A thesis submitted to the Department of Environmental Sciences and Policy of

Central European University in part fulfilment of the

Degree of Master of Science

Why the Global South breaks free from plastic: an experience of the Philippines and Kenya in making policy on single-use plastic bag

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July, 2019

Budapest

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ABSTRACT OF THESIS submitted by:

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for the degree of Master of Science and entitled: Why the Global South breaks free from plastic: an experience of the Philippines and Kenya in making policy on singleuse plastic bag

Month and Year of submission: July, 2019.

Plastic bag pollution problem has become a global issue because of the threats to wildlife, human safety, and economic development. For the last years developing countries, especially from Africa and Asia, have been actively enacting legislation to restrict plastic bags, despite the absence of globally binding agreement. However, the research around the factors contributing to such norm emergence lacks. This research aims to address this gap by investigating how plastic bag regulation has been developed in the countries of the Global South. The research explores the specific case studies of Kenya and the Philippines. Through semi-structured interviews with the main stakeholder groups participating in policymaking, the research identifies the dominant policy narratives. These narratives are analyzed through the aspects of its impact on coalition formation and policy outcomes and compared over the case countries. The results of this research confirm the hypotheses of Narrative Policy Framework and provide some additional insights into the role of social media, international interventions, and education of decision-makers in the development of plastic bag regulation. These findings can be used by practitioners from a public policy at the national and international levels to mitigate social tension around the environmental issues and promote effective environmental legislation.

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Keywords: plastic pollution, policy, Kenya, Philippines, policy narrative, plastic bag, developing countries, coalition, agenda-setting, norm emergence.

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List of Abbreviations

- DENR Department of Environment and Natural Resources
- GAIA Global Alliance for Incinerator Alternatives
- KAM Kenya Association of Manufacturers
- NEMA National Environment Management Authority
- NGO Non-Governmental Organization
- NPF Narrative Policy Framework
- NSWMC National Solid Waste Management Commission
- PARMS Philippine Alliance for Recycling and Materials Sustainability
- PET Polyethylene terephthalate
- **RETRAK Retail Trade Association of Kenya**
- PIP Packaging Institute of the Philippines
- **UNEP United Nations Environment Programme**
- WWF World Wild Fund

Introduction

Intensive growth in plastic production and consumption has led to the unprecedented scale of the plastic waste problem. Recent UNEP (2018) report shows that about 8 million tonnes of plastics leak into the ocean every year due to insufficient waste management and low recyclability of the plastic. It impacts wildlife, human health, and economics, and aggravates climate change and chemicals pollution.

Plastic bags as a symbol of plastic era, in essence, represent all advantages and disadvantages of it: light-weight to transport the goods but easy wind-blown for a long distance, durable to carry on goods but highly persistent in the environment, having low price for the consumers but low economic value for the recyclers, waterproof for the users convenience but blocking sewage systems causing the floods, transparent and flexible for a variety of use but confused with jellyfish and eaten by the whales and turtles, single-used but decomposing up to 1000 years.

For the last ten years, over 127 countries have adopted some form of legislation to regulate plastic bags, with most developing countries enacting restrictions, especially in Africa and Asia (UNEP 2019). It is a quite uncommon tendency in the environmental field when a norm has emerged from the Global South to the Global North, and the majority of the countries have introduced plastic bag regulation in the absence of any globally binding agreement. Therefore, it is worthy of in-depth study to find out what factors have influenced the policymaking process in developing countries and incentivized the governments to develop environmental legislation.

Understanding the reasons for such a tendency can help to develop effective global and national strategies to address the plastic pollution problem, especially in the Global South, and reconsider the role of multilateral binding agreements in the

environmental protection. Moreover, the findings of this research can be generalized for other environmental problems and ways the Global South deals with it.

This project aims to explain how single-use plastic bags regulation has been developed and passed in developing countries using the case-studies from the Philippines and Kenya. Therefore, the objectives of the research are identified as following:

- to identify main stakeholders participating in policymaking on single-use plastic bags in the Philippines and Kenya, and their vision and ways of interaction;
- to find out and analyze the dominant policy narratives around the single-use plastic bags issue in the Philippines and Kenya including public discourse, coalition composition, and policy settings;
- to research agenda-setting process in the Philippines and Kenya, and impact of the policy narratives on coalition formation and policy outcomes;
- to formulate the factors contributing to the emergence of single-use plastic bag regulation in the Philippines and Kenya.

These countries present a specific interest because the relevant legislation has been introduced just recently or at the stage of its expanding that provides rich data for analysis. Moreover, the Philippines was named as top five contributors to marine plastic litter, and recently the government has committed to prohibiting all single-use plastic by 2030, additionally to the current bans implemented in some cities. In 2017 Kenya adopted the most extreme restrictions for single-use plastic bags engaging other east African nations - Uganda, Tanzania, Burundi, and South Sudan to follow suit. Both countries are quite significant for the regions; therefore, information about the factors contributing to the development of single-use plastic bag regulation in these countries could be generalized for the wider region. Besides, the English language is

considered as one of the officials, which makes it possible to get access to the data, including the legislation, consumer documents, and stakeholders in these countries.

Since the research question is how policy narratives on the single-use plastic bags impact policy outcomes in Kenya and the Philippines, the research is focused on the agenda-setting stage of the policymaking process and role of the coalitions and their narrative strategies. Therefore, this research is grounded in the Narrative Policy Framework. Research design is based on explanatory case study analysis of the actors and coalitions in Kenya and the Philippines, with a further comparison between the focus countries. The primary data collection method includes an interview with stakeholders engaged in the creation of a policy narrative around the single-use plastic bags issue in case countries.

Despite the significance of the plastic pollution problem, confirmed by a range of research on plastics impact on wildlife mainly, and a rapid increase in national regulations and corporate commitments to address the problem, there are just a few studies aiming to understand why it is happening, especially in developing countries. Moreover, the storytelling approach actively used by the stakeholders in the environmental field is rarely studied in terms of how these narratives may impact the policymaking process in developing countries and on such cross-cutting issues as plastic pollution. Therefore, the findings of this research may be useful for practitioners in public policy, including NGOs and international public organizations in terms of how to create and recognize the policy narratives in order to improve environmental governance.

This research begins with a review of literature in the field of plastic pollution problem itself and the current approaches to address it through regulation with a particular focus on the Global South. This part provides an overview of the problem

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and identifies the knowledge gaps existing in the literature. The second chapter includes information about the Narrative Policy Framework and literature review on its implications, especially in the environmental field. The third part consists of research design description and overview of the methods used to collect and analyze data, and its limitations. The fourth chapter consists of cases description and the results of data analysis for Kenya and the Philippines, including an overview of the narrative elements and strategies used by coalitions across the countries, and its comparison between the countries. The fifth chapter contains a discussion on how these findings correspond to the theoretical hypotheses and outcomes of other scholars in the field. Moreover, some recommendations for further implication and research are presented there. The research ends up with the conclusions summarizing the findings and its significance for environmental science and policy.

1. Literature review

This literature review provides the contextual framework for the research interest by identifying theoretical and empirical incentives to explore the issue, as well as points to the gaps in knowledge which the thesis aims to fulfill. First, it sets a broader picture of the plastic pollution problem globally, including discussion on the effectiveness of measures to mitigate plastic pollution. Then it moves to the analysis of the current trends in plastic waste management, particularly in the countries of the Global South. It also includes the justification for the specific interest of this thesis to single-use plastic bags issue and policy regulation in Kenya and the Philippines. The next part presents an overview of the existing policies to reduce single-use plastic bags pollution globally and regionally, including the analysis of international patterns of this norm emergence, and its implications in countries of the Global South. It ends up with a review of the role of agenda-setting in the public policy-making process at the national level.

1.1. Plastic as a global environmental problem

1.1.1. Plastic production and consumption

Mass production of plastic started in the 1950s (Beall 2009), and it has increased 200-fold since that time. Currently, the global annual production of plastic is estimated at 300 million tonnes (Napper *et al.* 2015), while its global cumulative production has reached 8.3 billion metric tonnes (Geyer *et al.* 2018). Over 50% of plastic is used for single-use disposable applications, mainly for packaging (Nkwachukwu 2013; Xanthos and Walker 2017). Around 5 trillion plastic bags are produced annually (UNEP 2018). Consumption of plastic in Western Europe and North America has reached 100 kg per capita, while in Asia, it is just around 20 kg per person

but with expecting rapid growth (Verma 2016). Plastic production is also shifting to Asia mainly in China (38%), followed by Europe (16%), North America (21%), the Middle East and Africa (18%) (Gourmelon 2015; Worm *et al.* 2017; UNEP 2018). Most of the plastic waste is generated in Asia, with America, Japan, and the European Union being the world's largest producers of plastic packaging waste per capita (UNEP 2018).

There are main global trends of plastic industry identified by the different authors: extremely rapid increase of plastic production and proliferation in every economic sector due to increase of consumption and relatively low price that leads to displacement of more sustainable materials, global shift from production of durable plastic to single-use plastic that increase the amount of plastic wastes, inability of wastes management systems at the national level to deal with increasing amount of plastic wastes, high level of hazardous chemicals use in plastic production that constrains closing the manufacturing loop, plastic waste becomes globally-traded commodity (Barnes *et al.* 2009; Nkwachukwu 2013; UNEP 2014; Jambeck *et al.* 2015; Geyer *et al.* 2018; Thompson 2017; UNEP 2018).

According to 2010 estimates, 275 million metric tons of plastic waste was generated in 192 coastal countries with 4.8 to 12.7 million metric tons entering the ocean. According to 2015 estimates, 16 of the top 20 countries contributing to marine plastic litter are middle-income countries, where waste management infrastructure does not fit the pace of economic growth. China, Indonesia, the Philippines, Thailand, and Vietnam are the main polluters with up to 83% of mismanaged waste (McKinsey 2015; Jambeck *et al.* 2015; Worm *et al.* 2017).

1.1.2. Plastic waste management

Nowadays, there are several approaches to manage plastic waste: recycling, disposal at landfills, incineration with or without energy recovery. Different scholars

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underline the advantages and disadvantages of these approaches. While being the least expensive, landfill requires large areas of land, and may lead to the release of hazardous chemicals contained in leachate (Ritch *et al.* 2009), greenhouse gas emissions, health threats and irrecoverable loss of resources. Incineration allows reducing waste volume and demand for landfills, and energy generation, but it is also associated with the resources loss, intensive air pollution, and greenhouse gas emissions, as well as need to dispose of toxic ash and slag. Currently, more countries begin considering the incineration approach despite the claimed drawbacks (Nkwachukwu 2013).

Recycling requires a developed system of waste segregation and the market for recycled materials. Although it is developed in Europe and America, their recyclables are mainly shipped to the developing countries with lower environmental standards and lack of formal recycling systems (McKinsey 2015). The largest plastic waste exporters are the United States, followed by Japan, Germany, and the United Kingdom. China was the leading importer of plastic scraps from the western countries until 2018 when the country had implemented a national ban for import of the recyclables (Gourmelon 2015). The use of recycled plastic is still quite marginal compared to virgin plastics because of the low price of virgin material and the quality of the recycled resin. Moreover, recycled plastics are not commonly used for food packaging due to food safety concerns and hygiene standards, and low-weight volume rate makes plastic bags less economically viable for collection, and more likely to leak into the environment consequently (Nkwachukwu 2013; Barnes *et al.* 2009; Hopewell *et al.* 2009; McKinsey 2015).

There are also some other options aiming to reduce plastic waste generation, but questioned by a range of the studies: downgauging (reducing the amount of

packaging used per item) which is disadvantaged against aesthetics, convenience and marketing benefits, and the effect of investment in tooling and production process; reuse of plastic packaging which is limited logistically and by marketing purposes; use of biodegradable plastics which requires appropriate technical attributes for disposal, consumer education, and could become a significant issue in sourcing sufficient biomass to replace all the plastic currently consumed (Hopewell *et al.* 2009; Ritch *et al.* 2009; Nkwachukwu 2013). Moreover, Ritch *et al.* (2009) argue that improvements in the environmental performance of packaging materials are used by retailers and manufacturers to improve their sustainability performance without changing the process itself.

Based on the recent UNEP (2018) report 79% of the plastic waste ends in landfills, dumps or the environment, while about 12% has been incinerated and only 9% has been recycled. Up to 80% of the waste that accumulates on land, shorelines, the ocean surface, or seabed is plastic, mainly plastic bags which are easily windblown (Barnes *et al.* 2009). If the trends in consumption and waste management keep going, around 12 billion tonnes of plastic litter will end up in landfills and the environment by 2050 (UNEP 2018). Many studies claim that global "peak waste" will not be achieved before 2100 mainly because of population growth, urbanization and increase of consumption on the developing countries (Walker *et al.* 2006; Jambeck *et al.* 2015; McKinsey 2015; Surhoff and Scholz-Bottcher 2016; Wang *et al.* 2016; Barnes *et al.* 2009; UNEP 2018). However, Worm *et al.* (2017) underline such trends as a decoupling of waste generation with economic growth, stagnation of plastic production and use in Europe, improved waste management in some countries, and growing concerns around plastic pollution.

1.1.3 Threats of plastic pollution

Plastic presents a range of challenges for the environment, economic, and social development at every stage of its lifecycle. The production of plastic from the fossil resources is associated with consumption of 8% of the world petroleum and the release of 400 million tonnes of CO2 per year (Gourmelon 2015; European Commission 2017), with an expected increase by 20% by 2050 (UNEP 2018).

Plastic can pose a threat to human health through dietary exposure because of a range of hazardous chemicals (phthalates, Bisphenol-A, PFC and BFR, etc) contained in plastic production, and its endocrine-disrupting functions associated with the development of such diseases as obesity, cancer, diabetes and behavioural disorders (GESAMP 2015; Bakir *et al.* 2016; Keswani *et al.* 2016; Ritch *et al.* 2009; Forrest and Hindell 2018; UNEP 2018). There is a substantial range of the studies on endocrine-disrupting chemicals and its growing threat to human-beings and wildlife, led by World Health Organization (WHO 2012) and some national environmental agencies especially in the EU (KEMI 2013).

Plastic debris can also affect a variety of species through entanglement, ingestion and chemical contamination resulting in harm or death and biodiversity loss (Gall and Thompson 2015; Browne *et al.* 2015; UNEP 2016; Werner *et al.* 2016; Wilcox *et al.* 2016; Worm *et al.* 2017; Forrest and Hindell 2018). There is a wide range of research made in the different parts of the world to illustrate the scale of the plastic pollution problem. Studies estimate that around 10-20 million metric tonnes of plastic wastes reach the ocean annually, affecting 700-1500 species, including seabirds, turtles, marine mammals and vertebrates, 17% of which are IUCN red-listed (Ritch *et al.* 2009; Nkwachukwu 2013; Vegter *et al.* 2014; Gourmelon 2015; Worm *et al.* 2017; Xanthos and Walker 2017; Jambeck *et al.* 2018; Forrest and Hindell 2018). According

to UNEP (2018), plastic waste causes the death of up to 1 million seabirds and 100 000 marine mammals annually. Plastic bag poses one of the most significant impacts on seabirds, turtles, and marine mammals at population and taxa level because it can be easily mixed up with jellyfish. For example, green turtle mortality due to plastic ingestion was recorded in the Philippines (Abreo *et al.* 2016; Wilcox *et al.* 2016; Worm *et al.* 2017). Ingestion of plastic can affect fertility in female fish, marine ecosystem sustainability and the global fishing industry, which provides 15% of the world's dietary protein (McKinsey 2015).

Contamination of the environment with plastic debris can have adverse economic effects. Stranded plastic along shorelines impacts tourism due to aesthetic issues reducing tourism revenue, and recreational activities, and leads to economic losses associated with vessel damage, threats to public health, invasive species transport, negatively impact shipping, energy production, fishing, and aquaculture resources. Moreover, plastic bags can block the sewage system causing the flooding during the rainfalls (e.g., Ghana, Bangladesh, Philippines), act as breeding grounds for malaria-carrying mosquitoes, increasing the risk of diseases spreading, damage agriculture because of soil pollution and livestock decrease due to plastic litter digestion (e.g., Kenya) (Clap and Swanston 2009; Cole et al. 2011; Sivan 2011; Jang et al. 2014; Nkwachukwu 2013; Vegter et al. 2014; Newman et al. 2015; Xanthos and Walker 2017; Jambeck et al. 2018). A preliminary estimate of the overall economic impact of plastic on marine ecosystem is around \$13 billion per year (UNEP 2014; Xanthos and Walker 2017), and \$1,26 billion just in the countries of Asia-Pacific Economic Cooperation, with the tourism sector bearing the largest share of the cost there \$622 million (Mcilgorm et al. 2011).

However, despite increased scientific and public awareness there are still many gaps in knowledge of the sources and the amount of plastic that leaks into the environment, the impact of plastic pollution, particularly the link between plastic ingestion by marine animals and human health, the carbon and toxin footprint of singleuse plastics, social and economic aspects of plastic pollution at the national and regional levels, consequences for ecosystem services.

1.1.4 Mitigation measures to address plastic pollution

Currently, three main approaches to deal with the plastic pollution problem are identified: governmental regulation (ban, levies, etc.), market instruments (extended producer responsibility, alternative materials promotion, etc.) and change of consumers behavior (raise public awareness, etc.). Vegter *at al.* (2014) argue that the cost and benefits of these options depend on the distance to point source, population size, a wealth of populations. Market-based governance approaches to address plastic marine litter are implemented in two ways: the direct economic cost of the pollution and its removal, and corporate social responsibility through the taxes, charges, fees, fines, and permits (Mcilgorm *et al.* 2011; Newman *et al.* 2015; Vince and Hardesty 2017).

UNEP (2018) specifically focuses on the importance of stakeholders engagement, evidence-based studies to promote alternatives, economic incentives to encourage the uptake of eco-friendly alternatives (e.g., tax rebates, research and development funds, technology incubation, public-private partnerships), revenues use for the public good, jobs creation in the plastic recycling.

Nowadays, 127 countries have adopted some form of legislation to regulate plastic bags (UNEP 2019). Vegter *et al.* (2014) claim that regulatory approaches are widely used due to low transaction costs. Moreover, for the last ten years, 1700 NGOs and activists established anti-plastic movement Break Free From Plastic and initiated

a range of national and local campaigns advocating for the reduction of plastic consumption and production through the policy development as well. Many NGOs conduct monitoring research on marine debris to increase awareness: The 5 Gyres Institute, Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, the Ocean Conservancy controls the International Coastal Cleanup (Pettipas et al. 2016; Xanthos and Walker 2017). In 2011 plastic industry associations developed a global Declaration for Solutions on Marine Litter (Vince and Hardesty 2017). In 2018 the world's leading fast-moving consumer goods companies (e.g., Nestlé, Pepsico, Unilever, The Coca-Cola Company, L'Oréal, and Mars, Incorporated), plastic packaging producers (e.g. Amcor, Sealed Air Corporation, ALPLA Group, Aptargroup Inc., Berry Global, RPC Group and Bemis), global retailers (e.g., Walmart Inc., Schwarz Group, Carrefour, Target, and Ahold Delhaize) and environmental services companies released 'New Plastics Economy Global Commitment' to ensure that 100% of plastic packaging can be reused, recycled or composted by 2025 that also means elimination of problematic and unnecessary plastic, reducing the need for single-use plastic, rid off hazardous chemicals from plastic and reducing the use of virgin plastic. By June 2019, over 400 companies joined the commitment (Ellen MacArthur Foundation 2019). Vince and Hardesty (2017) argue that the social license for acceptable behavior regarding plastic use and disposal has been changing dramatically in recent decades.

However, the effectiveness of the public campaigns, economic incentives, and introduced regulations is rarely evaluated due to lack of data (Vegter *et al.* 2014; Worm *et al.* 2017; UNEP 2019).

Since the focus of this study is plastic bag policy regulation in the developing countries of the Global South, it is essential to understand the regional context in order

to find the similarities and differences which can impact the policy outcome. Therefore, the part below presents a review of the plastic pollution issue in the Global South context, and justification of choice on case-countries.

1.2. Plastic pollution issue in the Global South

There is a range of specific reasons for anti-plastic bag sentiment in developing countries identified by the different authors: poorly developed system of waste management caused by weak economic development and institutional scarcity, which makes the plastic pollution problem more essential especially in the situation of outpacing tends of plastic production and consumption; need to shoulder not only the burden of their own consumption waste but also the externalities of the developed countries; short and clear cause-effect chain with the consequences resulting in body harm or economy damage (Clap and Swanston 2009; McKinsey 2015; Horvath 2018). For example, in Ghana plastic bags accumulated in waterways clogged drains during heavy rains in 2005 causing significant flooding resulted in the death of 150 people and millions of dollars damage (Jambeck et al. 2018), while in India it resulted in at least 1 000 deaths. Similar floodings happened in Bangladesh in 1988 and 1998, which led to the banning of plastic bags in 2002 (Nkwachukwu 2013), and almost annually in the Philippines (Wachira 2014). In Western Kenya, veterinarians claimed that in their lifetime cows ingest an average of 2.5 plastic bags, among other plastics (UNEP 2018). Field (1997) underlines that environmental damage in developing countries, more than in the developed ones, affects economic productivity.

Moreover, the countries with the largest coastal borders discharge plastic into the oceans with the most considerable quantities. Based on the analysis of mismanaged wastes China, Indonesia, the Philippines, Thailand, and Vietnam are

considered as the main contributors to marine plastic debris (Jambeck 2015). Based on McKinsey (2015) assessment, these countries are at a stage of economic growth in which consumer demand for disposable products is growing much more rapidly than local waste-management infrastructure. The following triggers of consumption growth in these countries are identified: rapid urbanization (around 40%) which increases per capita waste generation and level of plastic within the waste stream; trends in the consumer-packaged-goods industry where plastic packaging is promoted as a solution for food safety provision, and support low-income consumers with shrinking productdistribution sizes (sachet); lightweighting of packaging to increase resource efficiency and reduce transportation emissions which makes the packaging less valuable to recycling system (McKinsey 2015).

All of these countries have introduced different types of plastic regulation. In the Philippines, while there is no national law or regulation on single-use plastics, 59 cities and municipalities have enacted local ordinances that ban or charge a levy on plastic bags, and another bill suggesting the national ban has been filed in Congress in 2019. In 2008 China introduced a national ban on non-biodegradable plastic bags <25 μ and levy on the consumer for thicker ones. Indonesia has a range of locals bans on single-use plastic bags and levy on plastic bags imposed on customers at selected retailers in 23 cities. Since 2012 non-biodegradable plastic bags are taxed by weight in Vietnam. Also, this year, Thailand has approved a roadmap to eliminate single-use plastic, including plastic bags by 2030 (UNEP 2018, 2019).

For this research, Kenya and the Philippines were selected as focus-countries because of easy access to information and importance for a broader region. The relevant legislation on plastic bags has been introduced in these countries just recently or is at the stage of development that provides an update and rich data for the analysis.

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Moreover, all information about the cases, including legislation, media publications, and local NGOs reports is available in English, which is also a working language for the target-stakeholders. Both countries are quite significant for the wider sub-region; therefore, understanding the plastic bag policy-making process in these countries could be generalized for a bigger area. Besides, the Philippines was named as one of the main contributors to plastic marine debris, while UNEP headquarters is located in Kenya, that provides additional context to explore using Policy Narrative Framework.

Since this study is focused on plastic bag regulation in the developing countries, it is important to analyze the global trends in order to locate the experience of Kenya and the Philippines there. Thus, in the next part, an overview of the current policies in the field of plastic pollution at the global, sub-regional, and national levels is presented.

1.3. Policy regulation of plastic pollution

Currently, there is a number of international frameworks addressing the plastic pollution problem, i.e. the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (1972), the International Convention for the Prevention of Pollution from Ships (1973), the United Nations Convention on the Law of the Sea (1994), and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1992). It mainly focuses on market-based instruments to minimize wastes and policy development to reduce marine debris in general (Xanthos and Walker 2017; Worm *et al.* 2017). In May 2019 the 14th Meeting of the Conference of the Parties to the Basel Convention agreed on an amendment prohibiting plastic waste exports to developing countries. Moreover, there is a range of non-binding commitments such as G7 Action Plan to Combat Marine Litter, Honolulu Strategy, Global Partnership on Marine Litter, UNEP Clean Seas

Campaign and recently introduced G20 framework on marine plastic waste (Reuters 2019). Palasis (2011) underlines that soft law dominates global efforts on marine plastic pollution, which leads to an increase of discussions around the need to have a global convention to address the plastic pollution problem. A range of studies claims that the current legislation is ineffective due to its fragmentation and non-binding nature, lacks implementation and stringent rules and does not address land-based sources of plastic litter (Chen 2015; Simon and Schulte 2017; Vince and Hardesty 2017). However, some studies argue more for the integrated policy approaches (Rayner and Howlett 2009; Hu 2012) and bottom-up community-based approaches (Vince and Hardesty 2017) rather than a global treatment, which can be actively opposed by coastal countries.

Nevertheless, many countries take national approaches addressing the issue through legislation and policies. Such initiatives have been started since the 2000s in the developing countries (e.g., Bangladesh, India, etc.) and driven mainly by the adverse environmental impact of plastic bags and as a way to prevent floods and disease spreading (Ritch *et al.* 2009). Moreover, some studies underline such reasons for the enactment of the plastic bags regulation as visibility gained by governments that introduce bans on the importation, production, and use of single-use plastics (Clap and Swanston 2009; UNEP 2019).

Currently, 127 out of 192 countries reviewed by UNEP (2019) have adopted some form of legislation to regulate plastic bags. Analysis of the national legislation shows that the most common form of regulation is the ban of the free retail distribution (43%), and manufacturing and import (32%), while around 30% of the countries have instituted economic levies - taxes on the manufacturers or consumers fees for plastic bags. Levies range in cost, frequency and plastic bag quality (Asmuni *et al.* 2012;

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Dikgang et al. 2012), while bans - in thickness making environmentally informed decisions for consumers and retailers are difficult (Xanthos and Walker 2017). 22% of the countries have included elements of extended producer responsibility and 27% legislative requirements to implement recycling targets. In many developing countries without national legislation, sub-national governments (states, cities. and municipalities) enacted state or local-level legislation to reduce plastic bag use (e.g., India, the Philippines, the US, etc). Clap and Swanston (2009) confirm that in the case of absence of international treaty to codify new norm, policy responses may vary. Europe leads the way with 44 countries have enacted some form of legislation to regulate plastic bags, followed by African nations with 37 countries regulating plastic bags, and 27 countries in the Asia Pacific region (UNEP 2019). Since 2002, countries in Africa and Asia have introduced bans (Dikgang et al. 2012) on plastic bags, while in the rest of Europe, mainly levies (Poortinga et al. 2013). Across North and South America, interventions for plastic bags are made mainly at the level of the cities, municipalities, and states rather than national one (Xanthos and Walker 2017). However, the effectiveness of these regulations is still questioned due to lack of information about their impact because of the recent adoption or inadequate monitoring (Vegter et al. 2014; Worm et al. 2017; Vince and Hardesty 2017). Based on recent UNEP (2019) research, in 30% of the countries which have data, a rapid decrease in plastic bags consumption was registered within the first year, while 20% of countries have reported little to no change. Among the main reasons for that, there is a lack of enforcement and affordable alternatives (UNEP 2019). However, Nkwachukwu et al. (2013) argue that ineffectiveness of regulatory instruments can also be associated with its disparity with trends in production, use, and disposal.

More countries decide to go for the national plastics regulation, and more international environmental activity happens at the national and subnational level. It requires a deeper understanding of how new environmental norms emerge and diffuse and how they are interpreted into policy in different jurisdictions around the world.

The international norm dynamics literature assumes that norm's adoption may happen when it is codified by states in international agreements, practices, and institutions, and it tends to be diffused from the states of the Global North to the Global South via the efforts of norm entrepreneurs (transnational social movement or international institutions) (Finnemore and Sikkink 1998; Keck and Sikkink 1998; Bernstein 2001). However, in the case of single-use plastic bags and plastics in general, there is no international level treaty or institution to govern the norm adoption. Moreover, the norms are emerged from South to North and without networks engagement. The first strict regulation was enacted in Bangladesh, India, Taiwan, China, South Africa, and countries like the US, UK, Australia, Canada, and even the EU started doing it much more recently. Germany and Denmark were the earlier adopters of legislation imposing extra tax or levy on the retail stores or plastic bags manufacturers in 1991 and 1994 respectively, while Bangladesh was the first country introducing a ban on plastic bags use and manufacturing in 2002 (Xanthos and Walker 2017). The policy in the countries of the Global South originated as bottom-up initiatives at multiple jurisdictional levels based on local and regional specific concerns without conventional international actors involvement (Clap and Swanston 2009).

In the early 1990s in Bangladesh, local environmental NGOs started a public campaign against plastic bag later taken up the Ministry of Environment. After plastic bags blocked drains causing floodwaters in 1998, the national ban on the use and manufacture of all shopping bags was introduced in 2002 (Reazuddin 2006; Clap and

Swanston 2009; Nkwachukwu 2013). In India in late 1990s different states enacted bans on plastic bag distribution, use, and disposal after landslides and floods caused by plastic bags blocking the sewage system and resulted in at least 1 000 deaths. Moreover, plastic bags posed a health threat to free-roaming sacred cows (Chauhan 2003; Clap and Swanston 2009; Nkwachukwu 2013). In Taiwan, the rapid economic growth led to an increase of plastic wastes, especially from fast food and retail sector, while garbage picking for recyclables became an unattractive occupation. Therefore, in 2002, Taiwan's Environmental Protection Agency introduced a ban on disposable plastics (Mclaughlin 2004; Clap and Swanston 2009). In South Africa plastic bags ban was introduced after conducting the research on waste management that revealed a range of problems associated with plastic bags: threat to image for tourists as disregarded wind-blown plastic bag litter was easily caught in the branches of trees and bushes, health risks for animals as it was easily digested by livestock and wildlife, and risks of disease spread as the plastic bags were frequently used as toilets (Hasson *et al.* 2007; Ritch 2009; Clap and Swanston 2009).

Clap and Swanston (2009) explain this way of norm emergence by the role of the industry - its structural presence in the economy (job provision), instrumental power to lobby or litigate, and the traction of its discursive strategies in specific contexts (efforts to capture the environment discourse). Thus, the less power industry has, the quicker and more extreme policy is developed, especially at the municipal level. Clap and Swanston (2009) specify that discourse currently promoted by global industry in favor of plastic bags is based on existing norms of recycling and energy efficiency. These concerns are congruent only with established recycling norms in the North. The anti-plastic bag norm is based on human and wildlife health, and safety concerns which have more international resonance (Ritch *et al.* 2009). Some authors make focus on

the role of civil society, underlining that the influence of community-based groups and NGOs can result in a significant change to government regulations and industry policy (Ritch *et al.* 2009; Vince and Hardesty 2017).

Thus, the first and the most radical regulation of plastic bags in the form of a total ban on manufacturing and/or use started in the developing countries of the Global South, and this trend is still on. Similar legislative practices have been intensively spreading all over Africa and Asia. This norm emergence is unique, but there are just a few studies researching it. This research intends to contribute to generating more knowledge on the factors incentivizing the developing countries to develop a plastic waste policy so actively. To find out the reasons behind, it is crucial to understand the agenda-setting process. Therefore, the next part presents the core concepts of agenda-setting in the policy-making process.

1.4. Agenda setting in public policymaking

The policy-making process consists of a range of stages: agenda setting, alternative consideration, policy formation, decision-making, policy implementation, monitoring, and evaluation. Kingdon (1995, 5) defines agenda as "the list of subjects or problems to which governmental officials, and people outside of government closely associated with those officials, are paying some serious attention at any given time." Therefore, the agenda-setting is a process in which some public problems are identified and recognized, and specific solutions are generated and considered (Liu *et al.* 2010). However, due to the limited information-processing capacity of government and attention range, the lists of problems and solutions are also limited (Jones and Baumgartner 2004). Agenda setting is of "central importance to any political system" (Walker 1977, 423).

A policy agenda-setting approach focuses on studying the key factors and forces of predecision which allow to some public issues, and policy alternatives obtain relatively more governmental attention than others (Schattschneider 1960; Kingdon 1995; Jones and Baumgartner 2005). Kingdon (1995) underlines the following predecision aspects: what problems attract attention, how and by whom policy agenda is set, what policy solutions are seriously considered.

This research is focused on plastic bag regulation at the national and local levels; therefore it is essential to understand how the policymaking process and agenda-setting especially are arranged at every level. However, Jones (1983) argues that the basic characteristics and dynamics of local policy processes are very similar to the national ones. While other approaches underline some differences: local policy formation is controlled by a small number of influential individuals or groups interested mainly in business (Domhoff 2006), combination of land commercial interests, local government and entrepreneurial coalitions play a dominant role in shaping the policy priorities (Logan and Molotch 1996), coalitions of governmental and non-governmental actors play a significant role in local policy-making (Mossberger and Stoker 2001). Jones and Baumgartner (2004) claim that the public is seriously involved in agendasetting process, illustrating it with a study of policy and agenda congruence between the priorities of the public and the priorities of law-making activities and the US Congress over time. However, they specify that "the location of issues within that structure differs between Congress and the general public in a manner that suggests multiple entry points for influencing the legislative agenda" (Jones and Baumgartner 2004, 20).

Scholars underline the following fundamental aspects of agenda-setting (Liu 2010):

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1. Important policy participants (local and federal government actors (Kingdon 1995; Hula and Haring 2004), interest groups (Schneider and Teske 1993; Ferman 1996; Silvel *et al.* 2002), experts (Kingdon 1995; Sabatier 1988; Silvel *et al.* 2002), general public (Jones 1983; Silvel *et al.* 2002), the mass media (Scheufele *et al.* 2002), and local political parties and campaigners (Scholz *et al.* 1991).

2. Attention attractors. Due to the limited capacity of policymakers to process information, public issues have to compete for policymakers' attention (Jones 1994; Kingdon 1995; Jones and Baumgartner 2005). There are some factors which can attract the attention, identified by Kingdon (1995) and Jones and Baumgartner (2005): the intrusion of new information into the policy agenda-setting process, as it is associated with changing social conditions; focusing events which underline the occurrence of natural or man-made crises or disasters; feedback from existing governmental programs and new public problems; and budgetary considerations.

3. Alternative attributes. Kingdon (1995) suggest three main characteristics of new policy ideas and alternatives which can increase the chances to be considered by policymakers: technical feasibility, value acceptability (regarding the mainstream value), anticipation of future constraints (e.g., budget) and policy compatibility for the local policymaking (e.g., consistency with a federal policy) (Liu 2010).

4. Political factors (e.g., changes in government, crisis, consensus, and coalition building, etc.) (Kingdon 1995; Innes and Gruber 2005).

Although my research interest is the agenda-setting of policymaking on plastic bag, it is analyzed through the lens of policy narratives. Therefore, as the theoretical framework, I use Narrative Policy Framework which correlates with theories mentioned above but provides a more systematic framework and tools to analyze the role of policy

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narratives in plastic bags agenda-setting in Kenya and the Philippines, its impact on coalitions formation and interaction, and policy outcome.

2. Narrative Policy Framework and its application

Since the fact that people tell stories to make sense of their personal experience, narratives play a critical role in generating meanings via the creation of social constructions. Nowadays, it shapes all aspects of daily life, including market development, information consumption, governance, and policymaking. At the same time, current theories of the public policy process are missing "the politics of constructing policy reality" (Shanahan *et al.* 2013), while the Narrative Policy Framework provides a systematic framework and tools for examining the role of narrative in policy agenda-setting, decision-making, and policy implementation. Moreover, the findings of NPF studies may have wide practical implications as a source of insights for effective policymaking, and on how to avoid manipulations of policy narratives served to influence public opinion and policy outcomes.

Therefore, understanding the mechanisms of narrative policy creation in the field of plastic pollution and implications in the developing countries may provide effective instruments to address such complex in the different parts of the world as well as at the global level.

2.1. Definition and historical introduction

Narrative Policy Framework (NPF) locates the role of policy narratives in the policy process, where "narratives are a way of structuring and communicating our understanding of the world, whereas political narratives are persuasive stories for some political end" (Shanahan *et al.* 201, 539).

Although Jones and McBeth firstly named NPF in 2010, the role of narrative was studied and supported in a variety of academic literature including communications (e.g., McComas and Shanahan 1999), marketing (e.g., Mattila 2000), psychology (e.g.,

Green and Brock 2005), health care (e.g., Hinyard and Kreuter 2007) and public policy (e.g., Hajer 1993; Roe 1994; Stone 2002; Fischer 2003). Hajer (1993) found out that political change occurs when a new discourse (narrative) becomes dominant, Roe (1994) that the narratives may recast a policy problem and underwrite the policy assumptions, Stone (2002) that the definition of policy problems has narrative structure, Fisher (2003) utilized narrative concept regarding the importance of language to public policy, McBeth and Shanahan (2004, 2005) found out that narratives were strategically constructed and therefore should be studied empirically. Moreover, there were some attempts to integrated the narrative concept in the Advocacy Coalition Framework (Sabatier and Jenkins-Smith 1993; McBeth *et al.* 2005), Punctuated Equilibrium Theory (Baumgartner and Jones 1993), and even Cultural Theory (Ney 2006), for example, to examine climate change (Jones 2010).

However, research involving narratives and public policy remains a quite unpopular concept because of being "too associated with literary theory, too superfluous to underpin theory building, and too nebulous to facilitate the empirical investigation of policy process and outcomes" (Jones and McBeth 2010, 330). These concerns came from the debates between positivism, and postpositivism scholars emerged in the 1990s over what constitutes legitimate public policy theory - policy based on prediction, propositions, and casual drivers, or contextualized through the narratives and social constructions respectively (Shanahan *et al.* 2018). A consistent criticism of narratives work has been related to the disconnection from institutions or policy settings, inability to generalize the findings due to the uniqueness of the narrative form and content, incompatibility with validity and reliability as scientific standards, challenge to prove causality, and rejection of empiricism (Sabatier and Jenkins-Smith 1993; Fischer 2003; Dryzek 2004; Dodge *et al.* 2005).

NPF was shaped as a response to criticisms of postpositive approaches in public policy specifying that that besides well-established factors influencing the policy process such as institutions, rules, governing coalitions, there are policy narratives as variables missing in the dominant policy process theories (Shanahan *et al.* 2013). For last decades a range of quantitative research studies revealed the reliability of policy narratives as a source of data (e.g., McBeth, Shanahan, Arnell) and found out the most persuasive elements of policy narratives (Jones 2010; Shanahan *et al.* 2011). Now NPF is being widely tested in a variety of policy context especially on social and environmental issues: McBeth *et al.* 2005, 2007 on roots of environmental policy conflict in Greater Yellowstone, Shanahan *et al.* 2013 on Massachusetts wind energy policy, Heikkila *et al.* 2014 on hydraulic fracking in Colorado, Leong 2015 on water policy in Jakarta, Gupta *et al.* 2014 on US nuclear energy policy, Crow *et al.* 2016 on the US environmental policy, Peltomaa *et al.* 2016 on forest policy in Finland.

2.2. Core components of NPF

NPF takes a neo-positivists approach to understand the social construction of policy realities (Radaelli 2012). NPF aims to answer these key questions: What is the empirical role of policy narratives in the policy process? Do policy narratives influence policy outcomes? NPF identifies three parts of the policy narrative: narrative elements, narrative strategies, and policy beliefs.

NPF claims that policy narratives have exact narrative elements (form and content) that can be generalized to different policy contexts (Jones and McBeth 2010; Shanahan 2018). NPF requires a minimal range of the narrative structure elements such as a setting or policy context, plot, characters (heroes, villains, victims), and the moral of the story (Jones and McBeth 2010). The setting consists of such elements as

geography, legal parameters, economic conditions, norms, etc. Plots provide relationships between the components and structure causal explanations. Stone (2002) specifies particular plotlines typical for public policy: a story of decline, a story of control, stymied progress story, or change as an illusion. Shanahan *et al.* (2013) studying coalitions on windmills project in Massachusetts, concluded that the "control" plot and the "decline" plot were the most common. Characters consist of fixers of the problem, causers of the problem, and those who are harmed by the problem. For example, Jones (2013) in a study of climate change in Norway, found that the hero was the most important character in influencing citizen perceptions of this issue. Moreover, additional character types were recently explored: "beneficiaries" of a policy outcome (Weible et al. 2016), "allies" and "opponents" (Merry 2016), and "entrepreneurs" and "charismatic experts" (Lawton and Rudd 2014). NPF interprets a moral of the story as policy solutions, which motivates the characters' actions (Jones and McBeth 2010; Stone 2012; Shanahan *et al.* 2018).

The following narrative strategies used to influence the policy process are identified by NPF scholarship: scope of conflict (strategic construction of policy narratives to expand or contain policy issues), causal mechanisms (arrangement of narrative elements to assign responsibility and blame for a policy problem), and the devil-angel shift (extent to which the narrator identifies him- or herself and the opposing narrators as villains or as a hero) (McBeth *et al.* 2010; Shanahan *et al.* 2013; Gupta *et al.* 2014). Moreover, there are some narrative tactics to influence the subsystem: policy symbols (to define policy issues in memorable ways) and policy surrogates (to debate more controversial problems) (Nie 2003). These strategies are developed to be used across policy narratives to allow generalization.

Policy beliefs as a set of values are shaped by the cultural context in which the policy issue occurs and strategically constructed stories to affect a policy outcome (McBeth *et al.* 2005; Shanahan *et al.* 2011). Despite the relativity of the narratives, NPF scholars claim that it is not random, and can be systematically studied. NPF suggests to measure policy beliefs through the narrative elements and use some of the preexisting deductive theories, such as Cultural Theory (Mamadouh 1999), Human-Nature Relationship or Political Ideology (Lakoff 2002) in order to identify the beliefs. In the previous studies, NPF mainly tested Nature–Human Relationship, the Polis–Market Belief, and Conservation–Business Belief (Shanahan *et al.* 2011, 2018).

NPF rests on a series of assumptions: policy narratives are central in policy processes; policy narratives operate at three levels of analysis: micro (the individual), meso (groups and coalition), and macro (institutional and cultural); a broad set of actors (elected officials, interest groups, the media, etc.) generate policy narratives; and policies and programs are translations of beliefs communicated through policy narratives (Shanahan *et al.* 2011).

Jones and Mcbeth (2010) underline that distinction into the levels helps to categorize units of analysis, specify causal drivers, and guide hypothesis development. At the micro level, a researcher is interested in understanding how policy narratives impact individual public opinion and how it is formed by policy narrative. Shanahan *et al.* (2011) underline that at this level NPF imports theory from other fields to provide measurable concepts such as canonicity and breach from the humanities, narrative transportation from communication, congruence and incongruence from political psychology, and interdisciplinary theories such as trust. At the meso level, the main focus is on how policy narratives shape coalitions to influence policy outcome, developed from classic theories such as rational choice's heresthetics and E.E.
Schattsneider's scope of conflict (Shanahan *et al.* 2011). And at the macro level, the researcher is concerned with the influence of policy narratives embedded in cultures and institutions on policy outcomes. However, the macro level is largely undeveloped (Shanahan *et al.* 2011), while such approaches as American Political Development (Jensen 2003) or narrative event analysis (Büthe 2002) can contribute to the results at this level (Jones and McBeth 2010).

NPF utilizes a variety of techniques for data collection including surveys, quasiexperiments, content analysis (e.g., public consumption documents, media coverage) depending on the approaches of treating narratives as either explanatory or dependent variables (Pierce *et al.* 2014). A quantitative research method is dominant (79%), while qualitative one still may be used (e.g., interviews, Heikkila *et al.* 2014).

2.3. Overview of the main hypotheses and relevant studies

Below there is an overview of the core NPF hypotheses (H#) and relevant studies (Table 1).

Hypothesis	Exact Wording and Source	Extent Research
H1: Breach	On the basis of an individual's expectations, as a narrative's level of breach increases, the more likely an individual exposed to the narrative will be persuaded (Jones and McBeth 2010).	Ertas 2015 Shanahan <i>et al.</i> 2014 Shanahan, McBeth, and Hathaway 2011
H2: Narrative transportation as the ability of the narrative to "transport" the reader into the world of narrative	As narrative transportation increases, the more likely an individual exposed to that narrative is to be persuaded (Jones and McBeth 2010).	Jones 2014
H3: Congruence and	As perception of congruence (of	Ertas 2015

Table 1. NPF hypotheses and rele	vant studies (Source: S	Shanahan et al. 2014)
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incongruence (of beliefs or worldviews)	belief systems) increases, the more likely an individual is to be persuaded by the narrative (Jones and McBeth 2010).	Husmann 2015 Niederdeppe, Roh, and Shapiro 2015 Shanahan <i>et al.</i> 2014 Jones and Song 2014 Lybecker, McBeth, and Kusko 2013 McBeth, Lybecker, and Stoutenborough 2016 Shanahan, McBeth, and Hathaway 2011 McBeth, Lybecker and Garner 2010
H4: Narrator trust	As narrator trust increases, the more likely an individual is to be persuaded by the narrative (Jones and McBeth 2010).	Ertas 2015
H5: The power of characters	The portrayal of policy narrative characters (heroes, victims, and villains) has higher levels of influence on opinion and preferences of individuals than scientific or technical information (Shanahan <i>et al.</i> 2011).	Jones 2010 Jones 2014b Jones, Fløttum, and Gjerstad, forthcoming
H6: Narrative Strategy	Policy actors who are portraying themselves as losing on a policy issue will use narrative elements to expand the policy issue to increase the size of their coalition (Jones and McBeth 2010).	McBeth <i>et al.</i> 2007 Shanahan <i>et al.</i> 2013 Gupta, Ripberger, and Collins 2014
H7: Narrative Strategy	Policy actors who are portraying themselves as winning on a policy issue will use narrative elements to contain the policy issue to maintain the coalitional status quo (Jones and McBeth 2010).	McBeth <i>et al.</i> 2007 Shanahan <i>et al.</i> 2013 Gupta <i>et al.</i> 2014
H8: Narrative Strategy	Policy actors will heresthetically employ policy narratives to manipulate the composition of political coalitions for their strategic benefit (Jones and McBeth 2010).	None
H9: Narrative Strategy	The devil shift: higher incidence of	Shanahan <i>et al.</i> 2013

	the devil shift in policy subsystems is associated with policy intractability (Shanahan <i>et al.</i> 2013).	Crow and Berggren 2014 Heikkila <i>et al.</i> 2014 Leong 2015 Merry 2015
H10: Policy Beliefs	Coalition glue and policy outcomes: advocacy coalitions with policy narratives that contain higher levels of coalitional glue (coalition stability, strength, and intra- coalition cohesion) will more likely influence policy outcomes (Shanahan <i>et al.</i> 2013; Shanahan, Jones, and McBeth 2011).	Kusko 2013 McBeth <i>et al.</i> 2010
H11: Policy Learning	Variation in policy narrative elements helps explain policy learning (Shanahan, Jones, and McBeth 2011).	None
H12: Coalition Membership	The media are a contributor (a policy actor) in policy debates (Shanahan <i>et al.</i> 2008).	Shanahan <i>et al.</i> 2008 Peltomaa, Hilden, and Huttunen 2016 Crow and Lawlor 2016
H13: Role of Media Actors within Subsystems	Media acting as conduits of policy information will show stability of policy narratives across media outlets, whereas media acting as contributors to policy debates will show a greater degree of variation in narrative structure and framing across media outlets (Crow and Lawlor 2016).	None
H14: Role of Narrative Elements in Policy Communication	Policy actors using rhetorical narrative strategies to a greater degree are more likely to prevail in policy debates than those using technical or scientific communication (Crow and Lawlor 2016).	McBeth <i>et al.</i> 2012 Crow and Berggren 2014
H15: Role of Framing	Policy actors using thematic framing of policy problems are more likely to sway public opinion in favor of their articulated problem and solution than policy actors that	Shanahan <i>et al.</i> 2008

	employ episodic frames or other human interest frames, leading to higher success passing their proposed solutions (Crow and Lawlor 2016).	
H16: Role of Story Frames	Policy actors using story frames consistent with specific audience beliefs, but varying across media platforms, will influence policy outcomes toward their policy preference (Crow and Lawlor 2016).	None

Shanahan *et al.* (2018) claim that while some of them are well-worn (H1, H2, H4, H5, H7), some remain untested (H3, H6) or dropped (those on endogenous and exogenous public opinion), and some are new propositions (H8, H9, H10, H11). Moreover, Weible and Schlager (2014) summarising a range of studies on policy narratives claim that some hypotheses remain contradicting (H1 and H3), some are useless without considering the context (H13), and that some narratives may be limited for analysis and incomplete in terms of characters, strategies, or morals, but mainly due to particular context (lack of resources, etc.) It underlines the significance of the context and needs to consider other factors of the policymaking process than just narratives. Therefore, Weible and Schlager (2014) recommend continuing studies of the NPF and its potential links to other frameworks and theories explaining policy processes. Shanahan *et al.* (2014) also raise an ethical issue related to NPF normative implications in terms of how the officials and practitioners can use an understanding of policy narratives for good governance or control and manipulations.

Different NPF scholars underline the need for more cross-country comparisons of the narratives, as well as of sectors within a single country, and narratives in the same policy sector across different countries. They argue that comparison of the narrative's role in different policy context (regime) can help to understand better the context itself and the role of narrative in the policy process for cross-cutting issues such as climate change or plastic pollution. Moreover, there are some other gaps identified by NPF scholars: connectedness between the different levels, understanding of narratives' generator, coalition formation process and its links with policy narratives, narrative work at an individual level, as well as impact of actual coalitions on actual policy outcomes, and lack of data on the narratives role in policymaking process outside of the United States, in non-democratic environment.

Therefore, this research contributes to cross-country comparative studies of the policy narratives around plastic pollution issue and their impact on coalition formation and policy outcomes. Moreover, it shows how NPF can be effectively used in qualitative analysis.

2.4. NPF implication at meso level

For this research, the role of the narratives in policymaking is analyzed at meso level with a focus on the narratives employed by members of the advocacy coalitions in every case-country (Kenya and the Philippines) and their impact on coalition dynamic and policy outcomes (plastic bag ban). Therefore, the actors and coalitions are considered as units of analysis to study their narrative strategies, and compare across the case-country and between the countries. The narrative elements such as settings, plot, characters, solution, and causal mechanisms are used as variables to measure policy narrative strategies (winning/losings, expand/contain policy subsystem) and explain policy change (outcome) in focus-countries through coalition variation. NPF researchers suggest considering the following theoretical causal drivers

for the meso level analysis: policy beliefs, policy learning, public opinion, heresthetics, and scope of conflict.

In this research, policy beliefs are identified based on the concept of Clapp and Dauvergne (2005) about worldviews of global environmental change, which includes such categories as a market-liberal, institutionalist, environmentalist and social greens. Number and quality of policy beliefs are considered as binding elements (coalition glue) which can be tested statistically (surveys, coded hearings) or through the policy narrative elements, for example characters can be used to measure stability, strength, and cohesion (congruency and frequency in policy narratives) of policy beliefs over time (McBeth *et al.* 2005; Shanahan *et al.* 2011). Therefore, NPF suggests the following hypotheses: Advocacy coalitions with policy narratives that contain higher levels of coalitional glue (coalition stability, strength, and intra-coalition cohesion) will more likely influence policy outcomes.

NPF finds policy narratives to be an essential input in policy learning, referring to Hajer (1993) who writes about coalitions validating their policy story through its institutionalization, and policy changing when the discourse becomes dominant. Shanahan *et al.* (2011) underline that these changes could occur even without scientific information, but with just broad acceptance of new normative setting, different prioritization of values or new causal arrangements (e.g., the status of disabled). McBeth and Lybecker (2010) made research on recycling policy suggested that policy learning emerges when scientific information presented in the form of the story that underlines individual responsibility, efficiency, and good business idea rather than on reducing climate change because it generates ideological consensus. Therefore, NPF proposes the following hypotheses: *Variation in policy narrative elements helps explain policy learning, policy change, and policy outcomes*.

NPF scholars claim that narrative structures reflects the goals and values of the public and can be used to differentiate coalitional constraints (exogenous and internal). For example, narratives scholarships Hampton (2004) uses narratively structured focus groups to find out which environmental quality stories are salient in the community, Shanahan *et al.* (2011) writes about the exogenous public beliefs on climate change as conspiracy theory which may constrain the development of renewable energy, while anti-nuclear endogenous opinion may favor it, and Jones and Jenkins-Smith (2009) address the issue of internal shock after the near catastrophe at Three Mile Island dramatically decreasing public support of nuclear energy. Therefore, NPF suggests the following hypotheses: *When exogenous public opinion is congruent with a coalition's preferred policy outcomes, coalitions will offer policy narratives that seek to contain the subsystem coalition (by maintaining the status quo membership of the coalition). When endogenous public opinion shocks are incongruent with a coalition's preferred policy outcome, coalitions will offer policy narratives that seek to expand the subsystem coalition.*

NPF states that "policy narratives are at once the window to and the essence of coalition political strategy" (Shanahan *et al.* 2011, 552) aiming to divide or maintain coalitions. Schneider and Ingram (2005) claims that the way how advocacy groups present narrative characters play an important role, saying that public policy outcomes favor those who are "deserving and entitled" (e.g., AIDS and tobacco policy), while Jones (2010) assigns the dominant role to hero in defining the power of policy stories at least in climate change policy. Therefore, NPF suggests the following hypotheses: *The portrayal of policy narrative characters (heroes, victims, and villains) has higher levels of influence on opinion and preferences of citizens, elected officials, and elites than scientific or technical information.*

Besides the policy narrative elements intentionally utilized to affect policy outcomes, there are embedded policy narrative strategies (information, financial resources, public opinion) developed to shape the settings in order to contain or expand the policy arena. McBeth *et al.* (2007) based on studies of Baumgartner and Jones (1993) and Schattschneider (1960) explores how interest groups use narrative strategies, policy surrogates, and the allocation of benefits or costs to policy outcomes to expand or contain policy issues depending on their status. Therefore, NPF suggests the following hypotheses: *Advocacy coalitions use different policy narrative strategies depending on whether they perceive themselves as winning or losing on an issue with the intention of expanding or containing membership of the public in the policy subsystem.*

Moreover, the narrative strategies such as "devil-shift" are used to stifle policy learning leading to intractability and polarization. For example, McBeth *et al.* (2007) found out that two competing interest groups usually portrayed themselves as losing and used narratives to expand policy conflict, which hindered policy brokers from using science to reduce intractability. Therefore, NPF suggests the following hypotheses: *Higher incidence of the devil shift in policy subsystems is associated with policy intractability.*

3. Methodology

3.1. Research design

The research design used for the thesis is based on a case study method because of its usefulness in policy studies. Yin (1994, 23) suggests the following definition of a case study - "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident". Therefore, a case study is specifically used to investigate a phenomenon which is not distinct from context and requires an in-depth analysis of the contextual details. A case study is considered to be the most appropriate method if the research aim is to find answers to "why" and "how" types of questions (Rowley 2002). Therefore, it is applied for this research aiming to explain why the single-use plastic bag regulation has been developed and how the policy narratives have influenced the policy outcomes.

Case study approach provides a useful tool to investigate cases in depth applying multiple sources of evidence, with a focus on a specific situation or context where generalisability is less important, as the process of policy development and implementation (Rose *et al.* 2015). Other types of research strategies such as experiments and surveys have limited possibilities in a situation where the variables of analysis are more than information points (Teegavarapu *et al.* 2008). Moreover, case studies can be used for the retrospective investigation of events because of the use of multiple data sources (Rose *et al.* 2015), that is relevant for this thesis exploring the plastic bag policy development in Kenya back to 2016-2017.

There are three categories of case studies which could be single or multiple case studies: exploratory, descriptive, and explanatory (Yin 1994). Exploratory studies aim to develop the research questions and hypotheses, or generate a theory, while

explanatory ones are more appropriate for investigating causal mechanisms and its specific contexts (George and Bennet 2005), and descriptive case studies are mainly used to describe the phenomenon itself (Teegavarapu *et al.* 2008). Since the research aim to examine the role of policy narratives on a single-use plastic bag in coalitions formation and impact of its narrative strategies on policy outcome in Kenya and the Philippines, the explanatory type of case study is chosen.

Teegavarapu *et al.* (2008) underline that multiple cases could be analyzed under a single case study (referred to as "multiple-case study"), and selection of cases is based on repetition logic, rather than sample logic. For this work, the experience of two countries on plastic bag regulation (Kenya and the Philippines) was analyzed as a single case in order to find out the common patterns proving the hypotheses. Case selection was determined by the research purpose and theoretical context, the accessibility of data, and availability of time and resources for its collection. Therefore, Kenya and the Philippines are the developing countries recently implemented or currently developing a policy on single-use plastic bags. However, due to financial and time limitations, offline research interviews and field observations were made only for the Philippines case during the study trip there, while for the Kenya case, stakeholders interviews were conducted online.

Moreover, case studies could be implemented at multiple levels of analysis, which seems the most appropriate in the case of this thesis: an investigation of the policymaking process in the focus-countries is done at the meso level (groups, coalitions) as suggested by the Narrative Policy Framework.

There is a range of the advantages of case study method underlined by the different authors: richness of the details which may provide a more holistic view and understanding of the situation or its aspects, effectiveness of getting a unique

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information, no need for a large sample and aim for analytical generalization, ability to utilize multiple methods of data collection/analysis and multiple sources of evidence, accessibility of the format for wider readership (Yin 1994; Teegavarapu *et al.* 2008; Rose *at al.* 2015).

3.2. Data collection

The data used for this study was mainly obtained from the interviews, direct observations, mass-media analysis, and literature review using the qualitative research method.

1.Literature Review

The literature review was undertaken throughout the various phases of the study, i.e., problem description, formulation of the contextual framework, assessment of countries experience, etc. Mainly electronic materials have been used including the different studies, workshop reports, bills, ordinances and policy documents, UNEP and NGO reports on the issues of solid waste management and plastic bag waste globally and particularly in Kenya and the Philippines.

2. Mass-media analysis

To find out the social discourse around the plastic pollution issue created by the local and national media in Kenya and the Philippines mass-media coverage was analyzed based on policy narrative structure. Moreover, this data was used to identify key stakeholders in the research field, and develop an understanding of their politics. Google News search using the code phrases "plastic bags in Kenya" and "plastic bags in the Philippines" was employed to find out the main mass-media covering the issue in the focus-countries. This method of Google News search can be limited due to the exclusion of print mass-media (e.g., newspapers) from the search, and decrease of data representativeness consequently. Afterward, a separate online search for every

identified English-speaking mass-media was made using additional date-filter: 2016-2017 in the case of Kenya, and 2018-2019 in the case of the Philippines. Finally, nine national and sub-regional (African) mass-media in Kenya and thirteen national and sub-regional (Asia Pacific) mass-media in the Philippines were analyzed.

3. Interviews

Primary data on policy narratives was obtained through 19 interviews of key stakeholders involved in plastic bag policy development in Kenya and the Philippines. All interviews were conducted during May-June 2019. Through background reading of relevant reports and mass-media analysis, relevant organizations and other stakeholders were identified.

Semi-structured, open-ended interviews were conducted with key informants from the following governmental, non-governmental, and business organizations as well as from the local public initiatives:

- National Environmental Management Authority of Kenya (NEMA);
- Kenya Association of Manufacturers (KAM);
- Retail Trade Association of Kenya (Retrak);
- Greenpeace Africa;
- Social media campaign #banplasticsKE;
- Department of Environment and Natural Resources (DENR), Environmental Management Bureau, Republic of the Philippines;
- Senate of the Philippines;
- City of San Fernando, Republic of the Philippines;
- Puerto Princesa City, Republic of the Philippines;
- Philippine Alliance for Recycling and Materials Sustainability/Philippine National Solid Waste Management Commission (represented by the same person);

- Packaging Institute of the Philippines;
- Nestle Philippines, CSR Department;
- Robinsons Land Corporation, CSR Department;
- GIZ, Philippine Office;
- Philippine EcoWaste Coalition;
- Mother Earth Foundation, Republic of the Philippines;
- Archdiocese of Manila, Republic of the Philippines;
- Buhay Zero Waste community, Republic of the Philippines.

All the interviews with stakeholders in Kenya were conducted online. In the case of the Philippines, face-to-face meetings were arranged. Only the respondents from Senate of the Philippines and Puerto Princesa City answered the questions by email. Moreover, it is essential to note that a number of the interviewed stakeholders in Kenya is less than the Philippines which probably can be explained with less willingness to have online interview in contrast to face-to-face form, and less overall transparency in communication (only 42% of research interview requests sent to the stakeholders in Kenya were satisfied, while for the Philippines case it was 100%). Therefore, it may impact the validity, reliability, and representativeness of data in Kenya case, while it is important to note that all the stakeholder groups were covered. Moreover, interview as a research method can be limited in the case of gathering retrospective data (Kenya) due to the limited memory capacities of the respondents. The Philippines case is selected as a core one for analysis from the agenda-setting point of view, while the Kenia case is more in support since the plastic bag regulation is just being developed in the Philippines, while in Kenya it was introduced two years ago.

Before starting the field research, the interview protocol (Appendix 1) was prepared based on the research questions and guided by the core elements of

Narrative Policy Framework (settings, characters, plot and moral). A structure of general topic interview prompts allowed to direct conversations to focus on the socioeconomic context, actors, decision-making process, and policy image of plastic bag issue. The starting question always was "Tell me your story about the plastic bags in your country", which was very useful in icebreaking and encouraging the interviewee to build up his/her narrative. All the interviews were audio-recorded, transcribed using software with additional verification, and coded.

4. Direct Observations

Direct observations method was applied only to the Philippines case because of a study trip there. During my time there, I visited a range of events where I could observe a broader range of stakeholders, including the general public, and relationships between them. Moreover, I was able to assess Manila City and Boracay Island in terms of introducing the "plastic pollution" issue in the daily life context of the Phillipinos and tourists. It allowed getting a range of insights in the research field, which were integrated into the data analysis process. Below there is a range of the events and sites in the Philippines I visited while being there:

- Waste segregation and collection site, material recovery facility of Zero Waste Community in Manila City;
- Zero Waste Workshop at the secondary school of Manila City;
- "Cry of a dead whale" installation in Manila City;
- Multi-sectoral forum on plastic wastes in the Philippines;
- Meeting of the experts from DENR with the representatives of GIZ to discuss the project idea addressing plastic marine pollution in the Philippines and potential funding opportunities.

3.3. Data analysis

This study focuses on the policy debate around plastic bag pollution between groups of policy actors; therefore, the analysis was made at the meso level of the NPF. Selection of policy actors was based on mass-media analysis. Moreover, this method was used to find out the dominant stories on the plastic bag issue in the focus-countries by qualitative interpretation of the relevant articles and news.

Categorization of the policy actors in terms of what coalition they belong and analysis of their narrative elements and strategies was based on 19 interviews that I conducted in May-June of 2019 with actors from multiple sectors in Kenya and the Philippines. Organizations on both sides in every focus-country work (or worked, in the case of Kenya) in close cooperation with a range of local and national stakeholders to produce public reports, scientific research, lobby, file lawsuits, arrange public consultations and events, advocate online and offline in order to influence the political and public debate on plastic bag pollution issue.

Guided by NPF, the policy narratives of each coalition in every country were identified through the coding of the interviews. Throughout it, the central policy narrative elements, including characters, plot, solutions, and narrative strategies, were analyzed. Moreover, the direct observations from the site (relevant just for the Philippines case) largely contributed to a deeper understanding of the narrative elements and narrative strategies.

Based on this data, the comparative analysis of coalitions in each country and, afterwards across two countries was made to identify the differences, and similarities between the coalitions (narrative elements and strategies) in the different countries, and to find out the patterns in creating the policy narrative around the plastic bag issue in the focus-countries and its influence on policy outcomes.

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Thus, literature review and mass-media analysis were used to identify main stakeholders participating in policymaking on single-use plastic bags in the Philippines and Kenya, and their vision and ways of interaction. Interviews were used as a primary method to find out the dominant policy narratives around the single-use plastic bags issue in the Philippines and Kenya, and its impact on coalition formation and policy outcomes. Comparison of the policy narratives in case-countries allowed to formulate the factors contributing to the emergence of single-use plastic bag regulation.

3.4. Limitations

There are some limitations of the case study approach identified by the different scholars: generalizability, as it is impossible to predict the average 'causal' effect of variables across all cases, internal validity can be used in case study research; time and energy demand to carry it out due to the complexity of field research if multiple data collection methods are used; selection bias with exemption of the cases contradicting favoured theory (Teegavarapu *et al.* 2008; Rose *et al.* 2015). Moreover, there is a concern over interview subject reliability or bias in analyzing the policy narratives, which probably makes this method is rarely used in the study of Narrative Policy Framework.

3.5. Ethics

Based on the CEU Ethical Policy on Research, the ethical issues were considered in planning, designing, and carrying research.

All the participants were engaged voluntarily with no financial or other remuneration, and risks of coercion were considered. Before the research, the potential benefits and hazards for the participants were assessed. No potential risks and hazards for the subject were identified. As the potential benefits for the subject, an

opportunity to share a success story of national policy development was underlined. The research did not involve any incompetent adults, children, or contexts where obtaining consent was impossible.

All procedures ensuring the informed consent were followed. Before the interview, every interviewee was informed on the purpose of the research interview, use of the gathered data, confidentiality and anonymity, possibility for withdrawing consent, and asked for permission for recording. Afterward, every interview file was assigned with the code name to ensure the anonymity of the interviewees, stored and used in a way to secure the confidentiality of data.

4. Case study: Kenya

4.1. Case description

Africa is experiencing massive population growth, intensive urbanization (growth rate of most cities exceeds 4% annually) and growing middle class, creating significant markets for single-use plastics (Oyake-Ombis 2012). It is accompanied with an expansion of coastal population as well as an increase of the number of people living on the river banks, which in the case of inadequate waste management infrastructure leads to intensive river transportation of land-based plastic wastes to the ocean. The lack of drinking water enhances the problem as it is also packaged in single-use sachets and plastic bags (Jambeck *et al.* 2018; Horvath 2018).

Around 50 mln people (World Bank 2017) living in Kenya generate 1.6 mln tons of plastic waste annually (Ministry of Environment and Forestry 2019). More than 80% of wastes in Kenya are managed inadequately due to lack of financial resources, trained manpower, appropriate policies, facilities for waste collection, transport and disposal, and local authorities autonomy to make their own financial and administrative decisions in the field of waste management (Bahri 2005; Oyake-Ombis 2012; Aurah 2013).

According to the Kenyan office of the Japan International Cooperation Agency, the only ¹/₃ of the generated plastic waste is suitable for recycling because of the material composition of the products (Jambeck *et al.* 2018; Horvath *et al.* 2018). Moreover, the lack of local or national markets for products, contamination of recyclables, and absence of policies on recycling and technological gap were identified as major obstacles for recycling development in Africa (UNEP 2005; Bahri 2005; Ministry of Environment and Forestry 2019). Incineration and Waste-to-Energy systems are considered as inappropriate technology in most African cities due to high

organic (70%) and water content of waste stream, lack of trained human resources and technical infrastructure, and associated high capital costs (Bahri 2005). The majority of the waste is disposed of at open dumpsites with no leachate treatment and gas recovery systems, and close location to the wetlands or water sources.

Plastic bag littering is especially prevalent in urban settings as migrants coming from rural areas may ignore the norms and values of hygiene differ from their native villages and discard plastic bag litter in the environment (Scheinberg 2011). However, the research shows that the use of the plastic bag is a form of social change in Kenya. Its popularity is explained by low price (or free of charge), availability, convenience and lack of alternatives. In pre-urban centers of Kenya, an individual shopper use about three new plastic bags per day (Wachira *et al.* 2014). According to the Kenyan National Environment Management Agency (NEMA) about 100 million bags were being offered by supermarkets alone, with only 50% of these ending up in the solid waste stream (Oyake-Ombis 2012; Horvath *et al.* 2018). Therefore, poor disposal of plastic bag waste was responsible for seasonal flooding and mosquito breeding, livestock decrease because of plastic ingestion, soil depletion, health risks due to use the plastic bags as 'flying toilets' in slum neighborhoods. (Bahri 2005, Wachira *et al.* 2014, Jambeck *et al.* 2018).

In 2005 UNEP launched the Pilot Project on Sustainable Management of Plastic Waste in Nairobi aiming to gather useful experience for replication within Johannesburg Plan of Implementation and the African Ten Year Framework Programme on Sustainable Consumption and Production. Therefore, the National Environmental Management Agency and UNEP commissioned Kenya Institute for Public Policy Research and Analysis to develop an environmental policy to address a waste problem with particular focus on plastic bags because of their "importance, high

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political & public attention and availability of international experience to learn from" (UNEP 2005, 13). The study recommended a range of measures prioritizing ban on plastic shopping bags that are less than 30 microns in thickness. The Kenyan government announced bans on plastic bags four times since 2005. President Mwai Kibaki together with Nobel Prize Winner Wangari Maathai actively promoted measures addressing plastic. Moreover, there was continually growing public pressure from local activist groups, foreign environmental agencies (UNEP), the press and social media (e.g., #banplasticsKE supported through a retweet by Kenya's Cabinet Secretary for Environment and Natural Resources) (Behuria 2019).

Kenya has 50 plastic manufacturing industries importing around 80% of virgin raw materials for plastics and polythene production. Most of the produced plastic is consumed locally with small portion exported to the neighboring countries. Plastic bags production has proliferated since 1990 due to increasing consumer demand (Horvath 2018). Therefore plastic production has been referred to as one of the critical pillars of economic growth and employment creation in Kenya (Oyake-Ombis 2012). Kenya's plastic manufacturers, both independently and through the Kenyan Association of Manufacturers (KAM) have consistently voiced their concerns about anti-plastic bag action.

However, in 2017, Kenya enacted regulation (executive decree) banning the manufacturing and use of plastic carrier bags. Under the new law, offenders can face fines of up to \$38,000 or four-year jail terms, making this regulation the most severe in the world (UNEP 2018). Moreover, one year before, the East African Community introduced Polyethylene Materials Control Bill #10 prescribing elimination of polyethylene bags within one year from the coming into force of this Act.

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4.2. Results of data analysis

Stakeholders of the plastic bag ban policy issue in Kenya were categorized based on the suggested policy solution (Pro-Ban or Anti-Ban) through the analysis of their narratives. The results are presented in Table 2. These coalitions are established for this research, while none of these organizations communicated arrangement of coordinated actions to address the plastic bag ban issue. However, the Kenya Association of Manufacturers and the Retail Trade Association of Kenya are organizations built on coordinated position and actions of its member-organizations. Thus, the Pro-Ban coalition is represented by governmental and non-governmental organizations, while the Anti-Ban coalition is mainly by business associations.

Table 2. The Kenya	a case: advocac	y coalition con	nposition
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Pro-Plastic Bags Ban Coalition	Anti-Plastic Bags Ban Coalition
National Environmental Management Authority (NEMA)	Kenya Association of Manufacturers (KAM)
Public campaign #banplasticsKE	Retail Trade Association of Kenya (Retrak)
Greenpeace Africa	

All interviewees specifically underlined a tremendous role of Cabinet Secretary ("She was also an environmentally conscious person at heart" (#banplasticsKE 2019)) and social media in promoting ban for plastic bags, but a lack of scientists engagement. Two respondents named UNEP as a strong influencer in terms of technical assistance and promoting Kenya's experience globally ("The government wanted to win international goodwill" (Greenpeace Africa 2019)).

For every member of the coalition, an analysis of the narrative elements and strategies deployed by organization/community was made and used afterward to formulate the prevailing narrative of every coalition in Kenya (Table 3).

Narrative Elements	Pro-Plastic Bags Ban Coalition	Anti-Plastic Bags Ban Coalition	
Statement of a problem	"Plastic is everywhere" (#banplasticsKE 2019), it pollutes our rivers and lands, blocks drainage system and threats agriculture	"Plastic itself is not a bad thing (KAM 2019), the problem is how it is used and disposed of	
Characters			
Victim	Polluted nature, Kenyan people experiencing floods and farmers losing livestock.	Kenyan people losing their jobs because manufacturers have to shut down their activity.	
Villain	Plastic industry in Kenya producing so much plastic bags and suing the government for considering "public interest".	Corrupted government of Kenya which failed to arrange waste management system and considered the interests of only NGOs, whose real motivation shall be questioned.	
Hero	Ministry of Environment of Kenya and Cabinet Secretary individually prioritizing public interest over industry one.	Manufacturers who are ready to contribute in the development of waste management system in Kenya.	
Setting	Context, including geography, legal conditions, norms is universal for boabove.	context, including geography, legal parameters, economic onditions, norms is universal for both coalitions and described bove.	
Causal mechanism	Intentional: manufacturers produce an enormous amount of plastic bags which is unable to manage appropriately.	Inadvertent: plastic bags are produced for consumers convenience; it contributes to industry development and employment.	
Moral of the story	Ban of single-use plastic bags.	Effective solid waste management system.	
Plotline	Story of control: the ban on single- use plastic bags would prevent floods risk, promote traditional packaging materials, decrease	Story of decline: the ban on single-use plastic bags would lead to the closing of the manufacturing sites, job	

Table 3. The Kenya case: comparison of policy narratives

	environmental pollution, contribute to tourism and agriculture development.	losses, development of shadow market, an increase of paper bags use which have a bigger environmental impact.
Narrative strategies		
Expansion		Plastic bags ban would force the plastic industry to relocate its manufacturing outside of the country, which leads to a decrease in investment flow and increase of costs for the retailers, and consumers consequently.
Containment	"Protection of environment would benefit to all 45 million population of Kenya, while only 100 000 people may lose their jobs because of plastic bags ban" (#banplasticsKE 2019).	
Devil shift		Policy-making process is one- sided, influenced by civil society and particular political interests. The government failed to arrange a waste management system but blames the industry for inability to recycle plastic bags.
Angel shift	Plastic bag ban can help to improve the environment, which is a matter of public interest.	
Policy beliefs	Environmentalist.	Market liberals, institutionalists.

Analysis of the narratives, created by the coalitions in Kenya, shows that the Pro-Ban coalition mainly focused on the benefits for a broader range of population, national economy and environment, and more likely identified the winners to preserve the policy image ("it is a matter of public interest" (#banplasticsKE 2019), "civil society was very supportive as shared our concerns" (NEMA 2019), "public-private partnership could help to anticipate the risks" (NEMA 2019) and communicating themselves as a hero to fix a problem. The Anti-Ban coalition built its narrative mainly around the losers ("Retailers used bags for marketing, we were ready to start selling it instead of giving free of charge, but not to get rid of it at all" (Retrak 2019), "The main fear was that it would not work for the consumers" (Retrak 2019), "Because of corruption, money was not used for waste management development while manufacturers continued to pay that tax" (KAM 2019) communicating the government as villains. The causal mechanism creates policy realities by assigning reasons for the problem. The Pro-Ban coalition used intentionality by blaming the industry for the adverse consequences of unlimited plastic bags production, whereas the Anti-Ban coalition deployed inadvertent causal mechanism asserting that plastic bags pollution was an unexpected but manageable side-effect of the convenience and economic growth. However, KAM (Anti-Ban coalition) also partly exploited intentional causal mechanism to shame the government for its failure to arrange an appropriate waste management system and to question its capacity for effective law enforcement. It proves the NPF hypothesis that the winning coalition will be more likely than the losing coalition to identify winners in their narrative, while the losing coalition will be more likely than the winning coalition to identify losers in their narrative.

The Pro-Ban coalition used the stories of control over the problem of environmental pollution in case of ban implementation, whereas the Anti-Ban coalition relied on stories of economic decline, unemployment, and investment outflow. It contributes to the NPF assumption that the story of control and decline are the most widely used.

In terms of policy strategies, the Pro-Ban coalition used the narrative elements to contain the policy issue by diffusing the benefits ("Protection of environment would benefit to all 45 million population of Kenya, while only 100 000 people may lose their jobs because of plastic bags ban" (#banplasticsKE 2019), while the Anti-Ban coalition tried to expand it by diffusing the cost ("Manufacturers had to shut down their factories, people lost their jobs" (KAM 2019)) and engaging a more extensive range of the losers. It proves the NPF hypothesis that *the winning coalition will be more likely than the losing coalition to stress the diffusion of benefits and concentration of costs in their narrative, while the losing coalition will be more likely than the winning coalition to stress the concentration of benefits and diffusion of costs in their narrative.*

Moreover, the Anti-Ban coalition raised an issue of corrupted government as a policy surrogate to rile the opposition and mobilize a new audience. It confirms the NPF hypothesis that *the losing coalition will be more likely than the winning coalition to use policy surrogates in their narrative.*

Another narrative strategy that was examined is a devil-angel shift. The Anti-Ban coalition used devil-shift exaggerating the power of the Pro-Ban coalition (e.g., "Policy-making process is very one-sided, with few consultations and very abrupt, we do not have a long term transition" (KAM 2019). Whereas, the Pro-Ban coalition applied an angel-shift emphasizing themselves as a hero capable to fix the problem (e.g., "Plastic bag ban was initiated by the government as executive decree to exclude the legislators" (Greenpeace Africa 2019)) and de-emphasizing a power of opponent (e.g., "Industry argued that plastic bags could be recycled, but nobody was recycling it" (#banplasticsKE 2019)). NPF researchers claim that the devil shift emerges when a group frequently identifies the other side as a villain. In this case, although the Pro-Ban coalition used intentionality and blamed the manufacturers communicating them as

villains, the devil-shift occurred with the Anti-Ban coalition which declared its commitment and efforts to solve the problem. It may be explained by a lack of data for analysis and a few numbers of analyzed members of the coalition.

It is important to note that the Anti-Ban coalition was referring to the scientific data on environmental impact of paper bags as alternative, while the Pro-Ban coalition claimed the absence of scientific data, although underlying the professional expertise of Cabinet Secretary as a decision-maker ("She understood the issues...she has been a professor on environmental issues at university" (Greenpeace Africa 2019)) and the fact that plastic pollution was visible itself ("What we have is what we can see" (#banplasticsKE 2019)). To some extent, it contradicts to NPF hypothesis that *the winning coalition will be more likely than the losing coalition to stress scientific certainty in their narrative, while the losing coalition - scientific uncertainty.* But some NPF scholars assert that "the power of a good story is likely to shape subsystem policy learning and outcomes, regardless of the available scientific information" (Shanahan *et al.* 2011, 549).

In terms of coalition glue, the Pro-Ban coalition was quite stable and coherent in the created policy narratives (e.g., policy solution and narrative strategy) while in the Anti-Ban coalition there was some internal disagreement on policy solution (e.g., "retailers were not able to negotiate amongst themselves to start selling the bags due to fear of losing the customers in case if the rival would not stop free of charge distribution" (Retrak 2019)) and perception and engagement of civil society (e.g., "civil society did not play an active role, although they should have for the sake of consumers" (Retrak 2019), "government consulted with NGOs because they supported them, but not with industry" (KAM 2019)). The Pro-Ban coalition was very consistent in its policy solution calling for single-use plastic bags ban with a slight difference in types

of regulated bags, whereas the members of Anti-Ban coalition communicated a variety of policy solutions. Thus, at the beginning of debates, Retrak suggested to sell the plastic bags instead of free distribution as a way to reduce plastic bags waste, and KAM supported additional taxation for the plastic products to contribute to the development of waste management system. It proves the NPF hypothesis that the *advocacy coalition with policy narratives that contain higher levels of coalitional glue will more likely influence policy outcomes.*

Regarding the beliefs, the Pro-Ban coalition consisted of the environmentalists, while the Anti-Ban coalition - of market liberals. Therefore, the Pro-Ban coalition used prior the image of environmental degradation which may cause a bigger problem for all people ("if marine life dies we are going to suffer" (#banplasticsKE 2019), "even if you are the industrialist, you still live in the environment" (NEMA 2019), while the Anti-Ban coalition tended to employ direct human victims as workers at the manufacturing sites (KAM 2019), street vendors and consumers (Retrak 2019).

To summarize, the Pro-Ban coalition used the narrative elements and strategies to contain the policy issue and restrict coalition expansion by limiting the scope of conflict through the benefits diffusion and costs concentration. Moreover, the Pro-Ban coalition itself had a higher level of coalition glue in terms of stability and consistency of narratives use. Therefore, it created the most convincing policy narratives and succeeded in reaching the desired policy outcome.

5. Case study: the Philippines

5.1. Case description

Urbanization is a significant driver of economic development and social change in the Asia-Pacific region resulting in the rapid growth of consumption and production. The consumer class in Asia is now estimated at around 600 million people, and their trends in consumption are reaching the levels of industrialized countries (Zhao and Schroeder 2010).

Around 105 million people (World Bank 2017), living in the Philippines generate 2.7 million metric tons of plastic waste annually. Over 60% of plastic waste is not collected due to lack of publicly funded individual household collection system and low average material value of plastic waste. 40% of plastic waste is collected by informal waste pickers (McKinsey 2015). According to the study of Jambeck *et al.* (2015), around 2 mln metric tons of plastic waste is mismanaged annually. The Philippines consists of more than 7 000 islands surrounded by water with an extensive network of rivers, which increases the likelihood that mismanaged waste will enter the nation's waterways. Based on reports by WWF-Philippines, the country's National Solid Waste Management Commission, and the World Bank, around 74% of plastic leakage comes from waste that has been collected (WWF 2018).

However, the national collection rate is about 70-90% that is explained by the extensive involvement of local communities (barangay) in waste-collection services, and their high autonomy in decision-making on waste-management services assigned by Ecological Solid Waste Management Act of 2000 (Republic Act 9003). Most waste that is formally collected is disposed of at one of 600 open or controlled dumpsites; the remainder is sent to one of 70 sanitary landfills. Incineration is banned, while the waste pickers practice open burning (Jambeck *et al.* 2015; McKinsey 2015). Despite the

developed system of Material Recovery Facilities (over 9000), the recycling rate is about 30% which mainly includes organic waste and economically viable types of plastic (e.g., PET) (Atienza 2011; Pariatamby and Fauziah 2014). Atienza (2011) and Sapuay (2019) has identified a range of challenges for solid waste management in the Philippines: lack of political will of the local chief executives to implement the legislation due to negative attitude, other priorities, and complexity of waste segregation system development; lack of funding as very few local government units collects fees for garbage disposal, and governmental subsidies are not enough; lack of technical capability. In 2015 the Philippines was named as one of the top-three contributors to marine plastic pollution (McKinsey 2015).

However, as the waste sector in the Philippines is responsible for 9% of the total GHG emissions, it is considered within the National Climate Change Action Plan, 2011–2028 which includes the following tasks: intensify waste segregation at source; discard recovery, composting and recycling; regulate the use of single-use and toxic packaging materials; close down polluting waste treatment and disposal facilities (Magalang 2014).

Plastic bags consumption in the Philippines is estimated at 174 per capita per year, and over 48 mln for the entire Philippines per day. While there is no national regulation on single-use plastics, 59 cities and municipalities have enacted local ordinances that ban or charge a levy on plastic bags due to their role in the clogging of waterways, increased flooding and water pollution (GAIA 2019). Moreover, there are four bills suggesting the national ban on single-use plastic, including plastic bags in the Philippines filed in Congress in 2011 (#2759 "Prohibiting the use of plastic bags in groceries, restaurants, and other establishments, and providing penalties for violations thereof"), 2013 (#106 "Regulating the production, importation, sale, provision, use,

recovery, collection, recycling and disposal of plastic bags"), 2018 (#1948 "Single-Use Plastics Regulation and Management Act of 2018") and with the latest one in 2019 (#40 "Regulating the manufacturing, importation and use of single-use plastic products, and providing penalties, levies and incentives system for industries, business enterprises and consumers thereof"). Atienza (2011) underlines a significant role of environmental NGOs (e.g., Mother Earth Foundation) in the promotion of sustainable waste management. While it is also recognized that the Philippines have one of the most active and vocal civil society sectors in Asia with over 10 000 registered environmental NGOs (Atienza 2011). Since 2017 the coalition of NGOs in the Philippines has arranged beach clean-ups, and brand audits, released the public reports based on the results and launched online campaigns calling for corporations' responsibility.

5.2. Results of data analysis

Stakeholders of the plastic bag ban policy issue in the Philippines were categorized based on the suggested policy solution (Pro-Ban or Anti-Ban) through the analysis of their narratives. The results are presented in Table 4 below. It is essential to mention that the Alliance for Recycling and Materials Sustainability was established in response to raising plastic pollution discourse in the Philippines, and includes Packaging Institute of the Philippines, Nestle Philippines, and Robinsons Land Corporation as member-organizations which may suppose coordinated actions. While in case of Pro-Ban coalition, a range of coordinated actions between EcoWaste Coalition, Mother Earth Foundation, Senate of the Philippines (particular congresswomen), and some Local Government Units was made.

Table 4.	The Philippin	es case: advocad	v coalition	composition
	THE FIMPPH		y oountion	composition

Pro-Plastic Bags Ban Coalition	Anti-Plastic Bags Ban Coalition
Department of Environment and Natural Resources (DENR)	National Solid Waste Management Commission (NSWMC)
Mother Earth Foundation	Buhay Zero Waste Community
Archdiocese of Manila	Packaging Institute of the Philippines (PIP)
Senate of the Philippines	Nestle Philippines
City of San Fernando	Robinsons Land Corporation
Puerto Princesa City	Philippines Alliance for Recycling and Materials Sustainability (PARMS)
EcoWaste Coalition	GIZ, Philippine Office (GIZ)

The Department of Environment and Natural Resources of the Philippines did not express a clear voice for the ban of plastic bags but its general narrative was closer to the Pro-Ban coalition, the same situation was observed in the case of the representative of Buhay Zero Waste Community and GIZ office in Manila who did not strictly oppose the ban but suggested the solution that was more related to the overall narrative of the Anti-Ban coalition. However, I can say that the Pro-Ban coalition was mainly represented by the governmental and non-governmental organizations, while the Anti-Ban coalition - by the international and national business companies.

For every member of the coalition, an analysis of the narrative elements and strategies deployed by organization/community was made and used afterward to formulate the prevailing narrative of every coalition in the Philippines (Table 5).

Table 5. The Philippines case: comparison of policy narratives

Narrative Elements	Pro-Plastic Bags Ban Coalition	Anti-Plastic Bags Ban Coalition
Statement of a problem	Plastic is the main marine polluter leading to decrease of wildlife diversity and fish stock depletion.	Problem is not in plastic but in a way how it is disposed.

Characters		
Victim	Ocean, wildlife dying because of plastic ingestion, future generations.	Ocean, Philippinos losing their jobs, and access to affordable products, business losing the market.
Villain	International corporations and manufacturers producing an enormous amount of plastic/Government failing to arrange appropriate waste management system and enforce legislation.	Philippinos consuming and littering so much, government failing to arrange a solid waste management system.
Hero	Government (Congresswomen and LGUs) promoting/implementing bills on single-use plastic/bags regulation/Corporations changing the packaging and delivery practices.	Business developing and implementing the real solutions to address the problem.
Setting	Context including geography, legal parameters, economic conditions, norms, etc. is universal for both coalitions and described above.	
Causal mechanism	Intentional: corporations keep producing an enormous amount of single-use plastics hiding behind the false solutions to avoid responsibility.	Inadvertent: plastics (including plastic bags) remain one of the environmental and poverty solutions, but it is the government who failed to dispose of it appropriately.
Moral of the story	Nationwide ban on single-use plastic (declared), but effective waste management system (based on described actions).	Circular economy.
Plotline	Story of decline: corporations promote false solutions to avoid the reduction of plastic production, which leads to the increase of plastic wastes.	Story of control: a holistic approach to plastic waste management system would allow addressing the environmental and economic issues of people's lives.
Narrative strategies		

Expansion	Corporations blame poor communities on littering while being the main contributor to marine plastic litter. There is no effective system of waste management at the local level to deal with an enormous amount of single-use plastics produced by corporations.	
Containment		Proposed alternatives to single- use plastics/bags have a much bigger environmental impact and are not always affordable for poor people who are a majority of the population.
Devil shift	Business establishment lobbies its interest in Congress blocking any bills on single-use plastic regulation, and brainwashing people on alternative solutions.	
Angel shift		We have been already implementing the solutions to address the waste problem holistically, while the government goes just for a popular short-term solution with no implementation afterward.
Policy beliefs	Institutionalist, Social greens.	Market-liberal.

Moreover, for understanding the narratives and its role for agenda-setting, it is important to underline some factors which could influence the prioritization of plastic waste issue in the Philippines: the government just finished LCA of plastic bags, congress elections have just passed before conducting the interviews, and investigation of the cases around exporting wastes labeled as "recyclables" to the Philippines from Canada, Hongkong and Australia was underway.

Analysis of the narratives, created by the coalitions in the Philippines, shows that the Pro-Ban coalition was mainly focusing on the losers and victims of the current policy image by blaming the manufacturers for intensive plastic production and false solutions ("Plastic industry is hiding data on plastic production" (EcoWaste Coalition 2019), "Ecobricks or school chairs do not solve the problem as companies would continue to produce plastic which goes somewhere anyway" (Mother Earth Foundation 2019), questioning the effectiveness of the existing waste management system ("Manufacturers always say that all plastics are recyclable and reusable, but if there is no appropriate collection system, then nothing works" (DENR 2019)) and bringing the negative consequences of plastic pollution to the public agenda ("Plastic is a blind spot of the global energy system contributing to global warming" (Congresswomen 2019)). Although, the Anti-Ban coalition used the narratives to create a story around the positive aspects of a more holistic approach to waste management system which they suggested for the environment and economic development of the country (e.g., waste-to-energy, recycling, and chemical recycling, education program for the street sweepers, downcycle projects as eco-bricks, etc.).

The Pro-Ban coalition created the narratives using the intentional causal mechanism blaming the corporations for plastic pollution and calling them to take responsibility. Whereas the Anti-Ban coalition deployed inadvertent mechanism asserting that plastic itself remains one of the environmental solutions to poverty while the root cause of the plastic pollution problem is a disposal way. Regarding the plotline, the Pro-Ban coalition used the story of decline focusing on false solutions promulgating an increase of plastic consumption, while the Anti-Ban coalition used the story of control over the environment and economic development in case of a holistic approach to waste management in the Philippines.

In terms of narrative strategies, the Pro-Ban coalition intended to expand the policy issue to the poor communities by diffusing cost ("Corporations always blame the

communities for not having a proper waste management" (Mother Earth Foundation 2019), whereas the Anti-Ban coalition tried to contain the policy issue by concentrating the cost for poor community ("Poor people do not have time, cars and money to use reusable alternatives to single-use plastics" (PARMS/NSWMC 2019)). The Anti-Ban coalition also used a policy surrogate to expand the policy issue and engage more stakeholders (e.g., "After a long repressions people now can do whatever they want" (PIP 2019)), while 40% of members from the Pro-Ban coalition also referred to the economic situation in the country supporting the point of opposite coalition in terms of inability of low-income group of population to consume sustainably (e.g., "75% of the population is low-income class who can't purchase the products in a bigger volume" (DENR 2019), "People are poor, and the environment is not their main priority" (Archdiocese of Manila 2019). Moreover, the participants from the Pro-Ban coalition used any clear symbols in communicating their storyline at least during the interviews.

Both coalitions underlined a lack of holistic scientific data on single-use plastic issue in the Philippines and engagement of scientists in general (e.g., "We don't have a study on plastic bags because of lack of manpower" (City of San Fernando 2019), "Scientists are not considered by the government" (Archdiocese of Manila 2019)). However, the Anti-Ban coalition used this argument as a reason not to introduce a ban on single-use plastic/bag due to lack of understanding on the alternatives and effectiveness of such measures ("Many studies need to be done" (PARMS/NSWMC 2019), while the Pro-Ban coalition used this argument to question the solutions suggested by the opposition because of scientific uncertainty or lack of data on it ("Scientists mainly work with issues of biodegradable bags or waste-to-energy"

(EcoWaste Coalition 2019), "We need more understanding of the negative impacts of patronizing single-use plastics" (Congresswoman 2019). The Pro-Ban coalition used devil-shift by exaggerating the power of the business establishment in influencing the policy-making process through the lobbying and brainwashing. The Anti-Ban coalition used angel-shift by emphasizing their attempts to implement systematic solutions, and deemphasizing the opponent questioning its willingness to go for popular solutions lacking further implementation (e.g., "NGOs run very aggressive advocacy and pushed the government for the popular short-term solutions", "Local government units ban single-use plastic bags which lead to decline of plastic waste but an increase of coated paper bags that can't be recycled" (PARMS/NSWMC (2019)).

Assessment of every coalition, based explicitly on the interviews, showed that the Anti-Ban coalition was more stable and coherent in terms of the created narratives and used strategies, while in the Pro-Ban coalition some inconsistency between the members was identified: policy solutions varied from the total ban for single-use plastic to changing the delivery system and improving waste segregation; perception of the characters also varied from corporations to government being villain and hero at the same time; angel- and devil shift deployed by the different participants towards the different opponents at the same time (e.g., some NGOs closely cooperated with government while others with corporations from the Pro-Ban coalition). Regarding the beliefs which determine the policies and programs, the Pro-Ban coalition had a wider variety of worldviews ranging from social greens to institutionalist, while the Anti-Ban coalition was more homogeneous, and represented by only market liberals.

Majority of the interviewees from both coalitions noted the significant role of social media in raising awareness on plastic pollution issue. However, the Anti-Ban coalition asserted that social media were used mainly by NGOs to create an image of

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issue popularity among the population in order to motivate the local governmental units to introduce the ordinance banning the single-use plastics, or congressmen and congresswomen to file bills banning single-use plastics before the elections. The Pro-Ban coalition stressed a lack of independent mainstream media, which now became associated with the business establishment through the sponsorship.

To summarize, the Pro-Ban coalition used the narrative elements and strategies to expand the policy issue by widening the scope of conflict through the costs diffusion and benefits concentration. Moreover, the Pro-Ban coalition itself had a lower level of coalition glue in terms of stability and consistency of narratives use. Therefore, based on NPF hypothesis tested in the Kenya case, I can conclude that the Pro-Ban coalition was not able to create the convincing policy narratives to succeed in reaching the desired policy outcome, unlike the Anti-Ban coalition. Thus, there is still a commitment to ban single-use plastic in the Philippines, but not a policy, which proves the NPF hypothesis in this context as well.

6. Comparison of the Kenya and the Philippines cases

Below there is a comparative overview of the narrative elements and strategies

around single-use plastic bags used by the coalitions in Kenya and the Philippines

(Table 6).

Table 6. Comparative overview of the narrative elements and strategies used by the

coalitions in Kenya and the Philippines

	Kenya	Philippines	Kenya	Philippines	
	Pro-ban Coalition	Pro-ban Coalition	Anti-ban Coalition	Anti-ban Coalition	
Narrative elements					
Statement of a problem	Plastic is everywhere; it pollutes our rivers and lands, blocks drainage system and threats agriculture	Plastic is the main marine polluter leading to decrease of wildlife diversity and fish stock depletion	Plastic itself is not a bad thing, the problem is how it is used and disposed of	Problem is not in plastic but in a way how it is disposed of	
Victim	Environment, people	Environment, people, future generations	People, industry	Environment, people, industry	
Villain	Plastic industry	International corporations and manufacturers	Corrupted government	People, government	
Hero	Government	Government including local government units	Manufacturers	Business establishment	
Causal mechanisms	Intentional	Intentional	Inadvertent	Inadvertent	
Moral of the story	Ban for plastic bags	Ban for single-use plastics/bags	Waste management development	Circular economy	
Plot	Story of control	Story of decline	Story of decline	Story of control	
Narrative strategies					
Expansion		Diffusing costs	Diffusing costs		
Containment	Diffusing benefits			Concentrating costs	
Devil shift		Business establishment lobbies its interest in Congress blocking any bills on single-use plastic regulation, and	Policy-making process is politically influenced, the government failed to arrange a waste management system		

		brainwashing people on alternative solutions		
Angel shift	Plastic bag ban can improve the environment which is a matter of public interest			We have been already implementing the solutions to address the waste problem holistically, while the government goes just for a popular short- term solution with no implementation afterward.
Policy beliefs	Environmentalist	Institutionalist, social greens	Market liberal, institutionalist	Market liberal

Therefore, we can see that the coalitions advocating for the similar policy solutions in Kenya and the Philippines created quite similar narrative elements but used different narrative strategies which depends on how the coalition portrait itself - as winning or losing.

Based on the analysis of the coalitions and their policy narratives in Kenya and the Philippines, some similarities and differences between the cases can be identified.

Similarities:

- Close cooperation of NGOs/civic groups with policy-makers at the national and local levels; the significant role of NGOs in supporting governmental initiatives on banning plastic;
- Power of individuals in governmental decision-making (Congresswomen in the Philippines, Cabinet Secretary in Kenya);

- Inadequate waste management system and associated economic risks (floods, fishstock and livestock depletion, threats to tourism) as primary triggers of policy change;
- Lack of scientific data on the alternatives to single-use plastic and scientists engagement on policy development;
- Significant role of social media in raising awareness, making pressure on the government/corporations;
- Business establishment blaming the government in corruption and civil society in lack of right intentions;
- Weak law enforcement and lack of monitoring system;
- In both countries the agenda-setting process is highly influenced by the international interventions such as UNEP or East African Legislative Assembly, World Bank and GIZ, illegal plastic waste export to the Philippines from the developed countries or illegal import of plastic bags to Kenya from the neighbouring countries as focusing events, and international reports as intrusion of new information, for example, McKinsey report naming the Philippines among top-5 countries contributing to marine litter, or UNEP recommendations suggesting the plastic bags ban as prior action to address waste problem.

Differences:

- Public participation in policy-making through the public hearings and consultations with industry in the Philippines, whereas in Kenya the general public was not engaged;
- Bill on the single-use plastic ban was filed in Congress in the Philippines, whereas in Kenya it was passed as an executive decree to exclude legislators;
- UNEP in Kenya played an essential role in technical assistance on the ban

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development and encouraging the government to introduce it, whereas in the Philippines the general recommendations on waste management were communicated by PARMS and NSWMC as not applicable for that context;

- In the case of Kenya, policy surrogate was unemployment of workers and investment outflow, whereas in the Philippines - the inaccessibility of reusable alternatives for the poor population;
- In Kenya, the dominant narrative was built around the environment protection in general which was considered as a priority for the government, whereas in the Philippines the dominant narrative was on waste management system development, especially in poor communities;
- Local government is more empowered and engaged in decision-making on waste management in the Philippines, unlike Kenya.
- Some cultural aspects of poor waste treatment (e.g., "People get used to have house-helpers who always clean after you, even in poor communities" (Buhay Zero Waste Community 2019)) and unsustainable consumption (e.g., "Women have to work now, therefore they do not have time to the market and buy in bulks, cook and segregate waste" (PARMS 2019) in the Philippines were underlined, whereas in the Kenya case, some geographic and economic aspects of overconsumption of plastic bags were identified (e.g., "Many people do not have toilets, that's why they use the plastic bags for it" (Greenpeace Africa 2019)).

7. Discussion, recommendations

Within this research, the agenda-setting stage of making policy on single-use plastic bags in Kenya and the Philippines was studied through the analysis of policy narratives created by the opposing coalitions.

To meet the first research objective, the analysis of the main stakeholders for each country was made. It showed that in both cases Pro-Ban coalition was mainly created by the governmental and non-governmental organizations, while Anti-Ban coalition - by the business establishment. Identified policy settings and dominant public discourse on single-use plastic bag were similar in the Philippines and Kenya: intensive urbanization and wastes generation, proliferation of single-use plastics and rapid growth of mismanaged plastic waste, corruption and development of civil society, public awareness of plastic pollution issue, etc. Since one of the research questions was to find out how the coalitions use the narratives to bring the issue to the agenda of policymakers, I analyzed the policy narratives and tested some NPF hypothesis for the meso level.

Results of data analysis show that winning coalitions - the Pro-Ban coalition in Kenya and the Anti-Ban coalition in the Philippines more likely than losing coalitions identified winners in their narratives and used a story of control in their plotline, and contained the scope of conflict by diffusing benefits and concentrating costs. Moreover, winning coalitions had more intra-coalition cohesion in terms of the narrative elements and strategies deployed. However, both coalitions in both cases used policy surrogates and stressed a lack of scientific data in general, which concur with previous NPF research that reveals "evidence-based decisions are not reflected in how policy realities are constructed" (Shanahan *et al.* 2008). The coalitions which portrayed themselves as winning used an angel-shift emphasizing the groups' ability or

commitment to solve the problem, while de-emphasizing the opponents. Thus, losing coalitions deployed negative and shaming narrative using the devil-shift narrative strategy. These results prove that the NPF hypothesis is applicable in the context of developing countries.

Moreover, this research contributes to Clap and Swanston (2009) concept explaining the emergence of the anti-plastics norm in the Global South with the role of industry and the weak power of "recyclability" arguments in the countries with an inadequate waste management system.

In the case of Kenya, despite the structural power of plastic industry in terms of job provision, it had less instrumental power to lobby and was excluded by the government from the decision-making process by changing the initial legal status of the promoted anti-plastic norm (executive decree vs. bill). Whereas in the Philippine case, the industry has more structural power to block filed bills in Congress but less power to influence local governmental units because of its high autonomy in decisionmaking on waste management. It explains the fact that there are so many local ordinances banning single-use plastic bags in the Philippines.

Moreover, as we can see from the coalitions' analysis, the Pro-Ban coalition in Kenya case, was arguing the discourse of Anti-Ban coalition based on recycling and resource efficiency as it was not congruent with the established waste management system in the country. At the same time, wildlife and human health and safety concerns were more relevant. However, in the Philippines case, "recyclability" argument actively promoting by the Anti-Ban coalition is slightly more applicable due to a higher rate of waste collection and segregation. Nevertheless, the discourse of the Pro-Ban coalition based on human and wildlife health and safety concerns, is more relevant for the local government units (e.g., the islands have a very limited capacity for waste management

including the recycling due to complex logistics, while plastic bags remain the main reason for floodings and associated health risks).

Some authors make focus on the role of civil society in the emergence of the anti-plastic norm in the developing countries (Ritch *et al.* 2009; Vince and Hardesty 2017), which concur with the current research. Community-based groups and NGOs in Kenya and the Philippines largely contributed to the policymaking process through a variety of ways: encouraging the government to introduce a law and resist industry pressure by mobilizing public support in Kenya, drafting the Congress bills in the Philippines, guiding and technical assistance in ordinance development in the LGUs of the Philippines, engaging the stakeholders in public discussion around the issue, making pressure on the corporations and manufacturers, raising awareness. Data analysis showed that in both cases, the business establishment blamed civic groups for a too aggressive public campaign in social media, and governments for considering the only NGOs position in decision-making.

The role of social media seems to be quite significant in both cases; however, it shall be studied additionally. In Kenya and the Philippines, the issue of plastic pollution has been discussed for the last ten years, and a range of attempts to introduce the relevant regulation was made but failed. In the Philippines, the first bills on a nationwide ban of the single-use plastic bag were filed in Congress in 2011 and 2013. Kenya enacted the plastic bag ban in 2017, when the first massive social media campaign #banplasticsKE was undertaken. Facebook launched the "Free Facebook" project in those countries in 2012 and 2015, respectively, providing millions of people with free access to social media. Social media as claimed by the majority of the interviewees, was a primary tool to deliver the anti-plastic message in order to mobilize public support. This support was used by the governmental bodies to justify the need for a

single-use plastic ban in court (Kenya) or to introduce the local ordinance (the Philippines). However, some respondents from both countries and representing both coalitions underlined the fact that the plastic pollution issue was utilized by the government to win the electorate's attention before the elections, rather than for making changes.

The findings of this research may be used by NPF scholars for further development and testing the hypotheses, especially in the context of developing countries and on such cross-national issue as plastic pollution. Therefore, there are some recommendations for future research in this field:

- Content analysis of the consumer documents for both cases to verify the policy narratives of the coalitions and test whether the interviews as research methods are credible enough.
- Experimental research design to check the perception of these narratives by the recipients in both cases and understand if this right;
- Narratives analysis at the micro and macro levels for both cases, and its interconnection in the developing countries;
- Retrospective analysis of the policy narratives around the plastic bags regulation for both cases to test NPF hypotheses regarding the previously failed multiple attempts to introduce the ban;
- Policy narratives analysis in the developing countries with similar geographical, cultural and economic context but non-democratic to study the role of democratic institutions, therefore;
- Application of NPF to the implementation stage of the policy-making process in the field of single-use plastic bag ban to study how the narratives are used to influence the enforcement.

Moreover, these findings can be used by the practitioners from a public policy, including the NGOs, for understanding the mechanisms and strategies of influencing the policymaking process through the creation of narratives in order to avoid manipulations. Nowadays, policy narratives are mainly used by corporations and international non-governmental organizations to influence individuals in terms of their consumption preferences. However, at the national level, it happens unintentionally and reactively, which can hinder effective policymaking in the environmental field. Therefore, policy narrative analysis may be a beneficial source of insights for the national policy-makers to manage the conflict and promote environmental legislation.

Since one of the research objectives was to define the factors contributing to the emergence of single-use plastic bag regulation in the Philippines and Kenya, comparative analysis of the cases was made. There are some similarities between Kenya and the Philippines cases, which may explain the emergence of plastic bag regulation: close cooperation of NGOs with policy-makers, influential individuals in governmental decision-making, inadequate waste management system and associated economic risks as primary triggers of policy change, significant role of social media, highly influenced by international interventions the agenda-setting process. The UN agencies may use it in developing information content, action plans, and funding priorities for the developing countries in Asia and Africa to address plastic pollution and other environmental problems. Considering the national aspects of policymaking on environmental issues in developing countries would increase the effectiveness of global environmental governance. First of all, the decision on what approach to use bottom-up or centralized, shall be made based on its relevance to the national policy narratives.

However, there are some limitations of this research: with the number of organizations coded, as it is not necessarily a complete coalition of actors involved in the issue, especially for the Kenya case which may limit the generalization of the results; with the research method used, as data collected through the interviews can be influenced by the interviewee's personality and the context of the interview while not reflect the organization's narrative.

Conclusions

The current system of global environmental governance is based on multilateral binding agreements, for example, the Paris Agreement in the field of climate change or the Basel Convention on waste management and the Stockholm Convention on hazardous chemicals. However, in the field of the plastic pollution issue, there is a more bottom-up approach. It can be explained with the urgency of the plastic waste problem for developing countries due to the rapid growth of mismanaged wastes because of specific geographic location, undeveloped waste management system and need to deal with illegally imported wastes, direct economic risks of the countries mainly relying on natural resources for food provision and tourism development, and health risks associated with the floodings and inadequate waste management system caused by the proliferation of single-use plastic. This urgency and scale of the problem, specific mainly for the developing countries, required immediate response, while for the developed countries it was not a big issue to initiate global regulation on plastic pollution until recent time. However, it shows that different perception of the problem in the Global South and the Global North led to the national environmental regulation development in the absence of binding rules and intensive international interventions. Nevertheless, in both cases, the intrusion of information from international organizations triggered policy-makers attention.

Moreover, from this research, we can see how significant the role of national non-governmental and international public organizations in the case-countries, as well as individuals at the governmental bodies in bringing the issue to the policy agenda. Government, including the local one in the focus countries, was more willing to cooperate with civic groups in terms of technical assistance and mobilization of public support, than with business establishment. Therefore, the stakeholders from the

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industry shaped a coalition in response to public and governmental pressure. Analysis of the policy narratives deployed by the winning coalitions in every country showed that the following factors could make the issue priority for policy agenda: building the narratives around the winners, containment of the conflict scope by diffusing the benefits, and coherence of the narratives over the coalition and time.

While the scientific data may not impact the policy outcome, lack of it can become an obstacle for the implementation. Social media becomes the primary tool used actively by the civic organizations and governmental bodies in the developing countries to mobilize public support for the resistance to the industry's pressure. Democratic institutions in developing countries such as courts, elections, and federalism, in general, can be employed to promote quite strict environmental legislation, for example, bans for single-use plastics, rather than economic instruments widespread in developed countries.

Therefore, to address the issue of global plastic pollution as well as other environmental problems in developing countries through the regulation, it is important for governments to engage civic groups in decision-making, build the policy narratives around the winners and solutions to effectively mobilize public support, and encourage the scientists to work on plastic pollution issue. For the international public organizations it is essential to consider geographical and cultural aspects of the countries while promoting the solutions, engage stakeholder groups from the particular sub-region in development of the roadmap rather than impose the solutions implied in the developed countries, provide funding for data collection in sub-region regarding the amount of plastic produced and consumed in order to understand the scale of the problem and develop the relevant measures, and assist with the coordination of the projects in sub-region rather than impose. Moreover, policy narrative analysis shall be

used by the practitioners in public policy in developed and developing countries as a source of insights on public discourse, coalition formation and impact of the broader environment on policymaking in order to enhance the environmental governance at the national and local levels.

Appendix 1

Table A1. Map of interview questions

CONTEXT	ACTORS	DECISION -MAKING	POLICY IMAGE
information	political institutions	policy process	policy monopoly
problem definition	community of experts	policy venues	conflict expansion
information control by subsystem	newcomers	policy solution	values and beliefs
social processes	role of scientists	policy assumptions for policy-makers	elite opinion
dominant policy story	public opinion	interests mobilization	governmental attention to public opinion
alternative narratives	media function	political inputs	alternative narratives
access to agenda -setting	losers and winners	involvement of concerned outsiders	policy obstacles and opportunities
economic and political tension	coalition composition	problem redefinition	policy controversies
metaphors, symbols	metaphors, symbols	consensus	consensus
political leadership	role of nature	political leadership	media coverage

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