The Ocean, a Global Common

A study about multilateral partnership for marine sustainability in the Coral Triangle

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1 List of abbreviations

APEC- Asia-Pacific Economic Cooperation
CT- Coral Triangle
CTMPA- Coral Triangle Marine Protected Areas
CTI - Coral Triangle Initiative
CTI-CFF - Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security
CPR- Common Pool Resources
EAFM - Ecosystem Approach to Fisheries management
FAO- Food and Agriculture Organization (Reference: Food and Agriculture Organization of the United Nation, The State of World Fisheries and Aquaculture 2016.)
IUU- Illegal, Unreported and Unregulated (Fishing)
LRFF- Live Reef Food Fish
LRFFT- Live Reef Food Fish Trade
MEWG- Monitor and Evaluation Working Group
MPA- Marine Protected Areas
RPOA- Regional Plan of Action
TWG- Technical Working Group
USCTI- U.S Coral Triangle Initiative Support program
WWF- World Wildlife Fund for nature
2 Introduction

The global world of today faces many challenges. Environmental problems such as; Climate change, melting poles, deforestation, pollution, coral bleach, and overfishing are problems caused by human’s negative impact challenging the planet’s boundaries. Some scientists have named our time the Anthropocene, a time where the impact of humanity might become too strong and the planet’s resources too scarce to meet the need for a growing population. Humans have become the dominant force on earth, a force that navigates the planet towards an unsustainable and irreversible state to be able to manage the growing population and its needs (Rockström, 2015:1f). However, it is important to recognize that environmental problems are not only global but also concentrated to local or regional levels, and it is important to realize that all these levels are stronger working together and need to be interconnected.

The oceans feed and aliment millions of people around the world daily and the consumption of fish reached record high numbers in 2014, much due to the aquaculture\(^1\) (FAO, 2016:ii). Even though aquaculture is growing, marine mammals are being caught traditionally straight from the ocean. Several unconventional fishing methods are frequently used and illegal fishing is threatening nature, other species (from bycatch\(^2\)), and challenging the future existence of fisheries (WWF, 2016a). Fish is also considered to be one of the most traded food merchandise of today and around half of the exports origins from developing countries (FAO, 2016:ii). The issues regarding responsibility and who is allowed to exploit the resources of the ocean are increasing. In return, these issues raise questions about who are responsible for the protection of these areas and what actions are needed to stop illegal or unlicensed use of the oceans. These are issues, that today, are more frequently discussed, and the problems of national and international waters are a recurrent topic among institutions, countries and people (Österblom, 2014:1f). The oceans are arguably a global common.

A common pool resource (CPR) is a natural or constructed resource that is shared by several individuals (Ostrom 1990:30). Oceans and fisheries are examples of common pool resources that are hard to control due to stretching over large areas. When common pool resources are used in unsustainable ways, these resources become scarce, which will affect people depending

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1 The cultivation of fish. Aquaculture stands for approximately half of the global fish consumption today (Troell et al, 2014).
2 Bycatch is other fish and marine animals getting captured in fishing gear made for target fishes, by catch can be dolphins, turtles, sharks etc, animals that are of non-targets. This consequentially ends with the death of the bycatch (WWF, 2016a).
on these resources and that might jeopardize the future of the common pool resources (Ostrom, 2008).

The confluence of the Indian Ocean and the Western Pacific in south east Asia is a common pool resource shared between Indonesia, Malaysia, the Philippines, Papua New Guinea, Timor-Leste, and the Salomon Islands. These six countries form a triangle like area called the Coral triangle (CT) almost the same size as half of the United State with its 5,7 million km$^2$ (Fidelman and Ekstrom, 2011:994). This area in the south east of Asia is home to approximately 363 million people that indirectly or directly benefit from the marine area, and 120 million people live and aliment directly from the shores of the Coral triangle (CTI RPOA, 2016:1). Fish and marine resources are the main income in the area and countless people would suffer plenty if these resources would disappear or diminish. With the fish industry becoming one of the world’s fastest growing food industries and export markets, one can argue that protection of the Coral triangle is significant for the people residing there and in the long term the global world (Troell et al, 2014:13258).

In 2007 the president of Indonesia proposed a new multilateral collaboration with the CT countries that was named the “Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security” (CTI-CFF) that was initiated in 2009. This collaboration is an initiative among six very different countries, to ensure, for present generations and the future generations, a more sustainable environment for the marine and costal resources in the Coral triangle (CTI RPOA, 2016:11).

2.1 Purpose and research question

This paper aims to see how a multilateral partnership like the Coral triangle initiative might contribute to sustainability of the common pool resource of marine and costal life in the area. The theory that the paper is based on is the theory of collective action, and the CPR the study focus on is the ocean shared between the six countries that constitute the Coral triangle. Monitoring and sanctioning, two out of eight principals, that Elinor Ostrom (1990:90) concentrates the theory of collective action on will be in focus. The question in focus is:
How does the multilateral partnership of the CTI work for the sustainability of the shared common pool resource of the marine life and the coastal area using the perspective of Collective Action Theory?

The protection of the oceans might be more urgent than ever before. The global world needs to act now and create lasting solutions for the future. Global partnerships regarding the common pool of the oceans might be a necessity in the future to secure global marine sustainability.

3 Theory – Collective action of common pool resources

3.1 Common pool resources (CPR)

A common pool resource (CPR) is described in Elinor Ostrom’s book, Governing the common from 1990 as:

“… a natural or man-made resource system that is sufficiently large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use” (Ostrom 1990:30).

A common pool resource is a resource that is essential for numerous people. To understand the theory and the problems of collective action and common pool resources the following sections will discuss that further.

3.2 Tragedy of the commons

The tragedy of the commons is a phenomenon that have been observed for centuries, with Aristotle saying that people are egoistic creatures not reflecting over the common good for the common interest. Which is the core assumption of the tragedy of the commons (Ostrom, 1990:2). Garret Hardin (1968:1243) claims that people must realize that the world is not infinite, without that realization, human misery will not decrease. The concept of the tragedy of the commons is arguably still present, especially considering environmental issues and the sustainability of the planet. The tragedy of the common is an expression that symbolise what happens when a resource is used until there is no resource left to use (Ostrom 1990:2). This
could be metaphorical for how the global environment and natural resources are being treated and overused by humanity today.

3.3 The logic of collective action

The logic of collective action is based on a realization that people are rational and self-centred. People most often let their own interest guide their actions which results in decisions that are necessarily not the best decisions for the larger group or in this case the global environment (Olson, 1965:1f). Eventually, these selfish, rational choices, might just end up hurting the individuals themselves even more, for example, without a healthy environment the world will fail to produce life essentialities back to the people. Unless there is a force benefiting an unselfish decision or the group is rather small, a decision made only for the groups interest is unlikely (ibid).

These concepts are important to recognize when individuals are trying to, in a beneficial way, use collective actions to protect common pool resources. Another problem that impregnate collective action theory is the issue of free-riding. This means that people will use the common pool resource without contributing to the common good. If too many or all people free-ride there will be no collective benefit (Ostrom, 1990:6). One can argue that free-riding is easier when sharing larger common pool recourses, due to more area to monitor. In addition to that, a failing monitoring system would also make it easier for people to free-ride. The issue of free-riding in connection to the absence of monitoring is arguably one reason for the existence of illegal and unlicensed fishing. Deficiency in techniques, resources or experience contributes to the illegal activity that exist around our oceans today (Österblom, 2014:1f). With more developed monitoring systems and sanctioning pattern, the illegal fishing might be more limited. The gigantic question still stands, who are responsible for the oceans and its protection, especially regarding international water.

Elinor Ostrom does not promote one simple solution for the issues of common pool resources or collective action methods. Ostrom argues that there are many different problems that need different solutions. Ostrom also argues that the centralized institutional approach, that
institutional change must be external and come from higher authorities to work, not always is the ultimate solution. It is time-consuming and difficult to initially make these institutions right. Many things such as cultural rules and detailed information might be needed to make a durable successful change (Ostrom, 1990:14). Ostrom argues for the uniqueness of every CPR and the need for every CPR to be dealt with in different ways and perhaps with new approaches. This will be discussed further down in the paper, in a section dedicated to new research on the theory. Even though Ostrom believes that every CPR problem needs a unique solution, there are eight principles that Ostrom believes characterize CPR’s in general (Ostrom, 1990:88ff). These principals, with a more detailed presentation of design principal four and five, are presented in the next section.

3.4 Ostrom´s design principle

These eight principle are designs and elements that help to sustain and manage CPRs for the future sustainability and generations (Ostrom, 1990:90).

1. Clearly defined boundaries
2. Congruence between appropriation and provision rules and local condition
3. Collective-choice arrangement
4. Monitoring
5. Graduated sanctions
6. Conflict-resolution mechanism
7. Minimal recognition of rights to organize
8. Nested enterprises

The principle of monitoring simply means that chosen people actively monitor CPR’s. Graduated sanctioning means that people who violate the rules will be sanctioned depending on the seriousness of the violation (Ostrom, 1990:94). Why these two principles are central in this study is because monitoring and sanctioning relates to the preservation and sustainability of resources in the way that they provide protection. One can argue that monitoring and sanctioning might be a way to help protect critical exposed areas and penalise people who do not respect these areas. It is commonly assumed that participants do not voluntary spend time monitoring and sanction other participants. However, in cases concerning common pool resources this is not a presumed problem, and free-riding is also not as common
This can be explained as “quasi-voluntary compliance”, which is described as comparable with the tax system and the compliance of taxpayers. Which basically means that people agree to follow something without direct force, but still is bound under coercion because people who get caught not cooperating will suffer consequences (Levi, 1989:52f). Margaret Levi expresses it as:

“It is voluntary because taxpayers choose to pay. It is quais-voluntary because the noncompliant are subject to coercion – if they are caught” (Levi, 1989:52).

People cooperate because of mutual understanding from both the rulers and participators of the system (ibid). Levi continually argues that for a quasi-voluntary agreement to work, the rulers must create trust to the participants, or in this case the taxpayers, so the taxpayers believe in a valid return from the tax-payments. Also, non-coercive methods must be used for cooperation in a system that requires “quasi-voluntary compliance” (ibid:53). The same system can be applied on the system of CPR.

In CPRs the monitoring and sanctioning are something that can come natural. In irrigation systems, when individuals are using resources of water, every individual desires to use as much water as possible. This naturally creates a monitoring system where the first participant that uses the water wants to use as much water as possible and the next participant have the same intention and therefore are watching the first participant so no infraction is being made. So, the presence of these participators make a natural monitoring system, where the participators monitor each other, resulting in an even use of the water resource. This also results in a natural way of sanctioning the participants who are not following the rules or free-ride. The participant who finds another participant non-compliant to the rules gains status and the person found violating will lose status. (Ostrom,1990:95f). This natural system of monitoring and sanctioning might work well in a smaller organization, especially where the resources are scarce and visual, for example in the case of a scarce water resource. In more complex and global systems, this might not work unless a concentration and inclusion of all levels are involved.

In a CPR as gigantic as the ocean, or the common resource of the ocean in the Coral triangle it might be hard to solely rely on natural monitors and sanctions. On a greater scale where international systems fight each other over natural resources or other goods, organized
monitoring and sanctioning might be a necessity, in combination with multilevel cooperation. Without participation on every level, a monitoring system only conducted on and from higher authorities might fail to protect society and lose respect and valuable cooperation.

3.5 New research

Elinor Ostrom writes in an article from 2010 that the theory of collective action needs to be updated. This article concentrates on the environmental issue of climate change and greenhouse gases but the principle regarding other global environmental issues are arguably the same when using the theory of collective action. Hence, to deal with global environmental issues, Ostrom suggests an update of the theory on collective action, an update concerning the behaviour of the individual and the importance of the cooperation between global, international, national and local levels. Traditionally the theory of collective action presumes that without externally imposed rules or help, for example from the government or other higher authorities, regulations in global questions, will show no result. However, Ostrom argues that the policies made by government will not be effective without the support from individuals (Ostrom, 2010:550f). Therefore, Ostrom argues for a polycentric approach.

A polycentric approach is a multiple government system that have authorities at different levels, where the decisions are made independently within a special level. That could be everything from a household to an international regime. The advantages of a polycentric systems are that individuals learn from local knowledge and from each other. This can create trust, innovation and cooperation simultaneously as it deals with the issue of monitoring (ibid:552). Ostrom continually argues for the relevance of the polycentric approach regarding global issues and that questions concerning global issues should not only be connected to the earlier theories saying:

“…that only the largest scale was relevant for the provision and protection of public goods for metropolitan areas, and the contemporary presumption by some scholars that only the global scale is relevant for policies related to global public goods” (Ostrom, 2010:552).

Even though earlier research has promoted that protection and solution should come from higher authorities should not eliminate the possibility that small and middle size network is
efficient, important and necessary. Hence, the need for a polycentric approach, especially regarding environmental problems, might be required. As mentioned earlier, Ostrom argues for the importance of not only recognizing one solution to all problems (Ostrom, 1990:14). This relates to the polycentric approach of solving problems through collective action on global scales, that not only one governance unit is recommended. Hence, several levels of units need to be interconnected (ibid). However, the conventional theoretical approach states that higher external rules are necessary to be imposed to handle these issues. This has resulted in the presumptions that global issues need to be addressed in that way, for example, through global treaties, to work. One important aspect to consider is that when individuals are included and informed about present and future problems, individuals tend to work for the common good, due to trust and understanding of the seriousness of the situation, which result in that actions are being taken without the enforcement of official authorities (Ostrom, 2010:555). It is also important to mention that no government system or approach is perfect and even though polycentrism might become more relevant, there will still be problems of individuals not understanding or caring about the present issues, which can result in unwillingness to cooperate or free-ride. However, doing nothing is not an option considering global environmental issues today. If a polycentric approach can lead to the experimentations and perhaps even innovation among different levels in society and the global world as Ostrom suggests (ibid:555f), a polycentric approach might be worth considering in the reach for sustainable solutions to different global issues.

4 Method and material

The research of this study is based on the case of the Coral Triangle and the initiative that exists between the six member states. The analysis later presented is constructed on the perspective of the theory of common pool resources and collective action with the focus of sustainability and future of the marine and coastal life in the Coral Triangle. The method used is a qualitative text analysis of documents. An analytical instrument, to help analyse the material, is constructed consisting of four questions. The analytical instrument is formed to help analyse the material and to keep a consistency in the analysis. To present the results of the analysis a matrix is made to get a clear view over the result. The matrix is made to help the reader get an overview of the analysis and to be able to process it before entering the discussion.
4.1 Material

The material the paper is based on are three central documents; 1: The CTI-CFF Regional Plan of Action (RPOA) from 2016; 2: The policy document of Monitoring and Evaluation System Operational Manual (ME) from 2013; and 3: An Activity report: Live Reef Food Fish Trade Intergovernmental Forum (LRFFT) from 2013.

The fist document is from 2016 and the other two documents are from 2013. This time span will not affect the analysis of this paper, due to the time being irrelevant to the research. The main purpose of the analysis is to explore how these documents relate to the CTI and how CTI works for sustainability in the area. The analysis builds on the notion of collaboration, hence collective action and the idea of a polycentric approach and the importance of monitoring and sanctioning. Additionally, other material such as smaller documents and information from WWF and the official website of the CTI are used throughout the paper.

The three documents used in this study are different in construction, intentionally chosen to make the research as valid and rich as possible. The first document, continually called RPOA, is chosen to get an overview of how the Coral Triangle Initiative works. The second document, continually called ME, is a product from CTI and this document presents how the Coral triangle initiative works and will be a source to see how the work is constructed. The last document, continually called LRFFT, is chosen to see how the partnership between the different states is played out and to see how issues are discussed and handled. The latter document also contains discussions between the member states of the CTI, this material has a dual purpose, both as a document and as an active conversation similar to an observation.

Documents are often easy to access with today’s technology and the documents are not affected by the process of the research or the researchers own opinions. Documents exist in different shapes and for different reasons but are not always created for research purposes (Bowen, 2009:31f). In this case, especially the documents RPOA and ME are produced to describe an initiative and how the initiative works and that makes it possible for the information to be biased. For example, details about negativity towards the initiative might not be mentioned, or important goals or targets that not reached an agreement might be excluded (ibid).
4.2 Methodology

The method used for this paper is a qualitative text analysis of documents. An analytical instrument with four questions incorporating collective actions between states, polycentric approach, monitoring and sanctioning have been constructed to help make a detailed analysis of the documents. This method is chosen to examine how a multilateral initiative can work to sustain a common pool resource. The analysis is built upon documents that are made from and related to the CTI. The aim is to get an analysis as unbiased as possible, however, in a text analysis the researcher is the one conducting the analysis, and that could make the analysis biased, even though the aim is to make the analysis as unbiased as possible. The analysis is conducted, solely by one researcher, and mistakes could occur even though the aim is to do a highly thorough analysis. This is something that might affect the validity and reliability of the paper (Esaiasson et al, 2007:57ff). This is something that need to be considered both for the researcher and the reader. However, the analytical instrument is formed to structure the analysis and to reduce the risk of mistakes and that unnecessary information is being gathered. This text analysis will concentrate on literally mentioned words and expressions related to the topics of collective action between states, polycentric approach, monitoring and sanctioning. Why I have chosen to have this focus and not, for example, to count words is because the analysis also is aiming for the unwritten message, hence the analysis will also concentrate on the implied message that might exist in the documents.

When using a qualitative analysis of documents as a research method it is common to combine other different qualitative research methods, such as interviews or observations (Bowen, 2009:30f). Interviews or observation had been a great compliment to this method but due to time and financial limitation, that was not an option. However, the main documents chosen contains different elements that will aim to make the research as rich as possible without adding other research methods.

4.3 Analytical instrument

To make this study more valid and reliable, an analytical instrument consisting of four questions have been formed to make a consistent analysis of the material. The analytical instrument is
also constructed to give the reader a greater understanding of what the researcher is aiming for while conducting the analysis (Esaiasson et al, 2007:57ff).

The four questions of the analytical instrument are:

1. How does the multilateral partnership work, are there signs of collective actions or a polycentric approach?
2. Does monitoring exist, if so, in what way and who are responsible for the monitoring?
3. Are there any existing or planned sanctions and who are responsible for the distribution of the sanctions?
4. How does CTI support the work the Coral triangle countries do?

A matrix is made with the purpose to give the reader an overview of the result of the analysis. The matrix is supposed to be simple and provide clarity before entering the discussion. The indicators in the matrix are collective action and polycentric approach, which is referred to the multilateral work and the collaboration between and within states. Monitoring and sanctioning are a part of the collective action theory and one can argue for monitoring and sanctioning being important for the protection of the common pool resource, i.e. the sustainability of the marine and costa area. Question number four is not included in the matrix, the purpose of question number four is to give an overview of how CTI support and work as an initiative. That will be described in text.

The indicators will be graded with low, medium or high, depending on how the indicators have been relevant in the documents. If the topic is not evident a mark (-) will be used.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Collective Action between states</th>
<th>Polycentric approach</th>
<th>Monitoring*</th>
<th>Sanctioning</th>
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<td>Policy Documents</td>
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<td>CTI RPOA</td>
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*According to the theory of Collective action.
5 Analysis

The case the study is based on are the Coral Triangle Initiative. Before the analysis of the documents the case will be presented. Later, an analysis with concentration to the analytical instrument will follow.

5.1 Case – The Coral Triangle Initiative

The case this study is built on is a partnership that was initiated in 2009 between six countries in the south east of Asia. These six countries share a common pool resource consisting of a common ocean area formed as a triangle between the countries, hence the name the Coral triangle. This area only covers 1.6 % of the planet´s oceans but contains an epicentre of a great diversity of marine life and nature. Except the greatest area of mangrove forest and the world´s largest tuna fisheries the area also covers over 70 % of all acknowledged coral species, over 50 % of the planet´s coral reefs and over 30 % of all acknowledged coral reef fish species. The area also resides 363 million people and provides these people and the global world with fish and important industry of fisheries (CTI RPOA, 2016:1ff)

The Coral triangle is, like many other areas in the world, under a lot of global pressures such as economic and population growth, international trade, tourism etc. Some direct effects that pressure the area even more are over-fishing and unsustainable fishing, climate change and pollution just to mention a few. 80 % of the coral reefs are threatened to medium or high risk (over half at high risk), many important fisheries located at the coast are about to collapse and many important species, such as tuna, are at high risk of depletion. The many threats that climate change puts on the oceans, such as coral bleach and sea level rise, are great threats to the future fisheries and these important species. The coral triangle is dependent of the healthy reefs and mangrove trees as a natural protector from natural disasters. The tuna stock provides millions of people with food and thousands of people with work. Healthy marine life contributes to growing tourism and all these combined contribute to millions of dollars in revenue. This is essential for a lot of people and the global market (ibid).
Earlier multilateral collaboration in the area covering Asia and the CT countries exists, many with solely economic interests. However, in recent years also collaboration considering the nature, marine life and other environmental issues have appeared. Coral triangle initiative was and is initiated to protect these areas of marine life, people and nature. CTI was initiated in 2009 and was called, “Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security” (CTI-CFF) (CTI RPOA, 2016:3ff). The CTI program has received great funding from other countries and organizations. United States has through a program called U.S Coral Triangle Initiative Support program (USCTI) invested over 40 million dollars (Christie et al, 2016:169). Larger NGOs such as World Wildlife Fund for nature (WWF) and smaller local initiatives are also a part of this initiative. Additionally, local companies and organizations have started to work in the spirit of the CTI (coraltriangleinitiative, 2015).

CTI is an initiative that has the ambition to continue a 10-year Regional Plan of Action ending in 2020. At national level, each country will create its own regional plan of action based on general commitments, targets and goals from the CTI regional plan of action. The members of this initiative are six very different countries, and to set one general agenda that every country must follow without regard to their differences is not realistic. Each country works towards the same goals with the resources that each county contains (CTI RPOA, 2016:12).

The main purpose of CTI is for the participating countries to implement actions to protect the oceans and its resources for the present population and the future. Ecological, economic and social features should impregnate how the different levels of institutions work. The basic concepts that the countries in the initiative should follow to successfully work towards sustainability includes; making the issues of sustainability of the oceans a high priority on national agenda, prioritize regional issues and collaborations and organize communal and private sector leadership as well as encourage public and private corporations (ibid, 2016:11). For the countries to be able to follow these commitments, the CTI regional plan of action have constructed five goals. Each goal contains numbers of targets that are followed by regional actions. These goals are important for the initiative and the work are centred around these goals.

The 5 goals formed by the CTI Regional Plan of Action are (CTI RPOA, 2016:13ff):
1. **Priority of seascapes** – This goal will serve to protect the seascapes in the geographical areas and prioritize investments and actions concerning the seascapes.

2. **Ecosystem approach to management of fisheries (EAMF)** - A plan designed to manage the fisheries in the area without risking the future.

3. **Marine protected areas (MPA)** – Areas in the water composed to protect coastal areas and provide food security, livelihood, income and biological diversity.

4. **Climate change adaptation** - A full climate change adaptation plan for the area.

5. **Threatened species status improvement** - Improved status for marine mammals and other natural assets in the area, prevent extinction and an overall health improvement of the marine system.

5.2 **Collective action and polycentric approach**

*How does the multilateral partnership work, are there signs of collective actions or a polycentric approach?*

**RPOA**

The Coral Triangle’s Regional Plan of Action (RPOA) is a document consisting of a synoptic view of the initiative. It describes the problems of the area, why the initiative was conducted, what and who it affects. It presents the desirable overall goals, targets and regional actions even though every country has its own national plan of action (CTI RPOA, 2016:1ff). This document is very informative and concentrate on the basic construction of the initiative. The document also shows the importance of multilateral partnership between the countries and that the multilateral work also should permeate several levels in society, not just the highest authorities. One example of that is:

“…our six governments have now developed an ambitious and visionary 10-year Regional Plan of Action. It captures the joint priorities and commitments of all of our governments…” (CTI RPOA, 2016:5)

and

“Our Action Plan is intended to serve as a rallying point for collective and parallel action at regional, national, and sub-national levels.” (CTI RPOA, 2016:5)
It is frequently mentioned that institutions, such as the six states and different levels of society are involved or are aiming for involvement. In the annexes future improvements are also mentioned. One section is about the continuing and advancement of the multilateral work, which is called “Coordination Mechanisms and Implementation Partners” (CTI RPOA, 2016:49). This section exists to ensure that the further multilateral work continues and develops. It is positive that the multilateral work, both regional and national actions are taken seriously. That shows that the multilateral work between and within the states and in the region, are of importance for CTI.

The document also contains many vague expressions that imply collaboration, examples of that can be found in goal number two, regional action one under target two and it is expressed as:

“Improve enforcement of IUU fishing through greater collaboration” (CTI RPOA, 2016:20).

and

“greater collaboration between national fishery management agencies, environmental management agencies, and enforcement authorities…” (CTI RPOA, 2016:20).

These actions recognize the importance of collaboration in preventing Illegal, Unreported and Unregulated (IUU) fishing. The actions also include that information needs to be shared, and that collaboration on different levels is needed i.e. between national fisheries and authorities such as navy and police. The expression “greater collaboration” imply that collaboration is important to tackle big issues in the area such as IUU fishing. However, “greater collaboration” is a rather vague expression and this kind of vagueness is reoccurring throughout the document. This can create an uncertainty about the seriousness of this document, and sometimes, as a reader, you can get the impression that some of the targets and regional actions are unreachable, much due to the imprecise expressions. These imprecise expressions can sometimes be interpreted as that the good intentions exceed the actual implementation of the goals and targets.

ME

The document of Monitoring and Evaluation System Operational Manual (ME), has been conducted through workshops where people from all member states of the Coral triangle have
participated. The manual is guided by the CTI regional plan of action, especially focusing on the five goals (Monitoring and Evaluation, 2013:3f).

“This Manual prescribes a process for facilitating regional collaboration among the countries to track progress towards the CTI-CFF goals and higher level outcomes” (Monitoring and Evaluation, 2013:4).

This manual, as it is called, is based on the notion of multilateral partnership, and the concept of collaboration that exist in the CTI. The manual was conducted after discussions concerning that the goals from the Regional plan of action needed to have measurable indicators to be realisable. The manual is also made to enable collaboration between the six countries and to be able to measure progress in the common goals and outcomes. This manual is centred around monitoring and evaluation, which means that data is collected to recognize improvement. The intention is that this document will contribute to the sustainment and enhancement of the common pool resource, hence the shared ocean area (ibid:4f). In this manual, the importance of the multilateral partnership is evident and important for the future sustainment of the common pool resource. It is also evident that the multilateral collaboration is important:

“Let's work together to make sure that we always work systematically by measures and it that sense, this Manual shall be very useful” (Monitoring and Evaluation, 2013:5).

and

“It is intended to serve as a rallying point for collective and parallel actions at regional, national, and sub-national levels” (Monitoring and Evaluation, 2013:8).

The countries of the Coral triangle have been involved in the making of this manual and a group called “Monitoring and Evaluation Working Group (MEWG)” has been constructed. The fact that the manual is constructed through the help from all member states shows signs of a working multilateral partnership, i.e. collective actions. The MWEG group exists to help the Technical Working Groups (TWG), five groups that each focusing on one of the five goals. The involvement of the MEWG was to help create indicators to be able to measure the progress. The indicators for the targets and goals are referred to as that:

“They reflect key stepping stones in the CTI process.” (Monitoring and Evaluation, 2013:12)
These indicators were presented at a summit and progressed through a collaboration between the Coral triangle states. (ibid:9ff) These indicators are important in the work for the CTI and towards a sustainable future because the indicators make the goals more feasible to reach. The work regarding these indicators is arguably a work by a multilateral partnership, where different groups and partners have been involved. The data is collected on national levels, by a national organ or a cooperative NGO, later the data is processed and delivered to higher parts, such as the CTI community and reported and presented at regional meetings (ibid:16). Furthermore, the data that is one of the important outcomes of these monitoring and evaluation systems need to be incorporated in a regional collaboration to have effect and to be useful in questions of comparison and for future measurements (ibid:9ff).

This manual builds upon the five goals the CTI regional plan of action conducted and will represent long and short term targets. In order to, in the end, reach the goals, four dimensions of components have been constructed and a rather detailed plan on how the goals are supposed to be reached is described. The manual also explains weaknesses, which is that not all goals have the indicators in place, or that indicators are in need of revision, for the system to work as intended. The creation of the indicators reflects a multilateral work but at the same time it reflects the importance to not oversee that each county might not have the same capacity to accept or finalize the indicators. There are no detailed explanations to why some indicators are not finalized. It is mentioned that some indicators were to “challenging” (ibid). To say that something is to challenging is extremely interpretable, and one can wonder in what way it was challenging. However, to conduct a manual with some missing indicators might be better than to not create a manual at all, at least it is a start. On the other hand, one can argue for the incomplete indicators to be a sign of weakness in the collaboration, that not all countries have the means or the will to follow the manual.

**LRFFT**

This document is an Activity report, an intergovernmental forum concerning the sustainability of Live Reef Food Fish Trade (LRFFT), in the area. This was organized and supported by CTI and two other organisations. In this report, all six countries except Papua New Guinea participated. This document addresses the question about live reef food fish trade, which is a part of goal number two of the CTI regional plan of action. This forum, as it will continually be
called, addresses numbers of issues, that relate to the collaboration regarding the management of LRFFT. The forum also aims to clarify what each country can do as well as propose regional actions in relation to IUU fishing and discuss further progress for the sustainability of the marine life in the area (Activity Report, 2013:5ff).

The document begins with an executive summary of the forum where the results and actions was presented. The results and actions shows engagement in the questions regarding the sustainability of the marine life and ended in a signed resolution. This resolution shows commitment in the questions and commitments in working with these questions on national, regional, and intergovernmental levels. The resolution contains actions regarding the establishment of marine protected areas (MPAs), develop systems that makes it easier for suppliers and traders of LRFFT to commit to fair trade and sustainable practices and address IUU fishing (ibid:7). This also includes the countries to:

“Identify and collaborate with independent bodies to monitor and check LRFF exports and to complement the government’s regulatory system…” (Activity Report, 2013:7)

The central issue of addressing IUU fishing in each country and work towards preventing trans-boundary illegal fishing and trading processes are of importance at the same time as collaboration among and within countries and all stakeholders are encouraged (ibid:7). In this document the problems of supply and demand are central and conversations whether other parties outside the area should be invited to participate in these meetings are on the agenda. China and Hong Kong are countries with huge interest in LRFFT (ibid:8). The initiative to invite China and Hong Kong can be argued to show a genuine interest in wanting to battle this problem. To have China and Hong Kong, one of the largest consumers of live fish, in this meeting might be good for the future work as it creates a conversation between the demand and the supply side.

Reoccurring weaknesses in the search of functional regional networks of actions in the area are showing. Most of the work is still being held within each country and is limited to the country’s own financial frame and own ability to handle problems. The discussions in the forum implies that regional collective actions are difficult to achieve, even though it is evident that regional actions are necessary for the future. In relation to the presentation of the Philippines common
borders are discussed. Even though there are several local problems that need local solutions, the countries that share borders, e.g. Malaysia, Philippines and Indonesia, need to jointly discuss how to handle these problems on a regional level before facing the issues of demanding countries (ibid:28). This is something that might capture the whole concept of the multilateral partnership and regional actions. Even though the struggle for regional work are evident, putting the questions and issues on the agenda makes it real and gives the initiative and countries something to work for

The forum ends with the countries agreeing on points and steps towards a sustainable future where more regional collaboration is necessary, especially regarding the huge demand side such as China and Hong Kong.

When concentrating on collective action and a polycentric approach the documents are showing, both literally by mentioning the word collective action and implied by expressing that regional actions are encouraged. A polycentric approach, both existing in countries and as encouragements in the documents are showing. What is evident when analysing these documents is the vagueness in the formulations regarding the multilateral work, both the already existing and for future collaborations. This could imply voluntarily compliance more than a must to follow the initiative. These initiatives or forums are not legally binding, rather platforms to exchange information, discuss problems and in the end work towards the same goals. Also, with the countries being so different, it is difficult to have a more coercive output regarding collective actions. Perhaps the collective actions must come from mutual understanding and trust. However, to get results more quickly, stricter guidelines might be necessary.

5.3 Monitoring and Sanctioning

Does monitoring exist, if so, in what way and who are responsible for the monitoring?

and

Are there any existing or planned sanctions and who are responsible for the distribution of the sanctions?
RPOA

In this document, monitoring is mentioned first in goal two, one example of how that is expressed is:

“Encouragement of Vessel Monitoring Systems (VMS) in monitoring fishing activities of large-scale and transboundary fishing fleets” (CTI RPOA, 2016:20).

Goal number two concerns management of fisheries and include the battle against IUU fishing. Monitoring is central in this goal, which will show more in the analysis of the LRFFT document. Even though monitoring is central in this section, it is not mentioned or developed as something essential, rather something that each country should deal with on their own. Furthermore, as seen in the reference above, the word encouragement is central. As well as in the previous analysis of this document vague expressions are recurring. It is evident, as well in this section that the vague expressions give a lot of space for interpretation.

In relation to monitoring, sanctions are mentioned, as well as the collaboration on different levels form fisheries to navy and police. Monitoring and sanctioning are not as frequently mentioned as, e.g. the work on multilateral levels. Even here, the expressions concerning sanctions are very open for interpretation. One example of that is:

“stepped up efforts on prosecutions” (CTI ROPA, 2016:20).

This reference is expressed more indirect and in a non-coercive way. Both “encouragement” and “stepped up” are more of a recommendation. However, this initiative works as a platform for the member states to work from in order to achieve the goals with the capacity that each state possesses. It could be discussed if an initiative with the goal to sustain a large, essential common pool resource should have more clear and measurable actions, rather than encouragements and recommendations.

ME

Monitoring and sanctioning are not often expressed but it is possible to interpret a vision of it when analysing this document. Expressions regarding the improvement and sustainment of the
fish stock, change in catch-units and size distribution of fish species are discussed and to improve these areas (Monitoring and Evaluation, 2013:11ff), monitoring could be needed to handle these improvements. This does not literally say that monitoring or sanctioning are needed, but could be applied for, in relation to, how these outcomes are supposed to be achieved.

Monitoring and evaluation is of course evident, because this is the core subject of this manual. In this manual, monitoring and evaluations is referred to as collecting information regarding progress in the area. When considering goal number three, Marine protected areas (MPAs), a system of monitoring of the areas are formed. MPAs will be monitored and evaluated in each CT country and later that data will be collected and transferred into a shared system, stored and evaluated. What is interesting to notice is that if organisations exist and work to monitor and evaluate progress in the area, the step to create a system of monitoring and sanctioning might not be as far away.

Information about how the monitoring and evaluation work is proceeding is being conducted through the MEWG and distributed through different channels developed by the CTI. These channels are, for example, the official website of the Coral triangle initiative\(^3\) and the coral triangle atlas\(^4\) where all the monitored and evaluated data is collected, all this accessible for the public. It is expressed as:

> “The data pathway is a key tool to map who will be responsible, and even more importantly, who will be accountable for each step of the indicator: collect, measure, compile, analyse, store and report. It can also serve as a means of information for the entities that have been identified in the pathway to ensure their collaboration.” (Monitoring and Evaluation, 2013:16)

That an instrument like this is constructed shows the possibilities to create other systems that can work towards the sustainability of this common pool resource. One can argue for that a system like this might be transferable to a monitoring and sanctioning system, or at least to provide instruments and guidance to construct a similar system in the future.

\(^3\) [http://coraltriangleinitiative.org/](http://coraltriangleinitiative.org/)

\(^4\) [http://ctatlas.reefbase.org/](http://ctatlas.reefbase.org/)
LRFFT

This forum mentions monitoring in a way that the other documents have not. In this document monitoring is often implied and literally mentioned recurrently in relation to the battle of the IUU issues. Monitoring is discussed as a natural and necessary option against the battle of IUU fishing in the CT. Sanctions are not as evident but mentioned.

One part of the forum is the written conversations between the countries. These conversations could work as an observation on how the partnership looks like between the countries.

It is expressed by the head Chair, who opened the meeting that:

“While countries in the region have individually taken measures to regulate the trade and address IUU fishing of LRFF, Dr. Pongsri acknowledged that the issues have not been directly addressed regionally. “This is why this meeting is very crucial,” he said, expressing hope that “with better understanding of the issues, we can work together and with other stakeholders” to better manage LRFFT and its challenges.” (Activity Report, 2013:12)

This shows that collective actions are necessary on different levels to fight these issues. This forum is centred around the complexity of the issue regarding IUU fishing and the complexity of the global market especially concerning China and Hong Kong’s high interest in the LRFF. As expressed by the Co-chair of the meeting, concerning China’s way of acting:

“These characteristics of the trade “require our collective action…”” (Activity Report, 2013:12)

This is expressed very clearly, that collective action among the countries is needed when discussing the complexity of the trade, and by “these characteristics of the trade” relates for example to unsustainable fishing, which implies that some sort of monitoring, and sanctioning are needed.

It is expressed in the document that one of the major concerns towards the sustainability is the uncontrolled harvest of marine mammals cached from the wild. Solutions do exist but the realization from the stakeholders are lacking (ibid:15). Suggestions to how the industry can face these challenges are discussed and among other suggestions, export quotas and protection of spawning areas (relates to marine protected areas) are discussed. One example in how to face these challenges are:
“Trade/fishery monitoring to follow trends in volumes, species, fishing activity, provenance, etc. to address IUU fishing” (Activity Report, 2013:15).

Even though this is more of a suggestion this shows that monitoring is an important part of the work toward sustainability and a necessity for the future.

One main discussion, relating to the increasing IUU trade concerns the buyers and what price they are willing to pay. Discussions concerning IUU fishing and what are being done today are reoccurring, and the problem of unreported fishes reaching other countries, especially China, are problematic. The conclusion is that improvement in reporting and traceability is needed (ibid:16ff). Concrete suggestions are lacking in the forum. However, discussions including improvement of traceability systems with already existing technology is mentioned (ibid:18). Even though this discussion ends in a positive tone, still there are no specific directions or action taken towards implementation of any traceability systems.

In Indonesia, the government have started imposing export quotas, and battle IUU fishing by using community-based monitoring and sanctioning methods. In the following live conversation, Indonesia explains that patrol groups, both governmental and communal, exist to monitor and sanction people that do not compile. It is a good sign that these kind of methods exist even though the concentration is on national level and not regional level. Some of the work Indonesia is doing in this area are also focused to local levels with no involvement from the state (ibid:25ff).

Continually there are some discussions and actions concerning the future, both national and regional. Both export and import sides are in focus with concentration to monitor export and import data and preferably linking them. Fishing methods, establishing quotas and designing more marine protected areas are also in focus (ibid:32ff). As mentioned in the analysis, the discussions imply suggestions rather than definite actions. What is missing, and would be preferable, are regional reachable goals.

What is apparent when analysing the document on LRFFT is that it is hard to separate collective actions and the polycentric approach from monitoring and sanctioning. When discussing how to protect this common pool resource the areas are connected. These connections show that
collective actions and monitoring (and sanctioning) are interrelated and should not be separated when discussing questions regarding protections of common pool resources.

Monitoring and sanctioning are presented different in the documents. Document one and two are not as focused on monitoring and sanctioning. The third document have more concentration on monitoring, however still lacking in discussions regarding sanctions. Monitoring and sanctioning are important in the theory of collective action and one could argue for it to have more space in the other two documents as well, due to the importance of battling the urgent problem of for example illegal fishing. The documents contain suggestions and encouragements, and the problems are more discussed informative than definite. To battle these problems relating to environment, sustainability and in this case crimes relating to IUU fishing, while lacking in consistency and actual actions could overturn the seriousness of these documents. However, it is important to recognize that these are complex issues over complex areas, and that the issues are being recognized as important and discussed should be consider as progress.

5.4 The roll of CTI

How does CTI support the work the Coral triangle countries do?

These documents are conducted through the spirit of the Coral triangle initiative. The first document is an synoptic view of how the initiative works and why it is important. It is mentioned that CTI aims to be a platform where groups, stakeholders, members, organizations etc. can organise their activities (CTI RPOA, 2016:49). This is something that is pervading all the documents. The second document is a general document, or manual over how the CTI have supported and processed a more detailed plan regarding the work relating to measure progress in the coral triangle.

The forum regarding LRFFT was held by CTI and another organizations. The roll of CTI in this forum was to immediately support the resolution by mediate the results to member countries of the CTI and the higher instances. CTI will also integrate the plans and recommendation from
this forum into the working groups and other effected parties (Activity Report, 2013:8). CTI as a part of this forum works informative to all the affected parties and make sure that information and protocols reaches the right places, so implementation of actions are possible.

While analysing these documents, it is evident that CTI is an organisation that aims very strongly for a collective action approach. CTI creates opportunities for the member states to interact, get information and get help and guidance for future work. However, sometimes the documents describe things that are essential for the future of the common pool resource but with expression that are vague and often open for interpretation. This element of vagueness can implicate impracticability.
6 Result and Discussion

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Collective Action between states</th>
<th>Polycentric approach</th>
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<td></td>
<td>Live Reef Food Fish Trade</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
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*According to the theory of Collective action.

The results are presented schematically in the matrix above. Collective action between states are frequently mentioned and implied while monitoring and sanctioning are not as represented. A polycentric approach is being interpreted as collaboration within states, which also is mentioned and implied rather frequently.

These three documents are different in construction, presentation and execution. However, the documents aim towards the same goal, which is to sustain and protect a common pool resource shared between the six countries. The question in focus in this study is how the multilateral partnership of CTI works for the sustainability of the shared common pool resource. This is analysed through the perspective of collective action theory. What have been evident throughout this analysis is that CTI have, through different ways, been involved in gathering information, creating meetings, and lifting problems up on the agenda. CTI has been an important platform for the work towards sustainability in the Coral triangle. Even though the documents have shown weaknesses and lacking in conclusion, there is something valuable in bringing environmental issues up on the agenda and creating engagement on multiple levels.

Throughout the material, it is evident that the work existing in this initiative shows signs of cooperation on multilateral levels. It is evident that the multilateral partnership between countries, hence the regional work, is frequently mentioned and desirable, but when analysing the material, not as substantial. It often shows that individual countries have actions and plans working within the country, but lacking in regional work.
Collective action within states are both implied and mentioned literally. Countries have taking advantages of different levels in society and created connections between them. This is a sign of polycentric approach. Ostrom argues, when people get included without coercion it might create trust and willingness to learn more about the problem. This could, in the long run, lead to and create lasting commitments and might involve more people to work for the common good (Ostrom, 2010:555). As mentioned earlier, the documents are often open for interpretation and consisting of encouragements and suggestions. Ostrom also argues for the complexity of solutions regarding environmental issues in connection to culture and details (Ostrom, 1990:14). The six countries represented are very different in e.g. religion, size, population, and economy etc. (Foale et al, 2012:176). When discussing global issues concerning the environment, long lasting solutions are important. This implies that the solutions must please the bigger crowd and fit the rest of the global society, to last. More open solutions and non-coercive agreements might be the way to go when constructing goals and actions regarding the environment. Coercion and unreachable goals might not even be accepted, especially in areas or partnership where countries possess substantial differences.

One problem concerning collective actions are the free-riding problem. One could argue for that if CTI would suggest or demand to strong regulations, it might not just create resistance towards the initiative, it might also create a free-riding problem. If the regulation and actions implemented are to strict, individuals, communities or higher authorities who do not compile, might start to break the rules or free-ride and the regulations or the initiative would lose its meaning and power. In the long run, to strict regulations might also start greater problems, such as conflicts. For CTI to have these interpretable goals and actions might, instead of leading to neutrality regarding the issues, create “quasi-voluntary compliance”. Margaret Levi (1989:52f) describes “quasi-voluntary compliance” to be something that individuals do without coercion, but still with an awareness that if individuals do not compile they will be sanctioned in some way. To create a system that is not build on coercion might create trust. For quasi-voluntary compliance to work responsibility is also put on the higher authorities. For individuals or the involved parties to cooperate, they need to be assured that the cooperation in return will bring some kind of profit (ibid). This kind of mutual un-coercive partnership puts pressure on both, in this case, the initiative and the cooperating parties. However, if the quasi-voluntary compliance should work, monitoring and some sort of sanctioning system need to be in place.
Monitoring and sanctioning are not mentioned generally in the documents, it is more implied and mentioned in connection to specific problems. However, when, foremost monitoring, is mentioned it is mentioned as a necessity. In the last document concerning live reef food fish trade, monitoring is more reoccurring. What is interesting in the analysis of the last document is that it is hard to separate monitoring and the multilateral work, within such as between states. This is interesting because it shows that multilateral work and monitoring and sanctioning are closely related. One can therefore argue that monitoring and sanctioning should take up more space in the more general documents, such as the RPOA document.

One central concept in the theory of collective action are “tragedy of the common”, which arguably is something relevant when discussing, environmental and global problems. As mentioned in the section of theory, people must realize that natural resources are scarce and that this is a real problem that exists in today’s global world, the world is not infinite (Hardin, 1968:1243). While analysing these documents, it is obvious that this is a problem. Several parts of the world suffer from a collective tragedy of the common, and initiatives and organisations such as CTI are formed to handle these problems, to make the world less of a tragedy. Even though these documents sometimes show inconsistency and lack substantiality the initiative creates awareness and gather information and people together in the spirit of the environment and the sustainability of the planet.

One can argue that if the tragedy of the global world are to diminish, the global world need to work together, hence regional actions need to be a reality. In the case of the Coral triangle, the work within each state is more developed, and this might, in fact, in the long run, create a positive outcome. If the countries themselves can create lasting organizations and collaboration, especially collaborations within society, the countries themselves, might become stronger and that might contribute to a richer regional collaboration in the future. This correspond with Ostrom’s arguments that if policies or decisions are made only by higher authorities, with no support or involvement from the individuals of society, the policies or the decisions will not be effective (Ostrom, 2010:550f). This means that a more polycentric approach is to prefer, rather than the traditionally view of the collective actions theory that presumes that externally rules or regulation must come from higher authorities to work, especially concerning global problems (ibid).
Larger collaboration or partnership might also slow down decision making. This multilateral partnership includes six parties, all substantial different, and to have these parties involved in a process concerning decisions regarding issues about complex problems, such as the ocean, might slow the process down. These six countries are different and by that have different needs. The shared common pool resource might have different meaning to the individuals benefitting from it. This could be one of the reason that every country has their own regional plan of action. It is a necessity for the initiative to work, and for the countries to be able to accept the initiative.

The world needs lasting commitments, which are commitments relating to states and individuals working towards future sustainability. This might be hard to come by under coercion and a polycentric approach might be something to work for. It is evident that the work and information that CTI communicate have created engagement from states, communities, NGO’s and individuals. Collective actions and a polycentric approach might be something to aim for in the future concerning global environmental issues. This might not be the traditionally way to go, but the future of our planet will not care about tradition.

7 Conclusion

This paper is made to explore how multilateral work in the Coral Triangle works for the sustainment of a common pool resource using the perspective of collective action theory. The paper has explored documents to see how the multilateral partnership is conducted and how monitoring and sanctioning are displayed. What can be concluded is that multilateral partnership or collaborations are desirable and necessary for the future. The paper shows that collective action between states are more desirable than visible in reality and that collaboration within states are more frequent and that more levels in society are connected and working together, sometimes without the control of higher authorities. A polycentric approach is visible.

Even though the documents show weaknesses in conclusion and lacking in actual regional actions, the information that is distributed and the willingness to work towards a sustainable future are distinct and gives hope. The issues regarding the marine and costal life in the coral
triangle area will affect millions of people and the global world if nothing is changed. That this issue is brought to national and regional agenda show that the problems are real and that solutions must come. The CTI has started to battle global problems that need to be addressed as such, these are not easy issues to solve and CTI and the including countries will not be able to solve them on their own. Discussions regarding inviting China and Hong Kong and meetings regarding trade in live fish must be seen as a step towards the right direction. Global problems need be solved on global levels, with the cooperation of every individual.
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