

Fields of Blue Growth as “Green” Answers:

A Critical Analysis of the Swedish Discourse on Aquaculture and Ocean Development

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LUND
UNIVERSITY

Bachelor of Arts thesis 15 credits
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Autumn semester 2017
HEKK03

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Examination form: Bachelor thesis

Semester: Autumn semester 2017

Abstract: Because of increasing pressures on marine life and habitats, the overall health of the global ocean has over the latter years received attention internationally. It is therefore of relevance to analyse how the type of human-nature relationship towards the ocean is presented through what can be coined as Blue Growth. The aim of this research is to critically discuss what human-nature relationships that are shaped through national Blue Growth strategies by focusing on how the aquaculture industry is depicted in it. This will be done by investigating, through a critical discourse analysis, three power laden actors in Sweden, a country with a long coastline, many islands and being a nation renowned for its nature and good keeping of it, figures itself and forms the discourse on marine development. Stemming throughout is that economic growth, and enterprising nature through entrepreneurial kick-offs, stands as the building block for developing ocean affairs. This in turn is argued to foster incomplete answers to how to deal with ocean degradation.

Key words: Sustainability, Enterprising Nature, Aquaculture, Blue Growth, Critical Discourse Analysis, Human Ecology

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Chapter 1: Introduction

Reminiscing back to 2003 when taking the ferry from Travemünde Germany and the horizon began to fade out as the ferry entered deeper waters, appearing on the sea's surface were thick brown trails of oil and pollution stretching for miles on end from passer-by ships. As urban land dwellers in the global north, it is not so common to experience that which goes on in marine environments. The world beneath the surface even less so. The ocean can hence seem vague and distant to many; as some kind of infinitely expandable space that is able to recycle the excesses of production on land. But evidently this is not the case given the thick brown trails of oil and pollution that dressed the surface of the Baltic Sea in 2003. Not only is human induced damage on nature an alarming sight to see, but it can also have a long lasting negative effect on nature, oftentimes being non-reversible. Problems arising in and out of the global ocean have however not gone unremarked in the international arena of decisions makers.

As more and more marine problems are arising in the ocean such as eutrophication, hypoxia and the loss of many marine species, due to overexploitation and the mismanagement of resources, the overall health of the global ocean and finding new ways to sustainably manage it, has over the latter years received increasing attention internationally (for more on this see World Bank Oceans, Fisheries and Coastal Economies 2017). This because there are a myriad of reasons for why a healthy global ocean needs to be assured for present and future generations. Not only does the ocean cover 70% of the earth's surface, but also provides fish as a main source of protein for vast amounts of people, and is one of the primary means through which the export of goods is made possible. But the ocean also encompasses a huge reservoir of biodiversity and space to foster new means for culturing crops and economic growth. This has not gone unmarked for the global body of decision makers. As a response, conference negotiations along with laws and policies have taken shape and formed a global discourse on how the future of the ocean is to be managed, and how the oceans landscape is to take form (Barbesgaard, in press). However "most ocean space lies beyond national jurisdiction" and exclusive economic zones only account for 42% of this ocean space (Silver et al. p.136). Some argue that the remaining 58% of high seas spaces and resources are at risk for ecological decline if they do not become managed either by market actors or by a nation state (ibid.). As a result a discourse has formed, going under the rubric "Blue Growth", for discussing policy developments and spatial planning on how to develop and utilise ocean spaces (Silver et al. 2015; European Commission 2012; Barbesgaard, in press). Briefly explained the concept signifies an expansion of market mechanisms into ocean spaces that involves the enterprising and the privatizing of nature, however disguised as progressive socio-economic development through marine and maritime affairs (Barbesgaard, in press).

It is therefore of relevance to analyse how human-nature relations expressed through the discourse can have an effect on the long term state of the global ocean and hence also human society. This will be done by investigating how Sweden, a country with a long coastline and being a nation renowned for its nature and good keeping of it, figures itself in the discourse on ocean development. Of significance is to look into if, and how, Sweden plans to develop its “Blue Economy”. In a working document by the Swedish Agency for Marine and Water Management (2017) it is highlighted that several sectors have received attention in the development work, however they explicitly pin point aquaculture. This industry is considered as a solution to multiple problems. For instance a practice that is brought up as a solution in the discourse is to culture blue mussels; an industry on the rise in Sweden. However the aquaculture industry is also controversial as a solution given the many problems that it also causes for example creating imbalances in trophic levels (Miller & Spoolman 2009, pp.58-65; Bruno 2014).

The aim of this research is to contribute to the debate on sustainability, by critically discussing what human-nature relationships are shaped through national Blue Growth strategies. The perceptions depicted through the strategies will be argued to have an effect on how human society appreciates and valorises nature, which in turn has knock-on effects on how future developments in the ocean may take form. The thesis taken is that current human-nature relations, more often than not, reflect nature as a space that needs restoration made possible by entrepreneurial businesses that foster economic growth. This relationship in turn simplifies nature's web of ecosystems to fit business-models that are not capable to take into consideration complete solutions to environmental degradation and nature's importance (Dempsey 2016). Nature resolutely becomes treated as a commodity only worthy of attention once profit is to be made from it. Hence the increasing interest in the state of the global oceans resources, a space in the world not yet fully immersed by capitalist modes of production. This paper will address how Sweden figures itself in terms of human-nature relations. I will look at how the aquaculture industry is portrayed in the Swedish Blue Growth discourse. The specific research questions focused upon are the following:

- (1) What human-nature relationships are presented through the Swedish discourse on Blue Growth?
- (2) How is aquaculture presented in the discourse?

More specifically I will critically discuss how industries that are often framed as innovative and sustainable, are depicted as solutions to the overall degradation of ocean ecosystems. Specific attention will be given to the aquaculture industry as it in many aspects is considered as being a viable solution to overfishing and eutrophication, but also having direct negative impact on nature from a biological stance. Despite this it is still the fastest growing maritime industry worldwide (FAO

2016). The industry gives room for contradicting ontological views of how and if the industry ought to be implemented fostering a versatile discourse on the industry's future place in the ocean. Moreover so called sustainable solutions of the kind proposed by the aquaculture industry to problems arising with marine exploitation can be understood as larger socio-cultural human relations to nature, that will be argued, are formed through political agendas that are expressed through what has been coined as Blue Growth. The scale of the research has been narrowed down to investigate how the aquaculture industry is portrayed through policy proposals that emphasize Blue Growth agendas in a Swedish context. In this paper, only documents distributed by Swedish authorities and organizations have been used for the analysis. Since the country harbours Europe's longest coastline (Regeringskansliet 2015) it has ample room and reason for developing its maritime and marine industries. The nation also has a high number of islands of which are inhabited (Källgård 2005). Therefore aquaculture is also potentially important as an industry for creating jobs. Hence the reason for why Sweden has been considered a relevant framework for analysis.

Chapter 2: Background

This chapter addresses what is meant by blue growth and briefly describes what aquaculture is and what the positives and negatives are of the industry. The following sections go more into detail about Sweden; what the Swedish Blue Growth agenda looks like and what the Swedish aquaculture industry consists of today. The aim of this chapter is to bring together key concepts that need clarification. In this paper Blue Growth functions as the background and the underlying framework for understanding why it is at all relevant to discuss perceptions of the ocean. To understand human-nature relations that emphasize nature as a space for creating business and how this is done through policy proposals, it is necessary that a picture is drawn of what is meant by Blue Growth and how it can be thought of through a critical lens. In the following section I will discuss more in detail the aquaculture industry: why it is at all relevant to examine and how it relates to Blue Growth. In the succeeding sections I will go more into detail about the positives and the negatives of the industry. And to draw the chapter to an end, a brief account is drawn of what the Swedish Blue Growth agenda encompasses and more specifically what the Swedish aquaculture industry consists of today.

2.1. Blue Growth – a problematic term?

Oceans and that which they contain have been receiving increasing attention in various international conferences as large parts of the oceans resources are either global commons or in need of reregulation due to decades of overexploitation (Barbesgaard, in press; Silver et al. 2015). Hence the ocean has become a target for future growth apparatuses. In a briefing paper published by *The Economist* (2015) it is claimed that

relationships with the ocean are evolving in important way and that during this century, the ocean is likely to become a new economic force. The ocean has historically functioned as a setting for global commerce, which has led to the drivers in it becoming “many and varied” and that they are growing in numbers today (ibid.). Because the more familiar human society gets with the building blocks of ocean climates, habitats and species, recognized is also the profitability in them. The ocean is argued to bring new sources of jobs, innovation and competitive advantages for individual nations states (ibid.). The strategy for attaining these aims is through what is symbolized as Blue Growth or the Blue Economy (European Commission 2012; The Economist 2015; Silver et al. 2015; Barbesgaard in press).

As such Blue Growth is a framework that has been applied over the latter years to address how to solve issues of environmental degradation in the ocean by developing and expanding business potential within it (The Economist 2015; European Commission 2012; Barbesgaard, in press). It is a guiding framework for developing industries such as deep-sea mining, fishing, aquaculture, mineral extraction and developing natural energy sources (European Commission 2012). In simple terms it is a policy framework that has been used internationally to discuss how to solve the often manmade problems in the ocean whilst creating a viable, long term strategy to prevent such problems from reoccurring all whilst fostering economic growth and new employment opportunities (ibid.; Barbesgaard, in press). The goal is to receive win-win-win solutions where neither nature, human society nor the economy ‘looses’ (Barbesgaard, in press; The Economist 2015).

Blue Growth is more specifically also a response to the pressing issue of finding solutions to problems such as overfishing, whilst needing to feed a growing population and finding new alternative energy sources (European Commission 2012). The concept has been argued to stem from what has been termed as ‘green economy’ (Silver et al 2015). Proponents of the green economy have been argued to embrace a conservation and development vision that favours technological modernization (ibid.). In other word this is an extension of sustainable development solutions to nature degradation. Turning the economy ‘green’ (however in this context ‘blue’ as the focus is set on oceans) is in practice translated to lobbying for environmental policies that in turn have resulted in protected areas, payments for ecosystem services and the privatization of ocean resources (ibid.). This has created injustices for many small scale actors within maritime affairs: fisher-folk that have lost access to fishing grounds due to nature conservation, and capital strong fishing fleets that buy up majority shares of fishing quotas (TNI 2014). By expanding the realm of capitalist modes of production to nature, in this particular case the ocean, neutral and economically partial views of nature as a whole are fostered where parts of nature become seen as commodities that can be bought, sold and owned by one or multiple proprietors (Silver et al. 2015). This has been made possible through big business and capital strong international organizations that have seen potential in environmental degradation, to

make money off saving and restoring nature's ecosystems (ibid.). Past attempts at privatizing nature for the sake of restoring it have however resulted in more damaging outcomes (TNI 2014). For instance, through carbon offsetting schemes such as REDD (the United Nations Reducing Emission through Deforestation and Forest degradation) philanthropic foundations, corporate partners along with mainstream actors have been able to privatize mangrove forests in the name of carbon sequestering schemes in Senegal, Tanzania, Madagascar and Kenya (ibid.). This in turn has led to fishing communities losing control over resources that have been used by the communities for centuries past, to capital strong private actors (ibid.). The dominant actors resolutely become in charge of what the outcomes are, silencing smaller less capital strong voices to gain recognition in new regional development plans, policy proposals and overall changes in the region. Moreover the new actors in charge of the resources may not always be fit to govern, nor have sufficient knowledge to care for the resources resulting in damaging the nature in question. Hence it can be said that 'bluing' the economy can in fact cause more harm than good in many cases, despite principally good intentions.

Given the examples illustrated above it can be argued that 'blue growth' is becoming another attempt at greenwashing future human-nature relations that are to take shape in the ocean. Greenwashing, simply put means that the information presented through a policy document, organisation, or business model is on the surface presented as environmentally responsible but having a contrary outcome or motive in reality (De Jong et al. 2017). As a response to ocean degradation many governments have included in their national strategies and policies a "tinge of 'blue'" (ibid., p.5). Hence the reason for investigating how Sweden has tinted strategies for the sustainable development of the ocean in shades of blue, and whether or not this 'blue development' is causing human-nature liaisons of the like presented above, as a form of greenwashing in the ocean.

2.2. Aquaculture

The massive worldwide decline in fish stocks has resulted in finding alternative solutions to feed the vast amount of people that have fish as their primary source of protein. Hence why the aquaculture industry has gained such prominence. Aquaculture refers to the breeding and harvesting of plants and animals that live in water environments (FAO 2016). The aquaculture industry is one of the fastest growing farming industries worldwide (ibid.; Clark & Clausen 2005). To date about 570 aquatic species are currently farmed over the world (ibid.). Millions of people around the world find a source of income and livelihood in the aquaculture sector (ibid.). According to FAO statistics (ibid.) the most recent estimate was that 56.6 million people were involved in the capture fisheries and aquaculture industries in 2014. Moreover the industry is considered as having a prominent future within marine development and is hence considered a strong candidate in 'blue growth' strategizing schemes.

2.3. Problems and positives of aquaculture

Often aquaculture is considered beneficial due to the fact that it has a varied use potential and certain practices such as mollusc farming has multiple positive effects on nature. The chief argument for aquaculture is that it is an alternative source of protein to wild caught fish that is necessary to feed the increasing amount of people that are dependent on aquatic species as their primary source of protein and livelihood (FAO 2016). Moreover the industry has potential to branch out and develop into new innovative industries (see homepages for innovative aquaculture industries: Simrisalg 2017; Mussel feed 2017; Gardsfisk 2017). Due to the crisis of overexploitation of marine species, the need to discuss alternative solutions to better the biological state of the ocean are present. Mussel farming for example, is not only an alternative source of protein but it is also an environmentally sound alternative to restoring ocean climates as mussels filter out excessive volumes of nitrogen from the ocean (Lindahl et.al. 2005). But they also function as ample measures for creating biodiverse habitats (ibid.). Mussel farms attract fish spawn and other aquatic life (ibid.) which in turn has positive effect on the ocean habitat.

Culturing fish on the contrary has negative effect on the environment. The most prominent issue with culturing fish, for almost all species, is that for the cultured fish to grow in mass they need to be fed with much larger masses of fodder that is made of wild caught fish (Bruno 2014). In an ecological food web, each organism is either a producer or a consumer. However if a species in the web is consumed excessively, for instance a fish caught in excess by humans, an imbalance is created where a consumer in the food web has little possibility of consuming the species as much of it is not left (Miller & Spoolman 2009, pp.58-65). This in turn creates an imbalance in the trophic web of aquatic species as smaller fish are caught in large scales leaving less food for larger fish to feed on (ibid.). There is also high risk for fish to escape and spread disease, reproduce with wild stocks altering local genetic material, and increase the amount of chemicals in the waters because of pest control (Jordbruksverket 2015). When culturing fish, there is also an addition of nitrogen and phosphorous that enters the waters (ibid.). Culturing fish thus contributes to a net supplement of nutrients to ocean climates due to nutrients that are added to the water coming from faeces and fish fodder that have not been consumed (ibid.). An example of where this would be particularly problematic is in the Baltic that is already heavily polluted. In the case of the gulf of Bothnia, for example, that is not geographically cut off from the Baltic Sea and where a lot of aquaculture farming takes place, an accumulation of nitrogen and phosphorous in the water is then free to move into the Baltic Sea which is already strongly effected by eutrophication (ibid.). Hence excess fish farming in the gulf of Bothnia can have a negative overall impact on the whole Baltic region (ibid.).

There are numerous issues with culturing fish, as illustrated above, that are often not made evident when discussing aquaculture practices as a long term solution to ocean

degradation. On the contrary it is often considered as an optimal solution as it solves the short term problem of feeding people and creating economic growth (Schröder 2013). Therefore it is also of relevance to investigate what the Swedish discourse on aquaculture practice consists of, is it primarily for the health of the ocean, or does economic profit gain centre stage when deciding on the industry's implementation?

2.4. Sweden's Blue growth agenda

Sweden has over the latter ten years been part in discussing how to develop its blue economy through proposals, plans and strategizing in parallel with the European Union proposing opportunities for marine and maritime sustainable growth in 2012 (European Commission 2012; Jordbruksverket 2012; Regeringskansliet 2015). In a strategy report published by the Swedish parliament in 2015 emphasis has been put on three pillars that are to illustrate what Swedish marine and maritime development will focus on, an ocean in balance, competitive maritime industries and attractive coastal environments (Regeringskansliet 2015). Further emphasis is put on enhancing and creating industries that are sustainable with the aim of ameliorating life environments and ensuring that the ecosystem services required for continued development of marine and maritime industries remain in good health. The point of departure is that environmental and cultural values, related to coastal and marine areas and industries, are preserved so that they can contribute to the development of maritime industries which are to create an economical, social and sustainable development. In sum the Swedish Blue Growth agenda hopes to see increased cooperation between actors that are already present in the industry, give room for more flexibility so that new industries can develop and establish more easily by allowing innovative research initiatives to take more space (Anderson & Lingsten 2017; Regeringskansliet 2015). All this should be done whilst keeping a sustainable and green profile, all while fostering the continued growth of industries such as offshore energy development and finding new innovative aquaculture practices (Anderson & Lingsten 2017).

2.5. Sweden's aquaculture industry

Swedish aquaculture production in 2016 has been estimated at 13 417 tonnes of fresh fish and molluscs, a 25 percent increase since 2015 (Tegenrot 2017). Rainbow trout dominated the market with a whole 86 percent (ibid.). There was also a 1 760 tonne production of char fish, 117 tonnes of eel, and 2 317 tonnes of mussels (ibid.). It is however peculiar that the Swedish Central Bureau of Statistics (ibid.) has categorised eel as being cultured in the same way as the other species presented above. Given that eel production requires that wild caught eel fry is captured and then grown in aquaculture facilities (Svenskt Vattenbruk 2017). It can therefore be argued to be a form of capture fishing and not a culturing of fish. Overall mussel production has seen an increase with more facilities that have been put to production over the latter years (Tegenrot 2017). The production of fish for fish feed and fish oil in 2016 has been estimated at 860 tonnes, showing a reduction of 20 percent in comparison to the prior year (ibid.).

According to a fact sheet on the Swedish maritime industry, the aquaculture industry is dominated by small scale enterprises with a primary aim of growing in economic terms and creating a competitive environment-friendly production (European Commission n.d.). The majority of fish production takes place in northern Sweden (Bruno 2014). Fish that is grown for fish oil and fish fodder is grown in basins or dams and mussels on vertical long-lines at sea on the western coast (ibid). However, there are enterprises opening up on the eastern coast as well. In general the industry is considered to have a potential to grow in the future (Bruno 2014; Jordbruksverket 2015; Regeringskansliet 2015; European Commission n.d.). This partially because of high national environmental awareness, conscious consumers, well established authorities, high academic competence and innovative actors within the industry (Jordbruksverket 2015).

However, the weaknesses that have been brought up are that the average age in both experts and people active within the industry is high, which can lead to the loss of important knowledge (ibid.). Moreover there are high expenses to aquaculture production and the turnover is not always good (ibid.). There is also little risk capital available in the industry to start up new initiatives and the industry is not very amenable to changes (ibid.). In general the knowledge of the industry is not extensive which also makes it slow to change (ibid). It is in other words not easily adaptable to new environmental policy laws and animal ethics (ibid.).

Moreover the majority of cultured fish produced in Sweden is not consumed within the country's borders (Bruno 2014). If Sweden would consume more of its own cultured fish, it would boost its local economy and potentially have less of a carbon imprint as less would have to be exported and imported (ibid.). Of relevance is to look into how the industry is portrayed and depicted in a Swedish context. Given that Sweden has a history of strong environmental laws (Dryzek 1997) and a people that see the ocean as integral to their culture (Söderqvist et al 2010), it is relevant to distinguish how the industry is depicted through the Swedish discourse on ocean development.

Chapter 3: Theoretical framework

This section of the paper is aimed at functioning as a theoretically guiding framework for the analysis. The section is outlined as follows. a brief account of how Blue Growth development ideals are interpreted to be theoretically motivated. This has been made evident through what Buttell (2000) and Dryzek (1997) define as ecological modernist approaches to perceiving nature. Following this framework, a theoretical lens has been compiled to be able to understand from what theoretical point of

departure the thesis has been based. The latter framework is based on interpretations of McAfee's (1997) and Dempsey's (2016) notions on selling and enterprising nature.

3.1. Ecological Modernization

Given that ecological modernization has been considered as a mainstream theoretical framework for dealing with current environmental problems (Buttel 2000), especially in the global north, it is of relevance to clarify what the theory communicates. The framework functions as a lens for understanding how the discourse on Blue Growth is comprised. Particular weight will be put on the works of Buttel (*ibid.*) and Dryzek (1997) as points of departure. The former discusses reasons for the prominent spread of ecological modernization, whereas the latter synthesizes what the general framework for understanding the surrounding world in terms of an ecological modernist entail, albeit with critical inputs.

According to Buttel (2000) during the 1990's the concepts of 'sustainability' and 'sustainable development' were proven to show real shortcomings in providing guidance for future environmental policies in the global north. Resolutely ecological modernisation provided more focused and clear-cut understandings of the problems and solutions that needed to be addressed in advanced industrial nations, which had been considered absent in prior discourses. Ecological modernization gave way for a new perspective on issues regarding environmental degradation all while avoiding the romanticized picture provided by environmental movements at the time. It is not unusual that the ideals of ecological modernization gained stronghold in many industrialized countries frameworks for handling and dealing with matters involving nature, as the framework proposed solutions that endorsed changes that would not markedly change the everyday lives of people.

Dryzek (1997) also stresses that ecological modernisation is a discourse of reassurance of relatively economically prosperous societies because it assures that no 'tough choices' need to be made between economic growth, environmental conservation and long and short term futures. The theoretical framework connotes a restructuring of political and economic life to one that allows for the continued expansion of the economy whilst saving the environment. 'Ecological modernization' has become a mainstream environmental sociological perspective which is often used as a synonym for 'strategic environmental management'. Within ecological modernization science, technology, capital and the state have been given main stage as advisors in environmental improvements.

According to Dryzek (1997) the theory of ecological modernization more accurately refers to a restructuring of capitalist political economy to one that connotes environmentally sustainable solutions to human-nature relations. The key to ecological modernization is that there is profit to be gained for business by making and selling preventative solutions of natures degradation. If problems of pollution are taken care

of immediately, it will not only cost less for business and government, but it will create aesthetically pleasing environments free from pollution creating healthier, happier and more productive workers. Emphasis is resolutely put on economic growth and efficiency as solutions to environmental degradation.

Hence, a central aim is to keep the economy growing whilst not causing any additional strain on the environment (ibid.; Buttel 2000). As such it is not a project only for engineers and technical concerns. It also requires long-term political commitment and holistic analyses of economic and environmental processes (Dryzek 1997). The general idea is to reorganize and develop a new era of 'enlightened capitalism' (ibid.). By enlightened capitalism is meant a capitalism that functions within sustainable realms. The commitments that are needed include foresight, attacking problems at their origins that in many cases may be multiple, and greater valuation of scarce nature. In other words the concept entails a better compartmentalization of the surrounding world, being able to neatly solve complex issues through tackling them rationally and by fitting the solutions in business models.

However, on the critical side ecological modernists have been criticized to see "nature... treated as a source of resources and a recycler of pollutants"(ibid., p. 144). Nature is resolutely seen as an entity attributed the same types of features as a factory; as an "adjunct to the human economy" (ibid.). This is partly because of the mechanistic ideals that are advocated out of ecological modernisation in parallel to notions of human superiority advocated by the framework. Moreover, notions that nature is unpredictable and has any intrinsic value is denied from an ecological modernist approach. Nature is resolutely considered subordinate to human desires. Governments, business, moderate environmentalists and scientists are considered the most suitable to cooperate and make changes to natural (or manmade) problems. In turn stressing that power laden actors and expert knowledge are the most suitable in leading the way forward. Resolutely ecological modernist approaches to solving environmental degradation can be argued to be more about human wellbeing than about nature's wellbeing. Whilst the actors deciding upon what this wellbeing is to entail, and whom is to part take in it, is narrowly reduced to institutionally strong actors.

3.2. Enterprising Nature and selling it to save it

In this paper the theoretical framework applied for understanding how human-nature perceptions are presented through the Swedish discourse on Blue Growth, has been analysed through McAfee's (1999) notions on selling nature to save it and what Dempsey (2016) conceptualizes as enterprising nature. The reason for having chosen works by McAfee and Dempsey as the theoretical lens for conducting the research is because they both present a critical reflection of how nature has become part and parcel to modes of accumulation. But also how governance and dominating human-nature relationships as presented above, can be considered as questionable remedies

for solving the crisis of mass species extinction but also as a general model for human presence in nature.

McAfee (1999) contends that the current world order is constructed in a way where nature is made evident through ascribing it monetary value. Nature is constructed as a world currency that earns legitimacy through its ability to be traded on international markets. She calls this human-nature relationship ‘green developmentalism’ a promise to solve environmental problems through market solutions. However, she argues that the relationship abstracts nature from both spatial, social and historical contexts because nature is in such a relationship reduced to the amount somebody is willing to pay for it. In creating human-nature relationships where a biological resources value is measured on the basis of its marketability or the costs of replacing it (Worster 1994), disregards how the resource is distributed and how non monetized goods and relationships contribute to the well being of people that use it. Nature’s essence is resolutely reduced to that of a commodity that is separable from its complex web of relationships to the surrounding world. A large segment of the worth of nature is lost because ecological and social relationships, that nature is embedded in, are excluded in its appreciation in the human-nature relationship that she has observed. Nature is then merely valued to the extent that it is consumed fostering perceptions of nature as a warehouse of potential commodities.

Much in line with ecological modernist views, McAfee (1999, p.151) denotes that green developmentalist approaches to nature purports a rationale for the “illusion that biological diversity can be saved without fundamental changes in present distributions of political power”. McAfee then goes on to argue that the values of nature in such a relationship become stirred by the powers of, and desires of, the capital strong by denominating nature through currencies. Power over nature is resolutely given to the ones with the greatest purchasing power as it is they that harbour the means to amass larger shares of the earth’s biomass. This translates to the privatization of the natural world and claiming market solutions to environmental problems by a small share of actors.

Dempsey (2016) draws on similar arguments, although with more current influences. According to her, to stem the loss of biodiversity the answer often lies in a turn towards economics. This is in part because of the make up of where people are spatially located. The majority of people around the world live in cities and are disconnected from nature. People have become not only increasingly physically disconnected from nature but also emotionally disconnected because of the trend of living in urban centres. Nature is something that exists outside of the city gates (see also: Evernden 1993). Because of this development, and in order to show a connection between human society and nature, it is required that a simple rational language is used. This language, more often than not, translates to economic trade-offs. For instance, Dempsey argues that for non-human species to persist, an

economically rational policy trajectory needs to be articulated for policy-makers amongst other relevant actors (e.g. business) to understand the importance of a biodiversity of nature. Without a rational policy trajectory that shows economic trade offs, non-human species would essentially be considered as futile.

According to Dempsey (2016, p.3) the proliferation of such a human-nature relationship is in part due to the ‘enterprising of nature’ through international alliances that use the maxim “in order to make live, one must make economic”. The central node in such a relationship is that nature will be able to compete in the global market and in state governance and hence nature needs to be conceptualized in business terms (Worster 1994). The issue, however, is that nature is then only considered worthy of consideration in relation to economic gains and once it has been conceptualized as being possible to make a business out of. All cultural meanings are stripped off. If nature is to be realised and related too as an arena for entrepreneurial business rearing, the doors open for the commodification and financialization of it. By ‘commodification’ is meant the transformation of a good, service or and idea into an object of trade resolutely ascribing it economic value as it enters a market (Gregorey et al. 2009, pp. 99-101). By ‘financilization’ is meant that goods such as commodities are made exchangeable for currency. By ascribing nature dollar value, nature becomes commoditized and made possible to trade in a rational financial way.

Enterprising nature also comprises the directing of efficient government investments in ‘green infrastructure’. As such it is a strategy for the accumulation of capital, whilst simultaneously, in the words of Dempsey (ibid., p. 11) being “an attempt to manage the excesses of capitalism that are degrading life on this planet”. Capitalism’s flaws are hence considered ‘corrected’ by internalizing externalities, such as pollution, to the calculation, through models, strategies and products that are marketed as green solutions (ibid.; McAfee 1999). Dempsey (2016) illustrates this through the emergence of models that calculate the values of ecosystem services. Hence by including costs of harming or destroying nature, it is possible to conceptualize how much money needs to be put toward restoring it, compensating for it or continuing to degrade it.

What is important in this type of relationship is to be able to rationally weigh the trade-offs when choosing whichever route. In valuing ecosystems decision-makers can rationally weigh the options and rank trade-offs between different courses of action. Resolutely nature and its resources are put on the map and considered resourceful as they harbour economic potential. However, in so doing culture, history and spatiality is given second status placing, if even any recognition at all. Moreover rational thought is given authoritative power over what ecosystems, or biological organisms, should be preserved and which ones are considered of lesser relevance. The human-nature relationship that is then created is one where human rational thought has deciding power over nature’s developmental path. This in turn reflects how enterprising nature is not only about creating conditions for biodiversity in

governance, but to conceptualize the place of humans in nature (ibid.). It puts humans over nature because nature is seen as a space in which humans can fulfil their productive and creative capacities. Nature as such exists for human societies fulfilment. Such a relation in turn distances and abstracts human society from the natural world, as it becomes perceived of as a commodity in a market place.

3.3. Summary

This section has addressed what ecological modernist thought posits. The aim of introducing the framework is that it has been regarded as the theoretical lens through which Blue Growth policy trajectories are framed. It has been necessary to include an account of what ecological modernisation stipulates in order to handle the data. IN analysing the data it is important to be able to identify if and to what extent the Swedish discourse on Blue Growth and aquaculture development, was enmeshed in ecological modernist ideals. This however will be strengthened and further examined in the analysis.

This chapter also addressed the analytical framework of selling nature by enterprising it. The aim of introducing this framework was to illustrate how it is possible to conceive the human-nature relationship presented by ecological modernists, from a critical perspective. That which was made evident was that ecological modernisation posits nature as in need of being strategically managed and where a human presence is strongly visible in this relationship. On the critical end of such a human-nature perception is that which has been presented through McAfee (1999) and Dempsey's (2016) notions on how such a relationship can in fact cause incomplete conceptions of how to deal with nature. This framework has in turn functioned as the guiding analytical framework for exploring the data.

Chapter 4: Methods

This section of the paper brings up what methods have been used to conduct the research. The section is composed as follows: a brief discussion of what discourse analysis is, followed by a section on how Fairclough (1992, 1995, 2010) has been interpreted to define critical discourse analysis. A clarification of what guidelines have been applied from Fairclough's model for conducting a critical discourse analysis. And to conclude this section of the research, a brief discussion is introduced on how the data has been handled followed with a section on validity and ethics.

4.1. Discourse analysis

Bryman (2012, p.528) writes that a discourse is "much more than a language as such: it is constitutive of the social world that is a focus of interest or concern ". A discourse then reveals a part of a society (ibid). However, the discourse does not necessarily

need to reveal a just and valid representation of what the majority of people think or believe. There can be hidden plays of power that leads the discourse in a distinct direction because of underlying political and/or economic interests.

Given that the aim of the research is to investigate what human-nature relations are portrayed through the Swedish discourse on Blue Growth by focusing on how the aquaculture industry is portrayed in it, it is of relevance to distinguish how ideological and political agendas are enunciated in strategy proposals on the subject matter as the ways in which an object is explained through language, forms the ways that we relate to the matter in question. With this knowledge it could be possible to do further research to distinguish how a country like Sweden, with a long history of good environmental laws and generally caring for its nature, could better its relation to marine habitats, species, and climates. The discourses that are pronounced to be of most significance to discuss, for instance subjects that are brought up in parliament, reflects a part of how society at large will be shaped. This in turn suggests that multiple realities exist and hence there is room for ruptures in what a discourse should constitute, but also of what ideologies will take form in society. Depending on who is able to gain access to the discourse will also shape it. Discourse is therefore not a neutral device for giving meaning to the world. People have hidden agendas that they seek to accomplish through talking and writing and discourse analysis is concerned with how people use language to accomplish those means. Language in this context is action oriented.

A reason for using discourse analysis as the primary method for analysing the data, is that Blue Growth has been argued to be a ‘cover up’ term that in fact hides behind language that claims to be for the benefit of the ocean and human society as a whole when it in practice has been interpreted to epitomize the commercialization and privatization of the ocean, arguably resulting in worsened situations for both humans and nature in certain cases (TNI 2014; Fairhead et al.2012). It is, therefore, relevant to analyse how text that discusses human-nature relations, is used to shape the Swedish discourse on Blue Growth. In this paper the method for conducting the research has been critical discourse analysis as suggested by how Fairclough (2010) frames the concept.

4.2. Critical discourse analysis

The research method deemed the most suitable for this study is critical discourse analysis because it allows the researcher to reveal ideological and political practices through text. Norman Fairclough is considered as a prominent figure in critical discourse analysis and his framework has therefore been used to critically discern the data. Discourse is a social practice, a form of action, that takes shape through text, dialogue, and/or visual representations. According to Fairclough (1992) ‘discourse’ is to be defined as a mode of political and ideological practice that sustains power relations and naturalizes significations of the world. It is a way to systematically

explore how often opaque relationships of causality between discursive practices and larger socio-cultural practices are shaped by relations of power and struggles over it.

Fairclough (1992, p.64) writes that “discourse(...)becomes a practice of signifying the world, constituting and constructing the world in meaning”. Language as such becomes a socially constructed process that reflects how the larger world is created and understood. Capitalist societies such as Sweden function as ample lenses through which critical discourse analysis using Fairclough’s (2010, p.1) notions on the method because an aim of critical discourse analysis is to “develop ways of analysing language which address its involvement in the workings of contemporary capitalist societies“. This in part because the economic system affects all aspects of social life which in turn has changed politics, nature of work, education and even social and moral values. Fairclough has made it possible to critically analyse and connect that which is being said on a micro level to that which is happening on a macro level. In other words, behind a text and the words assembled in it lies an ideology, an aim, opinions, and much more that are part in shaping the larger socio-cultural outside world whilst simultaneously crafting the smaller relational world that takes for in everyday practices through for instance reading a text. Hence the method makes it possible to draw general understandings of how the world is realized from textual material.

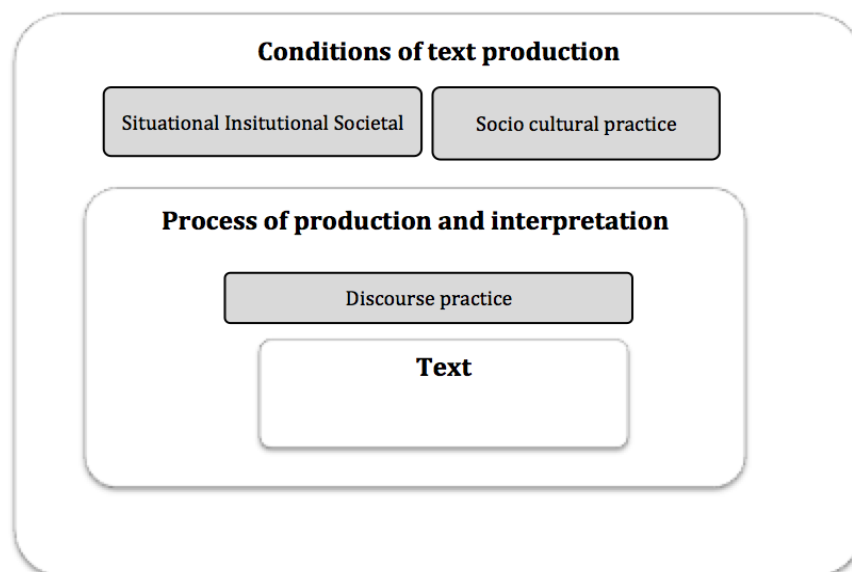
Fairclough (1992) has resolutely developed a framework for critically assessing discourse through three analytical traditions that have a dialectical effect on each other. Firstly, there is the tradition of *textual and linguistic analysis*. Textual analysis involves in part analysing the style, wording, and genre that is used in the text. For instance, in the sample chosen for this research the word ‘sustainable’ is reoccurring throughout the data, hence it is of relevance to analyse what the meaning of the word signifies in the sample. How is it defined, is it defined at all, and in what context is the word used? Herein social events are expressed through texts. In this level of analysis social structures in society and discursive practices that are formed out of relational meaning from one self to the outer-world, are made evident in text.

The second tradition is what Fairclough defines as the *discourse practice*. In this level of analysis the aim is to identify explanatory connections between the larger socio-cultural practice of the world order, and specific dimensions that constrain, or encapsulate, text production and interpretation. For instance, needed to be considered is in what context the text as been written. Is it by a governmental institution, a private organization or a private person? This will have an effect on how the text is produced, consumed and interpreted on a relational level. Discourse practice is considered to determine the macro processes that shape the production, distribution and consumption of a discourse but also the micro processes, such as resource constraints in the form of knowledge, norms and nature of the discourse that contribute to shaping the text. This tradition theoretically links personal mental models of the world and socially shared knowledge with the larger socio-cultural practices that they are part of.

Social structures and social events are mediated on this level; it can be seen as the middle ground between the socio-cultural outside world and individual social events that filter out and guide. It is here that compartments for identifying the outside world and how to navigate the personal self in it are formed.

Lastly there is the *interpretative socio-cultural tradition* of seeing social practice as something that is actively produced by people and made sense of through shared common-sense procedures. Social practices are social structures that are abstractions in society such as economic structures or social class systems. On this level of analysis ideology and power relations are central. Ideology resides in text according to Fairclough (ibid) which is why it is an ample tool for highlighting hidden agendas. It is considered the highest (the most outer) level of analysis. Social structures set limits to what can and cannot happen. Figure 1.1. illustrates the diagrammatical model of Fairclough’s (1992) framework.

Figure 1.1 Interpretation of Fairclough’s (1992) three dimensional model based on a powerpoint presentation in 2017 by Dr.Vasna Ramasar Lund University.



The overarching aim of Fairclough’s three dimensional model is to study how relations between discourses and social structures are connected and what effect such formations have on the real world. It is a means to highlight the dialectical relations between discourse and power play and how these effect other relations within the social world. The results are interpretations and explanations of social life that are social wrongs. Ideally the results will be able to be used to produce knowledge on how to mitigate such wrongs. Hence why critical discourse analysis has been used as a tool to highlight how the Swedish discourse on Blue Growth produces and depicts human-nature relations through the sample documents, as it will be possible to demonstrate

hidden power relations and ideologies, that are part in shaping the current human-nature relations. Having knowledge of these can in turn raise awareness as to where current political-economic structures need improvement.

4.3. Treatment of data

In regard to the coding of the data, Fairclough has drawn some guidelines on how to practically conduct a discourse analysis which have been applied as the tools for this research. The following guidelines have been used: on the textual level of analysis the documents have been visually interpreted, wording that has been reoccurring throughout the documents have been critically analysed, and the genre of the documents has been defined. To distinguish how the documents are expressed on a discursive and socio-cultural level, the interpretation of the data has been drawn to the analytical framework and critically examined against that which has been illustrated on a textual level. Fairclough has an extensive set of guidelines, but due to the scope of this research they have been reduced to the above mentioned tools. The reason for having chosen to visually analyse the documents is because of the nature of the actors investigated. Given that they are all power laden actors within Swedish society it was important to analyse how the documents were visually presented because visual representations give strong first hand impressions. Wording was also deemed important as it can highlight how they structure their sentences and whether or not the actors have clear definitions and aims. Moreover if certain subjects are included or excluded can also show how the actors posit themselves in the formed discourse. The genres of the texts needed to be included to stress why the sample documents were written in a certain style in, for the purpose of illustrating how power laden actors pronounce and express their goals. By analysing segments of the documents visual presentation, wording and genre it has been possible to draw a picture of the type of discourse that is drawn on aquaculture and who is, respectively is not, included in it. This in turn has made it possible to give support for what ideological and also socio-cultural premises the discourse may be formed by. In turn connecting to Fairclough's three dimensions.

4.4. Validity and ethics

In order to ensure validity of the research a hermeneutic approach for interpreting and analysing the data has been used. By this is meant that the material has been handled by bringing out the meaning of the text from the perspective of the authors (Bryman 2012). To ensure that the documents are reliable, examples of questions provided by Bryman (*ibid.*, pp.561-562). Furthermore the formality of the text has also been taken into account by making an examination of the text's constituent parts and assessing what institutional setting they fit in.

An abductive inference has been employed to conduct the research. By this is meant that the premises taken in the beginning of the study were not necessary to be guaranteed in the findings. It is not a given premise that human-nature relations are

only considered worthy of attention once profit is to be gained from nature. This can be found true once an analysis of the documents have been made. To concluded this section, the research rests on social constructivist notions which in turn makes it inevitable to not leave room for a certain level of subjectivity in the research. Moreover the method for conducting the research has functioned more as a guiding framework for analysing the data.

Chapter 5: Data

This section introduces the empirical material that has been collected throughout the research. The research is based on three separate documents from three different actors that all address the Swedish goals for developing marine and maritime related practices for the future. All three documents were written and published between 2012 and 2015 with the primary aim of informing the public, industry and government what the future of the ocean entails for Sweden and how they specifically, within the borders of their organization, stand in the matter. Given that the documents were produced and published within such a short timeframe and in relation to the European Commissions policy proposal in 2012 to begin Blue Growth development, they are deemed compatible and comparable. The three documents may not create a coherent whole for understanding human-nature relations in Sweden. However, they do portray how human-ocean relations are vested in society through power laden institutions and an organization that has a very high status and accreditation in terms of ethical conduct in Sweden. Due to the actors authoritative position of action in society, it can be argued that they also have strong potential to chaperon how human-nature relations at large ought to be, and are shaped, in a Swedish context.

5.1. Swedish aquaculture – a green industry in blue fields

The document published first was by the Board of Agriculture, in Sweden. The document is written to highlight how the Swedish aquaculture industry is to develop over the span of an eight year timeframe (2012-2020). Insights into how the Board of a Agriculture foresees the development of the aquaculture industry are relevant to understand because the board is the government's administrative and expert authority on issues regarding agriculture, fisheries and rural development (Jordbruksverket 2017). The research and data that the board distributes serves as a framework for the Swedish government to draw national strategies on marine development and is therefore laden with power to, in part, oversee how human-nature relations are to be vested in Sweden. The board has a strong say in how maritime and marine affaires are set to develop, for instance if aquaculture is to be a future industry for Sweden. Hence, it is of relevance to study how the board expresses human-nature relations through the discourse sample.

5.2. Environmentally adapted aquaculture in Sweden - a resources with great potential

The second document is a report on environmentally adapted aquaculture development in Sweden published in 2014 by the Swedish Society for Nature Conservation (Bruno 2014). The NGO defines itself as a charitable environmental organization with the power to bring about change (Naturskyddsföreningen 2017). Hence the reason for having chosen them as a lens for understanding Swedish human-nature relations as they, in contrary to the other two actors, have a specific focus on nature. Their aim is to spread knowledge, chart environmental threats, propose solutions and influence both politicians and authorities on a national and international scale. It has been Sweden's most influential environmental organisation for decades according to what is said on their website. Given that the organization has such huge influence in Swedish society (currently they are active in 270 community branches and there are around 226,000 members) and because of their emphasis on environmental protection, it is of relevance to try understand how the organization positions itself in the discourse on ocean development.

5.3. A Swedish maritime strategy – for people, employment and the environment

The third and final document was published in 2015 by the Swedish government. The document goes under the title “A Swedish maritime strategy – for people, jobs and the environment” and consists of a strategy proposal for developing marine and maritime industries in Sweden (Regeringskansliet 2015). The vision is to create a competitive, innovative and sustainable maritime industry that could contribute to increased employment, a decline in negative environmental impacts and a more attractive life environment. By focusing on sustainability, innovation and development the strategy is argued to strengthen the perceived image of Sweden in the rest of the world. Emphasized is that governmental agencies, counties, regions and communes can together with academia develop and realize the potential of marine and maritime industries. The document has been chosen because it shows how Sweden, on a national scale, aims at developing its maritime and marine industries which can give an overall picture of how human-ocean relations are expressed on a macro-social level.

Chapter 6: Analysis and Discussion

According to Fairclough (1992) ‘discourse’ is to be defined as a mode of political and ideological practice that sustains power relations and naturalizes significations of the world. This analysis is aimed at highlighting how discursive and social practices, expressed through text can be shown to naturalize ideological agendas and forces of power. Blue Growth development strategies hinge on the notion that nature is considered resourceful once potential in the form of economic development can be insured of it. What dominant human-nature relations are then portrayed in the Swedish

discourse on Blue Growth? Considering that the aquaculture industry has grown over the latter years in Sweden, and is a noteworthy industry branch in Blue Growth agendas, it is of significance to discuss how the industry is revealed in the discourse. Hence the following question: how is aquaculture presented in the discourse? In answering these questions it will open up discussion for what these human-nature relations signal for future ways of treating and managing the ocean.

6.1. Visual interpretations and genre

On the textual level of the analysis, linguistics such as genre and wording are investigated. A genre is “a socially ratified way of using language in connection with a particular type of social activity” (Fairclough 1995, p.14). It is of relevance to define the genre of a text in order to distinguish why the discourse has the format and language that it does, why only certain actors are included and others excluded and why the subject matter is discussed in the style presented (Fairclough 1995). A genre is expressed through the structural format that a discourse takes shape in. For instance a discourse can be organized as an interview, a lecture or through reports. A genre can also take on a specific style such as formal or informal. To distinguish the genre of the documents, they will be presented through their visual attributes and the style the document attains.

In the document produced by the Swedish board of agriculture the observer is introduced to the report by a fairly large picture on the second page of an aquaculture farm somewhere in Sweden. The focus is however drawn to the vast wilderness that takes up most of the photograph (see figure 1.2.). The farm is located either in a lake, or at sea (it is not possible to tell from the picture) in harmony with the vast forest that lies behind it (Jordbruksverket 2012, p.2). On the third page there is a similar picture (see figure 1.3.) also depicting an aquaculture farm in some remote nature only now the nature is covered with snow, in contrast to the picture before where the weather seemed milder due to a variation of tree types. The aim may be to illustrate that aquaculture farming is a possibility in coarse and in a variety of weather conditions; in some way depicting adaptability and flexibility of the industry. The fact that the picture portrays the landscape around the farm, gives room to interpret that the farm is part of the larger ecosystem-web enwrapping the nature in the region. The picture strategically enmeshes the rational, acutely scientific and manmade aquaculture industry as existing in symbiosis to the nature around it. Furthermore there are 18 photographs in the document and only five of them do not depict any human presence. The dominance of human presence in the majority of pictures, in turn may suggest how the bureau on an ideological level sees humanity’s place in nature, dominating it and strategically managing it. This in turn alludes to notion of ecological modernist ideals.

Figure 1.2 Swedish Bureau of Agriculture (2012) depicting aquaculture farming



Figure 1.3 Swedish Bureau of Agriculture (2015) depicting aquaculture farming



The document published by the Swedish Society for Nature Conservation (Bruno 2014) only has one picture in the whole document and it is covering the front page. The picture depicts blue mussels that are vertically grown on lines in the sea (Bruno 2014). The reason for having chosen blue mussels may be because the document discusses how the organization believes that the aquaculture industry ought to develop, strongly favouring the adoption of blue mussel farming. The reason for there being no visual human presence in the document, may be because of the organizations focus on conserving and improving nature. In a way, having only a single picture of mussel farming can also be interpreted to suggest agronomical approaches to conservation (Worster 1994, p.312).

In the document produced by the Swedish government the reader is presented on the very first page of the document with a picture of a person looking through a telescope that is fixed towards the ocean with the Öresund bridge outline in the distance (see figure 1.4.). An interpretation of the picture is that the person looking through the

telescope is looking for something, however that something is not yet completely evident but can potentially be found in the sea, hence the blurred background. The need to have the bridge in the background can be interpreted to give geographical meaning to the picture. Given the aim of the document, and the fact that the producer of it has as a primary goal to strengthen Sweden economically, socially, and politically the picture can then be interpreted to allude to the notion that the government is seeking potential business in the sea (Regeringskansliet 2015). It is not strange that the cover of the sample document is focused on the person looking through the telescope and not the sea, given that throughout the document central weight is given to growth and progress related to human development (Regeringskansliet 2015). This is also stressed by the fact that there are only three pictures out of 26 in the whole document that are free from human society (Regeringskansliet 2015).

Figure 1.3 Swedish Society for Nature Conservation (Bruno 2014) front page cover picture

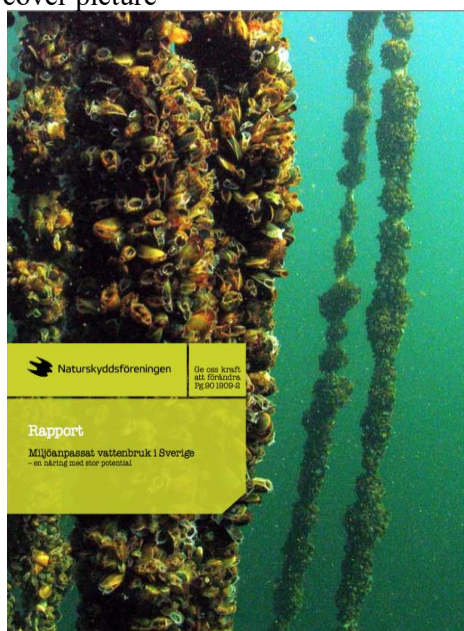


Figure 1.4 Swedish government (2015) front page picture



Looking at the text of the document and given that the producer of the document is the Swedish government, it gains an impersonal appeal by leaving out definitions of key terminology that can set the tone of the discourse. This in turn gives room for subjective interpretations of what is meant by key terms such as sustainable or not “jeopardizing environmental goals” (Regeringskansliet 2015, p. 37). Moreover since the discourse is directed towards a wide audience and a wide range of factors that are to be taken into consideration, also suggests that the aim is to create an impersonal appeal of the discourse. Resolutely one page has been devoted to the aquaculture industry. The government wants to see the development of a sustainable aquaculture industry, however, without defining what it meant by ‘sustainable’. The industry should have as minimal of an effect on the environment. This gives reason to question

what is meant by 'minimal'. Overall the government hopes to see a development of the industry by locating where the industry is geographically best implemented, and by developing more techniques and diversifying the industry even more. Specifically mentioned is mussel farming as an environmentally friendly option but that more incentives are needed to be put into the industry for it to develop. Aquaculture is not brought up as being environmentally harmful, however, mentioned is that techniques that foster an increase of nutrients and disease spreading need to be "controlled" (ibid, p.37). On the contrary the industry is discussed favourably as the section begins with bringing up the growth potential.

The document by the Swedish Bureau of Agriculture (2015) is very similar to the document produced by the government. The latter even makes reference to the bureau's (2012) publication (Regeringskansliet 2015, p.37). The general impression of the document is that it is formally structured and aimed to be consumed by government officials and industry specific actors interested in understanding how the industry is set to develop (Jordbruksverket 2012). Given that the bureau is the government's expert authority in matters involving agriculture, their voices undoubtedly correspond to each other. However, as an expert organization, the genre of texts produced by it should generally speaking, not give room for political ideals to shine through. The material produced should be objective and neutral and function as factual information. However the document has a section in which key persons have been chosen to comment on the development of the industry and four out of five of them are all positive towards the development (ibid., pp. 6-7). This in turn suggests a lack of objectivity in the matter as the discourse they are framing is one devoid of criticism hinging towards hidden agendas aimed to ensure the future development of the industry. The actor that has chosen to comment fairly neutrally (neither for nor against) on the matter was the director general of the Swedish agency for marine and water management at the time (ibid.). Moreover all commentators come from either governmental institutions or organizations (ibid., pp.6-7). In the bureau's lack of inclusion of a critical voice and a voice standing outside of expert knowledge and the government, also suggests that the discourse they are aiming at framing is one where only powerful actors ought to be given room in the matter.

The Swedish Society for Nature Conservation (Bruno 2014) on the contrary is much more detailed than the other two documents when it comes to considering the benefits and the issues of the aquaculture industry. The document provides arguments both for and against the industry, even bringing up responsibilities towards other nations and nature (Bruno 2014). Hence hinting towards wanting to form a discourse that reaches outside the nation's borders. In the document by the bureau it is also expressed that Swedish aquaculture is to become "a global asset" (Jordbruksverket 2012, p. 15) hinting towards an outreach beyond the national borders. The difference is that the context in which Swedish Society for Nature Conservation (Bruno 2014) expresses the need to consider aquaculture production outside of Sweden, is in terms of bettering the

state of the environment but also to better the life environments for people elsewhere when developing the industry. The Swedish Bureau of Agriculture (2012) on the contrary connotes economic growth and expansion; in other words expressing social progress as the catalyst for the development. Yet again alluding towards ecological modernist approaches to handling nature.

Stressed in the document is also that the presence of the Swedish Society for Nature Conservation in the discourse on maritime development in Sweden, particularly on the development of the aquaculture industry, is necessary in order for it to develop into an industry that is environmentally conscious (Bruno 2014). The document's genre is that of a report but with a tone that emphasizes the nature of the organization: with clear definitions as to how the organization hopes to see environmental regulations, certifications and measurements be made evident in the development. Resolutely one of their primary goals of the organization is to question and inform relevant actors what the consequences are for nature and society, if changes are to occur where nature is directly involved. The document is therefore more explanatory than the prior two documents and even to some extent commanding since the organizations opinions on how the industry ought to develop, clearly shine through and with a somewhat of a critical voice (Bruno 2014). The document even has a whole section dedicated to discussing how Sweden can make an environmentally conscious development of the industry (Bruno 2014).

To endure the picture of powerful authoritative actors, which is important to all three actors, it is necessary that they produce a discourse that is comprehended as serious. Hence the genres of the documents gain an authoritative, formal and descriptive purpose and style. However, the Swedish Society for Nature Conservation gains an explanative and informative purpose as a large part of the document is devoted to discussing how the industry is harmful for nature but also how it can contribute to pressing issues of protein production and eutrophication (Bruno 2014). The documents from the government (2015) and the Swedish Bureau of Agriculture (2012) are both strategy reports based on prior meetings and function more as visionary strategies for illustrating in which direction the aquaculture industry and maritime and marine development ought to advance. The document by the Swedish Organisation for Nature Conservation (Bruno 2014) on the contrary is a response and a contribution to the discourse on maritime development that is factually based but clearly incentivised. However all three documents discuss in a very formal and professional style how the maritime and marine industries are either aimed or hoped to develop. What they have in common is that they all see a strong human presence in the marine environment and that development is to reach outside of the nations borders. Here, however, at least the bureau and the Swedish Society for Nature Conservation take different epistemological stances as their institutional backgrounds shine through. The former sees the industry as a potential for economic growth, whereas the latter sees it as a

chance to better the stakes for industrializing countries to not be as negatively affected by how the industry is made up today.

6.2. Wording

According to Fairclough (1992) wording can have different meaning depending on the theoretical, cultural or ideological perspective of the actor producing the word. Moreover the way in which a word is used to present a phenomenon will have an effect on how it is received. Hence wording used by different actors or simply used with different end goals can change the meaning and, route of a discourse. In the document produced by the Board of Agriculture (2012) ‘green industry’ is reoccurring throughout the text. There is no definition of what is meant by a ‘green industry’. But denominating an industry as green often involves nature. Given that the term ‘green industry’ is used in a context where the aquaculture industry is being discussed in a positive tone, it fosters the image of the industry as not being harmful to nature. Denominating the aquaculture industry as ‘green’ can also be interpreted as a means for making the environment permanently visible in resource developments or land use decisions (Dempsey 2016, p. 11). For instance, the aquaculture industry can be understood as green in terms of being good for biodiversity and ecological purposes as it provides an alternative to consuming wild caught fish and hence the need to develop the industry as a resource. But in reality the practice is harmful to the ecology and biodiversity of marine species because the practice, as illustrated earlier in the paper, causes an imbalance in trophic levels (Miller & Spoolman 2009, pp. 58-65).

By describing the industry as ‘green’, and by the bureau using the term for defining how they intend the industry to develop, suggests that their goals are to make nature more present in the development. But given the lack of definition of what the bureau defines as a ‘green industry’, gives room to draw the argument that the adjective green in this context is a way to greenwash the industry. Otherwise the term would have been defined. Given that the bureau is an expert organization that in part deals with how the industry is set to develop, there are high stakes for the bureau to see a successful development of the industry. It is then possible to draw the argument that ‘green’ in this context is merely a means for continuing extractive human-nature relationships in the same way as always.

By denominating the industry as having a “future”, producing “environmentally and climate smart products” and fostering a “force in regional development” (Jordbruksverket 2012, p.5), the practices of the aquaculture industry are then presented as being more conscious and progressive ways of producing resources to prior ways of fishing. Nature is in this new and improved industry included into the market equation and not cast aside as prior practices have been because of denominating it as a ‘climate smart product’. It is a ‘green industry’ producing ‘climate smart products’ and hence it is considered worthy of investing in as the term is used in co-occurrence to ‘future’; a green industry having a future. The industry is in

turn marketed as a green solution to ocean degradation. The issue that still remains is that there is no distinct definition of what a green industry is other than that it involves aquaculture practices. However these are many and varied, and differ depending on scale and geographical space. And as illustrated earlier in the paper; the aquaculture industry is not sustainable because it increases the amount of nutrients in the water and it requires a net outtake of biomass from the ocean that exceeds the net input (Miller & Spoolman 2009; Bruno 2014). The bureau most likely does not think that salmon culturing industries that are considered to have a substantial negative impact on ocean health (for more on salmon culturing see: Vidal 2017) are to be implemented. However it is impossible to know due to the lack of definition. To avoid room for interpretation, the bureau would benefit from defining how a green industry is to be interpreted. Or at least expand on the positives and the negatives of the industry, as it would show that the bureau is knowledgeable and considerate about the issues with culturing aquatic species.

In the document produced by the Swedish government (2015) the word ‘sustainable’ is deliberately used in every section. Throughout the document there is no definition of how the Swedish government defines ‘sustainable’. The term is known for being diffuse and leaving room for interpretation (Dryzek 1997), which is the case in the sample document. In the case of ocean development, since it covers a broad set of industries, practices and species it is difficult, but all the more important, to distinguish what is meant by ‘sustainable’; for whom? What? And how? The term is used as an adjective to describe how the ocean will be used and dealt with sustainably (Regeringskansliet 2015, pp.9, 11, 12). But not once in the document is it specifically defined what this would mean. This in turn hints that the government may deliberately not want to give a definition to ‘sustainable’ because leaving it undefined gives room for various interpretations of the term; in turn including the continuation of production of loosely environmentally conscious businesses.

In the introduction the Swedish coast is also described as being “productive” and having the possibility of being “resourceful” in terms of harbouring biotechnical solutions (Regeringskansliet 2015, p.7). Mentioned is also the potential of extracting these resources (ibid.). Already from the first paragraphs of the document, nature is typified as existing for human use, another ecological modernist ideal. Following in the next paragraph on the significant growth potential of developing maritime industries and extracting marine resources, it is claimed that the development of the industries raise the potential of coastal and less central nodes in Swedish society to grow. When the development is put aside to ‘Swedish society’ it can be understood as primarily existing, and being of benefit for human society. This impression is strengthened by the fact that in the sample document the vision for maritime industries is that the development becomes a resource for the growth of the Swedish economy. Not mentioning how it in any way could be resourceful for the ocean’s future health. It is growth on behalf of nature’s resources for human society; a way of including nature

but ascribing it second place. This in turn alludes to what McAfee (1999) claims as ‘green developmentalism’.

6.3. Second and Third level of analysis

The relation presented above, that the industry’s development is primarily for the benefit of human society is an example of what Fairclough (1992) defines as ‘discursive practice’; where personal goals meet social structures. By emphasizing economic growth as a driving force for the development of the industry, the ocean is comprised to function as the arena in which the economy will be able to grow (Dempsey 2016). It signifies ideological motivations for the development of the industries. In other words by emphasizing economic growth as the main reason for the maritime and marine industries development, shows what is prioritized on an ideological level by the government. That governments put weight on economic growth is nothing new, however it is still of relevance to bring up especially when it is growth on behalf of natural resources. When governments discuss the expansion of the economic market into nature, a new relation to that specific nature is formed. Nature becomes quantifiable, rational and to an extent predictable (ibid.). A relationship worth contesting when discussing resources that are not yet completely immersed by capitalist modes of production. Moreover, marine ecosystems are also denominated as “in need of preservation” however again to ensure the “development of the industries” (Regeringskansliet 2015, p.14). Nature is depicted as being needed and worthy of care-taking, however here again once benefit of human progress has been insured of it.

Dempsey (2016) also draws the argument that emphasis has over the latter years been put towards greening the economy. Even McAfee (1999) already in the 90’s argued that nature was becoming subject to what she refers to as ‘green developmentalism’; finding market solutions to the degradation of nature. Nature is perceived of and made resourceful once it is able to be traded and made profit of, otherwise there is no point in caring for it. In relation to denominating the aquaculture industry as a ‘green industry’ it begs the question if the Bureau of Agriculture, in so doing, is part in finding market solutions to nature’s degradation and not primarily bettering it. Or what Worster (1994, p.312) defines as the ‘New Ecology’ that reflects agronomic attitudes towards the conservation and management of nature. This type of human-nature relationship can in turn form unjust notions of when and what nature is deemed important, as decisions on how to handle and preserve nature become reduced to economic trade-offs (Dempsey 2016). This in turn fosters a relationship to nature in which it becomes devoid of any intrinsic value because it is reduced to the price it is ascribed through market mechanisms.

The ocean is then seen as a warehouse of commodities (Dryzek 1997) that can be chosen to either be put into the market or not. The ocean becomes broken down to services that are there to be enterprised; to be imagined as an entity that can be compared, ranked and ordered quantitatively (Dempsey 2016, p.10). All

entrepreneurial business ideas that take form in and out of the ocean's processes, are not bad for nature. For instance in the case of mollusc farming the positives outweigh the negatives, and the industry can be considered partly as a solution. But the human relation to nature that is depicted out of such a rationale fosters in many cases incomplete valuations of nature but also incomplete solutions to environmental degradation as nature becomes reduced to economic trade offs and strategic technical solutions to nature's degradation. It is only in the discourse on aquaculture development presented by the Swedish Society for Nature Conservation that stresses the want for the development of an industry that strongly accentuates environmental concerns. This however is only vaguely stressed in the other two documents where economic gains and growth through scientific and industrial solutions gains central attention.

According to Fairhead et al. (2012) ascribing nature value in relation to human development, signals not just an idea of nature but an entire philosophy of way that differs from prior attitudes. That nature is conceptualized through monetary terms, is evident in the discourse on Swedish maritime development. It can be argued to be the common-sense procedure through which the discourse is in part formed (Fairclough 1992). Green solutions, activities and resources have developed into big business and have become part of the mainstream growth economy (Fairhead et al. 2012), an extension of the economic market. The discourse created in such a relation is one where there is more often than not human presence in nature. On the one hand it can be argued that this is a good alternative: that human society should be more involved in nature's processes especially given the fact that human society is having more of an impact on nature (in terms of climate change and overexploitation of natural resources) than ever before. Longo & Clark (2016) and Dempsey (2016) argue that a primary cause for treating nature in harmful ways is because human society is detached from nature's processes due to increasing amounts of people living in urban centres absent from nature. There is a need to bridge the gap between human society and nature. However the over-arching picture that is portrayed of human-nature relations in the sample documents, is that of a progressive, technical and business like approach to coming closer to nature. There is little to no mention of cultural or historical concerns. Entrepreneurial solutions to ocean degradation, alternative methods to fishing based on technical solutions and practices that foster economic incentives are all central to all three discourses formed out of the documents. The image illustrated above based on McAfee (1999), Fairhead et al. (2012), and Dempsey's (2016) notions on human-nature relations, seems to be the predominant way for giving the ocean attention from its audience in the discourse on Swedish Blue Growth development.

This perception is even more so supported by the fact that Swedish government claims that there is a need to develop a better evaluation of the value of ecosystem services so that better economic assessment can be made of them (Regeringskansliet 2015, p. 14).

Ecosystems are also symbolized as services that should be preserved, not for the sake of preserving nature and fostering biodiversity, but for the continued development of the maritime industries. It is possible that the definition harbours the argument of conservation for the sake of biodiversity and keeping the ocean in good health, however given that it has been left out, there is no possibility of knowing. This also suggests that the government values ecological modernist approaches to developing human-nature relations given that the government, the bureau and the Swedish Society for Nature Conservation encourages technical solutions to sustaining nature processes. Since the discourse formed in all three documents are positive towards the development of the aquaculture industry, that is completely scientific and technical, also stresses that ecological modernist influences are part in directing the discourse.

In the clause “oceans in balance” (Regeringskansliet 2015, p.14) the ocean is also denominated as “being able to deliver goods, services and other values”. The human-nature relation that is accentuated is one where nature is considered as a ‘service’ harbouring ‘goods’ for human use. Dempsey (2016) illustrates how denominating ecosystems dollar value through models that calculate the net worth of nature can never show the true value of the ecosystem. This is because the model would be too complex to be able to make a holistic calculation of all the possible externalities needed to be taken into consideration in valuing an ecosystem. There is not enough knowledge about nature to be able to make claims about its worth. In so doing humans are ascribed an authoritative position over nature and nature in turn is construed as an entity to be neatly compartmentalized and rationally thought of (Dryzek 1997).

Moreover valuing nature through economic means, according to Silver et al. (2015), fertilizes real opportunities for the implementation of neoliberal governance practices of ocean resources. What is meant with neoliberal governance practices is the privatization of global ocean commons, strengthening the private sectors presence in ocean affairs and amplifying the trade of already heavily traded ocean resources. This is in part due to the international adoption of green language that has helped create conditions for neoliberal practices in nature (ibid.). This is made evident throughout all the documents given that the discourse that is formed out of the documents is one where nature is already discussed in terms of requiring “green industries” (Jordbruksverket 2012), and “sustainable solutions” (Regeringskansliet 2015).

Lastly neither document brings up any issues regarding the fact that more actors, as a result of the development of maritime and marine development, will be placed in the ocean. When nature is recognized as valuable to production, private sectors resolutely see it as an opportunity to invest in ‘green’ industries such as conservation, sustainable agriculture and carbon sequestration measures on land and currently so at sea (Silver et al. 2015). The ocean becomes subject to the marketization of its resources, distracting the focus from bettering the state of it to one about making profit of it. Despite the fact that the primary intentions are practices that are good for the environment (such as mollusc farming) the relation created is still one where profit is needed to be ensured.

This is even encouraged in both the government's (2015) and the bureau's (2012) documents: that more capital and investments are needed to be made available for the development of the aquaculture industry but also the maritime industries at large. Given that the government (2015) and the Bureau of Agriculture (2012) want to see an increase in entrepreneurial activity when looking towards developing maritime and marine industries, more businesses will as a result form in and out of the ocean. In the government's proposal it is also stressed that incentives (Regeringskansliet 2015 p.10) are needed for business opportunities to evolve. The incentives are most likely monetary. This was also brought up in an interview with a mussel feed entrepreneur in Sweden who strongly accentuated the need for climate compensation as a source to make the industry attractive for investors (Odd Lindhal, Mussel feed., pers.comm, 2017).

The human-nature relation that is created draws on Dempsey's (2016) argument that nature's services become considered as entities required to be traded in a market in order to reach their full potential value. In valuing ecosystems decision-makers can rationally weigh the options and rank trade-offs between different courses of action (ibid). In so doing, business as usual can continue only now in a better format. The problem is that the discourse formed out of the three actors is one in which nature becomes considered resourceful once money is ensured of it. Hence the reasons why the Swedish government and the board of agriculture have emphasized the need to create business potential in an ocean that is increasingly being affected by environmental degradation. Hence it is also all the more important that the government, the bureau and respectively the Swedish Society for Nature Conservation define and pinpoint what exactly they mean by 'sustainable 'green industries' that produce 'climate smart products'. Especially since an industry like aquaculture, is so vast and varied in practices and can have either positive or negative overall impact on its surroundings. It begs the question of what other industries, that are set to develop in the Blue Growth agenda, can have of an effect on nature.

7. Conclusion

The aim of this paper has been to contribute to the debate on sustainability by critically discussing what human-nature relationships are shaped through the Swedish discourse on Blue Growth by specifically analysing how the aquaculture industry is depicted in it. By applying the method of critical discourse analysis it has been possible to draw a picture of how the power laden institutions in Swedish society are partly framing current and future human-nature relations to marine environments. The perceptions depicted through the strategies have been argued to have an effect on how human society in part appreciates and valorises nature, which in turn has knock-on

effects on how future developments in the ocean may take form. The specific research questions focused upon have been: what human-nature relationships are presented through the Swedish discourse on Blue Growth? And how is aquaculture presented in the discourse? The thesis taken has been that current human-nature relations, more often than not, reflect nature as a space that needs restoration made possible by entrepreneurial businesses that foster economic growth. This relationship in turn simplifies nature's web of ecosystems to fit business-models that are not capable to take into consideration complete solutions to environmental degradation and nature's importance. Nature resolutely becomes treated as a commodity only worthy of attention once profit is to be made from it. Hence the increasing interest in the state of the global oceans resources; a space in the world not yet fully immersed by capitalist modes of production.

Resolutely the human-nature relationship accentuated in Swedish Blue Growth strategizing, based on the insights gained from the sample documents, is one that reflects nature as a space that needs to be better taken care of however only once economic gains have been assured from it. Society's attention is only turned towards nature, in this case the ocean, once there is economic profit to be made. This has been illustrated by how the sample documents visually give more room to images of nature with human presence in them, except for the Swedish Society for Nature Conservation that through its visual representations gives the impression of the organization having an agronomical approach to nature. Moreover the discourse that is formed out of the three actors is one that does not seem overtly critical of expanding the aquaculture industry. The Swedish discourse on Blue Growth that has been made evident through the sample documents, is one that primarily involves entrepreneurial innovative and largely technical solutions to ocean degradation and social and economic development. Largely entrepreneurial businesses, such as aquaculture production, is given centre stage in the discourse. In the government's strategy report there is mention of bettering life environments, including a variety of actors and ensuring resources with cultural meaning. But they are mentioned, other aspects such as industry development and economic growth are given far more attention. Hence why the aquaculture industry is also seen in light of being a positive solution.

Moreover the aquaculture industry has been shown to be portrayed as neatly enmeshed in nature based on the pictures presented in the Swedish Bureau of Agriculture's (2012) document. But also because of the positive tone that the industry is given in the sample documents overall. The Swedish Society for Nature Conservation (Bruno 2014) on the one hand brings to attention, and thoroughly so, that the industry does have its flaws and needs to be reframed so that it does not cause the environmental harms that many of the industry's practices does today. The government wants to see the development of a sustainable aquaculture industry without defining what it meant by sustainable but the industry should have as minimal of an effect on the environment as possible. The lack of definition of key terms such as 'sustainable' or 'minimal

effect' by the government gives room to question how the government positions itself to practices that can be harmful; can production continue if the harm caused by the business is just under the threshold from what the government considers as tolerable environmental harm? What if 'tolerable harm' is high or diffusely defined? It is only mentioned that techniques that foster an increase of nutrients and disease spreading needs to be controlled, not altogether stopped. Hence there is room to question what the government means.

The Swedish Bureau of Agriculture also avoids defining key terminology such as 'green industry' and in so doing the bureau gives room for interpreting that they are actively trying to market the aquaculture industry as being environmentally conscious: drawing attention to nature by making it visually present through denominating the industry as 'green'. However, in so doing the bureau also falls prey to what is commonly referred to as greenwashing. This is strengthened by the bureaus lack of bringing up what the negative consequences are of applying aquaculture practices. Instead throughout the document a positive and future oriented tone is emphasized.

Stemming throughout the documents produced by the government and the bureau of agriculture has been that economic growth stands as the building block for developing maritime and marine industries. The problem of having a human-nature relation in which economic growth is central to the connection has been argued to create incomplete measures of how to value and handle nature. This because nature in such a relationship is reduced to fit into business models, which in turn fosters fragmented solutions to problems of overfishing or ocean degradation at large. Green investments, businesses, activities and resources resolutely become big business opportunities distracting attention from the acute problems that are occurring out of business such as aquaculture. The human-nature relations that are signalled through this relation is one where the ocean will be treated as a factory producing commodities.

On a final note for the future development of the research, it is suggested that interviews be made with relevant actors from the sample documents, but also from industry specific actors. This would give room for a fuller perspective on the Swedish discourse on Blue Growth and how human-nature relations are depicted in it. This analysis has given a departure for understanding how the discourse on Blue growth and aquaculture is shaped by power laden institutions and organizations in Sweden. Building on the analysis through interviews, would make it possible to specifically locate a case to investigate if the aquaculture industry, is considered as a solution as it is suggested to be through the discourse formed in the analysis. Or if the industry is in fact causing people and nature more harm than good.

8. References

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