redress. Instead, 'redress' encourages one to look at the full process. Bedner and Vel (2010) explain that the process begins with a real-life problem that a citizen experiences. The next step involves considering the citizen's ability to formulate this problem into a grievance, blaming another party for causing the problem and making a claim for redress based on a particular normative framework. Thereafter, the citizen needs access to a forum that will properly handle the matter. Finally, it is important to assess whether the achieved redress is appropriate in the eyes of the redress seeker and under the rule of law. However, Bedner and Vel emphasise that in practice the process is often dynamic and seldom progresses linearly from a real-life problem to an appropriate redress (Bedner and Vel, 2010: 1-29).

The forum that can provide redress for industrial pollution is the government institution that is authorised to regulate the industry. Initiated by a citizen complaint, the authorised institution can take regulatory measures that will halt the pollution. Such a measure is *synthesis par excellence*; where the process of redress seeking and regulation meet. When I started my research, I presumed that pollution victims would seek redress in the form of a cleaner environment. As a result, I assumed that the citizens would engage in redress seeking processes that would – if successful – serve not only the redress seeker's interests but also those of his or her community and even of the society as a whole. This reasoning is also common amongst policy-makers and scholars. 'Access to justice' and 'legal empowerment' are popular themes in government policies, development projects, and even in research (see, for example, HiiL, 2014; and UNDP Indonesia, n.d.).⁴ These sectors focus on 'justice seekers' and aim to strengthen their position, often expecting that citizens can play a role in public interest promotion.

However, as my research progressed, I became increasingly aware of the complexity of redress seeking processes. First, a complaint does not necessarily lead the authorised government institution to take appropriate regulatory measures. When citizens filed a complaint about industrial pollution, the authorised government often considered the matter a conflict between the citizens and the industry. The government chose to mediate between these

Programme (UNDP), the World Bank, and the Van Vollenhoven Institute of Leiden University. In 2010, I became a PhD researcher within the project, 'Legal Empowerment as a means to development? A political-legal study of rights invocation by pollution victims in China and Indonesia'.

4 Two research projects in which I participated (i.e., 'Access to Justice in Indonesia' and 'Legal Empowerment as a means to development?') also departed from the citizen's perspective as 'justice seeker' (see leidenuniv.nl, n.d.; and nwo.nl, n.d.)

private parties but neglected its role as a regulator with the authority and obligation to take regulatory measures to protect the public environmental interest. Second, certain citizens affected by pollution did not aim to halt the polluter. They preferred to settle for financial compensation (e.g., a job at the polluting industry). The redress seeking processes that I witnessed had devastating consequences for the environment and the social relations within affected communities. Thus, I realised that in order to understand how industrial water pollution is addressed in Indonesia, I also needed to consider the regulation process and better understand its link to the redress seeking process.

Regulation may refer to many different rules and actions to influence behaviour. This thesis takes regulation to mean the process that aims to promote certain public interests.⁵ Until the late 1980s, most regulatory theories departed from the idea that only the government can act as a regulator. Acting mostly under administrative law, the authorised government institution sets the norms – for example by issuing a license – monitors the licensee's behaviour and takes (enforcement) measures in cases of non-compliance (Van Rooij, 2006: 5-6). Thus, the key actors in this process are the regulator and the licensee. Regulatory scholars often refer to this as 'command and control regulation'; the regulator commands the norms and controls compliance through monitoring the behaviour and enforcement (see chapter 2).

In recent decades, scholars as well as policy-makers and officials have widely acknowledged that government regulation can involve more than merely strict norm-setting, monitoring and enforcement. For example, prior to imposing a sanction, the government may use more flexible norms (e.g., tradable permits), it can make use of self-monitoring by licensees and respond to violations by trying to persuade the violator to comply.

Furthermore, there is a consensus that non-state actors such as firms, civil society actors and citizens may also carry out regulatory tasks (see, for example, Ayres and Braithwaite, 1992 and Gunningham et al., 1998). Chapter 2 will explain in more detail how the advantages of citizen participation in drafting regulations have become widely accepted in policies and applied research programmes. For example, the importance of consulting with citizens in planning and licensing procedures has been generally acknowledged. Furthermore, citizens can aid the government in detecting violations through complaint mechanisms. Citizens may even play an important role in responding to a detected violation (e.g., boycotting a violator's products or services as a result of the public naming and shaming of the violator). Such boycotts can have a strong deterrent effect.

5 For a more extensive discussion on the concept of regulation, see chapter 2.

2.2 Exploring the nexus between regulation and redress seeking

The previous section explained that the changing ideas about regulation and redress seeking have led to the processes becoming more intertwined. Citizens have a more prominent role in addressing industrial pollution. They can participate in the regulation process. Improving opportunities to seek redress is high on policy agendas. At the same time, the government has more regulatory options and recent debates on the advantages of citizen participation and policies encourage the government to involve citizens in the regulation process. Therefore, at first glance, it seems that with more opportunities to regulate and seek redress, the chances are higher that the government's and citizens' common aim of a cleaner environment will be achieved.

This reasoning is particularly attractive in situations where trust in the government as a regulator is generally low, and hopes are vested in non-state parties to promote public interests. In current debates in Indonesia, the government's failures to carry out its 'command and control' regulatory tasks are barely discussed amongst scholars and policy-makers. Investing in improving the government's regulatory role is usually considered rather hopeless. The presumptions are that the lack of capacity (i.e., financial, human resources, training) is hard to overcome, that the government is corrupt, and that the government suffers too much from bureaucratic and political battles. Many practitioners focus instead on 'empowering' citizens and interest groups by giving them an important role in promoting environmental interests.

However, the previous section also explained that regulation and redress seeking processes have very different features. The key actors and the trajectories of the processes vary. Regulation, in principle, involves the regulator (i.e., the government) enforcing (i.e., through authorities) certain behaviours of license holders (e.g., industry). The key actors in the redress seeking process are, in principle, the affected citizens and the actor that caused a particular problem. In the case of industrial pollution, the question is whether the responsibility for causing a problem lies with the respective industry or the government for not taking adequate regulatory measures. Another question is whether the aims of the processes are the same. The aims differ when the affected citizens want another kind of redress than the halting of the violation (e.g., financial compensation).

Since citizens have – both in theory and in practice – come to play an important role in addressing industrial water pollution, the processes of regulation and redress seeking have become more entangled, and their interactions have become more complex. It is important to see the two processes in conjunction with one another to better understand when the two processes can reinforce one another, or when and how they do not contribute to better protecting the public interest in a clean environment. Few studies have systematically explored this nexus, in theory or in practice. By considering the situation in Indonesia as a case study, this thesis seeks to contribute to a better

understanding of how the two processes interact, overlap and leave gaps in the practice of protecting citizens against industrial water pollution.

2.3 Key actors

The research question focuses on citizens, interest groups and authorised government institutions as key actors. As previously mentioned, my initial focus was on citizens affected by pollution. However, I soon noticed that in the redress seeking process, interest groups often played an important role in representing these citizens. I take interests groups to include NGOs and, for example, groups of community leaders and labourers who engage in redress seeking or regulatory activities.

With regards to government institutions, fieldwork made clear that although district governments are often authorised to regulate the industries within their territories, provincial environmental agencies often play a core part in regulatory activities, particularly when pollution problems come to light. Therefore, this research focuses primarily on provincial environmental agencies. However, the cases that this thesis discusses often include other institutions, such as the Ministry of Environment,⁶ a district environmental agency, or a sectoral institution. Therefore, this thesis also considers the roles of such institutions.

Although this research discusses industrial perspectives on and motivations regarding compliance, a systematic analysis of them falls outside the scope of this research.

3 METHODOLOGY AND COURSE OF RESEARCH

This study is based on an interdisciplinary research approach, known as socio-legal studies. The empirical part comprises of two in-depth case studies of industrial pollution – in West Java and North Maluku – as well as an analysis of the daily regulatory practices of the environmental agencies in the provinces of East Java and West Java. Furthermore, this study contains a legal analysis of the environmental management acts, the water acts and the decentralisation acts. The legal analysis informs an understanding of the regulatory practices, and *visa versa*, the study of such practices informs an understanding of the substance and developmental history of the legal framework.

The empirical research was mostly qualitative. For the two case studies of West Java and North Maluku, I conducted fieldwork between 2009 and 2012.

6 Elected in 2014, president Joko Widodo passed a policy that merged the Ministry of Environment (MoE) with the Ministry of Forestry. The new ministry is currently named Ministry of Environment and Forestry (MoEF).

For each case, I spent a total of two to three months in the field, spread out over two or three fieldwork periods. I interviewed a variety of stakeholders in each case, including government officials, NGO members, community leaders and industry representatives. I also used semi-structured questionnaires to interview citizens living close to the industrial plants: 56 people in West Java and 77 people in North Maluku.

During the fieldwork, I also gathered relevant archival material, including documentation from government institutions and NGOs, and newspaper articles. For the pollution case in West Java, I gathered and analysed over 400 documents, mainly from the provincial environmental agency. For the North Maluku case, I recovered approximately 450 documents, mostly newspaper articles and documents from Walhi, an environmental NGO. The analysis of these documents of both cases offered a more historical perspective and an understanding of how the cases developed over time.

The analysis of the daily practices of the environmental agencies is based on observations I made when I accompanied agency officials for three months in West Java and nearly one month in East Java. I joined officials involved in monitoring and enforcement. Every day I observed their activities at the environmental agency's office and in the field, where they visited industries.

The selection of case studies and agencies took place throughout the research process. I initially focused on the redress seeking process, but during this process my focus widened, as my early experiences in the field had made me realize that the interesting features of addressing industrial pollution lay in the intersection between the redress seeking and regulation processes. Thus, I began to search for cases where citizens addressed the industrial water pollution problem and environmental agencies were actively involved in regulating the industry's behaviour. Another criterion was that I could get access to environmental agencies and would be allowed to follow their daily activities.

During the first fieldwork period, in North Maluku in 2009, I still focused mainly on the redress seeking process. The selection of the North Maluku had resulted from my participation in the 'Access to Justice in Indonesia' research project, organised by the Van Vollenhoven Institute, the United Nations Development Programme (UNDP) and the World Bank. Together with the research project team, I selected the case study in North Maluku because the UNDP was running an initiative there to increase redress seeking opportunities. My research aimed to support this initiative.

However, the case study in North Maluku, as well as my observations during exploratory visits to North Sumatra, Surabaya and Bandung, made clear that it was uncommon for environmental institutions to take enforcement measures against polluters. As I became aware that the reluctant attitude of the government in regulating pollution was an important factor in understand-

ing the developments within the redress seeking processes, I became keen to better understand the regulatory roles of government institutions.

I became particularly interested in Provincial environmental agencies, because they were often involved in cases with a certain status, for example because they received attention in the media or because citizens had demonstrated against the pollution. I was particularly interested in the West Java and East Java environmental agencies, because they appeared, at least at first sight, exceptionally active in regulating the industries. I wanted to understand what they did precisely to regulate the behaviour of polluting industries and why so.

My presence at these agencies at the same time gave me the opportunity to gather much information on two pollution cases that these agencies were dealing with. During the three-month period in which I observed the daily practices of the West Java agency, I also gathered information on Rancaekek, an infamous local pollution case. I decided to include this case as an in-depth case study, and follow up on previous research conducted on Rancaekek by my supervisor Adriaan Bedner, a decade earlier, in 2001. His material and the documentation I retrieved from the agency's archives allowed me to reconstruct the developments of the case as they had taken place over the decades, similar to my approach in the North Maluku case.

After I observed the daily practices of the West Java agency and studied the Rancaekek case, I concluded that in West Java, the government was also rather reluctant in its role as regulator. Around that time, I heard of examples in the province of East Java where the government had, in fact, closed a sugar factory after it had been found violating the law. In search of new insights on the regulatory role of the government in cases of industrial pollution, I decided to include the East Java environmental agency as well as the pollution case of the closed sugar factory in my study.

In order to situate my findings in a wider theoretical context, I studied global, Indonesian and environmental literature on regulation and redress seeking.

Between 2009 and 2012, I occasionally discussed my findings with Indonesian scholars, policy-makers from the Ministry of Environment and members of national environmental NGOs. In 2016, I conducted more in-depth conversations by cooperating with Indonesian scholars and the NGO Indonesian Center for Environmental Law (ICEL) in the 'Making Environmental Regulation Work for the People' project (MERW). This project was managed by the International Development Law Organization (IDLO) and was funded by the Dutch Embassy in Jakarta. The project aimed to follow up on my existing research findings and to improve the practice of regulating industrial pollution.

My cooperation with Indonesian scholars, NGO members and policy-makers provided me with additional insights into the relevant legal framework and the daily practices of environmental agencies. The MERW project also allowed me to reflect on the question to what extent the findings from my PhD research were exemplary for how industrial pollution is dealt with, also in other parts

of Indonesia. The research that was conducted within the context of this MERW project, as well as the responses from officials and scholars to the findings, showed that although there are significant differences in how industrial water pollution is dealt throughout the country, many findings are generalizable. This goes particularly for the reluctant role that environmental institutions play in enforcement and the focus on seeking redress in the form of compensation for the pollution rather than ending or reducing it.

3.1 Sensitivity and ethical considerations

In 2008, I began my research as part of the Access to Justice project on the pollution case in North Maluku. I soon noticed that my preliminary findings led to controversies. The staff members of environmental NGOs disapproved of my research findings as they had expected that my fieldwork would affirm their view that the local people unanimously suffered from pollution caused by the mining company. The staff members thought that the main barrier for affected locals to achieve a more just situation was their difficulty in addressing their concerns about the environment. The organisations hoped that establishing local complaint posts would help such locals overcome this barrier. However, my findings were not as straightforward. Pollution was not the poor and divided population's only problem, for those who saw it as a problem at all. The villagers I interviewed more often mentioned problems related to economic issues, such as limited job opportunities and an unfair distribution of benefits. Such economic issues had led to serious tensions amongst community members.

This experience illustrates the sensitivity of both my research and its outcomes. The attempts by interest groups to achieve redress for the people they represented were occasionally genuine, but often there was little room for a nuanced presentation of the facts or critical self-reflection about the side effects of their actions. My findings often, at first glance, seem to undermine the positions of the interest groups that seek to achieve redress for certain citizens. However, as a researcher, I analyse the situation from a broader perspective than that of one particular case. Nevertheless, I hope that these researched insights will contribute to more effectively promoting environmental interests and improving the situation of those affected by pollution, particularly the most vulnerable people in communities whose voices often remain unheard.

4 OUTLINE OF THE BOOK

The next chapter provides an overview of the literature on processes of regulation and processes of redress seeking. It argues that globally, in recent decades,

these two processes have gradually become more entangled. The government – traditionally a regulator – increasingly depends on other actors to carry out its regulatory tasks. At the same time, the attention on the citizen's perspective as a 'justice seeker' expanded. The redress that a citizen seeks – which in principle is a private interest – may be similar to the public interest (e.g., when a citizen seeks to halt environmental pollution in their vicinity). Therefore, one may conclude that by strengthening the position of citizens in the redress seeking process, one may simultaneously achieve the goals of the regulation process. The redress seeking process may complement or even replace the regulation process. However, this chapter explains that the relation between the two processes is complex and that the processes do not automatically complement each other.

Before looking at the implications of these intellectual developments on Indonesian practice, chapter 3 analyses the local legal and institutional frameworks relevant for dealing with industrial water pollution. It discusses the main developments in the successive Environmental Management Acts (EMA) of 1982, 1997 and 2009. It also reflects on how ideas about regulating environmental issues have been developing. The chapter also looks at the relevant water regulations, as well as at the Regional Government Acts of 1999, 2004 and 2014 that are the basis for decentralisation. These have had a considerable impact on the division of authorities between the various government institutions. Uncertainty nevertheless remained in this area. The chapter concludes that despite the fact that the legal framework has progressed over the years, it still has considerable weaknesses. These weaknesses are especially apparent in the administrative law framework for regulating industrial pollution.

The second part of the book will look at the practice of dealing with pollution, from the perspective of the regulator as well as of affected citizens. First, chapter 4 describes how environmental agencies at the provincial level – in East Java, West Java and North Maluku – are involved in regulatory and redress seeking processes concerning industrial pollution. Although the three agencies differ in many ways, they share inconsistent and flawed legal and institutional contexts. Such contexts negatively impact the effectiveness of the regulatory efforts. Due to the limited effectiveness and complication of regulating through administrative law, it is hardly surprising that scholars, policy-makers and officials tend to look for alternatives to influence the behaviour of violators (e.g., by depending on self-regulation, economic instruments, ad hoc regulatory initiatives, criminal law and the redress seeking process). However, there are indications that 'command and control' regulation is in fact rather effective in protecting the public interest in clean river water.

The following chapters demonstrate the potential complications and negative effects of relying on the redress process to address industrial pollution. Chapters 5 and 6 depart primarily from the perspectives of citizens affected

by pollution. Chapter 5 describes a case in Rancaekek, West Java. In the media and government documents, the local farmers are usually considered victims of the pollution because their rice fields became less productive after the upstream textile industry ran its wastewater into the rivers the farmers relied on. However, a closer analysis reveals that although the farmers were not the only ones affected, they managed to present themselves as the only victims in the redress seeking process. The farmers did not represent all of the community members and the community's interests. The social relations within the communities were complex and became even more so after the government tried to deal with the case by facilitating negotiations between the farmers and the industries. The outcome did not result in a solution to the environmental problems and even contributed to social tensions within the communities located downstream from the industry.

Chapter 6 discusses a mining case in North Maluku. The people who lived in the vicinity of the mining site experienced many injustices. These were not merely related to environmental pollution. Moreover, different citizens experienced different injustices. These experienced injustices even transformed over time as a result of altered opportunities to achieve redress for a particular injustice. The complexity of the case made it difficult to come to a solution that would satisfy all people living near the mining site. This case illustrates the complications of trying to regulate through the redress seeking process.

Chapter 7 concludes by answering to the main research questions and providing recommendations on how Indonesian regulation can become more effective and how the citizens who are affected by pollution – or those who are at risk of becoming victims of pollution – can play a more fruitful role in the promotion of public environmental interests.