

Exploring 'Outliers'  
Uncovering Transformative Learning approaches in a Caribbean fisheries network

# Exploring 'Outliers' - Uncovering Transformative Learning approaches in a Caribbean fisheries network

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Submitted by  
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## Abstract

This study takes a solution-focused approach to identifying how learning, knowledge sharing and transfer can aid in the management of wicked problems which persist in grassroots communities. This is done by investigating an outlier grassroots network in the Caribbean fishing sector which has demonstrated a level of success, capacity building and sustainable development.

I draw on the 'Strengthening Caribbean Fisherfolk to Participate in Governance' project which ran from 2013 – 2016 to identify transformative learning pedagogy and approaches within informal and non-formal learning environments. I also identify other factors that contribute to transformative learning in the retrospective outlier case study. I conduct semi-structured interviews and collect documentary evidence related to the project. Data is analysed through an eclectic theoretical framework which uses the lenses of Cultural Historical Activity Theory (CHAT) and Transformative Learning.

Emerging themes illustrate how transformative learning was facilitated through a 'learning by doing' pedagogy and underpinned by 'inclusive participation and decision-making'. An important aspect involved good 'record keeping and documentation'. The 'role of support organisations' was crucial to 'establishing the motivation' of the fisherfolk, 'responding to change', and building 'trust'. Within these themes I discuss the role of a strong identity, traditional knowledge and culture related to grassroots participants. I also highlight transformative community learning, leadership and mentorship, and inter-connected approaches to developing capacity, knowledge, skills and behaviours which reflect changes in participation and mindsets towards long-term sustainability.

## Impact Statement

This research into informal and non-formal learning in a Caribbean fisheries network highlights how effective pedagogies, knowledge sharing and transfer, and foundational elements in the learning community facilitate transformative learning. These are areas which are not sufficiently explored in the international development literature and therefore the context of this study is relevant to international development work, informal and non-formal workplace learning, grassroots community learning, and education for sustainable development.

This thesis highlights how transformation and learning occur within a Caribbean grassroots organisation through an eclectic theoretical framework which uses the analytical lens of cultural historical activity theory and transformative learning theory. The case study identifies how various pedagogical tools underpinned various experiential learning strategies which facilitated knowledge sharing and transfer. It also demonstrates the importance of establishing trust and motivation building, community identity and participation, and the ability to respond to change over time. The case study exposes the critical role trust and community learning play with regards to transformation and sustainable development.

The findings of this study have implications for organisations working in international, regional and national arenas. The importance of acknowledging the cultural, historical, socio-economic and political contexts is highlighted throughout this study which demonstrates the need to understand these aspects fully in order to identify the best approaches to development practice and engaging change makers at the local, regional and international levels.

This thesis also focuses on a transformative learning in a grassroots community which has been facing a number of socio-ecological challenges, and this is particularly relevant in light of the increasing focus on climate change and the impact of this on poor and rural communities globally. The role of the grassroots communities as custodians of the environment is gaining acceptance, and therefore the recognition of the role that local/traditional knowledge may play in meeting environmental challenges is growing. This study further contributes to that perspective.

As part of my dissemination and impact strategy, I have I have discussed key findings of this study with organisations which are part of the Caribbean fisheries network, and they are keen to share these findings within the network. In recognition of the need to provide leadership for the fisheries industry and community, the Caribbean Network of Fisherfolk Organisations (CNFO) have recently launched their Leadership Institute and they would like to explore ways of integrating some of my findings into the new work they are embarking on. The representative I spoke to affirmed the value of the concept of transformative learning and welcomed the timeliness of the study. In addition to findings being relevant to ongoing work with the fisherfolk, there are other current inter-island collaborative regional projects in agriculture and coastal management which could benefit from the outcomes of my study.

Ultimately, this study demonstrates how effective transformative learning and knowledge sharing and transfer can contribute to addressing complex and stubborn long term problems. The study extends concepts of transformative learning, proposing a spectrum of transformative learning, challenges concepts of resilience in post-colonial contexts suggesting that other perspectives may be needed, emphasises the importance of a solid identity from an individual to a community level in engaging in transformative learning, and highlights the role of building and maintaining trust through transformative learning practices in order to ensure sustainable outcomes. The ideas can be further developed through future scholarship. Dissemination of the outcomes of this thesis will occur through direct contact with Caribbean organisations, through publication, and through conference presentations. There has already been an interest in researchers in the Caribbean to co-publish.

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## **Declaration**

### **Declaration of Word Count**

The exact number of words in this thesis is 43951. The abstract, statements, table of contents, acknowledgements, references and the appendices are excluded from the word count.

### **Declaration of Own Work**

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

### **Signed**

## Acknowledgements

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## Reflective Statement

I started my doctoral journey in 2013 choosing to do a professional doctorate in education because I felt it fit best alongside my work commitments and provided the structure I needed to keep me moving towards achieving the requirements of level 8 study and scholarship. I chose education because it has always been part of my professional life. I opted to focus on the Caribbean for this thesis because I am from Trinidad and Tobago and worked there for several years with various national and regional organisations in the agricultural sector. My specialism was medicinal and aromatic plants, and I was involved as a technical researcher/expert and educationalist on various projects up to 2008 when I relocated back to the UK. I have maintained contact with colleagues in the region over the years, which led me to consider making the Caribbean a focus on my doctoral study.

The projects I worked on included participants from grassroot and rural groups, as the intended recipients of positive project outcomes. However, years after these projects ended, I realised that these communities did not necessarily see significant impacts of project funding. In the year before deciding to do this doctorate, I worked on another small project and felt that, several years on, nothing seemed to have changed significantly. At the start of my doctoral journey, when thinking about my initial research proposal, I wanted to focus on these communities as lifelong learners and custodians of traditional knowledge. I wanted to explore how projects could make a wider socio-economic impact through education. I have always had an interest in bridging the gap between traditional and scientific knowledge and have great respect for indigenous and grassroot communities which often struggle to respond to economic and environmental changes. My research proposal at application was therefore focused on lifelong learning and vocational training within rural agricultural communities in the Caribbean region. Along the way I have used every stage of the EdD to develop my initial interests, objectives, perspectives and skills.

## **Foundations of Professionalism**

During my work on internationally funded projects I was struck by the role of external experts who seemed to have greater influence regarding the project directives and initiatives. The engagement appeared to me to be top-down and I felt that local expertise and knowledge seemed less valued even though local experts knew the local environment, culture and values better than the external experts. Through the exploration perspectives on professionalism I situated myself as a 'local expert' and wanted to focus on local expertise and professional identities in the context of international development. At first, I was unsure about how to approach this, particularly in the context of Caribbean agricultural development. As I started to separately explore the more general aspects of professionalism, professional identity, international development, expert and traditional knowledge there were significant pieces of literature which informed my perspectives at the time (Breidlid, 2013; Engeström, 1999; Freire, 1970 and Mosse, 2013).

I found it significant that, within the literature, professional experiences, roles and identities in the international development sector were mainly explored from the perspective of the 'western' professionals working in organisations around the world. Firstly, I observed that the role of the 'local' experts who worked alongside foreign consultants were not acknowledged as 'experts' or as 'professionals' and therefore appeared to be invisible. To me this represented a lack of 'value', 'voice' or 'identity' in the world of development work. Secondly, this connected to Breidlid's (2013) discussion of the dominance of western epistemology and knowledge production in a post-colonial world, and reference to the 'othering' of knowledge from more traditional/grassroot and indigenous peoples. My conclusion at this phase of my EdD noted that to empower grassroot communities and create sustainable outcomes it was necessary to include meaningful participation from local experts and communities and recognise local/traditional knowledge in development projects. My thesis illustrates the significant impact of both the local professionals and inclusion of grassroot knowledge and voices in terms of transformative learning and changing mindsets. In *Foundations of Professionalism*, I also explored cultural historical activity theory (CHAT) (Engeström, 1999) for the first time. Botha (2011 p314) suggested that the CHAT framework provided a mechanism whereby 'western research can redefine its relationship to people from indigenous/marginalised

contexts'. I was particularly interested in learning more about CHAT and how it could be used in these contexts.

### **Methods of Enquiry 1 and 2**

For the Methods of Enquiry 1 and 2 (MOE1 and 2) phase of the EdD I further explored CHAT as a framework, and used a mixed methods approach to gain a better understanding of local perspectives on knowledge, expertise and sustainability in the Caribbean agricultural sector, where my experiences had been based. These elements of the EdD were formative and though the small study presented challenges it also offered lessons learned which would inform my thinking for the institution focused study and the final thesis (Tikasingh, 2014a and 2014b).

### **Institution Focused Study**

My institution focused study (IFS) broadly focused on the Caribbean agricultural sector as the 'institution'. The MOE2 outcomes highlighted constraints and challenges which were consistent with previous reports regarding the state of Caribbean agriculture. For the IFS, I therefore wanted to understand these more from the perspectives of local individuals and how stakeholders could participate in setting an agenda for change to regenerate the sector. I used CHAT in this study as an analytical lens for activity system analysis (Yamagata-Lynch, 2010) and experimented with the problem centred interview (PCI) technique (Witzel and Reiter, 2012). The PCI method seemed to work well with the Caribbean respondents as it enabled them to 'tell their story', something which I found resonated with Caribbean people's tendency to share accounts via story-telling. I therefore allowed for story-telling within the interview for the thesis phase and it proved useful in gathering full narratives of experiences, perspectives and reflections.

The IFS yielded some interesting insights and experiences of respondents in relation to the state of Caribbean agriculture. Unfortunately, there were no simple answers to how stakeholders of the Caribbean agriculture sector could set an agenda for change. The data analysis highlighted some deep-seated issues which needed to be addressed and these included the notion of changing dependency mindsets in the

region, the enculturation of dependency through donor support, a lack of trust amongst stakeholders leading to poor knowledge and resource sharing, developing strong leadership of the sector with a fundamental motivation to succeed, and navigating individualistic identities at country level and a collective identity at regional level (Tikasingh, 2016).

As I reflected on the outcomes of my IFS I felt frustrated and concerned that these problems were too big and complicated and beyond the scope of a final thesis study. I wanted to focus on lifelong learning and explore how this could offer a solution to some of the issues highlighted above but I could not find a way forward immediately following the IFS. My final statements in the IFS centred on looking for success stories from other regions and sectors, but at the time I had not considered how this could form an approach for moving towards my thesis proposal. In many ways, at the time, I felt I had got to a dead-end.

During the period between completion of the IFS and the submission of my thesis proposal I read the book 'Outliers' (Gladwell, 2008) which triggered some new perspectives and shifted my thinking from problem-centred to solution-centred. I revisited the notion of success and considered whether there were organisations in the Caribbean agricultural sector that could demonstrate sustainability and impact, thereby connecting to the concept of outliers. I explored three possible organisations within the umbrella of 'agriculture' which included other areas such as forestry and fishing. Through this process I zoomed in on the fisheries sector, and from initial exploration I was pleased to find significant evidence of activity in the region. The fisherfolk, as a grassroots community, faced the same issues and challenges which were highlighted in my earlier EdD phases, yet appeared to have maintained some forward momentum over many years and were effectively outliers. This process of finding inspiration from unrelated sources was key to progressing to the thesis stage. The 'eureka' moment when the dots connected gave me a renewed sense of focus for my thesis.

At this point, I was transitioning to new supervisors and this also brought greater focus. Having identified an outlier network, I then focused on the notion of 'change'. Through more reflection, reading and further research I connected change to transformative learning (Tynjälä, 2008 and 2009) and the informal aspects of

learning in international development projects. I wanted to focus on identifying how some of the issues highlighted in the IFS could be addressed through learning for change and effective knowledge sharing and transfer practices.

## **Thesis**

As I come to the end of this EdD and reflect on the journey I am able to see how my thesis has developed through the stages, and how I have navigated some of the roadblocks along the way. The Caribbean fisheries network proved to be a rich source of data through both interviews and documentary evidence. The focus on the Strengthening Caribbean Fisherfolk to Participate in Governance (SCFPG) project from 2013-2016 offered an opportunity to uncover transformative learning approaches through activity system analysis. My study has offered a new perspective on learning in these types of development initiatives and provides insight into how learning contributed to creating change in this network, working across the grassroots to international community. When I consider my temporary feelings of defeat after completing the IFS, I recognise the importance of being open to different perspectives, thinking creatively and finding innovative ways of approaching a challenge.

The writing process and requirements of the thesis have been significant. This kind of process takes time and focus, and I have often struggled with both throughout for various personal and work-related reasons. It has taught me to persevere, and to manage my own experience of 'imposter syndrome' (Coryell *et al*, 2013). It has certainly made me empathetic to my own students, I understand their fears of negative feedback and anxiety around completing assessment tasks. I also understand how this leads to procrastination and stasis. Throughout this process, I have had to develop self-management strategies for overcoming these mental roadblocks. I take much of this experience into my own teaching practice and the way I relate to my students. Finally, I have explored a wide range of literature through the EdD. At every stage I have encountered perspectives, theories and approaches which have broadened my own knowledge base and informed my thinking along the way. The depth of this experience will support my future teaching and research practice and give me the confidence to know that I am not an imposter.

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## Chapter One – Introduction

### 1.1 Introduction

My research focuses on how learning, particularly informal and non-formal learning, contributes to changing mindsets and development approaches in the Caribbean fisheries sector, which is part of the wider agricultural sector in the Caribbean. This thesis presents a case study which investigates how transformative learning – a concept which is discussed more fully later in this thesis - is facilitated across grassroot level organisations to regional and international organisations who operate within Caribbean fisheries. The focal point of the case study is the Caribbean Network of Fisherfolk Organisations (CNFO) as an example of a grassroot organisation which has achieved a level of capacity building and sustainable development over a period of many years. The CNFO is an organisation that has avoided failure and offers a unique opportunity to understand how transformative learning occurs in informal and non-formal settings. I investigate the context of learning opportunities and tools which were set within the ‘Strengthening Caribbean Fisherfolk to Participate in Governance’ (SCFPG) Project which was delivered over 2013-2016.

Much of the literature on informal learning relates to learning in a single workplace (Eraut, 2004; Illeris, 2003; Marsick, 2009). In this study, however, the term workplace refers to the shared collaborative spaces where the subjects of the project interact. There is limited literature which relates to these rural and grassroot contexts and populations, learning environments, development work and learning approaches, and this is an area where further research is needed. From an international perspective, the focus has tended to be on formal education environments and contexts, with some references to education in the field with regards to land-based agriculture such as farmer field schools (Braun and Duveskog, 2008; Bojić-Bultrini et al, 2009; Dolly, 2005).

There is also wider application to the global sustainable development agenda which was articulated through the UN’s Sustainable Development Goals (SDG) 2015 (United Nations, 2015). In order to achieve these goals education must take a central

role, and education for sustainable development (ESD) recognises that consideration must be given to adult education and training as part of the lifelong learning opportunities which can enable communities to be resilient to current and future global development challenges (Wals et al, 2017). This study relates directly to five of the seventeen SDGs which are:

- SDG1 - End poverty in all its forms everywhere
- SDG2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- SDG3 - Ensure healthy lives and promote well-being for all at all ages
- SDG4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- SDG8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

This study can therefore make a positive contribution to better understanding transformative learning approaches, tools, practice and pedagogies which can support the global sustainable development agenda at grassroots to international levels of engagement since research in this area is limited (Kioupi and Voulvoulis, 2019). In order to understand these approaches and practices situated in informal and non-formal grassroots environments the research questions are:

- What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level? – It is important to note that here I use the term pedagogy to refer to practices that support learning at work rather than in educational institutions.
- How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?
- What other factors within the outlier network contribute to transformative learning?

To address these questions, I employ an eclectic theoretical framework which is underpinned by Cultural Historical Activity Theory (CHAT) (Engeström, 2008 and Yamagata-Lynch, 2010) and Transformative Learning (Mezirow, 2009 and Tynjälä, 2008) in order to explore how transformative learning occurs within the context of the Caribbean fisheries network.

The following sections provide an overview of my professional and academic motivations for conducting this research and its contribution to new knowledge. I identify and establish the complex problems, which I refer to as 'wicked problems', within the Caribbean Agriculture sector. I also explain how and why the CNFO was selected as the subject of the case study, and my focus on this as an 'outlier'. Finally, I outline the structure of my thesis.

## **1.2 Professional Experiences**

I was involved with a range of agricultural diversification projects in the Caribbean region from 2000 to 2012, and interacted with grassroots/local, regional and international organisations as an expert in the field of medicinal and aromatic plants, a researcher and as an educationalist. Caribbean agriculture, which inclusively refers to land-based agriculture, forestry and fisheries, has experienced major upheaval since the 1990s, and sectors such as sugar and bananas, which were developed as export commodities during colonial rule, have all but disappeared. Diversification projects were a priority for agricultural stakeholders who had lost livelihoods due to the rapid decline of the sugar and banana industries as a consequence of trade liberalisation in the 1990s (Renwick, 2010). My role was usually related to producing and promoting educational outputs, training activities, research and information sharing to the network of individuals and organisations. The majority of these projects and initiatives were funded by development aid from various sources including the European Union (EU), Commonwealth development funds and limited national funds. The peak of funding for these projects was between 2003 to 2008. During this time I observed how grassroots representatives were sponsored to engage in funded projects which had specific timelines for implementation. The projects generated interest and momentum and aspired to create sustainable niche industries for local rural grassroots communities throughout the region. After 2008, projects struggled to find continued funding to maintain activities and build capacity at the grassroots level.

Whilst working on a project almost 10 years after my initial involvement with the sector, I felt that nothing had fundamentally changed in the region. Many of the short-term projects led to limited outputs and had no real impact on the local community or more widely. The major benefactors seemed to be the external

consultants rather than the communities. It was at the end of this project that I decided to embark on the Professional Doctorate in order to contribute to the field of research and scholarship, and to identify effective transformative approaches to building capacity, sustainability and impact in development projects through education.

### **1.3 Caribbean Agriculture – The Wicked Problems**

In this section, I use the concept of ‘wicked problems’ - to contextualise the scale and scope of the challenges in the Caribbean agricultural sector. Since the fishing industry is part of the wider agricultural sector in the Caribbean, I discuss these problems in the context of the wider agricultural constraints. Wicked problems can be found in many areas of society including within the public sector and international development. They are determined by their level of complexity, fluidity, interconnectedness of multiple problems across several domains, uniqueness, and relentlessness (Weber and Khademian, 2008 and Ramalingam et al, 2014). The challenges within the Caribbean agricultural sector certainly possess these qualities and specifically include economic constraints, infrastructural limitations, lack of political will and poor regional collaboration. As a result of the scale, scope and nature of Caribbean agriculture and the numerous challenges it faces in the global context, effective and sustainable redevelopment becomes a ‘wicked problem’ for the region.

Such re-development is needed because of the steady decline of the agricultural sector over many years. The impact of globalisation, trade liberalisation, the removal of preferential trade arrangements with the United Kingdom after the UK joined the European Union, scales of economy and climate change has been considerable (Williams and Smith, 2008). The sector has since struggled to recover in terms of contributing positively to Gross Domestic Product (GDP), livelihoods and economic development. The small island developing states (SIDS) have been particularly affected, and in recent years have turned to other sectors in the services industry, such as tourism, hospitality and finance, to encourage economic growth and development (Barker, 2012). Lands previously given over to farming and forestry are being used for infrastructure to support these newer industries and sectors, and farmers and fishers are an aging population with young people opting to find work in

other sectors. Valuable traditional knowledge and practices risk being lost permanently (FAO, 2017).

In 2003, the Caribbean Community (CARICOM) Heads of Government launched a regional strategy to reposition agriculture as a priority for redevelopment and diversification called the Jagdeo Initiative. The strategy recognised several constraints which included the following:

- Limited financing and inadequate investment
- Deficient and uncoordinated Risk Management Measures including praedial larceny
- Inefficient land, water distribution and management systems
- Inadequate research and development
- Outdated and inefficient agricultural health and food safety systems
- Inadequate transportation system particularly for agricultural products
- Fragmented and unorganized private sector
- Lack of skills and quality human resources in agriculture
- Poor market infrastructure including market information and market linkages

Data generated in 2014 as part of this Professional Doctorate (Tikasingh, 2014) suggested that there had been no improvements to these constraints despite national, regional and international funding through development aid projects. In fact, agricultural imports to the region increased (CTA, 2013). To understand the deeper underlying issues as perceived by the regional stakeholders, I conducted a follow-up study (Tikasingh, 2016) and this highlighted the following fundamental issues:

- Mindsets need to change, from one of being historically dependent to one where there is willpower and motivation to 'get it done'
- There is a lack of trust which leads to poor knowledge and resource sharing amongst stakeholders at every level (institutional, academic, research, grassroots)
- There is generally poor documentation regarding historical and current project delivery and outcomes. This impacts on 'institutional memory' and often results in repetition of work rather than progression of work previously done.

- Strong leadership and vision are needed in the sector regionally which needs to transcend partisan politics and national identities.

The result of these persistent challenges has been a declining focus on agriculture both in terms of agricultural exports and domestic food production making the region heavily reliant on food imports (Barker, 2012; Beckford, 2012 and Wenner, 2015). This had a significant impact on the region's food and nutrition security (FNS). The Food and Agriculture Organisation (FAO, 1996 p1.) defines food security as a state where '... all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life'. FNS is embedded within SDG2 and SDG3.

A report from the FAO and the Pan American Health Organisation (PAHO) for Latin America and the Caribbean raises red flags suggesting that the region is not on track to meet SDG2 and SDG3 by 2030. The report makes a clear statement that countries must improve the quality of their policies and programmes, increase investments urgently, and involve the entire society (FAO and PAHO, 2017). Serious redevelopment of the agricultural sector is necessary in order that the region can adequately supply itself with sustainable food resources.

Considering the complexity of the problem, there can be no single simple solution. Dentoni et al (2012) suggest that wicked problems cannot be solved due to their nature, but efforts should instead be made to manage the problem and to break the problem into manageable parts (Ramalingam, 2013). This study takes a positive approach and identifies possible educational strategies and approaches which can contribute to managing the problem. The role of education in agriculture has been highlighted in the past (van Crowder et al, 1998 and Reimers and Klasen, 2013) though the focus has mostly been on formal education provision and less on nonformal and informal learning (Šūmane *et al*, 2018). This study focuses on nonformal and informal education settings within the context of the Caribbean Network of Fisherfolk Organisations (CNFO), and therefore contributes to the wider exploration by researchers and practitioners of inclusive and transformative learning approaches which can support collaborative sustainable development initiatives at local, regional and international levels. I situate my study within the 'Strengthening

Caribbean Fisherfolk to Participate in Governance' (SCFPG) Project which provides a clear stream of non-formal and informal learning opportunities related to particular regional project objectives.

#### **1.4 Establishing the 'Outlier'**

A significant challenge of exploring transformative learning approaches within the agricultural sector is that regional collaborative initiatives tend to be ineffective, weak and struggle to demonstrate impact and longevity. These initiatives are delivered through organisations which work inter-regionally, internationally, and nationally. Networks, clusters and project teams are often formed in the process and represent and include 'producers, agribusinesses and institutions that are engaged in the same agricultural or agro-industrial subsector, and interconnect and build value networks when addressing common challenges and pursuing common opportunities' (Galvez-Nogales, 2010 p. x). These may be formal or informal depending on the level of project funding. Reasons for failures of the networks and organisations to build sustainability and impact in the region are recognised and understood by stakeholders in the sector (Tikasingh, 2016).

There are, however, a small number of networks within the agricultural sector in the region which have avoided the trend of failure and I refer to these as 'outliers'. The Caribbean fisheries network is such an outlier. Gladwell defines an outlier as (2008 p2):

1. Something that is situated away from or classed differently from the main or related body
2. A statistical observation that is markedly different in value from the others in the sample

More broadly there has been limited consideration of why and how outlier networks succeed. Experts suggest that outliers may enable researchers to observe and apply practice, focus on adapting outlier principles as opposed to trying to replicate practice and improve understanding of current practice (IMD, 2013). Outliers have unique strategies which are grounded in the local environment and can offer an opportunity to highlight strengths which can be used constructively (Bullough Jr.,2012).



I believe that some attention should be given to the outliers in order to understand what they are doing that others are not, and to identify and highlight useful processes for knowledge sharing and transfer, and transformative learning. I scanned the collaborative networks in the region operating within the wider agricultural context and narrowed the field by reviewing evidence of successful network activity to identify such an outlier. My criteria for success were determined by visibility through scientific publications, project documentation and reporting, growth and development over a sustained timeframe, engagement of grassroots stakeholders at an international level and production of concrete outputs. The network selected for this case study is the Caribbean fisheries network which has been developed through formal structures and connections and facilitates knowledge exchange, cooperation, research informed activity and support for grassroots engagement.

### **1.5 Structure of the Thesis**

My thesis is presented in seven chapters. In Chapter Two I introduce and discuss the rationale for the use of CHAT and Transformative Learning within the theoretical framework. My framework embraces creative and new approaches to using the principles of CHAT and Transformative Learning. I highlight the non-interventionist application of CHAT and the use of CHAT as an analytical lens and conceptual tool. With regards to Transformative Learning, I discuss the focus on informal learning in the Caribbean fisheries network, knowledge transfer and knowledge sharing and the focus on transformative learning with regards to learning for sustainable development. This chapter underpins the importance and contextual relevance of the cultural, historical, and geo-political factors within the case study which are presented in Chapter Three.

Chapter Three presents a detailed overview of the cultural and historical development and transformations of the Caribbean fisheries network over several decades, as well as the geo-political and socio-ecological factors which impact the Caribbean region in terms of the marine ecosystem. The chapter establishes that transformative learning has been happening over a period of years and this narrative enables the transformations within the fisheries community to become clearer. In keeping with the principles of CHAT, I introduce the key organisations involved in the

Caribbean fisheries network and therefore those who had key roles in the 'Strengthening Caribbean Fisherfolk to Participate in Governance' case study. This chapter illustrates the many factors which are part of the 'wicked problem', but also provides evidence of work done over many years to build and sustain collaborative, transformative activity in a broader sense. This leads to an introduction to the 'Strengthening Caribbean Fisherfolk to Participate in Governance' (SCFPG) project which is the focus of this case study.

Chapter Four explains the rationale for the case study methodology. I identify my epistemology as being informed by Paulo Freire's emancipatory change and critical social theory. My ontology is derived by distilling aspects of other defined ontological positions which I present as a 'transformative ontology'. The rationale for the selection of the case study is discussed, as well as its contextualisation with the CHAT framework. The research design is presented and discussed which includes Phase 1 Interviews and Phase 2 Document Analysis. I also present my approach to data analysis and a summary of my key themes.

In Chapter Five I present my findings from the data collection and analysis. The key themes which emerge are 'learning by doing', 'role of support organisations', 'trust', 'establishing the motivation', 'responding to change', 'record keeping and documentation' and 'inclusive participation and decision-making'. The themes are presented alongside the interview and documentary data which are relevant and provided insight into addressing my research questions. The data is viewed through the lenses of CHAT and transformative learning which provide a richer interpretation and evaluation of how transformative learning, knowledge sharing and knowledge transfer is facilitated within the SCFPG project.

I discuss the key themes in Chapter Six in relation to the relevant literature and the theoretical framework. New perspectives emerge regarding how transformative learning is facilitated through informal learning approaches in the Caribbean fisheries network. The use of CHAT provides insight that extends beyond how the learning process occurs, and highlights how other wider aspects of the activity enable transformative learning within a grassroots community.

Chapter Seven presents some final conclusions and recommendations for future research. The application of the outcomes of the study to ESD, International Development and socio-ecological learning communities are also considered. Finally, I conclude with the academic contribution which this study makes regarding the inclusion of effective transformative learning strategies in informal and non-formal learning environments.

## Chapter Two – Theoretical Framework

### 2.1 Introduction

This chapter discusses the components of my theoretical framework – CHAT and Transformative Learning. I explain the main principles that underpin Cultural Historical Activity Theory (CHAT) (Engeström, 2008 and Yamagata-Lynch, 2010) and Transformative Learning (Mezirow, 2006; Tynjälä, 2009; Lotz-Sisitka et al, 2015; Peters and Wals, 2016) and how they are relevant and applied to my study. This chapter also justifies the use of CHAT and transformative learning as core elements of my theoretical framework which is used to explore the research questions and to provide an analytical lens for the study. I use CHAT because of the complex nature of the Caribbean fisheries sector, and the role that history, culture and the political landscape has played in shaping the sector of the present day. I use perspectives drawn from transformative learning because transformative learning approaches and indeed the notion of ‘transformation’ are the focus of my study. Finally, I present my theoretical framework which is applied to the SCFPG project and my study.

### 2.2 Cultural Historical Activity Theory (CHAT)

In this section, I discuss the development of CHAT and the principles which underpin CHAT. CHAT is a core component of my theoretical framework.

CHAT has emerged from Vygotsky’s and Leontiev’s work which considered the social and cultural context of learning and development (Cole, 1996; and Kaptelinin and Nardi, 2006) and at a later stage between work, learning and expertise (Engeström, 2008). Bearing in mind my earlier observations about the sociological aspect of the Caribbean fisheries network, and the importance of the local environment, culture and history, CHAT provides a relevant lens through which to conduct this study. This is because it offers, as Foot (2014 p329) acknowledges a ‘multi-dimensional, systematic approach that includes both psychological motives and all kinds of tools, as well as the always-present dynamics of power, money, culture and history, and enables researchers to analyse complex and evolving professional practices and engage in reflective research’.

Interactions between individuals are loaded with pre-established frames of reference which are grounded in historical, cultural and socio-economic contexts (Foot, 2014). Culture and history, which are naturally linked, shape people's values, their actions and their thoughts. Therefore, CHAT stresses the importance of contextualising what people do and think within historical events over time. The notion of 'transformation' is also inherent to CHAT and mediated activity (Paavola et al, 2004).

The first person to apply CHAT's main concepts, such as mediation and activity, to analyse work was Engeström (2001). To do so, he introduced the concept of an Activity System.

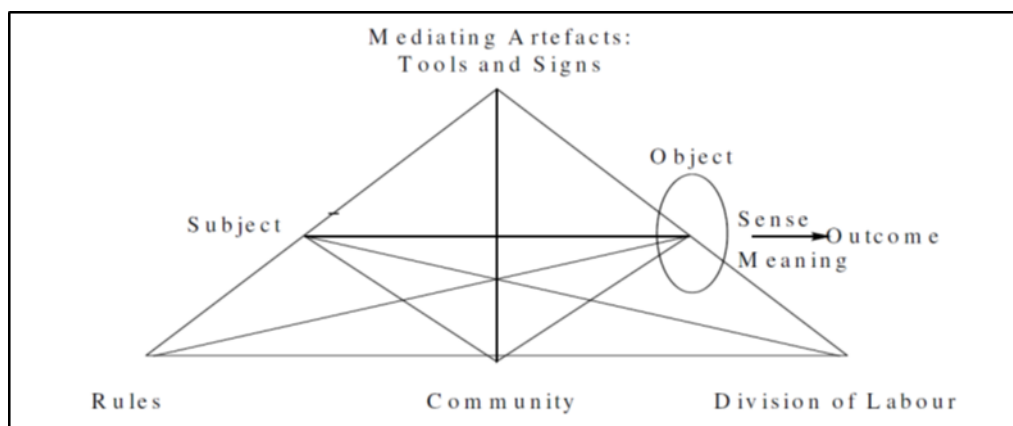


Figure 1: Engeström's Activity System (Engeström, 2001)

Engeström's concept of an Activity System retains Vygotsky's original emphasis on mediation and this is one of the key concepts in CHAT. Firstly, this relates to the way in which people use language and tools (books, software, etc.) as resources in their learning and development, and work practices. Secondly, mediation is influenced by people's historically and culturally formed values and predispositions.

In Engeström's activity system, the unit of analysis is collective activity in the context of community, division of labour and rules. Actions and the activity are viewed as distinct elements of the activity system or unit of analysis, in other words, 'a system possessing structure, inner transformations, conversations, and development' (Leontiev cited in Yamagata-Lynch, 2007 p455). The subject's actions relate to the context which is set out within the rules, community and division of labour, where the subject can be individual or a group (Cole, 1996). From a learning and development perspective, the object-oriented activity can change participants and their motives for participation, the social context of the activity and the activity itself. The object of the

activity is the purpose for participants to engage in the activity. The outcome is the desired goal of the activity. CHAT therefore provides a lens through which the transformations within the activity system as a whole are explored.

There are five principles which underpin Engeström's activity system (Foot, 2014). The first principle of CHAT is that the prime unit of analysis is a collective, object-orientated activity system which is mediated by artefacts. The second principle is that the activity system is a community of multiple voices, interests and perspectives. The third principle relates to time and historicity where activity systems change over long periods of time and need to be understood within the context of time, and the local historical context which underpin them. The fourth principle highlights the nature of contradictions within and between activity systems and leads to the fifth principle, the possibility for expansive transformation within an activity system.

The object is of utmost importance as it directs the activity and determines the actions of the subject. The object is characterised by its purpose and associated motives which lead to a desired outcome. The way in which the object is perceived by the subject(s) can be different and embedded in different cultural, historical and economic contexts and layers (Foot, 2014).

The collective nature and multiple viewpoints of the community within an activity system relate to interactions with other people who are focused on the same object-orientated activity (Gretschel et al, 2015). The community context and therefore division of labour and rules are important when considering the object and ultimately the outcome of the activity.

In terms of historicity, within the context of this thesis, the retrospective and longitudinal stance of the case study fully takes account of the implication of time and historical developments and changes over time. In this case study this is focused between 2013-2016 for the SCFPG project, but I also establish the evolution the SCFPG project from a historical and cultural viewpoint in Chapter 3.

The fourth principle highlights the nature of contradictions within and between activity systems (Foot, 2014). Contradictions arise from tensions which exist within or between activity systems and can be a source of change, learning and development. It is these tensions and contradictions which lead to transformation and expansion of

the activity system whereby participants of the activity widen their perspective and reconceptualise the object of the activity.

The fifth principle relates to the possibility of expansive transformation within the activity. In order to achieve the last principle, Engeström uses an interventionist methodology called the Change Laboratory in order to encourage expansive learning and object transformation (Engeström, 1987; Sannino, 2011; Virkkunen & Newnham, 2013). Since this study is not applying an interventionist methodology, I cannot use the CHAT theory of expansion to explore transformation within my study. For this reason, I underpin the exploration of transformation within the activity system with transformation learning theory.

Instead I present a non-interventionist retrospective longitudinal case study by using the historical developmental account of the Caribbean Fisheries sector from the 1980s to the emergence of SCFPG Project, to provide insights into naturally occurring and organic tensions and contradictions which have transformed the activity, the subjects, and inevitably the object over time.

Though a non-interventionist use of CHAT is less common, other researchers have also employed such an approach and have used CHAT as an analytical tool to explore complex human interactions in order to make sense of the lived experiences of participants of an activity (Yamagata-Lynch, 2007). This approach applies the triangular schema of the second (Figure 1) and third (Figure 2) generation representations of activity theory to analyse tensions and contradictions of the activity system. The third-generation activity theory has been useful in examining work processes and organisational development (Daniels and Warrington, 2007), and networks of interacting activity.

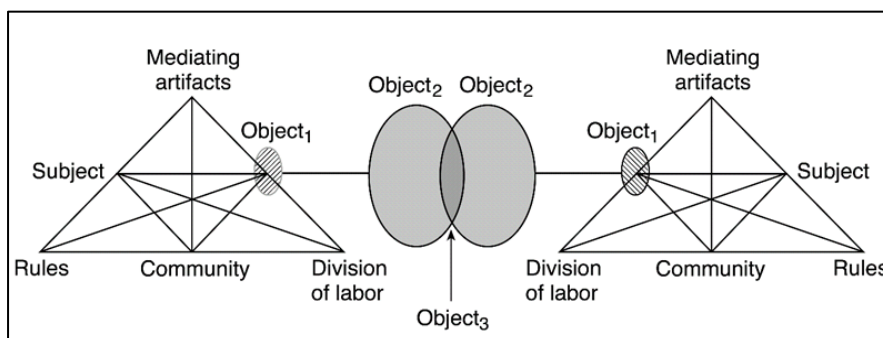


Figure 2: Third generation Activity System showing objects interacting.

I apply activity systems analysis to reflect processes of organisational change, to highlight how tensions and contradictions can encourage development and learning, and to capture organisational learning in a historical and social context (Barab et al, 2002; Roth and Tobin, 2002; Yamagata-Lynch, 2003). I also use CHAT to better understand how conditions for learning are created and what is learnt (Edwards, 2005).

For this study, the activity system will be used as a conceptual or thinking tool (Aas, 2014) in order to understand how learning in particular has been transformative to the participants of the Caribbean fisheries activity system. CHAT has been increasingly used to investigate practice-based learning and contexts, particularly in complex settings (Foot, 2014), which further strengthens the rationale for employing it in this study.

### **2.3 Connecting Transformative Learning and CHAT**

My interest in researching the strengthening of the fisherfolk organisations and their participation locally, regionally and internationally requires me to think about how people learn through their practice, networks and engagement to make changes in a positive and sustainable way. The use of CHAT as theory establishes the relationship between context and practice through the activity system analysis approach and allows me to analyse the context of the Caribbean fisherfolk networks and sector. To focus on practice-based learning in context I have chosen Transformative Learning where this refers to:

experiencing a deep, structural shift in the basic premises of thought, feelings, and actions...a shift of consciousness that dramatically and irreversibly alters our way of being in the world...that involves our understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power in interlocking structures of class and gender. (O'Sullivan, 2003 p203).

It is also necessary to conceptualise transformative learning as a process of change both in the learner's thinking and participation within a community (Tynjälä, 2009) because engagement within the fisheries network is a key component of this study. Considering the many ongoing debates related to Transformative Learning Theory



(Dirkx, 1998; Mezirow, 2006; Newman, 2012; Howie and Bagnall, 2013), for the purpose of this study, the phrase ‘transformative learning’ will be used as a conceptual metaphor (Howie and Bagnall, 2013). Mezirow’s transformative learning is informed by and has resonance with Paolo Freire’s (1970) emancipatory conscientization and critical pedagogy but Mezirow views transformation as individual centred, whereas Freire’s focus is on social transformation. By combining the CHAT lens with Mezirow’s transformative focus, I highlight transformative learning in the activity system at the individual and social/organisational levels thereby extending beyond Mezirow’s individual perspective to include that of the community as well.

To guide this exploration of transformative learning, reference is made to the phases of transformative learning to highlight where these processes have occurred in the activity system. I believe there are parallels between the notions of ‘tensions and contradictions’ of the activity system, and ‘disorienting dilemma’ of transformative learning. Both have the effect of initiating perspective transformation.

Table 1: 10 Phases of Transformative Learning (Calleja, 2014 p130)

Phase 1	Disorienting dilemma
Phase 2	Self-examination
Phase 3	Critical assessment of assumptions
Phase 4	Understanding that others have had similar experiences and feelings
Phase 5	Explorations of new actions, relationships and roles
Phase 6	Planning a new course of action
Phase 7	Gaining knowledge and skills to implement new course of action
Phase 8	Testing new roles
Phase 9	Gaining competency in new roles
Phase 10	The new perspective is embedded within the individual

Since the context of this study has relevance to wider socio-ecological issues and sustainable development goals, exploring transformative learning through the lens of CHAT incorporates the complex dynamics and elements of the activity system.

### 2.3.1 Transformative Transgressive Learning

In this section I introduce transformative transgressive learning (Peters and Wals, 2016) as a hybrid of transformative and social learning which has some relevance to socio-ecological challenges and sustainable development. 'Transgressive learning is about exposing marginalization, exploitation, dehumanization and other forms of systemic unsustainability, and disrupting the powers and structures that work towards maintaining it.' (Peters and Wals, 2016 p185)

Transformative transgressive learning, which is not a well-defined learning theory and can also be used here as a conceptual metaphor, pushes past the individual cognitive principles of transformative learning to learning which challenges Western hegemonic power structures which have become entrenched and normalised in practice. It brings together the elements of cognitive transformations, social action and agency, and intends to facilitate collective transformation of human activity (Lots-Sisitka et al, 2015). This extension of the transformative learning perspective is useful in order to understand the institutional, social, and conflictual dimensions of learning required to change practices, mindsets and the knowledge base to respond to socio-ecological challenges.

Boström et al (2018) highlights gaps in the literature as it relates to learning for sustainable development, with specific focus on the potential to use the transformative learning perspective to more comprehensively address the neglected aspects of learning for sustainable development. The gaps include a focus on individual learning rather than the collective or organisation, a disregard for institutional structures and boundaries and therefore a lack of attention to power, social and political elements, a narrow view of change related to resilience and adaptation with a need to consider more fundamental epistemological change in terms of new beliefs, knowledge and perspectives, inertia to change through institutional, social, cultural and political structures, and the unequal distribution of knowledge related to the same power structures. Boström et al (2018, p13) conclude by suggesting that 'that there is need for a theoretical perspective and approach providing a deeper understanding of the societal, contextual aspects of learning, in particular institutional structures, social practices and conflicts on macro, meso, and micro levels'.

Where global environmental challenges are increasing, Transformative transgressive learning is conceptualised as a radical learning approach to finding solutions which may be new or lie in old or local/traditional/indigenous knowledge. There are a small number of studies which have emerged through the use of CHAT and participatory action research which are highlighted as case studies in 'T-Learning' (transformative transgressive learning), and there is a need expressed to cultivate appropriate pedagogies towards this approach to learning (Lots-Sisitka et al, 2015 and Peters and Wals, 2016). It is also important to consider pedagogical approaches in the wider community and situated learning environments which includes informal and non-formal learning contexts of development work, so that change can be bottom-up rather than top-down.

### **2.3.2 Knowledge Sharing and Knowledge Transfer**

This section defines knowledge sharing and knowledge transfer because these are key aspects of my research questions.

There is an acknowledgement in the knowledge management literature that no firm definition exists of knowledge sharing and knowledge transfer (Paulin and Suneson, 2012), and that these two terms have sometimes been used interchangeably. I use the following definitions from The Encyclopaedia of Knowledge Management (Schwartz, 2006 p498):

Knowledge Sharing - "The exchange of knowledge between and among individuals, and within and among teams, organizational units, and organizations. This exchange may be focused or unfocused, but it usually does not have a clear a priori objective."

Knowledge Transfer - "The focused, unidirectional communication of knowledge between individuals, groups, or organizations such that the recipient of knowledge (a) has a cognitive understanding, (b) has the ability to apply the knowledge, or (c) applies the knowledge."

I recognise the importance of knowledge and learning particularly in the context of development and humanitarian work which has been also highlighted by Ramalingam (2006). The knowledge, which is shared and transferred, can be categorised as know-how (practical/habitual), know-why (theoretical/scientific), and

know-what (strategic/encoded) (Sanchez and Heene, 1997). In the context of international development and sectors such as agriculture and fisheries, I would also add indigenous/traditional/local knowledge which is increasingly being acknowledged as important in the management and sustainable conservation of complex ecological systems (Tengö et al, 2017). Within the context of development organisations and networks the focus should be on facilitating knowledge sharing as opposed to transmitting knowledge since 'it is the processes through which knowledge is shared that determines whether organisational learning occurs and therefore, whether a knowledge sharing process was a success.' (Cummings, 2003 p4).

## **2.4 The Theoretical Framework**

I present the theoretical framework for my study in this section which uses the lenses of CHAT and transformative learning to address my research questions.

1. The principles of CHAT highlight the cultural and historical context of learning establishing the wider factors which contribute to transformative learning, These wider factors are embedded within the subject, community, division of labour and rules of the activity system.
2. The activity system analysis approach establishes the pedagogical tools and practices within the network. These are embedded within the mediating tools / artefacts of the activity system,
3. The phases of transformative learning are used to highlight how practices of knowledge sharing and transfer facilitates the transitions through the phases. This is connected to the tools within the activity system and the structure of the activity which promoted opportunities for transformative learning.

The following graphic illustrates my theoretical framework which has been employed in relation to the CNFO and the SCFPG project.

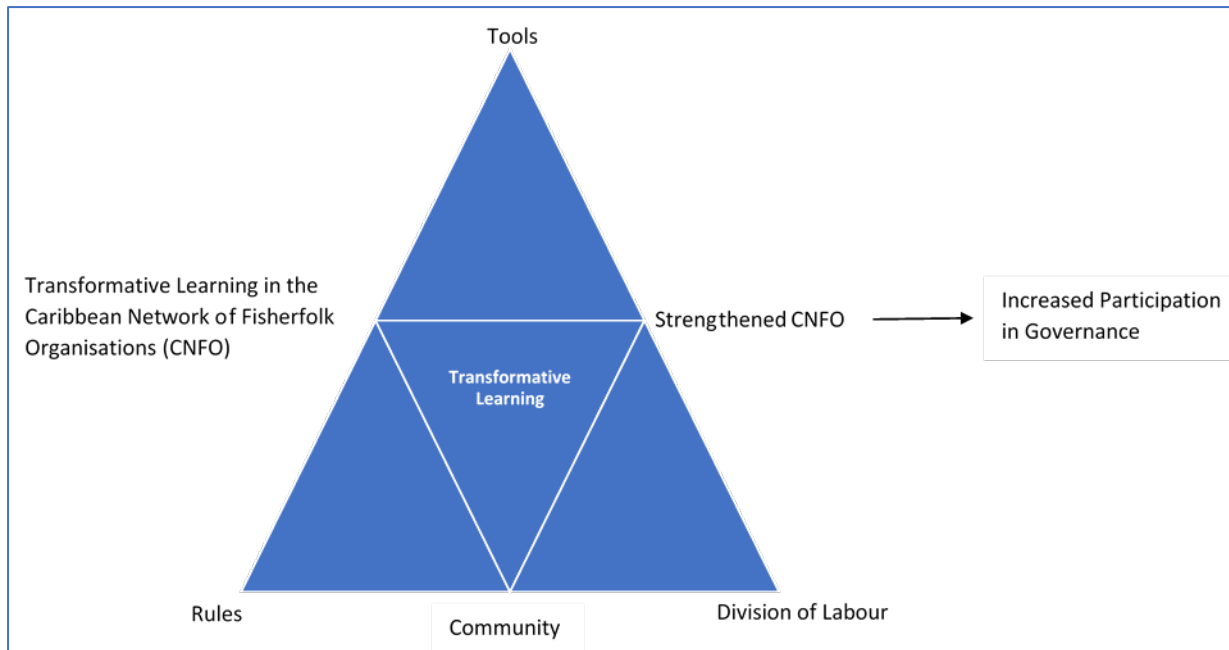


Figure 3: Theoretical Framework for this study

In my study, the subject of the activity is transformative learning in the CNFO, the object is the motive which is to strengthen the participation of fisherfolk in fisheries governance in the Caribbean, and the outcome is greater participation of fisherfolk in governance issues related to the Caribbean fisheries sector. I focus on the various elements of the CHAT activity system, in order to understand how they promote transformative learning within the informal learning environment of the SCFPG project, even though it was not conceptualised as a 'learning project' (Poell, 2006).

## 2.5 Conclusion

The main conceptual tools and theories informing this study have been discussed in this chapter. I am employing an eclectic theoretical framework which uses the first lens of CHAT as a non-interventionist, analytical and conceptual tool; the second conceptual lens of transformative learning is superimposed on the CHAT framework in order to sharpen the focus on how transformative learning occurs and how mediating tools enable this. In the next chapter, I discuss the cultural, historical, political and socio-ecological aspects of the Caribbean fisheries network, the development of the SCFPG project, and focus on what transformative learning has occurred within the network over time prior to the SCFPG project. I use the phases of transformative learning to outline the changing perspectives of the Caribbean

fisherfolk network over time. This therefore establishes that transformative learning is happening and enables me to then focus on how processes facilitate this within the parameters of this study.

## Chapter Three – Transforming the Caribbean Fisheries Network

### 3.1 Introduction

This chapter provides the cultural and historical context for the Caribbean Network of Fisherfolk Organisations (CNFO) which is the subject of the activity system in this case study. The management of Caribbean marine resources is highly complex, and this chapter uses the principles of CHAT to present an overview of the interconnected complexities of the marine ecosystem and the socio-political environment within which the activity system is situated. I establish the ‘rules’ which underpin the historical activity system and the impact these have had on the transformation of the Caribbean fisheries network of organisations. I introduce the ‘community’ of organisations which form the network working across the region and internationally, I outline the ‘division of labour’ in the activity system by highlighting their roles and the way in which they have already worked to transform the engagement and participation of the fisherfolk in development projects. I also illustrate and highlight that transformative learning has been happening over time, even if it has not previously been described in this way. The phases of transformative learning are used to make this clearly visible.

I introduce the ‘Strengthening Caribbean Fisherfolk to Participate in Governance’ (SCFPG) project at the end of this chapter. The SCFPG project is the setting for transformative learning activity within which I address my research questions.

### 3.2 The Caribbean Fisheries Network – Viewed through the CHAT lens

In the following sections, the principles of CHAT are used to contextualise and view the Caribbean fisheries activity.

#### **CHAT Principle 1: Understanding the collective, object-oriented activity system and the mediating artefacts (environmental, geo-political, cultural and sociological)**

This section provides an overview of the many components of the wider Caribbean Fisheries activity system within which the SCFPG project was delivered, in order to

illustrate the collective and the different types of mediating artefacts which influence development and transformation of the activity.

When considering the wider Caribbean region in regard to its status as a Large Marine Ecosystem (LME), there are several aspects that add to the complexity of the system and therefore the challenges which the region has faced with respect to its role in natural resource management. LMEs are large regions of the ocean (200,000 km<sup>2</sup> or larger) which supply humans with natural resource commodities, seafood, recreation, waste disposal and other services (Sherman and Alexander, 1986). There are 66 LMEs globally and these are coastal areas of high productivity generating US\$28 trillion (approximately £21 trillion) to the global economy (IOC-UNESCO and UNEP, 2016). LMEs are of significant importance and require attention when working towards achieving the SGDs. The majority of marine activity such as fishing, aquaculture, tourism, shipping and petroleum exploration and extraction occurs in these areas, and they are particularly vulnerable to overexploitation and pollution (Wang, 2004). They cross national boundaries and are a shared resource which require a shared management approach.

As an LME, the Caribbean has the highest number of state entities – 45 overall, whereas only 3 other LMEs have more than 10. That indicates the number of marine boundaries which exist in the region. Notably, there are also a higher number of small island developing states (SIDS) in the Caribbean LME (CLME) than in other LME regions in the world. This has strengthened the need for a collaborative approach with regards to Caribbean fisheries resource management.





Figure 4. – The Wider Caribbean LME (Parsram and McConney, 2011)

Additionally, there are differences around culture (ethnicity and language), ecology, politics, availability of technology, scales of economy and economic development (Mahon et al, 2007). The diversity of small-scale fisheries makes it an example of a complex adaptive system (CAS) and social-ecological system (SES) (Mahon et al, 2008). Collaborative activity is therefore difficult to manage and encourage within complex environments such as this. From a CHAT perspective, this creates diversity also in terms of mediating artefacts, division of labour, rules, and community and therefore establishes several sources of tensions within the activity system.

In the Caribbean, sharing of marine resources – exploited and non-exploited – across different marine borders has added to the social-ecological complexity (Chakalall et al, 1998). Considering ecological systems within the context of CAS has real implications for how sustainable approaches and management can lead to resilience amid changing environmental impacts, climate change, and human interference. The concept of resilience has been an ongoing theme in the ecological literature and has also been increasingly used with regards to SES, and transformative activity in sustainable development (McConney and Phillips, 2012).

In the late 1990s, there was a recognition by institutions such as the Food and Agriculture Organisation (FAO) that new approaches were needed to address the conservation and sustainable use of natural resources and their management. This

included the management of fisheries which had normally been located within the agricultural government ministry remit. With regards to fisheries, this shift was preceded by the United Nations Convention on the Law of the Sea of 1982 (UNCLOS) which gave coastal states the authority to manage fisheries within their jurisdiction. Following this, countries needed to review and revise their legislation, and the FAO supported CARICOM countries to align their fisheries legislation with UNCLOS (Chakalall et al, 1998). Other international codes and norms which CARICOM subscribed to included the 1995 UN Fish Stocks Agreement, the FAO Code of Conduct for Responsible Fisheries, and UNCED's Agenda (Haughton et al 2004). From an activity theory perspective, such laws and agreements have established underpinning rules of the wider international activity system and have clearly encouraged some transformation of Caribbean Fisheries as a smaller regional activity system involved in the management of its own fisheries resources.

The small-scale fisheries sector was and still is an important (though economically small) sector in the Caribbean and makes a valuable contribution to livelihoods, food and nutrition security, and health and wellbeing with the region. In the 1990s, there was a sense that the region lacked the capacity, expertise, skills and resources to fully and effectively implement fisheries management, conservation and governance. The issues facing fisheries governance for the Caribbean Community (CARICOM) were identified and largely fall under the following overarching areas (Chakalall et al, 1998):

- Institutional arrangements and constraints
- Monitoring, control and surveillance
- Information management and dissemination

The responsibility for fisheries management and development in the wider Caribbean is very complex with many different organisations active in the region. This impacted on the activity system with regards to the community, division of labour and rules and was another factor which encouraged of transformative activity.

Chakalall et al (1998) concluded that there was a need for institutional reform to better manage shared marine natural resources, the development of partnerships with fisherfolk organisations and other non-governmental organisations, the

strengthening and building capacity within organisations to participate in the co-management of resources, and for the development of stronger linkages with international and similar organisations elsewhere in the world. Furthermore, it was highlighted that information management, sharing and dissemination would be critical to strategic and collaborative planning for the sector. The need to involve the primary stakeholders, that is, the fishers in the management of resources and in setting priorities was also made clear.

**CHAT Principle 2: The activity system is a community of multiple voices, interests and perspectives**

This section identifies the key organisations who are involved in the SCFPG project. I focus on the sociological aspect of the SES rather than the ecological and the network of organisations who have worked with the fisherfolk to strengthen their participation in the management of fisheries in the region. These include the Caribbean Regional Fisheries Mechanism (CRFM), University of the West Indies - Centre for Resource Management and Environmental Studies (UWI-CERMES), Caribbean Natural Resources Institute (CANARI), and the Caribbean Network of Fisherfolk Organisations (CNFO). Each of these organisations plays a significant role and is part of the community that constitutes the SCFPG project.

**3.2.1 Caribbean Regional Fisheries Mechanism (CRFM)**

The Caribbean Regional Fisheries Mechanism (CRFM) was established in 2002 by intergovernmental agreement as a body of the CARICOM and was expected to enhance regional cooperation in the sustainable management of shared marine resources, to act in an advisory role to national governments in these matters, and to contribute to developing scientific, technical and institutional capacity in the region. CRFM became the successor of the CARICOM Fisheries Resource Assessment and Management Programme (CFRAMP) and the CARICOM Fisheries Unit (CFU). CFRAMP was established in 1991 to 'promote sustainable use and conservation of the fisheries resources of CARICOM member states' (Houghton et al, 2004 p352) and the CFU was to oversee the implementation of it. The process of establishing CRFM started in 1996 and after a series of technical workshops and working group meetings involving the CARICOM Ministerial Council for Trade and Economic

Development (COTED) and the CARICOM Legal Affairs Committee, CRFM was inaugurated in 2003 in Belize (Houghton et al, 2004)

CRFM has a very clear set of functions and established priority areas. To achieve its goals and objectives CRFM has a core structure which has three main components: The Ministerial Council, the Caribbean Fisheries Forum and The CRFM Secretariat (See Figure 5 below). The Ministerial Council has the highest policy and decision-making power, followed by the Fisheries Forum and finally the Secretariat.

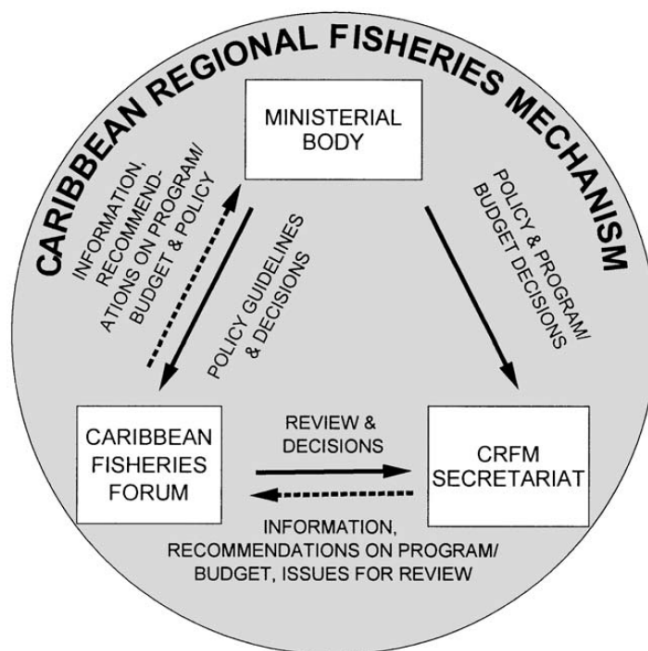


Figure 5 – CRFM Structure

The wider network of stakeholders with whom CRFM interacts is complex. The CARICOM commitment to the CRFM demonstrated the regional approach to fisheries management, and through a lengthy negotiating process it also demonstrated their political, financial and technical support for the initiative with collective benefits, as opposed to individual national interests. This, in itself, was an achievement for CARICOM and the region.

Following the establishment and formalisation of CRFM in 2003, further work began to explore the role of fisherfolk organisations nationally and regionally. Within the CRFM Forum, fisheries stakeholders engaged as full members, associate member or observers. Fisherfolk organisations were observers to the Forum. However, at

local and national levels there was a lack of capacity and this limited direct engagement with the fisherfolk (McConney and Phillips, 2012). Subsequent work therefore aimed to address this in order to develop the fisherfolk engagement, capacity and status within the regional strategies for management of marine resources.

### **3.2.2 University of the West Indies - Centre for Resource Management and Environmental Studies (UWI-CERMES)**

For several decades, UWI-CERMES has been closely involved in the shaping of the management of fisheries within the Caribbean region. Based in Barbados, its main focus is the sustainable natural resource management of the Caribbean basin and beyond. UWI-CERMES is a major contributor to fisheries science data and has worked to disseminate information back to the stakeholders with an aim to ensure development, progression and enhancement of practice.

In 1998, Chakalall et al indicated that there was limited capacity and research within regional academic institutions in fisheries and other associated subjects. However, since then UWI-CERMES has established itself in the region as a key academic resource and has engaged in a meaningful way across all stakeholders, including working closely with CRFM, FAO, CANARI and the CNFO. It has encouraged critical thinking, a bottom-up approach and solutions that are tailored for the region which is faced with many unique challenges. Researchers in UWI-CERMES have also published their work in academic journals and shared experiences of the region through their engagement with the UN, EU and other global organisations working in this sector.

### **3.2.3 Caribbean Natural Resources Institute (CANARI)**

CANARI is a non-governmental organisation which was established in 2001 and headquartered in Trinidad. It is focused on natural resource management, development and livelihoods in the Caribbean region and it encourages a participatory and partnership approach within its projects. It is another key organisation which has played a role in the capacity building of fisherfolk organisations in the region, particularly in the 'Strengthening Fisherfolk to Participate in Governance' project (2013 – 2016). CANARI embed the UN's SDGs in their

projects and their aim is to empower communities, reduce poverty, improve livelihoods, work towards gender equality and address issues impacted by climate change.

### **3.2.4 Caribbean Network of Fisherfolk Organisations (CNFO)**

Fisherfolk organisations were introduced to the English-speaking Caribbean in the 1960s and 70s during British Colonial rule. There were different histories and evolutionary pathways but there were some common features for their introduction (harvest, gear, fuel supply, processing etc). However, these early FFOs had limited success and many failed for a variety of reasons. Older generations of fishers remember those times and largely tended to recall the failures rather than the successes. Steps were taken by researchers and technical experts in the region to understand the history of Caribbean fisherfolk organisations in order to understand how experiences and events of the past could potentially impact new initiatives (McConney, 2007).

This was done through a bottom-up participatory approach. CFRM conducted a needs assessment in 2004 with fisherfolk which confirmed that there was a need to develop a network of fisherfolk organisations for the region. A meeting in 2005 subsequently produced a 'Strategy and Medium Term Action Plan for the Institutional Strengthening of Regional Fisherfolk Organisations 2006-2010' (CTA/CRFM/CARDI, 2005). This strategy aimed to address particular issues highlighted in the needs assessment and focused on capacity development, information sharing, skills development, and the building of critical mass. Linked to this, a project was implemented between 2006-2008 by the CFRM Secretariat for the 'Development of Caribbean Network of Fisherfolk Organisations'. It was funded by the ACP (Africa-Caribbean-Pacific)-EU (European Union) Technical Centre for Agricultural and Rural Co-operation (CTA) based in The Netherlands with the purpose of developing institutional capacities of fisherfolk organisations locally, nationally and regionally. The overall objective was to improve income and standards of living of fisherfolk and improve sustainable use of fishery resources in the Caribbean (McConney, 2007).

McConney and Phillips (2012) indicate that most fisherfolk organisations are small (less than 100 members), locally situated associations or cooperatives, which are

mainly made up of small boat owners and fishermen and may also include suppliers of gear and equipment, or those marketing the catch. Interaction with government agencies is necessary for fisherfolk who wish to sustain their livelihoods, so there is a need to have strong national and regional representation and networks. Over the years a great deal of collaborative planning and consultation has been done with researchers, the CRFM project staff and the fisherfolk in order to develop a network design that would benefit the complex Caribbean context where there are issues of multiple boundaries, ecologies, sociologies, and governance. The aim ultimately was to create a model that would have adaptive capacity and resilience embedded within the network structure. A multi-cluster model emerged with central nodes at the sub-regional hubs. Clusters are based on similar fisheries resources and geographical locality which reflects the socio-ecological system within the region (FAO, 2013). Further to this, the network has multiple levels from local, to national, to sub-regional and finally to regional (See Figure 6 below).

The CNFO was a direct outcome of the project to strengthen regional fisherfolk organisations. Through sustained consultation with primary and national fisherfolk organisations (PFOs and NFOs) progress was made towards the shaping of the vision and mission of the CNFO which emerged in January 2009.

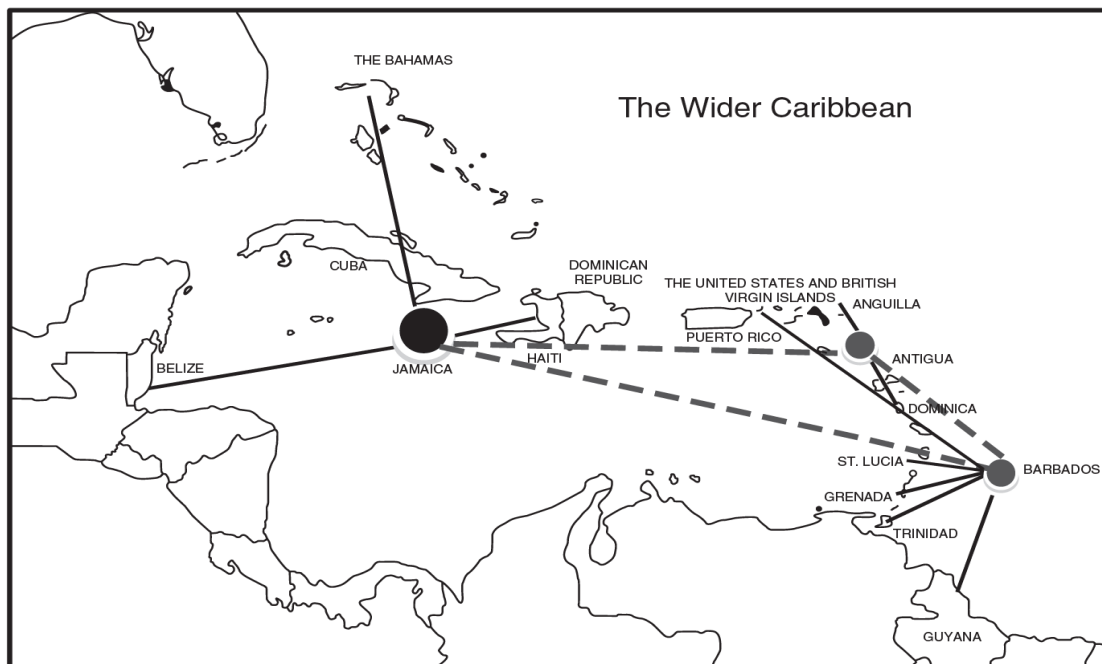


Figure 6 – Regional fisherfolk decentralised clusters

CNFO Vision:

*Primary, national and regional Fisherfolk organization with knowledgeable members collaborating to sustain fishing industries that are mainly owned and governed by Fisherfolk who enjoy a good quality of life achieved through the ecosystem based management of fisheries resources (CNFO, nd).*

CNFO Mission:

*To improve the quality of life for Fisherfolk and develop a sustainable and profitable industry through networking, representation and capacity building (CNFO, nd).*

The CNFO is composed of national organisations from Antigua and Barbuda, the Bahamas, Barbados, Belize, the Commonwealth of Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

Currently, the CNFO has partnerships with many organisations and are part of a community which includes CANARI, UWI-CERMES, CRFM, CTA, FAO, the Commonwealth Foundation, Gulf and Caribbean Fisheries Institute (GCFI), and the United Nations Environmental Programme (UNEP).

### **3.3 Transformative Learning - Changing perspectives in Caribbean Fisheries**

The following section is underpinned by the further three principles of CHAT:

**CHAT Principle 3: Activity systems need to be understood within the local historical context which underpin them, time and historicity**

**CHAT Principle 4: Contradictions and tensions arise within and between activity systems which lead to transformation / expansion**

**CHAT Principle 5: Activity systems possess the ability to transform and expand through time**

In addition to applying the principles of CHAT, I also illustrate the phases of transformative learning for the Caribbean fisheries community over several decades.



This section reflects the changing perspectives of stakeholders and individuals within the region in the context of CHAT and transformative learning.

### **Phase 1 – Disorienting dilemma**

The historical account of the key organisations and their development in the region which was previously outlined suggests that the initial ‘trigger’ for the process of change was the introduction of the United Nations Convention on the Law of the Sea of 1982 (UNCLOS), the 1995 UN Fish Stocks Agreement, and FAO Code for Responsible Fisheries. Coastal states became responsible for managing their own fisheries resources themselves. For the Caribbean, this meant that legislation had to be reviewed in order to align with the UNCLOS. The region received support from the FAO in order to achieve this.

### **Phase 2 – Self-Examination**

This major event led to the need to reflect on and assess the new circumstances. The evidence of such reflection can be found in published documentation from various authors including Chakalall et al (1998), Houghton et al (2004) and CRFM (2007).

### **Phase 3 – Critical assessment of assumptions**

Chakalall et al (1998), Houghton et al (2004) and CRFM (2007) present a critical analysis of the issues which were affecting the CARICOM as a result of the changes to international laws and agreements in the 1980s and 1990s. The analysis focused on aspects which needed to be addressed in terms of fisheries governance. The authors were from the region and involved in fisheries in different capacities and were well placed to undertake this review given the UNCLOS and its implications. The authors presented suggestions for action and initiated a process of reform within the sector. The focus was on institutional reform which would lead to more effective resource management, building partnerships from the local to the international organisations, strengthening the fisherfolk organisations in the region and capacity building to foster engagement. The review was comprehensive and involved all stakeholders including the public and private sectors, non-governmental organisations, support organisations, academic and research institutes. Lack of

expertise, specific knowledge and skills were also highlighted as areas where development was needed, across all stakeholders.

Strengthening of the fisherfolk organisations and bringing their voice 'to the table' was viewed as critical as they were considered to be the stewards responsible for managing the fisheries resources. Research was conducted to better understand the underlying issues for fisherfolk and the barriers to communication, knowledge sharing, collaboration and partnership (McConney, 1997). Assessment of the fisherfolk's issues and feelings were important to understand how mobilising this group could be effectively achieved so they could become more actively engaged in fisheries governance, that is, to understand mindsets and motivations for participation. Early fisherfolk organisations or cooperatives were a hangover from the British colonial period and they served many purposes. McConney (1997, p1) noted:

Older fishers remember the early cooperatives well. In particular they remember the fact that many of them failed in many places after only a few years and for many different reasons.... Although the scenarios of the past were not always gloom and doom, people remember the failures clearer than the successes. Some failures were very personal disappointments.

Some of the reasons given for failures also raised issues of trust, such as financial mismanagement, and competing government programmes. Funding was a big issue, as was support from other agencies. At the time of the assessment, considering the many negative perceptions from the fisherfolk, those individuals and agencies working towards the goal of engaging the fisherfolk as stakeholders in fisheries governance needed to establish an approach that would rebuild trust and create an awareness of the changing global challenges, the impact on the region and therefore the impact on the fisherfolk themselves.

#### **Phase 4 – Understanding that others have had similar experiences and feelings**

Chakalall et al (1998) included recommendations for an approach to the reforms suggested by considering what had been done in other fishing communities elsewhere in the world, specifically Southern and Eastern Africa and Southern Indian Ocean. The report was outward looking in that the authors sought perspectives from

their peers in the international community and this informed the development of the approach adopted by the key regional actors at the time (at institutional level). It is also interesting that Mahon et al (2008) looked beyond the context of fisheries to find models that might work in developing new perspectives on governance of fisheries. It is here that they considered the role of CAS in fisheries in order to generate new thinking and potential application of those ideas.

The Caribbean region did present with a unique set of challenges largely due to the complexity as discussed and for that reason understanding what others were doing in regards to global challenges certainly informed thinking and the learning process, but it was also necessary to look inwards in order to find new governance structures that would meet the needs of the region.

### **Phase 5 – Explorations of new actions, relationships and roles**

Researchers applied complex systems theory and social network analysis in order to identify effective strategies for the collective management and governance of common resources such as fisheries (Parsram, 2007; Parsram and McConney, 2011). These methods of investigation had never been applied to Caribbean Fisheries before, so this was certainly innovative and creative. In terms of learning metaphors, this correlates to the knowledge creation metaphor which extends beyond the participation metaphor. Both metaphors could be applied here as learning was not just socialising a community to existing practice (participation metaphor) but saw the development of new practices as well (knowledge creation metaphor) (Tynjälä, 2008).

I believe the time given to these activities was important, as it allowed greater consultation, research, and partnerships to evolve in a way that would best meet the specific needs of the Caribbean. It enabled stakeholders to better define their roles with regards to fisheries management and governance, and to establish what actions would be required to make progress.

### **Phase 6 – Planning a new course of action**

What emerged from the collective evaluative activities was a regional project on 'Development of Caribbean Network of Fisherfolk Organisations' which ran from September 2006 to July 2008. The project briefing note was clear and comprehensive, addressing the key aspects of the 'direction of travel', short-term and longer-term aims and objectives for such a regional network. The project was managed by CRFM and its Secretariat, and the funding was provided by the CTA based in the Netherlands. The project brief outlined actions, established where new partnerships could be forged and old ones strengthened, and outlined the roles of the stakeholders in the process.

### **Phase 7 – Gaining knowledge and skills to implement new course of action**

The activities included a series of national consultations to launch National Fisherfolk Organisations (NFOs), sensitisation campaigns on the need for NFOs and a Regional fisherfolk organisation (RFO) across key islands in the region including Haiti and Suriname, Train the Trainer workshops for Fisheries Extension officers, and developing effective communication and knowledge sharing practices.

McConney (2007) highlighted the principle of learning by doing and embedding good and bad experiences into institutional memory so that the fisheries community could adapt and build better and more resilience into institutions. The new course of action was planned and this plan was explicit in setting a new trajectory, making it clear that though previous work would be referenced, there would not be a duplication of work previously done. An action plan was prepared (CTA/CRFM/CARDI, 2005) which addressed the specific recommendations of the needs assessment and four projects profiles were developed for achieving specific goals. The fisherfolk organisations were included in the planning, monitoring and implementation of the action plan.

The initial working group which developed the action plan and strategy made a key recommendation at this stage that a participatory approach should be adopted by CRFM and the national fisheries associations through the implementation and engagement of the project plans. This suggested that organisations were learning new approaches to partnership working from each other. This collaborative

relationship from the grassroots organisations to those working on the international level would be instrumental in developing the relational, cognitive and structural dimensions of social capital (Nahapiet and Ghoshal, 1998; Inkpen and Tsang, 2005; Kwon and Adler, 2014).

The four projects were:

- Formation and Strengthening of Fisherfolk Organisations
- Creation and Expansion of National Membership of the Caribbean Network of National Fisherfolk Organisations
- Strengthening of the Caribbean Regional Network of National Fisherfolk Organisations: Regional and Extra Regional Expansion (2007 - 2008)
- Organisation Review and Network Stabilisation (2009)

The action plan and strategy for the development of the regional fisheries network outlined various training activities and workshops which occurred between 2005-2009. These were aimed at building knowledge and skills in specific areas which would ensure the aims of the overarching and sub-projects could be successfully achieved. These training activities focused on areas of weakness as identified in the needs assessments and previous research conducted regionally (CRFM, 2007; McConney, 2007).

Communication skills 'know-how' was viewed as an area requiring major improvement since it is so vital to effective information and knowledge sharing, education and learning, capacity building, negotiation, networking and conflict management. It was therefore a key area for educational and skills development for fisherfolk and fisheries officers across the region (McConney, 2007). In the Caribbean region digital record keeping and project documentation has been notoriously poor, as was highlighted in my IFS (Tikasingh, 2016). However, the Caribbean Fisheries organisations involved in the development of the CNFO such as CRFM, UWI-CERMES and CANARI have not only reported on activities meticulously but have also ensured that there is a public digital record of these activities, thus building and maintaining institutional memory with respect to work done in the region. There were seven national consultations, a regional workshop to launch the regional organisation, a Training of Trainers workshop for fisheries extension

officers, and a training workshop on management, communication and advocacy for the fisherfolk organisations.

Through this training cycle, stakeholders were brought together at various times over 2 years from across the region, and included fisherfolk, fisheries officers, researchers, and others who were supporting the development of the CNFO. The participatory approach was embedded within the training workshops and established the principles for collaborative activity. The following are the principles set out for activities (Almerigi, 2008 p3):

**'Key values for participation:**

- ***Everyone Included.*** *Each person is important to the group. Each person holds an important piece of the puzzle. Each person's view helps to create a whole picture.*
- ***Teamwork and Collaboration.*** *Teamwork and collaboration are necessary to get a job done in the most effective, efficient and economical way. A sense of solidarity grows among members of the group.*
- ***Individual and Group Creativity.*** *By paying attention to both thoughts and feelings, people experience a group's power to create.*
- ***Ownership and Action.*** *When groups come to agreement they feel a sense of ownership in the decision, then they can commit to the actions that are necessary to carry out the decision.*
- ***Reflection and Learning.*** *Continuously asking ourselves how we are doing and making improvements where we can.'*

**Phase 8 – Testing new roles**

The development of the CNFO and establishment of NFOs in various islands led to various individuals taking leadership roles. These individuals were themselves fisherfolk and were learning new skills 'on the job' for their new roles locally, nationally and regionally. Early challenges for the CNFO were identified by McIntosh et al (2009) and related in part to effective communication and the availability of appropriate technology to support this. Working with committed volunteers who took these leadership roles also presented some natural tensions with regards to

ensuring that they were not negatively impacting on their fishing 'day job' and could still provide for their families. McIntosh et al (2009, p303) note the following from the CNFO coordinator in its early development:

Mitchell Lay .... highlighted the tension between the time needed to communicate and coordinate effectively within the network, to attend regional and international meetings, to continue as an active fisher in order to secure his family's livelihood needs, and generally to "make sure things are OK at home".

The role of 'change agents' was also recognised as being important in the early period of such network and organisational development. These individuals were viewed as critical to ensuring sustainability of such development activities and the long term impact on policy and practice. Such change agents were willing to take the responsibility for applying their learning and new skills towards building capacity, engagement and collective action.

During the period of 2006 to 2009 when the four projects were being implemented, it was not just the fisherfolk who were testing new roles and learning new skills. This was also true of the support organisations such as UWI-CERMES, CFRM and CANARI (CFRM 2007a; CFRM 2007b; CFRM 2007c; CFRM 2007d, CFRM 2007e and CFRM 2007f).

Some examples of early activities where fisherfolk assumed and tested new roles and responsibilities included the following:

- The Trinidad and Tobago Union of Fisherfolk (TTUF) (the NFO) was registered in 2006. By 2007, the interim board was identifying objectives for the organisation and their membership which focused on developing business strategies to improve livelihoods (CFRM, 2007).
- The management of the Jamaica Fishermen Co-operative Union (JFCU) sought to ensure that their 4000 members secured insurance for their equipment and themselves. They also prioritised environmentally friendly and responsible fishing practices and conducted training which aimed to change practices which were harmful to the environment (Almerigi, 2008).
- Several NFOs held annual general meetings, electing boards and setting their agendas according to the needs of their members. There was significant

participation by fisherfolk across the islands and reports reflect an increased awareness of development needs in the fisheries sector (CFRM 2007; Almerigi 2008)

- In 2009, the CNFO was able to participate at the first CRFM Ministerial Council Meeting which was held in St Vincent and the Grenadines. The coordinator and deputy coordinator were able to represent the voice of the fisherfolk and submitted a comprehensive statement making recommendations for fisherfolk participation related to the Common Fisheries Policy (CFP) and Regime, fisheries management and development, and illegal, unreported and unregulated (IUU) fishing. The CNFO coordinator also highlighted that traditional knowledge was as important as scientific knowledge when considering the CFP (McIntosh 2009).

### **Phase 9 – Gaining competency in new roles**

Over this period of time, it is apparent that all the organisations were recognising their roles in regard to fisheries governance and management in the Caribbean region.

Evidence of how the CNFO advanced in terms of their participation and representation of the regional fisherfolk voice is noted through documentation of CNFO's presence and engagement at various regional and international meetings hosted by FAO, CTA and other such organisations.

In 2012, for example, FAO/CRFM/WECAFC jointly hosted a regional consultation on the development of international guidelines for sustainable small-scale fisheries (SSF). All relevant regional organisations participated, including the CNFO. The input of the CNFO coordinator was noted in the report for the meeting, with his acknowledgement of the importance of the SSF guidelines for the CNFO membership. CNFO comments on the guidelines were put forward as a result of prior NFO and CNFO meeting in 2012, demonstrating that consultation with fisherfolk had occurred (FAO, 2013). The significance cannot be underestimated due to the technical nature of the relevant documentation and global context of the SSF guidelines.



In 2013, CFRM published the CNFO Advocacy Strategy and Plan on Fisherfolk's Positions on Critical Issues concerning the Implementation of Regional Fisheries Policies in the Caribbean (Roopchand, 2013). The strategy was clearly articulated and demonstrated the intention to engage with and influence policy and decision makers, and other key actors at the regional and political levels. Projects developed sought to build capacity, knowledge, skills and competency in this regard.

### **Phase 10 – The new perspective is embedded within the individual**

In 2013, the President and Secretary of the CNFO and two representatives of CANARI talked about 'Getting a seat at the table: fisherfolk empowerment for policy change in the Caribbean' at an international conference hosted by Irish Aid, Mary Robinson Foundation: Climate Justice CGIAR Research Program on Climate Change, Agriculture and Food Security (CAAFS) and World Food Programme. The conference article highlighted the CNFO's achievements and challenges, demonstrating that the fisherfolk had gained a new perspective of themselves and their role in Caribbean fisheries governance.

Lay et al (2013) noted that many of the national fisherfolk leaders were more confident, knowledgeable and eloquent policy advocates. Fisherfolk had gained the respect of policymakers in their countries and regionally. The CNFO contributed to drafting the CARICOM Common Fisheries Policy, and was participating and collaborating with fisheries institutions regionally which represented a major cultural shift.

Lay et al (2013) further point out the tensions which exist between scientific researchers and fisherfolk, with senior international scientists using the lens of conservation rather than one of sustainable development. Fisherfolk's traditional knowledge is often disregarded or ignored completely, and projects have threatened livelihoods. Being able to articulate this point shows the sense of empowerment of the CNFO leadership, and ability to distinguish between approaches that protect both the environment and the livelihoods of grassroots fishing communities.

From 2013, the SCFPG project was launched which connected to the CNFO's aims to influence policy in the Caribbean fisheries sector. The project aimed to develop new skills and knowledge through a range of activities which would be conducted throughout the region.

### 3.4 Strengthening Caribbean Fisherfolk to Participate in Governance (SCFPG) Project

In order to take a focused approach to exploring the research questions for this thesis, the SCFPG project provides the context for considering how knowledge sharing and transfer occur and how this leads to transformative learning within the network of organisations involved in the project. The SCFPG project also forms the parameters of the activity system for my study. The conceptualisation of the SCFPG activity system can be illustrated in the following CHAT Diagram:

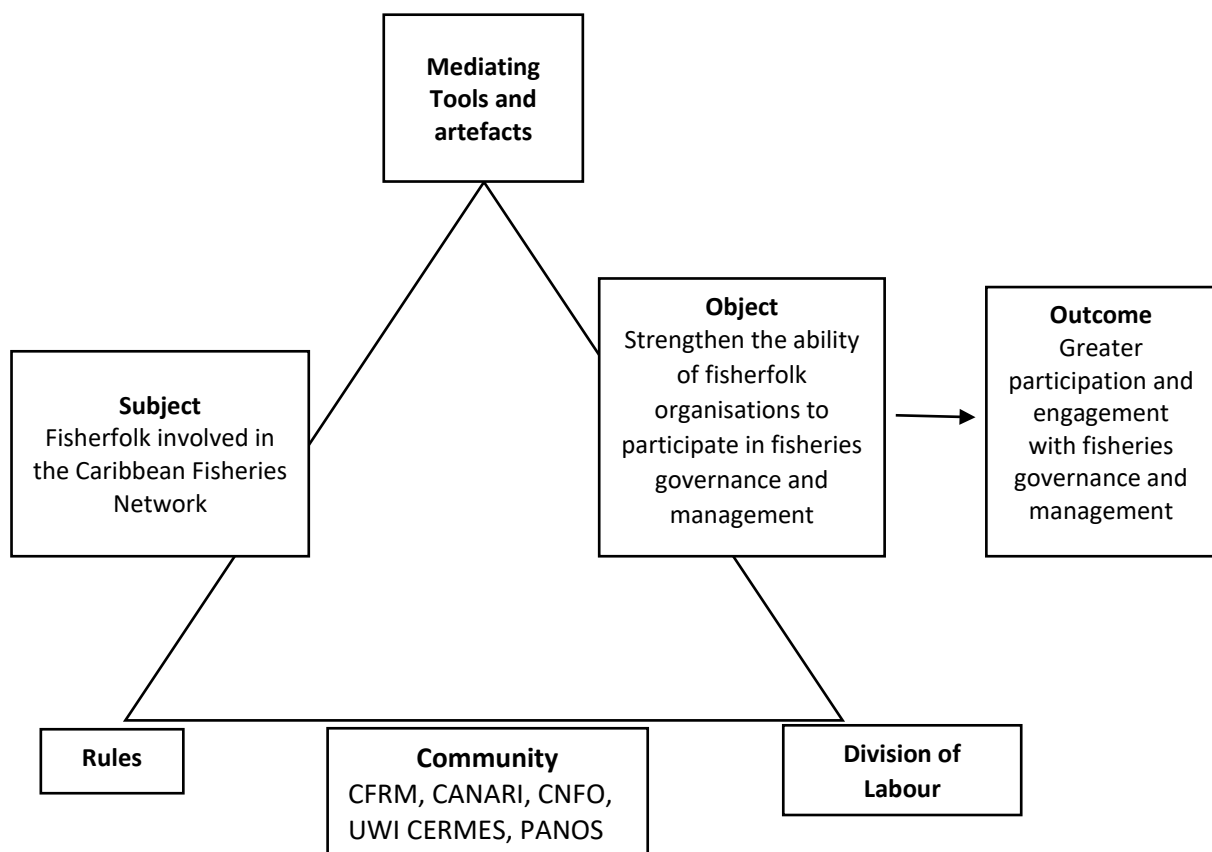


Figure 7: Setting out the SCFPG Activity System

The goal of the project was 'to improve the contribution of the small scale fisheries sector to food security in the Caribbean islands through building the capacity of regional and national fisherfolk organisation networks to participate in fisheries governance and management' (CANARI, nd). The project brief outlined several key results and was a collaborative effort between CANARI, UWI-CERMES, CFRM,

PANOS Caribbean and CNFO. It was funded by the EU EuropeAid Programme.

Activities included:

1. Capacity building of the CNFO, establishing a Fisherfolk Leaders Action Learning Group (ALG), project planning and needs assessment, facilitation of four ALG regional meetings
2. Capacity building of national fisherfolk organisations, establishing a group of mentors to support the local fishers, conducting training for mentors, conduct national workshops in 8 countries to engage the national stakeholders and encourage participation
3. Developing an online platform for sharing and disseminating information
4. Developing participatory videos to engage in policy discussion
5. Implementing a small grants programme to develop capacity
6. Supporting CNFO participation at decision making meetings regarding fisheries governance

### **3.5 Conclusion**

In this chapter I presented the historical, political and environmental issues relevant to the Caribbean fisheries sector and the context of this study. I situated this within the theoretical framework using the CHAT principles to underpin my discussion, and finally the phases of transformative learning to demonstrate how transformation has occurred in the activity system historically. I identified the wider rules governing the activity system, the community of organisations working together and division of labour in terms of development activities. The chapter concludes with the development of the SCFPG project which provides the focus for my study and research questions. The next chapter presents my research methodology.

## Chapter Four: Methodology

### 4.1 Introduction

In this chapter, I begin by identifying my epistemological and ontological position, and go on to explain the methodological decisions underpinning the exploration of the research questions:

- What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level?
- How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?
- What other factors within the outlier network contribute to transformative learning?

I employ a retrospective longitudinal qualitative case study methodology which includes the use of interviews and documentary evidence which relates to the subject of the case study which is the SCFPG project. Key features of the case study, that is the SCFPG project, are described using CHAT terminology which is central to the theoretical framework. Data Collection methods are discussed, along with approaches to data analysis and ethical considerations.

In many ways my approach directly responds to the call by Boström et al (2018 p14) for longitudinal qualitative studies which follow actors, practices, and institutions over time in order to 'capture critical processes and moments for transformative learning, including both hindrances and promoters of this form of learning'.

### 4.2 My Epistemological and Ontological Perspectives

I am fundamentally interested in the role education and learning approaches can play in grassroot community development for building sustainable livelihoods, but also how national, regional and international agencies engage with and learn from interactions with these communities. This has developed through my interactions with grassroot agricultural communities in the Caribbean and a desire to see Caribbean mindsets change from one of post-colonial dependency to one of self-

empowerment and self-directed development. The complexity of the Caribbean context and social, economic and political history has informed my own epistemology in relation to this research, where epistemology refers to the 'how knowledge can be created, acquired and communicated' (Scotland, 2012 p9).

My epistemological stance resonates with Freire's (1970) perspectives of emancipatory social change and reflects my belief that the deeper entrenched post-colonial attitudes which still exist in the region currently need to change. The role of education (whether formal or informal) in creating emancipatory social change through *conscientizacao*, or critical consciousness, particularly at grassroot level is of immense importance. My epistemology is therefore informed by Freire and is reflected in the following:

People can be passive recipients of knowledge — whatever the content — or they can engage in a 'problem-posing' approach in which they become active participants. As part of this approach, it is essential that people link knowledge to action so that they actively work to change their societies at a local level and beyond (Freire Institute, 2019).

I am interested in how people connect and work together to bring about changes in mindsets, actions and the environment they inhabit and work in. I view culture and history as essential to understanding the issues, problems, and challenges of the Caribbean. I have discussed the connected and integrated elements of the Caribbean context and have made a case for employing CHAT and Transformative Learning within the theoretical framework.

From an ontological perspective, where ontology refers to 'how things really are and how things really work' (Scotland, 2012 p9), it is important to acknowledge the interconnectedness and complexity of the Caribbean socio-ecological system and the human networks which are at work. My own ontological stance is informed by a 'relational ontology' (Lange, 2018) and 'transformative activism' (Stetsenko, 2016) but cannot explicitly be defined within these existing labels. It is instead a hybrid of these and I am therefore defining it simply as a 'transformative ontology' where the subjects' individual and group knowledge are linked to action in order to create change cognitively, socially, and within the environments which sustain them.

I use CHAT to highlight the relational dynamics of all parts of the activity system and use transformative learning to highlight the disruptive elements which can make the activity system transform and expand. This approach reflects a relational ontology where 'all entities in the natural world, including us, are thoroughly relational beings of great complexity, who are both composed of and nested within contextual networks of dynamics and reciprocal relationships' (Lange, 2018 p283).

The relational ontology acknowledges the connections between individuals, groups, communities and their environment. However, with regards to changing mindsets, innovating new solutions to emerging socio-economic and environmental issues, and engaging grassroots communities in transforming their realities, there needs to also be sustained *action* towards that new reality. In this regard, from an ontological perspective, I see an affinity to Stetsenko's (2016) notion of 'transformative activism'. Transformative activism or transformative activist stance (TAS) challenges the philosophical and conceptual foundations of sociocultural and critical theories and highlights the need consider decolonising epistemologies and ontology. TAS seeks to move 'away from the notion of adaptation to the status quo toward the notions of social change and activism' where learning and development are collaborative processes of an activist nature leading to 'future-oriented agendas within collaborative projects of social transformation' (Vianna and Stetsenko, 2014 p575 and 576). The community decides on a vision or goal and what can and ought to be changed.

My ontological stance has also been informed by the work of Lots-Sisitka et al (2015) and Peters and Wals (2016) who explore transgressive transformative learning as a way of challenging developmental approaches which are embedded in norms and hegemonies that perpetuate inequality and social injustice. The methodological framework employed in transgressive transformative learning studies uses both CHAT and participatory action research and is interventionist in nature. The framework connects to the notions of social constructivism and activity, but transgressive transformative learning also requires 'engaged forms of pedagogy that involve multi-voiced engagement with multiple actors.... that have an emphasis on co-learning, cognitive justice, and the formation and development of individual and systemic agency' (Lots-Sisitka et al, 2015). My transformative ontology resonates with this pedagogical emphasis which views learning as a collaborative activity

aimed at transformation and which is underpinned by principles of social justice and equality.

The SCFPG project is firmly embedded in a participatory ontology which can be interpreted as being grounded in CANARI's Action Research and Learning (ARL) approaches. CANARI, as an organisation, has very strong core values and is particularly committed to sustainable natural resource management, and working with local community groups in order to ensure equality, social justice, and improved livelihoods. These organizational values and the ARL approaches employed in the project also align with my transformative ontology.

My ontological position therefore predisposes me to explore my research questions in the real-life context and natural setting of the SCFPG project. This enables me to look more closely at the role of education within the network and informal settings, to expose learning approaches within the context of national, regional and international engagement, and to explore how these have contributed to transformative learning in the community of participants. I focus on an outlier network because that offers a relevant subject for considering practice in relation to my research questions.

### **4.3 Situating myself as the researcher**

From the perspective of the shared experience of having once worked on development projects as a local expert in the region and being from the Caribbean I am an insider researcher (Savin-Baden and Major, 2013). However, as I am not currently working in the region or engaged in any projects related to fisheries, I could also be considered an outsider. Milligan (2016) proposes an alternative as an 'in-between', which in my case is more appropriate.

With regards to my researcher position, I consider myself to be an observer who is also able to consider activity within the 'real-world and natural setting'. When considering the interviews, I feel that my 'insider' status of being from the Caribbean opened up the interviewer-interviewee rapport and contributed to the discursive flow of the interview, and the interviewees' generosity with their time and responses. In order to maintain a balanced perspective, I kept a reflexive research journal which documented various aspects of my thinking throughout this study (see Appendix 1 for a sample).

#### 4.4 The Case Study Approach

As my research questions focus on exploring the 'how' and 'why' of a successful Caribbean network with regards to network development, knowledge sharing and transformative learning, I choose a case study as the most appropriate research design (Yin, 2009). Yin (2009, p18) defines 'case study' as 'An empirical inquiry about a contemporary phenomenon (e.g., a "case"), set within its real-world context - especially when the boundaries between phenomenon and context are not clearly evident.'

Case studies can typify and exemplify a trend, and in this study, provide insight into transformation of a long-established activity. My case is the SCFPG project involving the CNFO which is a contemporary example that enables me to understand the unique nature of the learning approaches within a complex activity system. As part of engaging with the case study, I verify first person accounts and interview data against historical documents for accuracy and to address distortion of historical fact.

Case Studies employ a diverse range of methods which include interviews, document analysis, analysis of artefacts, projects, policies, and systems (Sroka et al, 2014). I use multiple data sources to enhance data credibility, and enable triangulation (Stake, 1995 and Yin 2009) which increases trustworthiness. Though this is a small-scale study, the particular benefit of a small study is that I study the phenomenon with depth and within the natural setting (Denscombe, 2007).

I classify this case study as exploratory, single and holistic (Yin 2009). I also define my case study as transformative and interventionist in nature for the following reasons. The case study focuses on a subject which has transformed and expanded over time, and the SCFPG project itself used an interventionist approach in order to transform the CNFO. Since I looked back at the SCFPG activity system, and the timeframe for the project spanned 4 years, I also employed a retrospective and longitudinal lens. I believe that this was the most appropriate approach since there are limited opportunities to observe such initiatives and activities in action within organisations and in real-world contexts.

Retrospective case studies are one type of longitudinal case study and allow for more effective data triangulation (Street and Ward, 2010). The retrospective approach is very useful since it allows the effect of time to become more evident in



the data. This approach, together with the use of CHAT, provides depth with regards to consideration of the impact of time, cultural and historical factors which affect development within and of the activity system. Essentially, I use the theoretical framework and methodology to ‘vicariously experience, make sense of and become able to report participants’ lived experiences’ (Yamagata-Lynch, 2010, p65) at the time of implementation of the project.

#### **4.4.1 Case Study Selection**

I purposively sampled an outlier network for my case (Bryman, 2012). In focusing on an outlier case, I was able to explore the local context specific aspects, particularly with regards to the Caribbean region. This predisposed me to take account of situational factors and individuality in my case study (Patton and Applebaum, 2003). One of the merits of local studies is that they are a means of exploring the links between theory and practice more deeply (Bullough Jr., 2012, p353):

‘Local studies take place in a specific context and with colleagues, opens contextual peculiarities and cultural idiosyncrasies to view, potentially leading to the identification of unrecognised resources, specific and unique points for action, and opportunities for improvement....When values clash, local studies provide opportunities to confront the limiting functions of culture and to reconsider values and commitments. The focus on outliers holds similar promise. Moreover, such studies offer opportunities to locate strengths that may be extended and built upon.’

I selected this case precisely because of the comprehensive and detailed documentation related to the project and the wider Caribbean fisheries context, which enabled more effective data triangulation. Due to the specific nature of the Caribbean’s historical and cultural contexts, the insight gained from this study can potentially be applicable to network and collaborative activities in the region, since they relate to a successful collaborative project operating in the same socio-economic, cultural-historical challenges. Lessons can also be taken forward by others nationally, regionally and internationally. Furthermore, the case sheds light on change processes that would otherwise remain invisible and therefore constitutes an

invaluable insight into a change process from which others in similar situations/contexts may learn.

The SCFPG project was selected on the basis that it presents a network and activity system that:

- is set in reality and the real-world context of existing global, regional and national complexities.
- demonstrates transformation and expansion over time through the actions and mindsets of the individuals and the community of participants
- demonstrates evidence of capacity building and sustainable development which is well documented throughout its historical development.

#### 4.5 Data Collection Methods

This section explains the key methods of data collection for the case study.

I took a two-phased sequential approach to data collection comprising of individual interviews in phase one, followed by documentary analysis in phase two (see Table 2 below). During Phase 1 participants signposted me to relevant articles, organisations, and initiatives which gave me a greater understanding of the cultural, historical, environmental, and social elements related to Caribbean Fisheries, thereby fully connecting to my epistemology, ontology and theoretical framework. The documentary data added depth and detail to my exploration of the SCFPG project which could not be obtained through interviews alone. It offered significant insight into the conduct of, participation at, and outcomes of the various elements to the project delivery and learning opportunities.

<b>Phase</b>	<b>Method</b>	<b>Data Analysis and Triangulation</b>
<b>Phase 1</b> Participant interviews – from support organisations of the CNFO	4 individuals agreed to be interviewed from different organisations within the Caribbean fisheries network. I used a semi-structured, discursive-dialogic interview	Thematic Analysis of transcripts, and corroboration of data against wider literature related to the Caribbean fisheries network.

	approach. I also transcribed the interviews.	
<b>Phase 2</b> Documentary Collection	Sourcing and identification of documents related to the SCFPG project via public online platforms, mainly of the: <ul style="list-style-type: none"> <li>• CFRM</li> <li>• UWI-CERMES</li> <li>• CNFO</li> <li>• CANARI</li> <li>• FAO</li> </ul>	Documents allowed for triangulation of data collected during Phase 1. Thematic analysis of documents, with additional focus also on extracting the voices of the fisherfolk since it was not possible to get an interview with any fisherfolk for this study.

Table 2: Phases of the data collection

For an overview of my data collection and analysis timeline please see Appendix 2.

#### 4.5.1 Phase 1 - Interviews

My ideas about the interview process have been influenced by Brinkmann and Kvale's (2015) two metaphors for interviewing which relate to ontological positions of the researcher as the 'miner' or the 'traveller'. I align more closely with the 'traveller' as this connects to my own transformative ontological position where I was informed by the 'journey', 'landscape' and 'guides' (or interviewees), 'walking with' the 'local inhabitants' of the terrain through their stories and experiences, in order to generate new knowledge. However, I was also interested in facts related to the mediating tools used in the SCFPG project so there was also an aspect of 'mining' where data collection is focussed on facts reported by the interviewees, with the interview also being a process of knowledge collection.

I used semi-structured interviews where respondents were given freedom to flow with the narrative they were telling and were allowed to 'tell their story'. This approach borrowed from the problem-centred interview technique (Witzel & Reiter, 2012), as it followed a discursive-dialogic method of reconstructing knowledge enabling a more complex picture of the 'terrain' (Brinkman and Kvale, 2015) to emerge. Storytelling is one way in which Caribbean people communicate and it can be found in many formats (eg. calypso, folklore tales, the theatre of masquerade, comedy), so this approach worked well for the demographic. The data generated

provided relevant insight into various elements of the activity system and offered cultural and historical perspectives relevant to the local context, and the development and transformation of the activity system.

The individual semi-structured interviews were conducted via Skype since the respondents were located outside of the UK. I emailed them the participant information sheet and the questions prior to the interview allowing them to develop a detailed narrative. I also asked them to confirm their consent prior to being interviewed (see Appendix 3).

The interviews were 45 minutes to 1 hour, were audio recorded and subsequently transcribed by myself so I could become familiar with the data (Braun and Clarke, 2006). The interviews were comprehensive, and I encouraged participants to express their own opinions and perspectives (Savin-Baden and Major, 2013) fully and openly. I used an Interview Schedule (Robson, 2011) (see Appendix 4), which I designed to allow for flexibility of each respondent's narrative. From a CHAT perspective, a flexible approach also allowed for the individual subject responses to be incorporated into the multi-voiced activity system.

#### **4.5.1.1 Sampling of Respondents**

Sampling of participants was purposeful and comprised of academic and technical experts and represented 'capacity builders' (Weber and Khademian, 2008) within the activity system. I held four in-depth interviews with individuals within the activity system, referred to as R1, R2, R3 and R4. Within the Caribbean fisheries network, there was a small pool of individuals, experts and fisherfolk to approach within the activity system, and a smaller number who were willing to participate and be interviewed. However, the individuals who participated and were interviewed offered valuable insight, experience and were generous with their time and were willing to provide in depth accounts. None of the respondents were fisherfolk since those I contacted did not agree to be interviewed. The respondents offered insight into the fisherfolk since they worked closely with the fisherfolk and built a comprehensive understanding of the people, personalities, mindsets and culture of the fisherfolk.

All respondents were male, had been part of the SCFPG project working within the key organizations at the time, and had worked in the sector for many years in different capacities. Two respondents were from academic and research

organisations, and two respondents were technical fisheries experts. They had all worked with organisations which supported the SCFPG project, and each had over 20 years of experience working on different fisheries projects.

Since the SCFPG project was grounded in a participatory approach, all four respondents were participants in the various activities of the SCFPG project. This means that they participated in the workshops, field trips, and dialogues across all components of the project as illustrated in Figure 8. R1 and R3 also facilitated some sessions of the various workshops which were held as part of the National Fisherfolk Workshops (NFWs), the regional workshops for the Caribbean Fisherfolk Action Learning Group (FALGs) and the regional Training of Trainers workshops for Mentors (TTMs).

Table 3: Respondents (listed in order of interview)

<b>Respondent</b>	<b>Background</b>	<b>Project Involvement (2013-2016)</b>	<b>Time of Interview</b>
R1	Academic	Participant and facilitator	May 2017
R2	Researcher	Participant	July 2017
R3	Technical Expert	Participant and facilitator	August 2017
R4	Technical Expert	Participant	October 2017

Please see Appendix 2 for my timeline related to interviews. I interviewed each respondent once, each interview lasting 45 mins – 1 hour.

These individuals were part of the activity system community and were historically involved in Caribbean fisheries development for many years. The limitation of the ‘recall effect’ (Street and Ward, 2012) was mitigated by cross-checking what was said against the thorough project documentation.

Respondents provided wider insight into the elements of the SCFPG project. The individuals interviewed were key to the implementation of the project but were very open about the challenges and issues faced retrospectively and after the completion of the project. All participants provided a historical context at the beginning of the interviews. Their accounts were similar in that they all discussed similar activities and challenges which I will discuss in the following chapter.

I also intended to interview fisherfolk individuals who were also part of the subject of the activity system, and particularly were the focus of the object. I made several attempts to find a willing participant, but this did not materialise. I explored other ways in which to solicit the voice of the fisherfolk and found several ways in which I could still gain their input into this study through what was already in the public domain. This was available through the documentary data such as SCFPG Project reports, the CNFO newsletters, the CNFO website and Facebook page, and participatory videos which were made as part of the SCFPG Project. This has provided useful insight into the transformation of the CNFO and its members over time. I monitored the CNFO and other NFO Facebook pages from August 2018 to present 2020, checking Facebook notifications twice weekly over this period of time (see Appendix 2 for my timeline). Over 2019 I noticed an increase in posts, particularly on the CNFO page, and this is now almost a daily occurrence.

#### **4.5.2 Phase 2 - Documentary Collection**

Having outlined the process I used in phase 1 of the data collection I set out my approach to documentary collection for phase 2 in this section.

Documentary records have mitigated against not being able to interview the fisherfolk since they provide detailed accounts of the activities, and an insight into the fisherfolk participation and voice. The use of documents as a source of contextual and historical information related to the activity system was particularly useful and, because documentation of this kind is rarely publicly accessible and available in the Caribbean, it was a unique opportunity to explore how comprehensive documentation in such activities could also contribute to a trajectory of development and transformation of the CNFO.

Documents can be defined as 'literary, textual or visual devices that enable information to be shared and 'stories' to be presented' (Coffey, 2014, p372) and are useful sources of data within case study research (Olson, 2010). As artefacts, they serve different purposes. In this case study the documents were created as a record of activities, achievements, and outputs related to project funding and action research. Project related documents were authored by technical officers, but it was significant that the words and feedback of the fisherfolk were not altered but were presented as spoken. The participatory videos, public webpages, newsletters and

facebook documentary artefacts were authored by the fisherfolk. These documentary artefacts provide an insight into the social and cultural ‘environments’ related to the fisherfolk, but also of the learning environment relevant to my study. I used a diverse range of documentary sources, which offered multiple viewpoints (Olson, 2012).

I collected documents that were related to the CNFO development prior to the SCFPG project, and more specifically documents which related to the implementation of all aspects of the SCFPG project from 2013-2016. Documents which related to the SCFPG project specifically contributed to understanding the activity systems more fully, as they related to the ‘*rules*’, ‘*community*’ and ‘*division of labour*’ as expressed in the CHAT activity system (Engeström and Sannino, 2010). Furthermore, based on the view that sustainable development relies on appropriate supportive policies, a culture of participation, and acknowledgement of the local context (Uphoff, 1992), I reviewed key institutional documents since they contributed to gaining a better understanding of the social realities, culture, rules and environment within which specific institutions operate.

I sourced documents from online databases from key support organisations such as the CFRM, UWI-CERMES, CANARI and CNFO’s small online repository. I obtained further documents related to participation in international meetings from FAO’s online platform. I used the documentary evidence to gain insight into the range of activities and approaches which were taken during the SCFPG project. These records are comprehensive and provide a snapshot of activities and discussions between participants as experienced at the time. The key activities were

- **National Fisherfolk Workshops** (NFWs) (First and Second sessions in each country)
- **Regional Workshop for the Caribbean Fisherfolk Action Learning Group** (FALGs) (Three sessions)
- **Regional Training of Trainers Workshop for Mentors** (TTM) (Two sessions)
- **Development of Participatory Video** (PV)

Figure 8 below provides a timeline of the activities throughout the SCFPG project.

# Timeline of SCFPG Workshops

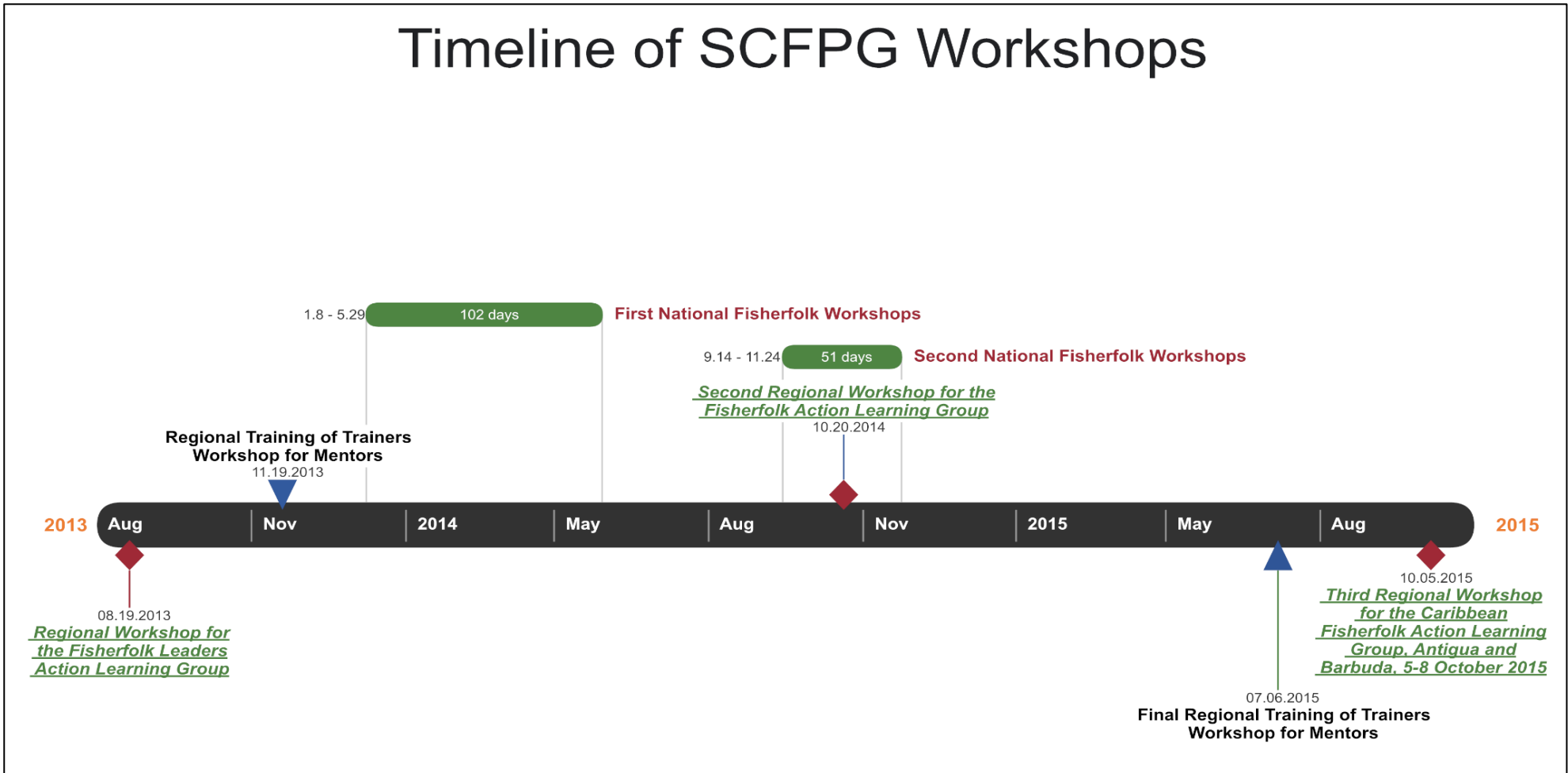


Figure 8 – Timeline of delivery of workshops between 2013-2015



Table 3 provides key information regarding the main documents used. The references allocated in the table are used when referring to specific documentary artefacts in the sections to follow.

Table 4: Document reference guide

<b>Document (n=number of workshop)</b>	<b>Reference</b>	<b>Author</b>	<b>Type</b>
<b>Report of the Regional Workshop for the Fisherfolk Leaders Action Learning Group (n1)</b>	FALG1, 2013	CANARI	Report
<b>Report of the Regional Training of Trainers Workshop for Mentors (n2)</b>	TTM1, 2013	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Barbados (n3)</b>	NFW1BB, 2014	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Dominica (n4)</b>	NFW1DM, 2014	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Jamaica (n5)</b>	NFW1JM, 2014	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Saint Lucia (n6)</b>	NFW1LC, 2014	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Suriname (n7)</b>	NFW1SR, 2014	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Saint Vincent and the Grenadines (n8)</b>	NFW1VC, 2014	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Grenada (n9)</b>	NFW1GD, 2014	CANARI	Report
<b>Report on the Matura to Matelot Fisherfolk participatory video Workshop (n10)</b>	PVM2M, 2014	CANARI	Report
<b>Participatory video Fishing for a living: North Coast facilities, Trinidad</b>	PVF4L, 2014	Fisherfolk	Video
<b>Report on the 2nd Regional Workshop for the Fisherfolk Leaders Action Learning Group (n11)</b>	FALG2, 2014	CANARI	Report
<b>Participatory video Catch, Kill, Destroy: Poaching The Bahamas Fisheries</b>	PVCKD, 2014	Fisherfolk	Video
<b>Report of the Final Regional Training of Trainers workshop for Mentors (n12)</b>	TTM2, 2015	CANARI	Report
<b>Report of the 3rd Regional workshop for the Fisherfolk Leaders Action Learning Group (n13)</b>	FALG3, 2015	CANARI	Report
<b>Report of the National Fisherfolk Workshop, Suriname (n14)</b>	NFW2SR, 2015	CANARI	Report
<b>Report of the National Fisherfolk Workshop, Anguilla (n15)</b>	NFW2AI, 2015	CANARI	Report
<b>Report of the National Fisherfolk Workshop, Barbados (n16)</b>	NFW2BB, 2015	CANARI	Report

<b>Document (n=number of workshop)</b>	<b>Reference</b>	<b>Author</b>	<b>Type</b>
<b>Report of the National Fisherfolk Workshop, Saint Lucia (n17)</b>	NFW2LC, 2015	CANARI	Report
<b>Report of the National Fisherfolk Workshop, Saint Vincent and the Grenadines (n18)</b>	NFW2VC, 2015	CANARI	Report
<b>Report of the National Fisherfolk Workshop, Jamaica (n19)</b>	NFW2JM, 2015	CANARI	Report
<b>Report of the National Fisherfolk Workshop, Dominica (n20)</b>	NFW2DM, 2015	CANARI	Report
<b>Report on the National Fisherfolk Workshop, Grenada (n21)</b>	NFW2GD, 2016	CANARI	Report
<b>Strengthening Caribbean fisherfolk to participate in governance: Description of Project</b>	DOP, 2016	CANARI	Website Overview
<b>Facilitating participatory natural resource management: A toolkit for Caribbean managers</b>	FPNRM, 2011	CANARI	Toolkit
<b>Leading Fisherfolk</b>	LF, 2017	UWI	Book
<b>Caribbean women small-scale fisheries learning exchange with Costa Rica.</b>	FLE, 2018	CoopeSolidar, CNFO and CERMES	Report

In total there were 21 workshop reports over 2013 to 2015. The workshops were attended by technical experts from various organisations including the FAO, fisherfolk representatives from primary fisherfolk organisations and national fisherfolk organisations, fisheries officers from government departments, and other relevant stakeholders. My interest in the workshops related specifically to ‘how’ participants were engaged, ‘how’ knowledge was shared and transferred, and ‘how’ the facilitation of the workshops supported transformative learning for the participants.

Since the support organisations of CANARI, CFRM and UWI-CERMES facilitated the various meetings, workshops and activities, the authors of the documents were representatives of these organisations with technical expertise in the sector. The purpose of the documentation was for monitoring and evaluation purposes since the SCFPG project was externally funded through EU agencies working with the support organisations. The organisations were also motivated to maintain a record for the CNFO membership and future status. The documents are therefore credible and authentic (Savin-Baden and Major, 2013). As I reviewed the reports above, it was interesting to note that negative and positive participant interactions and views were

recorded, with positive and negative commentary from participants being included, particularly in the initial activities. This reassured me that the documents offered an balanced representation of the SCFPG project activities. The documentation was also consistent in terms of format, style and tone. Other documentary artefacts such as the participatory videos were sourced via CANARI and were located on YouTube. I considered the videos to be authentic as there was a record of the activity and making the videos within particular workshop reports.

#### **4.6 Ethics**

The study was guided by ethics as set out by the British Education Research Association (BERA, 2018). My study did not involve vulnerable persons, children, or the elderly and gained approval through the Institute of Education's ethics review process for doctoral students. I believe that being from the Caribbean enabled better communication and did not present an ethical challenge for the study as it did not create any perceived differential power which could potentially result if there were current working relationships (Somekh and Lewin, 2012).

Participants confirmed their consent to be interviewed via email, and before the interview commenced. I sought to address and alleviate concerns regarding participant identity in published work, data encryption and protection, and confidentiality of the data collected (see Appendix 5). The storage and use of data comply with the UK by the Data Protection Act (1998) and General Data Protection Regulation (GDPR) (2018). As the study involves individuals who engage at various levels across national-regional-international planes I recognise the need to protect the sensitivity of the data collected. Participants were reassured of protection of their identity and privacy, and I have used pseudonyms. They also had the opportunity to withdraw from the study and have their data removed.

#### **4.7 Data Analysis**

I discuss my approach to data analysis in this section and introduce the key themes which emerge.

To analyse the data collected, I used CHAT and activity system lens to understand how the network collaborated to share and transfer knowledge in order to facilitate transformative learning within the context of the SCFPG Project. Though transformative learning was not an explicit aspect of the SCFPG Project, my study used the SCFPG activity system to magnify how transformative learning was facilitated through mediating tools, and the broader elements of the activity system. This emphasises the principles of CHAT and the activity system, and the notions of transformative learning which are ontologically connected.

My approach to data analysis was therefore abductive, deductive and inductive (Reichertz, 2013). I used abduction to generate new perspectives, deduction to connect the study to the conceptual theoretical underpinnings, and induction to demonstrate concrete evidence which addresses the research questions. Deductive and abductive approaches were most useful in the analysis of the interview data, and all three approaches were applied in the analysis of the documentary evidence.

The parameters of the activity system - particularly those of mediating tools, community, division of labour and rules – enabled identified themes and patterns to be structured under these umbrella categories. I applied thematic data analysis since it is flexible and generally can be applied in most epistemological and ontological perspectives. I developed themes from an interpretative level (Braun and Clarke, 2006) which is consistent with my interviewer stance as a ‘traveller’.

I followed the standards for qualitative data analysis (Robson, 2011) for the thematic coding of interviews and the selected documentary evidence in which I:

- labelled elements of the data which was relevant to the research questions, with specific focus on text which addresses ‘how’ knowledge sharing and transfer facilitate transformative learning within the network, and within the context of the SCFPG project
- included the process of noting important memos and ongoing reflections
- identified patterns and themes within the data sources
- connected patterns of ‘common practice’ within the activities of the network and wider activity system to relevant knowledge base and theoretical / conceptual constructs.

In addition to a categorisation strategy for coding, I also looked for connections within the data seeking relationships beyond similarities. The approach of combining categorisation and connection is considered advantageous (Robson, 2011) and I believe this fit well with CHAT and the activity system unit of analysis which underpins the theoretical and analytical framework. I also applied Braun and Clarke's (2006) step-by-step 6 phased approach to thematic analysis (See Table 4 below).

Table 5: 6-Phased approach to thematic analysis

<b>Phase of Analysis</b>	<b>Process</b>
Familiarizing myself with my data	I transcribed the interview data, which was then read and re-read throughout the research process and any thoughts were recorded. I also read and re-read the documentary reports and similarly recorded initial thoughts. I triangulated the interview data with wider documentation related to the Caribbean fisheries sector and network.
Generating initial codes	I completed the coding systematically across the entire data set, and data for each code was collated.
Searching for themes	I gathered the collated codes into potential themes.
Reviewing themes	I reviewed the themes in relation to coded extracts and I generated a thematic map.
Defining and naming themes	I reviewed and named the themes in order to ensure consistency with the context of the research.
Producing a report	This thesis presents the analysis of the data, in relation to the research questions, theoretical framework, epistemological and ontological perspectives.

Based on my epistemological and ontological positions, I interrogated the data in such a way as to shed light on the transformative processes and previously hidden aspects related to learning within the activity system. The key themes were not generated from the research literature since the nature of my research sought to generate new perspectives of informal learning settings and transformative learning processes in grassroot and international development contexts. Instead, they were

derived from the patterns within the data and I then contextualised these within the CHAT activity system framework. The CHAT framework provided *a priori* overarching categories, for example, mediating tools and community which was consistent with a deductive approach.

I coded the interview data using the phrases and words which emerged from the voices of the participants. I then categorised these emergent codes into key themes which also reflect the participants' voices and was consistent with abductive analysis. The documentary records followed a very similar reporting format, and it was possible to see a pattern within the data in terms of presentation, content and voice. For example, each report was organised similarly to document the objectives of the activity, the methodology or tools which were used in terms of delivery and facilitation of specific content, the range of participants who formed the community and engaged in different ways within the activity, the collaborative evaluation of the activity and participant feedback, and forward planning objectives to promote action. The analysis was more inductive as I looked for data that would directly address the research questions, and the codes were based on the patterns which were observed. The codes were then categorised into key themes which best described the data within the context of the research questions.

#### 4.7.1 Key Themes in Phase 1 and 2

In this section I introduce the key themes which I generated through the data analysis process from the phase 1 interviews and phase 2 documentary analysis.

The following table 5 illustrates the Key Themes from Phase 1 and Phase 2 and how these correlate to the CHAT activity system framework which provide the *a priori* categories.

Table 6: Key themes – Phase 1 and Phase 2

Phase 1 - Interviews		Phase 2 – Documentary Records	
Key Theme	Relation to CHAT Activity System	Key Theme	Relation to CHAT Activity System
<b>Learning by Doing</b>	Mediating Tools	<b>Learning by Doing</b>	Mediating Tools Community Division of Labour

Phase 1 - Interviews		Phase 2 – Documentary Records	
Key Theme	Relation to CHAT Activity System	Key Theme	Relation to CHAT Activity System
			Rules
<b>Inclusive participation and decision-making</b>	Mediating Tools Community Division of Labour	<b>Trust</b>	Subject Mediating Tools Community Division of Labour Rules
<b>Role of Support Organisations</b>	Community Division of Labour	<b>Establishing the motivation</b>	Subject orientation to the object Community
<b>Responding to Change</b>	Culturally and historically embedded in the Subject	<b>Inclusive participation and decision-making</b>	Subject Community Division of Labour Object
<b>Record Keeping and Documentation</b>	Mediating Tools	<b>Record Keeping and Documentation</b>	Mediating Tools

The final themes therefore are:

- Learning by Doing
- Role of Support Organisations
- Trust
- Establishing the motivation
- Responding to Change
- Record Keeping and Documentation
- Inclusive participation and decision-making

#### 4.8 Conclusion

This outlier retrospective case study presents an innovative methodological approach to exploring transformative learning in an International development network context. I used CHAT and the activity system in a non-interventionist context to interrogate the research questions and the data collected. Umbrella thematic

headings are aligned to the activity system parameters of subject, mediating tools, community, division of labour, rules and object. More specific themes are aligned to the codification of the data. The specific themes are learning by doing, inclusive participation and decision-making, record keeping and documentation, role of support organisations, trust, establishing the motivation, and responding to change. In the following chapter I present and discuss the findings within the context of the specific research questions using the interviews and documentary evidence which offer relevant contextual insight. Chapter 6 connects the themes to the relevant theoretical perspectives and literature.



## Chapter Five: Caribbean Fisheries – A Case Study of Addressing a Wicked Problem.

### 5.1 Introduction

In this chapter I present my findings which address the specific research questions. The research questions are addressed through specific key themes as follows (see Appendix 6 and table 6 below):

1. What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level? – The theme of learning by doing provides extensive evidence of pedagogical practices which are implemented to promote further transformative learning across the project participants who represent local/grassroot networks and institutional agencies.
2. How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning? – The themes of learning by doing, inclusive participation and decision-making and record keeping and documentation relate to knowledge sharing and transfer approaches and practice within the network.
3. What other factors within the outlier network contribute to transformative learning? – By using the CHAT activity system framework, other important factors which contribute to transformative learning are exposed. The themes of role of support organisations, responding to change, establishing the motivation and trust highlight unseen elements which contribute to the transformative learning process.

Themes overlap across the three questions reflecting the complex nature of the SCFPG activity and the dynamics of the activity system.

Table 7: Key themes addressing specific research questions

Research Question	Key Themes
1. What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level?	Learning by Doing
2. How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?	Learning by doing
	Inclusive participation and decision-making
	Record Keeping and Documentation
3. What other factors within the outlier network contribute to transformative learning?	Role of Support Organisations
	Responding to Change
	Establishing the motivation
	Trust

The following graphic (Figure 9) illustrates how these themes can be represented as they relate to each other and how they lead to transformative learning. Trust and establishing the motivation are essential foundations for the other themes to meaningfully connect and translate into transformative learning in this network.

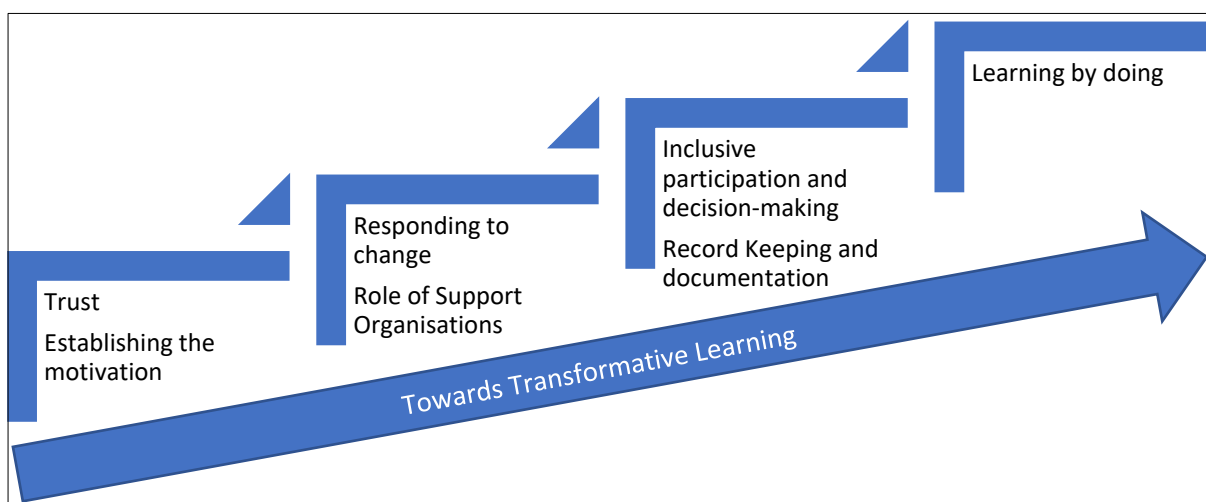


Figure 9: Representation and relationship of the themes

I use both the interview (referring to respondents R1, R2, R3 and R4) and documentary evidence to present the findings for particular themes within the context of each research question. I use the CHAT activity system principles to draw out connections and relational dynamics within the various aspects of the SCFPG project which enable transformative learning.

The following Table 7 illustrates how the themes relate to the phases of transformative learning.

Table 8: Relation between key themes to phases of transformative learning

<b>Key Theme</b>	<b>Phase of Transformative Learning</b>	
<i>Responding to change</i> <i>Inclusive participation and decision-making</i> <i>Trust</i> <i>Role of support organisations</i> <i>Establishing the motivation</i>	Phase 1	<b>Disorienting dilemma</b>
<i>Role of support organisations</i> <i>Trust</i> <i>Record Keeping and Documentation</i> <i>Inclusive participation and decision-making</i> <i>Establishing the motivation</i>	Phase 2	<b>Self-examination</b>
<i>Inclusive participation and decision-making</i> <i>Trust</i> <i>Role of support organisations</i>	Phase 3	<b>Critical assessment of assumptions</b>
<i>Learning by doing</i> <i>Inclusive participation and decision-making</i> <i>Role of support organisations</i> <i>Trust</i>	Phase 4	<b>Understanding that others have had similar experiences and feelings</b>
<i>Learning by doing</i> <i>Inclusive participation and decision-making</i> <i>Role of support organisations</i> <i>Trust</i>	Phase 5	<b>Explorations of new actions, relationships and roles</b>
<i>Inclusive participation and decision-making</i> <i>Role of support organisations</i> <i>Establishing the motivation</i>	Phase 6	<b>Planning a new course of action</b>

Key Theme	Phase of Transformative Learning	
<i>Record Keeping and Documentation</i> <i>Trust</i>		
<i>Learning by doing</i> <i>Inclusive participation and decision-making</i> <i>Role of support organisations</i> <i>Trust</i>	Phase 7	<b>Gaining knowledge and skills to implement new course of action</b>
<i>Learning by doing</i> <i>Inclusive participation and decision-making</i> <i>Role of support organisations</i> <i>Trust</i>	Phase 8	<b>Testing new roles</b>
<i>Learning by doing</i> <i>Inclusive participation and decision-making</i> <i>Role of support organisations</i> <i>Trust</i>	Phase 9	<b>Gaining competency in new roles</b>
<i>Record Keeping and Documentation</i> <i>Inclusive participation and decision-making</i> <i>Trust</i> <i>Role of support organisations</i>	Phase 10	<b>The new perspective is embedded within the individual</b>

I have established that transformative learning has been happening over time (Chapter 3), the table above demonstrates that the SCFPG project continued to engaged participants in the phases of transformative learning. In the sections that follow, I present findings which illustrate how pedagogical practices, knowledge sharing and transfer approaches and wider factors have enabled participants of the SCFPG project to engage in transformative learning.

## **5.2 What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level?**

In this section, I specifically address the research question:

What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level?

The 'learning by doing' theme comprehensively addresses this question and I cover the range of active and experiential learning activities and practices which are embedded in the SCFPG project that relate to this theme. I focus on specific tools of the project such as fisherfolk learning exchanges, action learning groups, mentoring and participatory video, and I highlight the interconnection using the principles of CHAT.

### **5.2.1 Learning by doing**

Learning by doing encompasses a range of pedagogical practices and tools which were applied throughout the SCFPG project. These are embedded within the CANARI approach to facilitation of learning, but are also explicit within the various components of the project. There are specific approaches which I highlight (in sub-sections) as significant, which engage individuals and groups in the phases of transformative learning and contribute to the overall goal of progressive transformation and sustainable development. These are:

- Fisherfolk learning exchanges (FLEs)
- Fisherfolk action learning groups (FALGs)
- Mentoring
- Participatory Video (PV)

From a CHAT activity system perspective, components such as fisherfolk learning exchanges, action learning groups, mentoring and capacity building workshops were the 'mediating tools' within the overarching SCFPG activity system. However, each of these elements was also their own smaller activity system (see table 8 below) which interacted within the SCFPG project. 'Learning by doing' is embedded in these components and this was highlighted by the respondents and in the documentary evidence.

The following table summarises the key features of the smaller activity systems. These will be discussed in more detail in the following sub-sections.

<b>Smaller Activity System</b>	<b>Community (Target)</b>	<b>Division of Labour</b>	<b>Rules</b>	<b>Mediating Tools</b>
Fisherfolk Learning Exchanges (FLE)	Fisherfolk	Fisherfolk learning from other Fisherfolk	Established between the participants	<ul style="list-style-type: none"> <li>• Field visits</li> <li>• Narratives of other fisherfolk</li> <li>• Culture</li> <li>• Traditions/Traditional Knowledge</li> </ul>
Fisherfolk Action Learning Groups (FALG)	Fisherfolk Leaders	Workshops facilitated by CANARI, UWI-CERMES, CRFM and others	Established within the sessions, collective agreement on actions	<p>Various methods of facilitation including:</p> <ul style="list-style-type: none"> <li>• Brainstorming</li> <li>• “Dotmocracy” or voting</li> <li>• Problem Tree</li> <li>• Small group work</li> <li>• Role play</li> <li>• Reflection</li> <li>• Panel discussions</li> <li>• Field Trips</li> <li>• Participatory video</li> </ul>
Training of Trainers Workshop for Mentors (TTM)	Allied individuals to act as mentors to the NFOs / PFOs	Workshops facilitated by CANARI, UWI-CERMES, CRFM and others	<p>Established within the sessions, collective agreement on actions</p> <p>Involvement of Fisherfolk leaders</p>	<p>Various methods of facilitation including:</p> <ul style="list-style-type: none"> <li>• Brainstorming</li> <li>• “Dotmocracy” or voting</li> <li>• Problem Tree</li> <li>• Small group work</li> <li>• Role play</li> <li>• Reflection</li> <li>• Panel discussions</li> <li>• Field Trips</li> <li>• Participatory video</li> </ul>
National Fisherfolk Workshops (NFW)	National fisherfolk community	Workshops facilitated by CANARI, UWI-CERMES, CRFM and others	<p>Established within the sessions, collective agreement on actions</p> <p>Involvement of Fisherfolk</p>	Same as above, but also included testing of the Leadership and Mentor roles through group work activities and discussions.

Smaller Activity System	Community (Target)	Division of Labour	Rules	Mediating Tools
			leaders and Mentors	<p>In each workshop (FLEs, FALGs, TTMs and NFWs), environment and culture played a role in the activities.</p> <p>The small grant scheme also provided an opportunity to learn and test new skills in applying for grant funding for local projects related to the SCFPG activity</p>

Table 9: Mediating tools within the smaller activity systems of the SCFPG project

### 5.2.1.1 CANARI's Facilitation Approach

From the records of the various workshops it was clear that the overall approach to knowledge transfer was participatory and interactive. This was in keeping with CANARI's approach, vision and mission. The methods of delivery and engagement reflect the participatory and interactive approach and are referred to as 'facilitation' methods in CANARI's (2011) guidance document 'Facilitating participatory natural resource management: A toolkit for Caribbean Managers' (CANARI, 2011). The document was written and prepared by CANARI staff with input from stakeholders who had worked and engaged with CANARI. The document was produced with support from the EU, UN-FAO, DFID (UK) and John D. and Catherine T. MacArthur Foundation. The purpose of the toolkit was stated as (CANARI, 2011):

*'This toolkit is designed to bridge this gap and help formal and informal natural resource managers as well as other independent persons to build their skills, knowledge and experience to facilitate participatory processes that can effectively and equitably engage stakeholders in decision-making about how the resources should be managed.'* (p7)

*'The toolkit is designed primarily for those working in Caribbean small island*

*developing states but many of the approaches are applicable to natural resource management in other countries and particularly other small island states.*'(p8)

Facilitation was described as:

*'helping groups or individuals come to a common objective without imposing, dictating or manipulating an outcome. Facilitation empowers individuals or groups to find their own answers to problems or plan approaches to issues identified.'* (pS1:1)

The guide also differentiated facilitation from teaching and training.

*'Facilitation is very different from teaching and training where there is a much higher flow of information from the teacher or trainer to the participants. In a facilitated process information is flowing from the participants. There is a high level of involvement of and interaction among participants. The facilitator asks questions and helps to clarify points. The facilitator does not control the decisions made by participants or the results of the process.'* (pS1:1)

The facilitators of the workshops were part of the Caribbean fisheries network community and were therefore similarly 'learning by doing' and adjusting approaches based on feedback and lessons learned.

The facilitation toolkit offered a variety of methods and techniques. The use of the different methods were well documented within workshop reports. The methods of delivery and engagement used included:

- Brainstorming
- "Dotmocracy" or voting
- Problem Tree
- Small group work
- Role play
- Reflection
- Panel discussions
- Field Trips
- Participatory Video



These methods offered a specific set of ‘mediating tools’ that were grounded in experiential learning and a participatory pedagogy and were used in the three components of the workshops for fisherfolk leaders, mentors and national groups. These tools were applied by the ‘community’ and there was a clear ‘division of labour’. The ‘rules’ were established through every workshop agenda and by adhering to the principles of facilitation set out in the toolkit. The smaller activity systems therefore impacted significantly on the development and transformation of the larger overarching SCFPG activity system.

The respondents initially seemed unsure of how to talk about learning within the Caribbean fisheries network particularly as it related to change. A possible reason for this may have been the distinction made between facilitation and teaching/training. Additionally, the learning environment was informal as opposed to the traditional formal learning environment, and learners were adult and from diverse educational backgrounds. The respondents initially related a historical narrative of the Caribbean fisheries network, described changes over time and the development of the CNFO. In their relating of the ‘story’ I felt that this established a process of reflection in the respondents who then sharpened their focus on learning and change within the network. They all expressed a belief in ‘learning by doing’. With regards to the fisherfolk specifically, R1 indicated that the fisherfolk responded better to ‘hands-on’ and practical activities.

The following sub-sections (5.2.1.2 – 5.2.1.6) explore the smaller activity systems, their relationships with each other, and how they function as mediating tools for transformative learning in the SCFPG project.

### **5.2.1.2 Fisherfolk Learning Exchanges**

One of the learning approaches mentioned early in interview was Fisherfolk Learning Exchanges (FLEs). The FLEs were focused on the fisherfolk learning with other fisherfolk. The subject of the learning exchanges mainly tended to focus on small scale fishing from the personal, economic, political and organisational empowerment perspectives of the fisherfolk community (FLE, 2018). These exchanges aimed to strengthen communication and ties across the Caribbean fisheries network. The

FLEs were a 'mediating tool' within the SCFPG activity system. However, the FLEs were activity systems themselves which had a subject and object-oriented activity, a community, rules, division of labour and their own 'mediating tools'. The tools of the FLEs were field visits and onsite learning from other fisherfolk. The transformative aspects were the narratives of lessons learned from individual or community experiences in the field which were discussed as a group. These narratives were forms of reflections which helped to instruct other fisherfolk to adopt more sustainable and responsible fishing methods.

R1 and R2 discussed FLEs as effective learning opportunities:

*'when they (the fisherfolk) have done fisherfolk exchanges, when people travel to somewhere else... the fisherfolk leaders claim that the learning exchanges organised by different entities, have been successful in changing mindsets'. (R1)*

R2 explained the possible reason why he believed the FLEs were successful:

*'Well... as you would know... people learning in different styles...different ways and mixes of them... and I guess visual, tactile, hands on, engaging interface works for everybody, fisherfolk and academics alike... driving things home more, rather than if you are talking to people about a protocol where all they are seeing is words on paper.. and probably no one will ever pay attention, so why should they waste their time...'. (R2).*

The FLE report (FLE, 2018) provided a source of documentary evidence of these learning exchanges and provided insight into the outcomes of such activities mainly focused on fisherfolk. The FLEs were informal learning opportunities which do not appear to be frequently documented. However, the learning exchange report highlighted positive examples of knowledge exchange and the importance of

- empowerment (of women in particular in this report)
- maintaining cultural identity
- traditional knowledge in the fisherfolk community
- community and solidarity
- shared resource management

Within the report, the words of the fisherfolk were documented and reflected how significant the impact of the learning exchanges were for this group (FLE, 2018 p11-12):

- *It is more profound; it is sharing traditional knowledge with sons and daughters*
- *The eyes express the eyes of any of us, who are taking all of these and trying to transform*
- *We see changes and transformations in the subject of traceability*
- *We see women transforming the environment*
- *I see a future and women contribute to that future ... and not only for them, but for the next generation*
- *The voices, the sounds ... today we have more voice than the first day. Not only we have more voice, but it is also stronger now*
- *At the roots are the people who are re-taking their past and moving forward into the future. At the root is the knowledge, the culture and roots that are founded in identity.*

These comments reflected an acknowledgement of transformation which was empowering to this group of artisanal female fisherfolk, and therefore offered a sense of how transformational other similar FLEs would have been (and still are) for small scale fisherfolk communities. The report went on to record lessons learned and offered quotations directly from the fisherfolk (FLE, 2018 p14-15):

- *It is necessary to strengthen the identity of Caribbean women as women of strength, empowerment and leadership. "Change starts with me and continue to work together".*
- *The importance of activating personal and collective "will".*
- *If we are leaders and empowered, we must multiply that knowledge and attitudes with other women in our fishing communities, and along the value chain. "Sorority because we can see how the voice of the eight women joined to become one, and thus bring learning to each of our communities."*
- *Ensure that traditional knowledge of fishers is recognized. We must rescue cultural traditions in fishing to help strengthen the identity and roots of our people, as well as their commitment to the restoration of a country and an activity such as responsible fishing, including the contributions of women and*

*young people. "The value of tradition: we have many traditions. They have taught me that we can gather values and traditions in Grenada. "*

From the record of the fisherwomen's voices the underlying and unseen role that cultural identity (art and music), tradition and traditional knowledge played in the community was highlighted. The report noted that (p20):

*'The artistic and cultural elements were particularly enriching, but also reinforcing for knowledge mobilization aimed at motivation for change.'*

This suggested that culture and traditional knowledge were 'mediating tools' within the FLE activity system which encouraged and motivated the fisherfolk 'community' who were part of the FLE activity system. It follows that such mediating tools therefore played a role in the SCFPG activity system where the FLEs were one of many 'mediating tools' which were utilized. The FLEs also impacted on the 'subject' and 'community' of the SCFPG activity system since the fisherfolk are part of the Caribbean fisheries network and the main 'object' of the activity system. The sense of empowerment, leadership and community, within the context of the FLEs as a meditating tool and as a smaller activity system, therefore contributed to motivating the 'subject' to act on the 'object' of the SCFPG activity system in an effort to achieve the desired outcomes of the activity. The tools of culture and traditional knowledge thereby reinforced the transformative nature of the FLE and SCFPG activity systems.

### **5.2.1.3 Fisherfolk Action Learning Groups**

As a key component of the SCFPG project, the key objectives for the Fisherfolk Action Learning Groups (FALG) were (FALG1, 2013 p1):

- To engage in action learning on an ongoing basis and apply it to real scenarios
- To contribute to the ongoing planning and monitoring and evaluation of the 4-year SCFPG project
- To develop and enhance personal leadership skills and knowledge
- To review the strategy and action plan for the formalisation of the CNFO as part of the SCFPG project
- To participate in policy and decision-making processes and projects for sustainable small-scale fisheries development in the Caribbean
- To develop and test effective communication skills and strategies in order to influence policy

The first workshop introduced the basic principles of action learning, and how it could be employed in appropriate contexts. Participants then used role play and the field trip real scenarios to test their new skills in all three FALG workshops. These types of activities align to phases 4-9 of transformative learning.

The documentary evidence provided insight into the FALG which helped to clarify how the FALG acted as a 'mediating tool' for the SCFPG activity system, but also functioned as its own activity system. The participants of the FALG workshops were nominated by the national fisherfolk organisations (NFOs) from the eight participating project countries and also included individuals from partner organisations.

All three workshops were intensive, instructive, interactive and highly focused on gaining the input from the fisherfolk participants who were taking leadership roles in their national and primary fisherfolk organisations. Action learning was explained as 'learning by doing' and involved 'problem solving by a group of peers'. The action learning group's (ALG) roles were specified as:

- **Presenter** who had a problem to be solved
- **Group Members** would ask probing questions to help the presenter solve his/her problem, but would not give advice
- CANARI functioned as the **Action Learning Coach** for the FALG
- **Learning buddy** was someone that helped to test new approaches/ideas discovered during the Action Learning process. After trying out the new idea/approach experiences were shared with the group so that the group was always learning.

One of the respondents R4 referred to the Action Learning Groups (ALGs) and explained the membership of the Fisherfolk Action Learning Groups (FALGs) in the following way:

*'We set up what was called the Fisherfolk Action Learning Group. The FALG was made up of a representative of the CNFO from each country... but you have to take into account the CNFO is made up of NFOs (national fisherfolk organisation) ... where there was no NFO they would then use the lead primary fisherfolk (PFO) group ... you could even have individuals.'* (R4)

The group met over the 4 year project, and he explained that:

*'it provided a non-confrontational environment for the fisherfolk leaders to meet, to share their experiences, to identify common issues, to identify solutions... and solutions would either go in the way of what capacity is required, or what do they do to influence policy'. (R4)*

The FALG activity system therefore had a well-constructed subject, object and set of desired outcomes. The community was defined by membership, the division of labour was set out clearly in terms of the ALG roles, and therefore the rules of engagement were clear to those within the activity system. The transformative mediating tools within the FALG activity system were:

- Action learning
- Role Play
- Field Trips
- Dialogue with other fisherfolk

These mediating tools strengthened the community within the FALG activity system, and this in turn helped in strengthening the Caribbean fisheries network and the SCFPG community. The experiential nature of the mediating tools enabled the community to learn through practice and participation. The real-world context of the interactions encouraged the FALG community to think more creatively and innovatively and apply their local knowledge to find solutions to 'community' problems.

The importance of effective questioning was discussed, and participants recognised the usefulness of this skill. FALG1 (2013, p3-4) further states that:

*Key elements of action learning were pointed out as:*

- *A group of peers collaborating*
- *Sharing practical knowledge and experience*
- *Building on current knowledge*
- *Taking action to test approaches (experiential) + asking questions and reflecting together on what they learnt*
- *Focusing on practical solutions/answers to real problems/questions = SEEKING CHANGE*
- *Empowering participants in the process.*

The pros and cons of action learning were discussed, as well as the appropriate use of an action learning approach.

A field trip activity was built into each FALG workshop in order to give the participants an opportunity to use action learning in a real case relevant to the local fisherfolk group on their beachfront sites and included:

- FALG1 - Blanchisseuse fisherfolk facility, Trinidad & Tobago
- FALG2 - Nassau fisherfolk landing sites at Montagu Ramp and Potter's Cay, The Bahamas
- FALG3 – Barbuda fisherfolk facility, Antigua & Barbuda

Using the CHAT framework, the FALG activity system was therefore composed of CFN 'community' members who fundamentally represented the 'national' fisherfolk interests of their country. In that sense the FALG 'community' was impacted on by the NFO or PFO activity systems which were far less well defined in some of the CNFO representative countries when the SCFPG project started. As a result, at the start of the SCFPG project, the NFO and/or PFO activity systems demonstrated several poorly defined elements which created tensions. Tensions arose due to:

- A poorly defined subject – fisherfolk representation from the landing sites was reported to be poor due to historical disappointment of the effectiveness and role of fisherfolk groups and appeared in the documentation
- An unclear object – without a representative subject, the goals, motivations and outcomes of the NFO/PFO activity systems were unclear and not defined by the fisherfolk themselves
- Lack of clarity with regards to 'mediating tools' – without a clear object, the NFOs/PFOs were unable to apply appropriate mediating tools. Initiatives regarding, for example, marine governance, adapting to climate change, managing small enterprises and engaging in the international discussion would require a specific set of 'mediating tools'. From the fisherfolk voices recorded in the FLE report discussed above, the underlying core set of general 'mediating tools' included cultural identity and traditional knowledge. In order to work towards specific 'outcomes' the NFOs/PFOs required training to develop skills and knowledge of other 'mediating tools'.

- PFOs were needed in order to build the NFO 'community'. PFO communities could only be as strong as the number of fisherfolk who engaged. Therefore, the difficulty in getting fisherfolk to engage weakened the 'community' and the 'division of labour' aspects within the CHAT framework.
- Because these local organisations were not fully formalised there was also a lack of clarity with regards to the 'rules' within the NFO/PFO activity system. There were not many NFOs or PFOs which had clear terms of reference for example.

The weakness of the NFOs and PFOs was reflected in the national fisherfolk workshop (NFW) reports, particularly the first of those workshops. The tensions within these smaller activity systems was directly and indirectly addressed through the larger SCFPG activity system. The FALG was one of the mediating tools in the SCFPG project which addressed leadership as a necessary 'mediating tool' within the NFOs/PFOs.

The first FALG also discussed the status of NFOs and PFOs and the challenge to getting fisherfolk to participate and engage in the local fisherfolk organisations. However, it was clear from the discussions that the focus was to build capacity of the local NFOs/PFOs to strengthen and simultaneously build capacity of the CNFO as the regional organisation. This was also the object of the SCFPG activity system. Specifically, the FALG activity system influenced the transformation of the NFO/PFO activity system through the development of leadership and effective communication skills in fisherfolk leaders of the NFOs/PFOs. The skills of leadership and effective communication therefore became mediating tools within the NFO and PFO activity systems.

In the second FALG workshop, there was a review of the objectives and relevant updates on activities of the NFWs which had started. During this workshop there was consideration and discussion of the small grant facility called the 'Fisherfolk Strengthening Fund' (FSF). This source of financial aid was being made available to fisherfolk to apply for funding for national projects related to the main SCFPG project objectives. The fisherfolk therefore needed to learn how to complete the grant application themselves. An extra input session was provided to explain the process



and the requirements of the process. The fisherfolk were supported by CANARI and UWI-CERMES to put forward viable and successful grant applications themselves. The FSF was another mediating tool of the SCFPG activity system. The fisherfolk leaders from the NFOs/PFOs did not possess the skills or knowledge to engage with this tool, and therefore the FALG workshop facilitators provided a participatory learning session and additional support through the principle of 'learning by doing' to help the fisherfolk leaders to develop their grant proposals. For successful applications, the NFO/PFO would have also been expected to engage in reporting and monitoring for the project. As a tool of the SCFPG activity system, the FSF was transformative to the knowledge and skills of the fisherfolk leaders and this in turn had a transformative impact on the smaller NFO/PFO activity systems.

During the second FALG participants also reflected on 'lessons learned', and the open discussion created an awareness of their shared experiences and challenges. The approach to delivery and facilitation enabled new perspectives to develop with regards to fisherfolk participation in policy decision-making, governance and capacity building. The discussions were transformative in that:

*'members found that the process helped them to think about similar issues that they were experiencing and also gave them ideas on how to treat with those issues. The groups found that the questioning process brought clarity to their own issues with one participant noting in particular that the process "brought up questions that I never thought of myself". Another participant shared that learning about the challenges of other organisations helped him to consider similar challenges he may experience within his own organisation in the future'* (FALG2, p8)

The overall feedback during the workshop evaluation reflected that participants were gaining skills and knowledge from their participation, and genuinely believed that the workshop provided a rich learning experience which was very 'hands on'. Since the second FALG workshop was held in the middle of the delivery period for the second set of NFWs, participants in the ALG had gained insight into the various NFOs and their challenges through the NFWs. They could see the linkages more clearly between the discussions at the second FALG workshop and the work that was

required at the local and national levels to strengthen the fisherfolk participation and voice with regards to governance and protection of their livelihoods.

The third and final FALG workshop was also the final workshop of the SCFPG project. The objective for this workshop was therefore to review progress and the overall implementation of the SCFPG project. Like the second FALG, participants discussed and reflected on lessons learned and experiences gained as fisherfolk leaders. Participants also considered current policies and projects in the Caribbean fisheries sector through small group activities and identified opportunities for participation and the need to effectively share information amongst the fisherfolk community. The role of the FALG beyond the timeframe of the SCFPG project was discussed and it was noted that it needed to be maintained after the project formally closed, in order to maintain the communication within the CNFO leader network. R4 stated that

*'all the organisations recognise the need to build the capacity of the network if the network of the fisherfolk is going to engage'. (R4)*

The third workshop included leadership training, which practically aimed to refresh knowledge and skills and to highlight the need for succession planning. The feedback from the third workshop was again very positive, with participants commenting on their learning, and what they found most useful for future activities. It was clear that throughout all workshops the facilitation approach was effective, and the materials were delivered at the right level in order to engage the diverse backgrounds of the participants. Though there was a heavy workload, participants appeared to enjoy the engagement in the activities and felt that they had learned new skills. Participants fed back on what they liked (FALG3, Appendix 9):

*'I liked the approach. The interaction was mixed with humour'.*

*'Very informative and I like the facilitators, they were very clear on their topics.'*

*'There were many tools available to improve my ability as a fisherfolk leader and my organisation.'*

*'It was straight forward. What we were taught is what we need to put into practice.'*

*'It was well attended and I gained many new ideas and knowledge.'*

*'The wealth of relevant information and the connection to others.'*

They were fully engaged in the activities and benefited from the shared experience.

The FALG was generally focused on developing leadership skills of the national fisherfolk NFO/PFO representatives. This was therefore an outcome of the FALG activity system. The knowledge, skills and motivations which were learned through the various facilitation methods were fed back to the national and primary fisherfolk groups through the leaders. The impact of this was that the NFO/PFO activity systems were simultaneously strengthened and transformed throughout the project.

#### **5.2.1.4 Mentoring**

Another component of the SCFPG project was to develop a group of who could work with local, national and regional organisations specifically to support the progression of the SCFPG project and to build participation in fisheries governance and management. The mentors were chosen by the fisherfolk leaders who were part of the FALG activity system. The mentors were individuals from government agencies, civil society organisations, technical assistance agencies, independent consultants and donors with expertise in fisheries governance and management, organisational management and development, outreach and mobilisation, communication and advocacy, and networking. This was not primarily a fisherfolk group, but the mentors worked with the fisherfolk groups.

The Train the Mentor (TTM) workshop objectives were to:

- understand key principles for participatory fisheries governance and management
- become aware of key capacity needs to support Caribbean fisherfolk to play an effective role in fisheries governance and management
- understand mentoring roles and key competencies needed
- gain knowledge and practice application of approaches and tools for mentoring fisherfolk organisations in the areas of strategic and operational planning, financial management, fundraising and structures, policies and processes for good governance, networking and communication for policy influence
- know more about the positions of Caribbean fisherfolk on key global and regional policies and how these affect small scale fisheries, fisherfolk livelihoods and food security

- establish a strategy for mentoring the fisherfolk organisations in the respective countries

Respondent R4 specifically mentioned that mentoring was a CANARI approach and it was viewed as a capacity building activity offering individuals the opportunity to connect to other people in the region who were part of the fisheries sector.

These workshops followed a similar format to the FALG workshops which embedded participatory and interactive facilitation methods. Participants had opportunities to practice new skills through small group activity and field trips where they could apply their mentoring model to real scenarios. The TTM workshops were another key 'mediating tool' within the SCFPG activity system but, just like the FALGs and FLEs, they became smaller activity systems with their own 'subject', 'object', 'rules', 'division of labour' and 'community'. The TTM workshops used the same facilitation methods as used for the FALG workshops and therefore these facilitation approaches also became 'mediating tools' for the TTM activity system. The subjects and the community of the TTM activity system were also part of the wider Caribbean fisheries network and as a result the TTM developmental activities also played a role in the strengthening of the local and national fisherfolk groups. As a capacity building activity, the TTM focused on developing the 'community' and the skills within the Caribbean fisheries network specifically related to strategic and operational planning, financial management, fundraising and structures, policies and processes for good governance, networking and communication for policy influence.

The TTM workshops were interactive and encouraged active participation. The aim was to prepare the mentors and enable them to engage effectively with the fisherfolk through the NFOs and PFOs, and at the NFWs which were another key element of the SCFPG activity system. This was similar to how the FALG members engaged.

In addition to outlining the basic principles of mentoring, the first TTM workshop generated discussion and reflection of the notion of participation, where the group offered their own perceptions of what they felt it meant. The activity employed a facilitation tool called the 'participation wall'. Participants were placed into small groups and discussed what they felt participation meant, agreed and listed three

words on paper which reflected their views, and this was placed on the participation wall.

The ideas were grouped into clusters based on similarity of ideas and then using the 'Dotmocracy' approach, participants voted on the key principle (in bold font below) that best illustrated participation in each cluster (TTM1, 2013 p4):

1. *Physical and mental involvement, To be an active part of, Active - **Involvement***
2. *Sharing ideas, Sharing, Team work or working together - **Team work***
3. *Engagement, Engaging, Interaction, Understanding - **Interactive***
4. *To be a part of, Been part of, Make a valuable contribution to - **Ownership***

The mentors reflected on the values and challenges of participation and concluded that if the benefits of participation were not highlighted to the fisherfolk it would be difficult to engage them. The plenary discussion noted many challenges and barriers to getting the fisherfolk to engage in participatory natural resource management. Whereas the FALG was focused on building strong *leadership* into the NFOs/PFOs, the TTMs were focused on using mentoring as a mediating tool to build stronger fisherfolk *participation* through their engagement with the NFOs/PFOs. This was another SCFPG activity which contributed to strengthening the structural elements of the NFO/PFO activity systems. Fisherfolk leadership and participation therefore became mediating tools within the NFO/PFO activity systems.

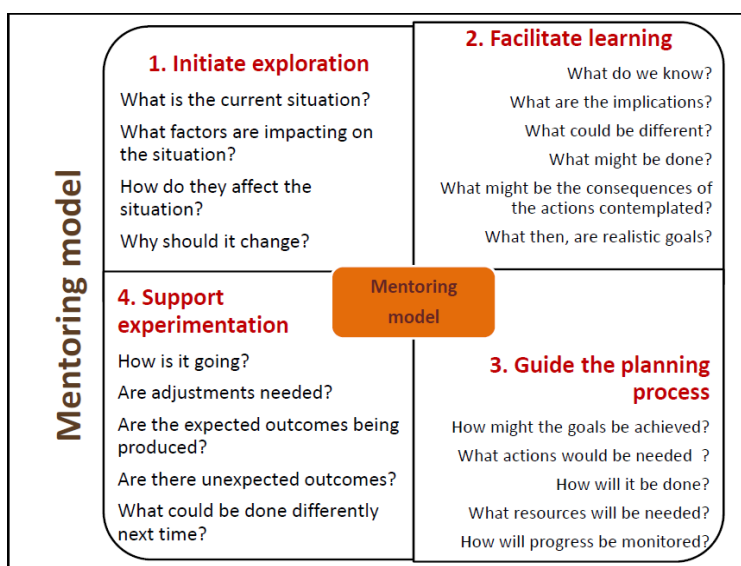
The mentoring role was important to knowledge sharing and transfer within the local, national and regional network. The following figures were from the presentation to the TTM group about mentoring. They provided a clear illustration of the approach and indicated that mentoring was viewed as the transformational element of the project (see Figure 10). The mentoring model discussed clearly illustrated the element of learning which is embedded within it (see Figure 11).

Figure 10: Difference between Mentoring, Facilitation and Coaching/Training (TTM2, 2015 Appendix 5)



	Mentoring	Facilitating	Coaching / Training
Goal	Transformational! An expectation of change, growth, development, empowerment.	Meet a pre-determined outcome	Build skill(s)
Timing of the relationship	Long term	Short term	Short to medium term
Target		Group process	Individual/collection of individuals. The focus is on each individual acquiring the skill(s)

Figure 11: Mentoring Model (TTM2, 2015 Appendix 5)



Mentors were encouraged to rate their own capacities using a form they were given. The form offered mentors an opportunity for initial self-evaluation and consideration of areas for development and reflection.

The participants were able to practise their mentoring skills through a field trip to a fishing village where they realised that they shared similar problems. Feedback indicated that everyone felt that they had learned something. In the time between the first and final workshop for mentors, arrangements were made by CANARI to facilitate online communication and interaction. This included the use of WhatsApp,

Facebook and Yahoo for group communication. There is evidence of some use of Facebook and WhatsApp by fisherfolk.

The final TTM workshop was held after the second set of NFWs was completed. The workshop focused on continuing engagement with the mentors after the SCFPG project was complete. There was also review of activities by the mentors, and a wider review of the implementation of the SCFPG project. There were sessions specifically dedicated to reflection of the mentors regarding their support of fisherfolk organisations, building relationships with mentees, managing conflict, establishing trust, further development of mentors (knowledges, skills and capabilities), facilitation techniques, and project management (which was related to the small grant fund applications and approvals). These activities took participants through the phases of transformative learning.

The fisherfolk leaders and the mentors had an opportunity to practise their skills at the National Fisherfolk Workshops (NFWs) which were capacity building activities. The same facilitation approaches were used such as voting, small group work, role play, problem tree and participatory video. Two NFWs were held in each location between 2014 and 2015 in the following 8 countries: Barbados, Dominica, Jamaica, St. Lucia, St. Vincent and the Grenadines, Suriname and Grenada. Attendance for each meeting reflected the local stakeholders' views and voices, particularly those of the local fisherfolk groups.

With a focus on the NFWs, the first set of NFWs addressed the following key areas:

- the identification of challenges facing the fisherfolk at a local level which acted as barriers to effectively engaging in fisheries governance
- the identification of priorities for strengthening the local and regional fisherfolk organisations
- the identification of opportunities for fisherfolk to become more engaged and involved in key national, regional and global policy and decision-making processes in order to address their challenges

The second set of NFWs further developed the knowledge sharing and transfer contexts by focusing on:

- shared experiences of capacity building, influencing policy and reflecting on lessons learned
- priority policy issues at the national, regional and international levels
- effective communication and messaging strategies for influencing policy
- basic principles of a project management cycle
- participatory monitoring and evaluation
- 'self' evaluation of the SCFPG project

The reports for the second NFWs indicated that there was some evidence of development and improvement of fisherfolk engagement at the local level but suggested that there was still work to be done in that area.

Where fisherfolk representatives attended meetings for regional or international meetings, they were required to write reports which directly related to knowledge sharing within the Caribbean fisheries network. This represented a learning opportunity as R4 explained

*'it is trying to get them understand that they may be going to meetings, they are gathering information, gathering knowledge... they have to share it, we provided them with a reporting format and then when they got back they had to complete that report and submit it to us. We edited it...because part of it is a learning process... they are learning how to prepare a report...'* (R4)

Gaining report writing skills was additionally important for seeking funding through grants such as the Fisherfolk Strengthening Fund (FSF) which was discussed previously.

It was also interesting to note unsuccessful initiatives where there was poor engagement from the fisherfolk.

*'for example, we are doing an ICT project ... all about early warning and danger at sea, and things like this which you thought would be very interesting and engaging but it hasn't proven to be...'* (R1)

In terms of informal learning through technology, the fisherfolk used WhatsApp and Yahoo groups. It was indicated that fishers do use smart phones and laptops but that



*'in the Caribbean we don't interact too well at the electronic level' (R2).*

Further to this, I asked if there were challenges to communication within the fisherfolk community. R2 confirmed this was an issue and that it was multi-dimensional. He explained that, for example, in St. Lucia fisherfolk prefer to communicate in creole (a hybrid language spoken in some of the islands). He also explained that even if fisherfolk are unable to read and write they get others to perform tasks like filling in forms. This further emphasized the importance of the 'community' within the activity system and the supportive role of leaders and mentors with regards to promoting participation and engaging the fisherfolk community.

#### **5.2.1.5 Participatory Video**

The use of participatory video (PV) was part of the SCFPG project objectives, and a PV workshop was facilitated particularly for the fisherfolk to develop their awareness, knowledge and skills with regards to PV and how it could be used as a facilitation tool which could generate meaningful participation, dialogue and advocacy. PV was therefore another 'mediating tool' for the SCFPG activity system. The PVs offered some insight into the fisherfolk voice as it related to certain problems or challenges the PFO community in question wanted to highlight. In terms of the PFO activity system, PV was a tool which enabled the 'subjects' to draw attention to some of the specific 'tensions' within the PFO activity system.

In August 2014, CANARI worked with Nature Seekers (a community-based organisation in Matura, Trinidad) to create a PV to highlight and document the challenges facing the fishing industry in the Matura to Matelot (M2M) community.

The objectives of the workshop as set out in the project concept note were to:

- identify the problems/ challenges facing fisherfolk in the Matura - Matelot area
- identify potential solutions for the challenges
- identify the appropriate target audience for the message(s)
- identify the best means for the dissemination of the final product
- develop the storyboard for the video
- capture the videos to complete the storyboard

- edit the video
- disseminate the final video

The workshop participants came from the fishing community in the Matura to Matelot area on the north coast of Trinidad. They identified the challenges they wished to highlight, discussed the solutions, the target audiences and the messages they wished to convey via the short video. The fisherfolk developed the storyboard for the project and were taught how to use the cameras. They received technical support from Nature Seekers to review the recorded footage and to decide what to edit into the final product. The name of the video was 'Fishing for a living: North Coast facilities' (CANARI Caribbean 2, 2014) (PVF4L, 2014). The workshops which facilitated this artefact development followed the same format as the other SCFPG project workshops in that they were interactive and required full participation from the fisherfolk (in this instance). Another PV was produced at the second FALG workshop in The Bahamas and the video was called 'Catch, Kill, Destroy: Poaching The Bahamas Fisheries' (CANARI Caribbean 2, 2016) (PVCKD, 2014). The PVs were used as mediating tools in the second NFWs and allowed the participating fisherfolk in each location to recognise that they shared common problems and challenges. They also recognised that in discussing their problems with other fisherfolk leaders and mentors they could share ideas, knowledge and possible solutions. These aspects resonate with the phases of transformative learning.

#### **5.2.1.6 Summary**

In conclusion of this section, I summarise the pedagogical practices which promoted transformative learning and the way in which this was done in order to engage all participants within the project.

Firstly, pedagogical practices were underpinned by an ethos established by CANARI which was inclusive and encouraged active participation and learning. This was applied throughout all component workshops within the SCFPG project. Secondly, the facilitation methods for each workshop demonstrated a 'learning by doing' pedagogy which was 'hands on', practical, collaborative, promoted dialogue and engagement with the phases of transformative learning. Thirdly, the structure of the project resulted in the development of various smaller activity systems, ie. the FLEs,

FALGs, the TTM, and the NFWs, which were mediating tools in their own right for the SCFPG project. Each of these activity systems had their own objects and desired outcomes in terms of building capacity of the CNFO. As the subjects of these smaller activity systems were transforming, they were simultaneously interacting with the other activity systems. For example, the ALG and the mentors were developing within their own activity system but engaged with the NFW activity system as part of the 'community' and 'division of labour'. Through the engagement with the NFWs, participants of the FALG and TTM activity systems transformed in terms of their knowledge and skills, but they also supported transformation of knowledge and skills within the NFW activity system. The transformation within these separate but connected activity systems contributed to transformation within the larger SCFPG project activity system and enabled participants across all organisations and levels to engage in phases 1-10 of transformative learning.

### **5.3 How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?**

In this section I address the research question:

How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?

The themes of learning by doing, inclusive participation and decision-making and record keeping and documentation are relevant to this question. Learning by doing involved interactive and experiential learning approaches and practices which were reliant on inclusive participation and decision-making. Record keeping and documentation was an important tool used within the network and contributed to effective knowledge sharing and transfer between participants of the SCFPG activity system. In the following sub-sections I present findings related to the themes of inclusive participation and decision-making, and record keeping and documentation in relation to the above research question. The theme of learning by doing has been discussed in the previous section.

### 5.3.1 Inclusive participation and decision-making

All the respondents agreed that work within the Caribbean fisheries network has taken a participatory approach which was informed by CANARI as a lead support organisation. This means that multiple stakeholders have worked together to build capacity of the Caribbean fisheries network. Decision-making was (and still is) based on consensus, and the diverse group worked together to agree on actions and find solutions to transform the activity within the region over many years.

Respondent R3 emphasised the decision-making processes and engagement at early stages with the fisherfolk groups which informed the formation of the CNFO. It clearly demonstrated a participatory approach which was led by CRFM at the time. He emphasised the significance of the 'shared marine resources' and why focus continues to be placed on the sector globally.

*'this is where in the global environment FAO has been in the lead, they have recognised that in the Caribbean, especially the CARICOM region, and the wider Caribbean region, we are dealing with shared marine resources, which is maybe what is helping to forge these networks, because we are dealing with resources that are shared so no one country can manage a lobster fishery... a shrimp fishery... In terms of small scale fisheries there has been global acknowledgement that they are important and from a Caribbean or CARICOM context, close to 90% of our fisheries are small scale, so that might be one of the factors.'* (R3)

The context of socio-ecological systems has also fostered and indeed necessitated a participatory and collaborative approach over several decades. This has been the case for the CRFM, UWI-CERMES, CANARI and even the FAO.

However, getting wide and consistent participation from the fisherfolk community was more challenging. With regards to how the local or primary fisherfolk organisations engaged and participated:

*'The primary structure is what we would call local which would mean fisherfolk at landing sites, site-based... so in terms of how the network, which are the folks really at the top, who work with the locals... it varies considerably, and it often varies considerably with topic.'*

External to the SCFPG project but related to the participatory approach which underpins the network's engagement, R4 also gave an example of further facilitation of fisherfolk to participate in wider arenas. He highlighted that UWI-CERMES, who had regularly attended the annual conference of the Gulf and Caribbean Fisheries Institute (GCFI), promoted an initiative called the 'Fisher's Forum' whereby a 2-3 hour session was added to the annual conference agenda which was (and still is) facilitated and led by the fisherfolk. The GCFI worked with several partners and has a scope beyond the CARICOM countries. The forum was a further opportunity for fisherfolk to discuss their issues and challenges with researchers, policy makes, fisheries officers and other fisherfolk from gulf and Caribbean region. The session promoted knowledge exchange, problem solving and learning through participation and is now a formal part of the conference activities. This was another opportunity for fisherfolk to engage in the phases of transformative learning.

From the perspective of the CHAT activity system, the participatory and collaborative approach related to the 'community' and 'division of labour' elements, and I consider these principles of participation and collaboration to be historically and culturally embedded within the SCFPG activity system. This is linked to the role of supporting organisations which is discussed section 5.4.1. The interconnectedness of the FALG, TTM, NFW and FLE activity systems to the main SCFPG activity system highlights the inclusive nature of participation where the fisherfolk were given tools for strengthening their voice at the local, regional and international levels and could also develop new perspectives, skills and practices.

The first FALG workshop enabled participants to contribute to the planning and implementation of the first set of NFWs, and the second and third FFALG workshops required participants to engage in monitoring and evaluation activities for the NFWs. Additionally, this group was responsible for identifying national mentors in countries participating in the SCFPG project. The role of mentors was discussed so that participants could make informed decisions about appropriate selection for the role.

At the end of the first workshop, facilitators and participants discussed the overarching objectives of the SCFPG project and how results could be assessed. Participants proposed that results were 'changes in behaviour and relationships' and

asked the question “How do we want ALG members to behave/act to achieve the project results?” The following responses were recorded in the first FALG Report (FALG1, 2013):

*‘Effectively communicating with other members of the ALG’*

*‘Serving as a communication hub between fisherfolk and CNFO (i.e. facilitating inter-sessional meetings with others as needed)’*

*‘Showing strong commitment through attendance at ALG meetings and participating in project activities over the next three years’*

*‘Raising the profile of the leaders – for them to be more visible and be role models’*

*‘Undertaking succession planning in the fisherfolk organisations’*

*‘Demonstrating stewardship (i.e. being responsible for sustainable fisheries)’*

*‘Being change agents (i.e. promoting organisational change)’*

The importance of effective communication, building and strengthening partnerships and relationships, leading by example and creating change were highlighted, and the ALG was viewed as pivotal in that process. In the second FALG workshop, there was a review of the objectives and relevant updates on activities. The feedback from the participants indicated that they recognised that participation and collaboration were necessary. The third FALG workshop included leadership training, which practically aimed to refresh knowledge and skills. The workshop report noted that *‘the leadership training session contributed to the objectives of the FAO’s Code of Conduct for Responsible Fisheries and Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in terms of building the capacity of fisherfolk to participate in decision-making processes’* (FALG3, 2015 p12). This indicated that workshop objectives were clearly aligned to not just local needs but wider international directives as well for fisherfolk to participate in decision-making.

Mentors also played a role in knowledge transfer and sharing particularly with the NFWs and more widely at the local country level. The following was recorded in the first TTM workshop report (TTM1, 2013 p6):

*‘Mentors were identified as being critical to the achievement of the project’s objectives, especially for objectives (ii) building capacity of FFOs and (iii) enhancing communication within and between FFOs. Mentoring in the scope of the project was then defined as providing direct support and guidance to*

*FFOs to become effective partners in fisheries governance at the regional and national levels.'*

Mentors were given the task of actively taking a lead in the NFWs and of raising awareness to government stakeholders in order to engage them fully.

The inclusion of the fisherfolk in key decision-making processes throughout the SCFPG project placed them in a unique position in terms of the activity system. They were part of the subject, they had a role in terms of the division of labour, they were a part of the community, but importantly they were the focus of the object of activity system. Inclusion in decision making during the project also worked to build trust and motivation within the fisherfolk group. The mediating tools required participation, collaboration and communication. Through knowledge sharing and transfer, the particular experiential learning approaches, and the embedded inclusive and participatory decision-making principles, fisherfolk leaders developed the skills, knowledge, awareness and confidence to engage in strategic decision making in terms of the SCFPG project.

### **5.3.2 Record Keeping and Documentation**

Within the context of change, the maintenance of accurate and comprehensive records was important. The documentation offered a timeline of activities, and a record of the outcomes and successes of those activities. If certain strategies did not produce positive or expected outcomes then the process of documentation offered an opportunity to reflect and therefore make adjustments to future activity. Record keeping and maintenance of documentation were part of the 'mediating tools' in the SCFPG activity system and play a role through various phases of transformative learning. Within the Caribbean context, it was very rare to have such a comprehensive set of project records and documents to refer to. It was also significant that these records were not just kept as hard copy but were held centrally on the CANARI website and were openly accessible and downloadable. The final NFWs highlighted the importance of maintaining records as a way of building institutional memory. The following was recorded in the final NFW report for Grenada (NFW2GD, 2016):

*The facilitator explained that institutional memory was important for the following three reasons:*

- **Changes** (e.g. succession planning): *Changes will happen in organisations and they need to be prepared. Capture what people have learned from experience and pass it on before those people retire or resign.*
- **Governance** (transparency and communication):
  - *Making good decisions depends on what knowledge is available.*
  - *Knowledge used by decision makers must be transparent and shared.*
- **Learning**
  - *Organisation becomes "smarter".*
  - *Saves time because there will be no need to waste time reinventing the wheel and just need to do what you know works!*
  - *Saves other resources such as money.*
  - *Keeps the organisation moving forward by avoiding what doesn't work and building on successes.*

Other documentation such as the 'Fisherfolk Net' newsletter for fisherfolk were accessible via the internet and through the web portals for CNFO and CFRM. 'Policy Perspectives' was a publication which was produced by UWI- CERMES and this was available via their web portal. The range of documentation linked to various important aspects of the fisheries sector underpinned an approach to working together that centred on knowledge sharing. The accessibility and availability of work records and activity by the various regional organisations also strengthened their legitimacy at the international level. Such documentary artefacts are useful reference points for other organisations (or activity systems) and can aid in building new collaborations and partnerships.

In terms of gauging whether learning was happening, R1 indicated that there had not been a formal assessment of 'learning' but that evaluations were conducted at the end of every activity within the SCFPG project. This has been well documented and evidenced in the reporting throughout the project. He pointed out that

*'combined they give you a sense of where people have moved from day 1 to day whatever...'*



All respondents viewed record keeping as very important in terms of institutional memory, so as not to repeat mistakes of the past and to share knowledge and information within the network and community. R4 also spoke about the developmental elements of learning to write reports in order to share information within the network. This was mentioned previously.

There were also a number of academic papers which were published about the work done with the CFN during the development period to currently. This was another key example of working in partnership.

*'Due to the partnership that we have with UWI CERMES in Barbados, they are very much part of the partnership, and as a University they are interested in publishing. The people there are interested in collaborative publishing, they are not interested in taking the information and putting it out themselves.'* (R3)

This reflects an ethos of collaboration and participation which extends within the network of organisations involved in the development work in the sector. It also illustrates the nature of the 'community' relationships which underpin the SCFPG activity system.

### **5.3.3 Summary**

Knowledge sharing and transfer was practically done through various mediating tools which were discussed in section 5.2. The principle of inclusive participation and decision-making underpinned all the activities within the SCFPG activity system and the smaller interconnected activity systems. Through a participatory and collaborative ethos, knowledge sharing and transfer practices were more effective and engaged participants in the phases of transformative learning.

Record keeping and documentation was a critical component of knowledge sharing and transfer, and highlighted how important comprehensive records were to maintaining institutional memory and building capacity. This enabled a learning journey which built on successes over time and ensured transparency and accountability at every level.

## 5.4 What other factors within the outlier network contribute to transformative learning?

This theme relates to the research question:

What other factors within the outlier network contribute to transformative learning?

Wider factors which contributed to transformative learning included the role of support organisations, responding to change, establishing the motivation and trust.

This section presents the findings related to these themes and their significance in relation to transformative learning. The ethos of inclusive participation and decision-making underpin these themes as well.

### 5.4.1 Role of Support Organisations

In the SCFPG project, the organisations which were part of the Caribbean fisheries network played a role within each of the phases of transformative learning. CANARI, UWI-CERMES, CRFM and other organisations have worked over many years to build capacity in the Caribbean fisheries network, and to engage the fisherfolk. This work has been influenced and supported by the FAO so that the region could have meaningful grassroot representation at international levels.

The respondents pointed to the different organisational roles as they related to overcoming or mitigating against challenges and encouraging change. With regards to change R1 explained:

*'...A lot of the change has come from CANARI, to some extent CRFM and CERMES have invested in leaders so you see individuals... and FAO as well... in terms of providing projects that allow people to exercise their leadership... so we are seeing individual abilities are improving, and to me that is exciting... and that is necessary...'*

He followed this by explaining that a concern was succession planning in terms of the fisherfolk community, and this was discussed in several of the SCFPG workshops over the 4 year period. In terms of the CHAT framework, succession planning related to the development and expansion of the activity system. The support organisations were focused on capacity building and sustainable development of the Caribbean fisheries network, and particularly the CNFO, NFOs and PFOs. The continuation of growth and transformative change through

engagement depended on the CNFO building its membership and thinking about developing leaders who would continue to drive the CNFO forward thereby transforming it as an activity system.

CNFO leaders and participants were generally motivated to engage.

*'the board... the executive of the CNFO as a company are quite genuinely interested...'* (R2)

R2 did indicate that engagement might differ depending on the setting or environment. For example, engagement at local sites which are informal and 'on location' tended to yield better engagement than at more formal meetings with government Ministers.

R2 felt that the learning opportunities had been beneficial.

*'we have leaders saying they need to get a handle on things... so that they can find a way to get the bottom up participation realising the importance that FAO is willing and able and sees the Caribbean as a player ... I mean not many people recognise fisheries in the Caribbean, or pay much attention, not even the governments in the Caribbean ... which is a problem for the international agencies... But the CNFO leaders are fully aware of the strategic importance.'* (R2)

Within the 'community' of organisations which comprise the SCFPG activity system, the CNFO was the least well developed in terms of organisational maturity and stable structures to support their objectives. This was also connected to the poorly defined elements within the NFO and PFO activity systems. However, in terms of international fisheries management institutions, the role of the CNFO was and continues to be pivotal for future project development and creating change at the local level. In order to help the development of the CNFO the support organisations such as UWI-CERMES, CANARI, CRFM and others worked together and played their part within the context of 'division of labour'. The collaborative action helped to strengthen the CNFO, the skills base of the fisherfolk and their awareness of matters important to the fishing industry in the Caribbean and globally.

The engagement of CANARI as a civil society organisation was discussed by the respondents. In promoting the role of civil society groups in these projects R3

suggested that *'it becomes a more bottom-up type dialogue rather than top-down'* and though the capacity development agenda included all stakeholders, there was a focus on public sector agencies. In this particular project, the focus on public sector agencies would have been more relevant to the object of the activity system, that is, strengthening Caribbean fisherfolk to participate in governance and policy issues related to the fishing sector. R3 ultimately viewed this positively as it was felt that building civil society groups would foster greater engagement with governance and livelihood issues. With regard to capacity development, he also indicated that cultivating strong leadership, governance, and succession planning within the CNFO, NFOs and PFOs were also very important to CANARI and the other support organisations.

There was an effort to present the power dynamics of the organisations as being equal. Within the 'community' the support organisations were building the CNFO and encouraging them to recognise the power of their voice as representative of the grassroots fisherfolk. Through the transformative activities of the SCFPG activity system, and interconnecting activity systems, this enabled the dialogue between organisations to be informed by the CNFO leadership therefore offering 'bottom-up' input.

The CNFO structure, as an umbrella group, was oriented to the network of national fisherfolk organisations, and therefore was a more 'horizontal' structure. The interviews and documentation reflect a community (made up of local, regional and international members) which was working together to strengthen a member of their own community. It seems the support organisations provided the initial 'push' but that the aim was for the CNFO to develop and grow alongside them in order to create change in the fisheries sector as they got stronger. All members of the community participated in the division of labour within the SCFPG activity system, and engaged in the using the mediating tools, in order to focus on the object and achieving the outcomes. Though there were 'lead' organisations, these organisations integrated themselves into all aspects of the activity system making it a fully participatory project where the 'lead' organisations were also learning within the SCFPG project.

Other organisational dynamics were highlighted in interview. Interestingly, R2 related an example which reflected how individual motivations and interests within organisations also led to particular initiatives and agendas. The following example was historically relevant to the development of the activity system.

*'CRFM were engaged with CTA<sup>1</sup> through CARDI<sup>2</sup>... because at the time the regional partner for CTA was CARDI, and this was one of the first fisherfolk projects. And there, maybe part of it is the people engaged, because at the time, there was a guy in CTA... he was very much engaged and interested in working with CRFM so eventually CRFM became the leader of the fisherfolk part of the programme. The CTA provided the resources for us to do the assessment through CARDI and for CRFM to work with the groups to set up the network.'*

It was also interesting to note that after a second project with CTA, the CTA experienced a change in leadership, and this resulted in a change in project focus in the region. The focus from the regional participants at the time was on formalisation of the CNFO, however after this shift in focus from the CTA the priority became policy focused. In this regard, the individual influence within organisations had a significant impact on the development and expansion of the activity system. International organisations can certainly exert more power in regard to such developmental initiatives and in this instance the effect was a 'top-down'. This resulted in the SCFPG activity system where the individual motivations established the object and outcome which were more focused on policy. Though the regional organisations had no say in this shift in focus and motivation at the international level, the key regional organisations were still able to develop a project strategy which enabled them to work towards the formalisation of the CNFO through the SCFPG activity. The regional organisations therefore played an important role in ensuring that the voices of the fisherfolk could be represented in a more significant way through the transformative activities of the SCFPG project.

R4 acknowledged that at the time of interview the CNFO was in a '*good position*' since they had gained legitimacy and recognition. However, he commented that they

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<sup>1</sup> CTA – Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA)

<sup>2</sup> CARDI – Caribbean Agricultural Research and Development Institute

needed to be able to demonstrate how they were able to reach the fisherman on the beach in order to convince donors and partner organisations that they represent all fisherfolk and are not just speaking as individual leaders attending meetings. He also talked about the CNFO and its relationship with its partners. Partnership and the role of partners in developing and supporting the network were raised as key to the relative success of the CNFO. The relationship did not just benefit the CNFO but also enabled the partner organisations to engage through project funding:

*'Lots of donors and funding agencies are providing funding to stakeholders like the CNFO so other groups would like to form partnerships with them to mobilise resources so it goes both ways' (R4)*

He discussed the partners' support for the SCFPG project and the implementation of the various aspects such as the NFWs, the FALGs and the small grants scheme. The partnership and collaborative relationships built through years of technical support and research activities were important to creating the community within the SCFPG activity system.

The support organisations were instrumental in not only developing the CNFO but in sustaining it. Their goals and motivations for the sustainability of Caribbean fisheries sector established not only the 'subject' and 'object' of the activity system, but also informed the 'mediating tools' which were employed, 'rules' of engagement, and the 'division of labour'. Though each organisation could be viewed their own activity system the SCFPG project was their shared object through which they were engaging in transformative activity.

#### **5.4.2 Responding to change**

The historical narrative of Caribbean fisheries confirmed that the sector and community had to respond to many transformative triggers over many years, representing phase 1 of transformative learning. From a CHAT perspective, the historical context and cultural transformation of the fisherfolk network were embedded within the 'subject' of this activity system, that is the Caribbean fisheries network itself. The 'rules', the 'community' and 'division of labour' within the SCFPG activity system were the result of transformation of the regional network over time. All respondents acknowledged that change was ongoing. There was an honest

assessment of the challenges which were constant, and R1 stated that *'the adventure continues'*. The CNFO was viewed as a project in development.

R1 indicated that despite progress being made it was still difficult to engage the fisherfolk on the fishing sites, and this has equally been reflected in the workshop documentation. He referred to another consultation that was taking place at the time of the interview and indicated that within the CNFO mindsets were changing at the executive and leadership level, but that it was unclear if mindsets were changing at the level of fishermen on the landing sites. It was evident in his responses that there was still a lot of work to be done, and there were still challenges to getting the fisherfolk to engage on a continued basis (particularly after the completion of the SCFPG project). The indication was that mindsets of the fisherfolk on landing sites were slower to change, but that there was a small group of fisherfolk leaders who had developed in their knowledge, skills and behaviours which enabled them to engage in fisherfolk participation in governance and management. These leaders were instrumental in setting up the NFOs and local groups and informed the developments of the CNFO activities. The fisherfolk leaders who have embraced their roles have been recognised at the global level:

*'the point is that there is that recognition at the global level... I mean the CNFO's arms are quite broad now they are sitting on various fisherfolk committees globally but they have to be able to make the changes globally as well ... as a regional group they have had changes... they are now learning to deal with organisational change... leadership change... they are in demand'*  
(R1).

This demonstrates the final phase 10 of transformative learning.

R2 gave his perspective regarding transformative learning and changes in mindset of those engaged in the projects within the sector. He responded that:

*'in some cases there is strong evidence for transformation... that however resides among the small group of leaders... who now forms the executive and a few on the outside of the executive...'*

He also referred to certain individuals and provided an example of a female fisherfolk leader saying:

*'over the years of working with her, clearly she has changed and leaped in capacity and outlook, and some of the others probably haven't changed that much but yeah there is evidence of what I would consider to be transformational.'*

He added that some fisherfolk leaders have an appreciation of international fisheries policy and engage internationally, attending international meetings effectively. He viewed this as positive and in the *'realm of transformation'*. Knowledge and better understanding of the changing global landscape for fisheries management and active participation in international meetings over time were *'mediating tools'* within the community of fisherfolk leaders. In the larger SCFPG activity system, the influence of these leaders was employed within the mediating tools of the FALG, TTM and NFWs.

The change in individuals and communities within the network have been the result of needing to respond to the international changes

*'you have to take into consideration what is happening globally as well... in fisheries we are dealing with the marine space, and there is lots of work done... in terms of fisheries when you are looking at the networking arrangements, you would have to take into consideration the global and the regional policy environment'. (R3)*

Work within the sector has been ongoing since the mid-1990s, with research and development activity extending over this period building up to the formation of the CNFO and, within this SCFPG project, the strengthening of the CNFO.

*'The means of engaging in policy was with the CRFM because the CRFM which is a CARICOM body was seen as the policy making... they were responsible for trying to shape regional policy in fisheries... and at the time, the CRFM was working on two significant policies... So they put together 2 regional policy instruments and the CNFO became part of that policy making process.'* (R3)

The regional organisations effectively kept the CNFO and its development and participation in the region as a key element of internationally funded projects, and indirectly built capacity of the CNFO through its engagement in these projects. R3 further explained that over the period of 2009-2013 the FAO was conducting regional consultations on the Small-Scale Fisheries guidelines and the CNFO contributed to



that. Through their participation with other global fisheries networks the CNFO gained legitimacy and status as the voice of the Caribbean fisherfolk.

R4 highlighted that it was worth considering *'fisherfolk moving from a state of dependency to be able to build independent organisations'*. He explained the historical context of fisherfolk groups and how they related to governmental departments. He explained that previously fisherfolk groups were totally dependent on government for resources, but the projects leading up to and including the SCFPG project were aimed at:

*'...trying to get them to build independent groups recognising that it is a delicate situation as to how they interact with government in regard to politics and diplomacy as well as how to mobilise their own resources'*. (R4)

He reflected on the journey of the fisherfolk over the years of engagement with them, and he could see that there has been a change in mindsets and in their own participation at local, regional and more widely at international levels. He recognised that:

*'they have now become more aware of their roles and their influence that they could bring to bear... there are some fisherfolk who would come to the table and argue their case...but there is still this thing of we will identify the issue but we expect somebody else to come and do it...you are trying to get their thinking to be more 'we will identify the issues and resources and we'll get it done'...So it is learning and thinking and recognising.. they have to be able to talk, mobilise resources and get things done.'*

He commented that to build such a network is not a short to medium term project but *'it calls for a long term commitment and investment'*. The time factor was considered to be very important in relation to historical development and change. The respondents all indicated that, with regards to the fisherfolk in particular, change was still an on-going process. The 'dependency' mindset and lack of competence in addressing certain issues were addressed through the mediating tools of the SCFPG activity system. The progression over the SCFPG project timeline reflected some change in mindset from early workshops to the final workshops.

From a CHAT perspective, the subject of this activity system was acted on by other regional and global activity systems related to changes in policy, the environment,

resources or economics. For example, due to FAO focus on global small scale fisheries (SSF), poverty reduction and food security the Caribbean fisheries network has had to take a participatory approach to influencing SSF policy in the Caribbean region. The SCFPG activity system developed due to local, regional and global transformative triggers over time. The Caribbean fisheries network, as the subject of the activity system, demonstrated adaptation and resilience as reported in documents, and continued to transform through ongoing activity.

It is particularly notable that the accounts given reflect the transformation of the fisherfolk leaders' abilities to communicate and participate in the international community, and this has been acknowledged through greater involvement in the global meetings. In this way the fisherfolk leaders and other local facilitators, as part of the Caribbean fisheries network, have also been able to have their voices represented and heard at the global and regional levels. At the local level, transformation of the mindsets of the fisherfolk on the landing sites have been slower to change, and the fisherfolk leaders and the support organisations have been tasked with convincing them of why a change is needed.

#### **5.4.3 Establishing the motivation**

There was a need to establish the motivation of the fisherfolk in particular to participate. Motivating the fisherfolk was a challenge due to a history of distrust. However, there was evidence throughout the reporting that the SCFPG project succeeded in motivating the fisherfolk to engage and participate, and therefore this contributed to the strengthening of the CNFO. Agendas were set for every activity which made the objectives clear to all participants setting expectations and goals.

The fisherfolk leaders who participated in the FALGs were expected to mobilise and build other leaders, for example this included sharing the leadership role, giving others the opportunity to lead, motivating others, providing peer support to other members of ALG (FALG1, 2013).

In the first FALG workshop, participants indicated that as fisherfolk leaders they were:

- *interested in seeing that fisherfolk would have a better standard of living*

- *working for the welfare of the fisherfolk*
- *sharing information with fisherfolk*
- *working to unite fishermen and help them achieve a better standard of living*
- *wanting to see the fisherfolk organisations grow*
- *wanting to see change in the fishing industry in my country*
- *seeking to improve the conditions of less fortunate fishermen*
- *helping to develop a sustainable fishing industry in my country*
- *promoting innovation in the fishing industry*
- *working to bring stakeholders in coastal marine management together to find solutions for fisherfolk and MPA managers*
- *getting fisherfolk to the table so their voices can be heard*
- *sharing my practical fishing experiences*
- *sharing experience in fisheries development management*
- *getting fisherfolk to play their role in managing the fisheries resources*
- *promoting good communication between the fisheries department and fisherfolk to improve on strategies for sustainability*
- *promoting participatory fisheries governance*

The responses reflected the need for development and empowerment of the fisherfolk and therefore a desire for transformation of the Caribbean fishing industry. They demonstrated motivation focused on the object of the SCFPG activity system.

From the FALG2 (2014) feedback from two participants indicated that the ‘process’ of the facilitation helped them to think about how to go about developing policies, forming partnerships and sharing information, and also helped them to systematically look at the steps in the policy development process. Both the content and the facilitation approaches appeared to transform initial negative participant perceptions to more positive attitudes towards the goals of the SCFPG project. Within the ALG participants recognised that fisherfolk needed to adjust their mind-sets in order to stop doing what was not working, and that adaptation required a better understanding of the environment in which they worked. They appreciated every element of the agenda which was covered and gained a better understanding of the importance of the CNFO to their livelihoods. By the end of the second ALG overall

feedback showed fisherfolk leaders' motivations shifting positively towards becoming more active in their national and local communities.

During the third FALG examples of fisherfolk engagement with influencing policy were presented, which was also done at the second FALG. It was particularly significant to note the following example as it indicates a growth in confidence of the CNFO leadership and significant participation at a global level with regards to policy decision making (FALG3, 2015).

The CNFO representative attended a global meeting in Cambodia on tenure and fishing rights in fisheries that was co-organised by the FAO. Initially the CNFO was not invited to the meeting, but the CNFO reached out to the FAO and advised them that use rights is a topic of importance to Caribbean fisherfolk and that the CNFO would like to participate on the behalf of the Caribbean fisherfolk community. The CNFO saw it as important to participate because agendas were being set with little input from Caribbean fisherfolk. At the meeting, CNFO was given an opportunity to sit on a panel and make a presentation on the CNFO's position on Rights Based Approaches to management. The policy influencing opportunity was seen as a success and lessons learned which were shared included:

- Know your allies, communicate with them, debrief and share information
- Be prepared when attending policy influencing meetings

The use of such examples was both instructive and motivational. The third FALG also encouraged participants to think about succession planning and building capacity at the local level. This was a recurring concern as it related to future expansion and transformation of the activity system. Feedback from participants was positive overall, and participants discussed future activities beyond the life of the SCFPG project. Some of the comments indicated that the friendly and relaxed environment contributed to their learning and their motivation to learn.

The first TTM workshop was held before the NFWs, so the training was positioned to motivate these individuals to engage with the mentoring role and the overall objectives of the SCFPG project. The mentor role was described in the following way (TTM1, 2013 p13-14):

1. *‘Mentors need to help fisherfolk to investigate an issue and collect all of the facts to understand all perspectives on the issue, so that fisherfolk can make an informed decision and take informed positions*
2. *Mentors need to be clear on mentoring role and what it means and where the boundaries are (e.g. not to act as representative)*
3. *Important for mentors to help fisherfolk to assess the results of decisions made and actions taken to determine what worked and what didn’t – and need to document this to ensure learning in the organisation.’*

It was stated that *‘as a mentor you don’t solve problems, you enable people to solve their own problems.’*

Mentors were important to supporting and motivating the local NFOs/PFOs and fisherfolk to participate and find local solutions to local challenges. They were also actively engaged with the NFWs.

The different NFW reports, particularly from the second set of workshops, also recorded feedback from participants which related to their motivations to engage. In Jamaica, many participants were of the view that their capacity and confidence to deal with policy makers and other key stakeholders had been improved. Most participants reported that they were happy with the workshop, were of the opinion that they had learned a lot and felt that the objectives were met. (NFWJM2, 2015)

The Suriname participants indicated that they learnt a lot and that the sessions made them realise that they needed communication plans for the fisherfolk organisations. They would aim to inspire other fishermen to establish organisations in their areas. Those that initially did not see the need for organising themselves as a group, realised how important a fisherfolk organisation was. (NFW2SR, 2015)

Fisherfolk leaders in St. Vincent and the Grenadines stated that through their participation in workshops under the SCFPG project they had gained an improved appreciation for fisheries policies and had been looking at ways to input into new policies. In this regard, fisherfolk in St. Vincent and the Grenadines had been able to consult with the government on the development of a national fisheries policy and an ocean governance policy. With regards to gaining a better understanding regional policy matters, fisherfolk approached the CRFM (the CRFM has an office in

Kingstown, Saint Vincent) to receive training sessions to better understand the Caribbean Community Common Fisheries Policy. Through their participation in the SCFPG project fisherfolk also highlighted increased confidence to approach the Chief Fisheries Officer to discuss fisheries related issues and use public forums, such as Saint Vincent and the Grenadine's annual Fisherman's Day, to influence policy and bring awareness to issues affecting fishers. They had increased their confidence in participating in workshops, making presentations and had gained a better understanding of project writing. They were also able to get younger fishers involved in meetings and workshop (NFW2VC, 2015).

Motivation is not an explicit aspect of the CHAT activity system, however, if the subject of the activity system is not motivated to engage with the object of the activity then it is then more likely that the outcomes of the activity system would not be achieved. There was a connection between the participatory facilitation methods, rebuilding trust and establishing the motivation of the fisherfolk in this study.

Motivation to participate in the SCFPG project was therefore required in order to get the community engaged in the activity. The community included the NFOs, PFOs and CNFO who were also the focus of the object of the activity system, and the wider support organisations who were responsible for facilitation, coordination, knowledge sharing and transfer. The motivational component was embedded in the leadership and mentorship activity systems, and ultimately influenced the motivations of the fisherfolk to engage in the object of the SCFPG activity system and in the phases of transformative learning.

#### **5.4.4 Trust**

The issue of trust has been historically situated. The partner organisations working to strengthen the CNFO understood that rebuilding trust would be necessary in order to encourage participation, particularly within the fisherfolk. The participatory approach and methods of facilitation employed by CANARI and other support organisations inherently acknowledged the need to build trust.

*'Mobilisation efforts are heavily influenced by the trust workshop participants have for the facilitators.'* (FPNRM, pS3:11)

*'Having prior experience working with the community was extremely useful as there was already built trust and understanding of issues facing the community.'* (FPNRM, pS4:5)

*'Trust among all stakeholders – this is important to facilitate the free and open exchange of information and ideas.'* (FPNRM, pS4:25)

The *'FALG was established to build a community of change agents from across the region that can lead, catalyse, facilitate and support effective participation of fisherfolk in governance and management of the small scale fisheries sector in the Caribbean.'* (CANARI, 2019)

In order to achieve this the fisherfolk leaders and mentors had to work closely with the PFOs and NFOs. In the first FALG workshop, the participants identified the following key objectives for moving forward with the SCFPG project (FALG1, p25):

*'Building relationships – with the community, other fisherfolk, partners'*

*'Building consensus and managing conflict'*

Within the ALG there was some acceptance and recognition that, in order to build an effective CNFO, they would need to build capacities nationally as fisherfolk leaders. The participants noted that fisherfolk were a complex stakeholder grouping and that forming relationships was therefore important so that issues could be addressed in a unified way. They also recognised the work of the support agencies CANARI, UWI-CERMES and CRFM to elevate the needs of the fisherfolk as a priority in the region. This reflects a building of trust between all the stakeholders. In terms of feeling able to discuss issues openly, the FALG3 (Appendix 9) reflected that participants appreciated *'the easy communication and friendship'* and the friendly and fun atmosphere.

In the first TTM, the mentors mainly identified challenges to encouraging fisherfolk to participate related to trust and motivation to engage, and while this was acknowledged, facilitators emphasised the need for participatory governance and management in order to strengthen the position of fisherfolk in terms of strategic representation and decision-making. Key sessions within the TTMs focused on building relationships, managing conflict, and establishing trust. New knowledge and skills related to building trusting relationships with local fisherfolk groups, communities and individuals were tested when participants of the FALG and the

TTM workshops joined the NFWs. From a CHAT perspective, trust was important for building and sustaining the 'community', and for enabling actions through 'division of labour'. Gaining the trust of the fisherfolk community was undertaken through the NFWs, where the fisherfolk leaders and mentors worked with the organisations within the CFN to strengthen fisherfolk participation through the CNFO, NFOs and PFOs.

The first set of NFWs raised many of the practical challenges faced by fisherfolk such as basic infrastructure, facilities, security, environment, and financial, but also highlighted that there was still a level of scepticism and distrust regarding establishing new fisherfolk organisations and their overall impact. There continued to be a lack of motivation at the level of the fisherfolk 'on the beach' to engage with fisherfolk organisations. For example, in the NFW1DM (2014, p3) the following points were noted:

- *Past bad experiences made fisherfolk wary about joining new organisations.*
- *Fisherfolk do not understand the value to their livelihoods of being part of an organisation.*
- *Members are not highly committed*
- *Insufficient cooperation among members. There may be disinterest and therefore heavy reliance on other members.*

The NFW1VC (2014, p4) noted:

- *Inadequate participation by fishers in their own organisations*
- *Inadequate involvement of fisherfolks in cooperatives*
- *Fishers not participating in meetings*
- *Inadequate cooperation by fishers – not united*

These points highlighted the continued lack of trust in government and other institutions and a lack of motivation by fisherfolk to engage in new initiatives. However, by the end of the first workshops the perspectives of the workshop participants appeared to take a positive shift. From the NFW1DM (2014) there was almost unanimous agreement that the workshop was valuable, both in terms of content and for the networking and friendships that were built. For some participants this was the first forum that gave them the opportunity to interface with senior public servants such as the Chief Fisheries Officer or the Registrar of Cooperatives, and to



discuss a wide range of issues affecting the fisheries industry, community development, and the environment.

In relation to CHAT and the activity system, trust is not explicitly connected to any one component, but it is embedded within the 'subject', 'mediating tools', 'community', 'division of labour' and 'rules'. Without trust, in a project such as the SCFPG where facilitation methods relied on collective participation and engagement of the community, there would be tensions between the tools, community, division of labour and the rules which governed the activity system. A lack of trust had resulted in poorly organised NFOs/PFOs and therefore a weak CNFO since these organisations required engagement by the fisherfolk. Though there was a historic engagement with the fisherfolk and the wider fisheries network prior to the SCFPG project, trust issues lingered, but there was an indication that this was changing through the life of the SCFPG activity. This did emphasise the role of time in instances like this case study where rebuilding trust would take decades between stakeholders, particularly where distrust has been historically and culturally deeply embedded into communities. Trust building activities through the FALGs, TTMs, NFWs and facilitation methods lowered barriers which encouraged fisherfolk participation, engagement and strengthening of the CNFO. It also contributed to engagement of participants, and especially the fisherfolk, in the phases of transformative learning.

#### **5.4.5 Summary**

This section explored other factors which contributed to the transformative learning experience of the participants within the SCFPG project. Throughout all components of the project the role of support organisations has been pivotal to maintaining a forward momentum and to determining the ethos underpinning the practices and approaches which have been implemented. The agility, adaptability and strategic action planning of the key organisations within the Caribbean fisheries network to respond to change at global and regional levels has also fundamentally important to engaging with the phases of transformative learning. The foundational elements which have been key to any engagement with transformative learning have been trust and establishing the motivation in participants. Without both of these underpinning core components none of the other themes would be significant. Trust

and motivation are core to engagement with every phase of transformative learning, sustainable development and capacity building.

## **5.5 Post-SCFPG: Evidence of sustainable Transformative Learning**

In this section I discuss specific examples of transformative learning which are based on my ongoing observations of the fisherfolk organisations through their social media platforms and discussions with representatives of CANARI and CNFO. These provide evidence of and highlight how mindsets have changed and how participation of the fisherfolk has changed since the SCFPG project. One representative shared that a participant of the SCFPG project recently expressed that being part of the project was a 'life-changing experience'.

### **5.5.1 Fisherfolk Organisations increase visibility and presence online**

Over 2019-2020, the CNFO has significantly increased communication via its Facebook platform. The quality and professional nature of the posts are noticeable. This activity demonstrates increased awareness and engagement with regional and global issues affecting fisherfolk. The posts relate to various topical and current activities of Caribbean fisherfolk and include the following examples which connect to previous aims of the SCFPG project:

- CNFO maturing as an organisation – an example of this is the recent publication of the CNFO Regional Code of Conduct for Caribbean Fisheries 2020-2025 which demonstrates significant progress since the SCFPG project which was aimed at building capacity and formal governance structures for the CNFO.
- CNFO building awareness regarding small scale fisheries (SSF) issues – CNFO asserts its role at the heart of the Caribbean fisheries sector and the contribution fisherfolk make towards regional food and nutrition security (FNS). The fisherfolk describe themselves as ecosystem stewards who need to 'think outside the net' to protect their livelihoods, their traditional knowledge, and their environment. This illustrates a sharpened self-awareness as an organisation and the role fisherfolk play locally, regionally and internationally in relation to issues such as FNS and impacts of climate change.
- CNFO showcasing engagement with international projects and initiatives – this reflects how the CNFO positions themselves internationally, participates in international consultations (for example with the FAO on SSF guidelines) and

confidently communicates and shares these activities and outcomes with their membership at the regional level.

- CNFO highlighting and celebrating regional fisherfolk leaders – there are now weekly posts under the banners of ‘Friday Fisher’ and ‘Wednesday Woman’. These are excellent short biographies of fisher men and women who are working in their communities, who may be engaged in small enterprises within the marine environment and who are leaders, mentors and pioneers in the sector. This can be linked to the SCFPG project which focused on developing fisherfolk leaders through the FALG workshops and mentors through the TTM workshops.
- CNFO encouraging the use of technology to support the fisheries sector – this addresses a challenge which was noted by respondents about the use of technology or smart phones. It is clear that the CNFO has transformed their own use of social media and leads by example. The UWI developed an app called ‘Fisheries Early Warning & Emergency Response (FEWER)’ which aims to help small-scale fishers reduce risks to hazards such as storms, hurricanes and other difficult sea conditions. This project was supported by CRFM. Another app was developed by UWI called ‘mFisheries’ which was supported by International Development Research Centre (IDRC) and the Technical Centre for Agricultural and Rural Cooperation (CTA). This app provides information on navigation assistance, safety at sea (SOS) emergency service, fish price information, practical tips and boat tracking information. The CNFO have been promoting these through their platform, which shows a deeper understanding of the role of information and communication technology (ICT) for the fisherfolk community.
- CNFO demonstrating greater participation and engagement with governance issues at national and regional levels – posts have highlighted examples where fisherfolk have engaged with national consultations and policy issues affecting the fisheries sector. This was another focus of the SCFPG project which was also aimed at empowering fisherfolk to participate in governance issues at local and regional levels.

### **5.5.2 Sustainability through collaboration and building trust**

My discussions with the organisation representatives highlighted continued transformative action after the SCFPG project. One factor which sustains wicked

problems and limits sustainable development tends to be limited access to funding which can be used to initiate solutions and transformation. The CNFO representative was proud to share that they have learned to access funding through working collaboratively with other organisations and institutions, such as the ones who supported the SCFPG project. This clearly demonstrates the importance of the transformative learning which occurred through participation, collaboration, and connected activity, underpinned by the building of trust. As Figure 9 shows, trust is one of the first steps towards transformative learning, and the current evidence indicates that these approaches have also led to sustainability.

### **5.5.3 Summary**

This section provides current examples of sustained transformative learning of the fisherfolk since the SCFPG project. It is clear that learning in the network is rooted in participatory approaches and trust, and these continue to enable ongoing transformation and change. Leadership and mentorship, respect for culture and traditional knowledge have created a network which is strengthening and growing in influence and confidence.

## **5.6 Conclusion**

This chapter provided an overview of the key elements of the SCFPG project which address the research questions. Using the documentary records and the interview data, the focus was on types of pedagogical practices which promote transformative learning, how knowledge sharing and transfer activities have led to transformative learning and identifying other factors within the outlier network which contribute to transformative learning. The historical development of the SCFPG activity system highlights the impact of time and the root causes for low levels of trust amongst the fisherfolk. Through the use of the CHAT activity system lens, the interconnected nature of smaller activity systems within the main SCFPG activity system became clearer to me. The smaller activity systems included the FLEs, FALGs, TTMs and NFWs which were also mediating tools within the SCFPG project. Within these smaller activity systems, the mediating tools were the participatory facilitation methods, but also included culture, tradition and traditional knowledge which encouraged knowledge sharing and transfer at the fisherfolk level and built trust.

These smaller activity systems also supported the strengthening of the NFOs and PFOs which had a direct impact on strengthening the CNFO. The FALG and TTM workshops developed leadership skills and facilitated greater participation at the level of the fisherfolk. In strengthening the elements of the small activity systems, the larger SCFPG activity system was also strengthened and was able to achieve its outcomes.

The integration of the Caribbean fisheries network within all elements of the different activity systems created trust, an environment of inclusive decision-making, and participatory learning through effective methods of facilitation. The network demonstrated a responsiveness to change over time, with different organisations playing specific roles in transformative activity within the Caribbean fisheries network. The careful building of trust with the fisherfolk organisations also served to motivate them towards the goals of the SCFPG project. The participatory pedagogies, the various mediating tools and artefacts and the unseen elements of trust, motivation, culture, tradition and community played a role in the transformation of the SCFPG activity system, and the engagement of the community in the phases of transformative learning. In the following chapter, I discuss the findings in relation to the existing literature and theoretical perspectives which will allow me to highlight novel concepts and new insights.

## Chapter Six: Discussion of Findings

### 6.1 Introduction

The final themes were Learning by Doing, Inclusive Participation and Decision-making, Record Keeping and Documentation, Role of Support Organisations, Responding to Change, Establishing the Motivation and Trust. In this chapter I discuss the key themes within the context of relevant and appropriate theory and concepts. The following table highlights those theoretical/conceptual connections between the key themes and the literature. The theoretical connections are presented through the themes within the various sections and sub-sections of this chapter.

Table 10: Linking Key Themes to Theory and Research Questions

<b>Research Question</b>	<b>Key Themes</b>	<b>Theoretical / Conceptual Context</b>
<b>What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level?</b>	<b>Learning by Doing</b>	<ul style="list-style-type: none"> <li>• Interconnected Activity Systems</li> <li>• Primary, Secondary and Tertiary Mediating Tools</li> <li>• Transformative Pedagogy</li> </ul>
<b>How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?</b>	<b>Inclusive participation and decision-making</b>	<ul style="list-style-type: none"> <li>• Participatory Natural Resource Management</li> </ul>
	<b>Record Keeping and Documentation</b>	<ul style="list-style-type: none"> <li>• Maintaining Institutional Memory</li> </ul>
<b>What other factors within the outlier network contribute to transformative learning?</b>	<b>Role of Support Organisations</b>	<ul style="list-style-type: none"> <li>• Creating cognitive trails</li> <li>• Civil Society Organisations</li> </ul>
	<b>Responding to Change</b>	<ul style="list-style-type: none"> <li>• Transformative disruptive capacity building</li> </ul>
	<b>Establishing the motivation</b>	<ul style="list-style-type: none"> <li>• Goal-directed Motivation</li> <li>• Identity</li> </ul>
	<b>Trust</b>	<ul style="list-style-type: none"> <li>• Trust</li> </ul>

## 6.2 Learning by doing

From a CHAT perspective this theme focused on the mediating tools which were used in the SCFPG activity system. These tools relied on the principles of 'learning by doing' and included various components such as the fisherfolk learning exchanges, the action learning groups which focused on fisherfolk leadership, mentoring, NFO/PFO capacity building through the national fisherfolk workshops, use of participatory video and the small grant scheme. The Caribbean fisheries network, as subject of the activity system, engaged in the range of activities by being active participants in the facilitation and learning, in order to achieve the object and outcomes of the SCFPG activity system.

### 6.2.1 Inter-connected Activity Systems

Through the use of the CHAT lens the complexity and the inter-connected nature of the SCFPG activity system with smaller activity systems within it became clearer. I established in the previous chapter that each component (FLE, FALG, TTM and NFW) mediating tool became a smaller activity system. Each one had its own subject and object which were fundamentally aligned to achieving the object of outcomes of the SCFPG activity system. There were subtle differences in the 'community', 'division of labour', 'rules' and 'mediating tools' for each smaller activity system which I illustrated in the previous chapter.

At the grassroot level of the fisherfolk, the key transformative mediating tools were culture, tradition/traditional knowledge and shared narratives. The importance of these elements to learning and knowledge sharing with respect to the fisherfolk meant that these elements would also be important in the other activity systems where the fisherfolk engaged. At the level of the FALGs, TTMs and NFWs the key mediating tools were the participatory facilitation methods within the CANARI toolkit. In the NFWs participants included fisherfolk leaders from the FALGs and mentors from the TTMs. At the level of the SCFPG activity, the mediating tools became the FALGs, TTMs, FLEs, NFWs and the small grant scheme. The following diagram illustrates my interpretation of how the mediating tools align across the activity systems in this study, which presents them as primary, secondary and tertiary.

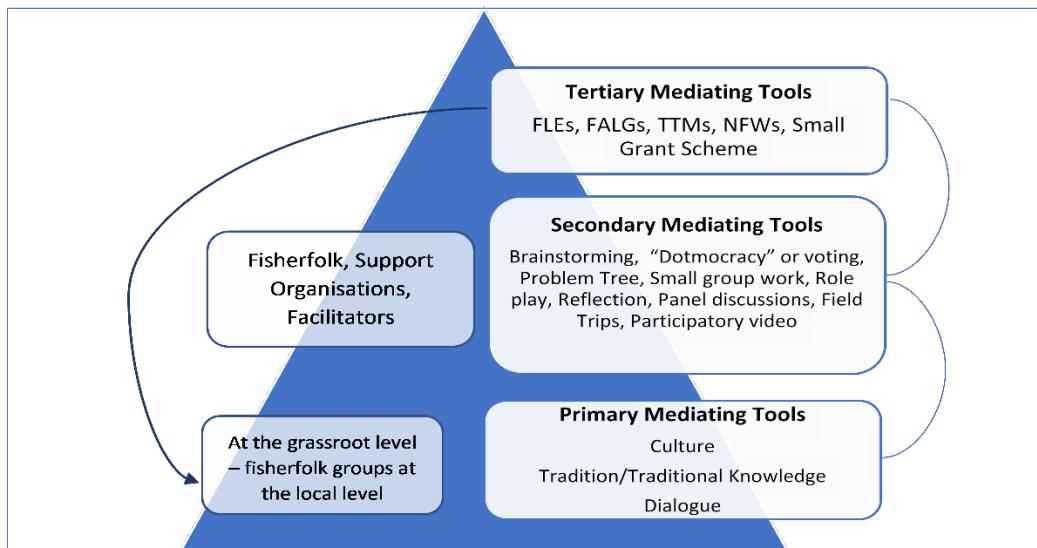


Figure 12: Levels of Mediating Tools within the inter-connected Activity Systems

I have identified culture and traditions/traditional knowledge as primary mediating tools because of the significance this had to the fisherfolk in terms of their engagement in the FLE. These underpinning aspects were key to their identity as fisherfolk and through the SCFPG activities they were free to use their traditional knowledge and talk about the Caribbean culture of fishing within the context of the project goals and outcomes. As the fisherfolk engaged in other activity systems such as the FALGs, TTMs and NFWs the workshops offered a foundation for knowledge sharing and transfer and transformative learning through the secondary mediating tools of the participatory facilitation methods.

Mediating tools are explained as being embedded within the culture, where culture and history give meaning to those tools (Kutti, 1996). From my study, I feel it is not enough to say that the mediating tools are culturally and historically developed, but that in this instance culture itself was a tool of transformative learning. I believe that the culture was a fundamental or primary mediating tool in terms of grassroots engagement in the informal learning activities. The community involved in the SCFPG activity system was largely made up of Caribbean people, though external FAO representatives were also part of the community. The external components of the community which included the FAO, EU, DFID and others were not involved in facilitation. The facilitators of the workshop sessions were Caribbean and had a long history of involvement with the Caribbean fisheries sector in different ways. They



were able to create a friendly and open environment where the fisherfolk felt heard in these activities. They were given a voice through dialogue, problem solving activities, and reflection and were able to draw on their primary mediating tools of their culture and traditional knowledge in order to participate authentically.

Though the participatory facilitation methods (secondary mediating tools) were not familiar to the fisherfolk or primarily located within the culture or history of the fisherfolk they were well established within the culture and history of the CANARI organisation. The expert use of the various tools allowed the fisherfolk to engage by acknowledging their traditional knowledge and by addressing their concerns and challenges within the Caribbean fisheries sector. These secondary mediating tools therefore became informed by the primary mediating tools of culture and traditions/traditional knowledge.

FLEs, FALGs, TTM, and NFWs as smaller activity systems, were also mediating tools within the larger SCFPG activity. These became tertiary mediating tools of the SCFPG activity system. They were the interventions through which the subject was able to achieve the object and outcomes of the activity system. Each smaller activity system led to their own concrete outcomes but also interacted with each other.

Please see Figure 13 below.

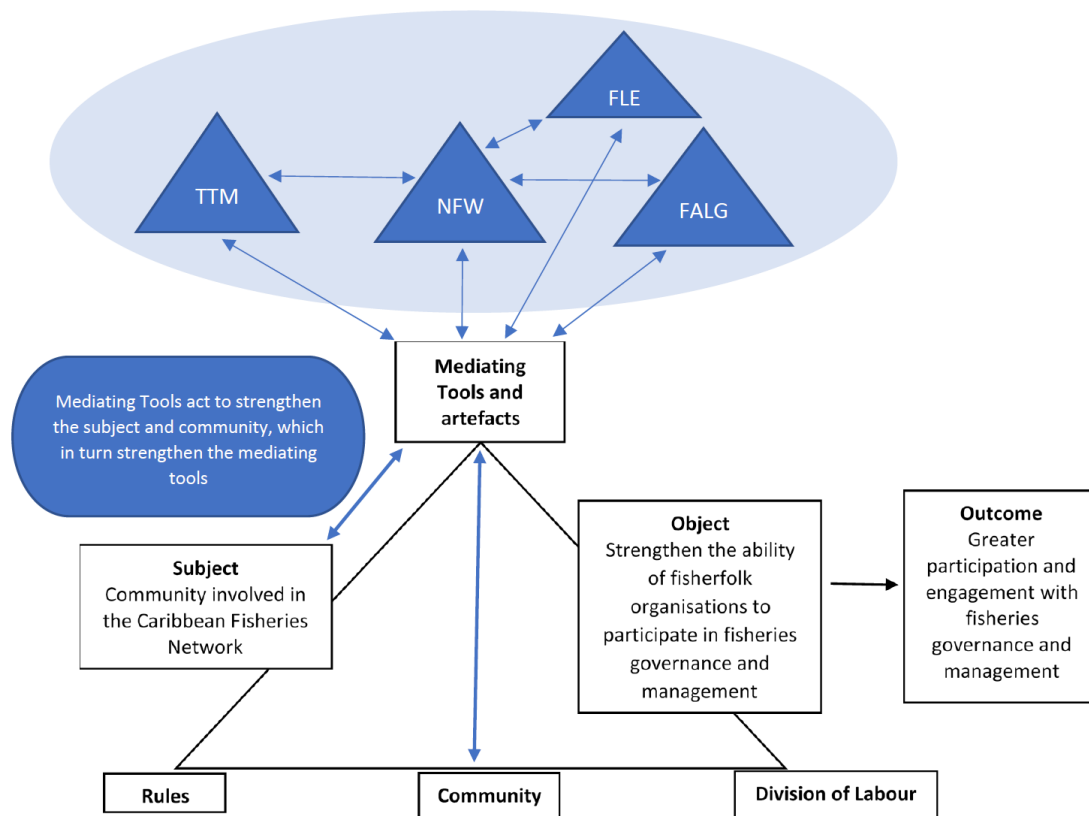


Figure 13: Interconnectedness of the Mediating Tools within the SCFPG Activity System

### 6.2.2 Transformative Pedagogic Tools

‘Critical pedagogy has transformative intent; it creates space for democratic process, critical dialogue and political debate and for ongoing questioning of dominant discourse’ (Jupp Kina and McEwan-Short, 2018 p233). The pedagogy underpinning the SCFPG project undoubtedly demonstrated democratic processes, critical dialogue and debate, and ongoing questioning. The outcome of the project therefore provided evidence of transformation in not just individuals but also in the community.

The facilitation methods included a range of interactive and experiential learning approaches through informal and non-formal settings. These facilitation methods within workshops and the FLEs did take a problem-based approach, which generated knowledge sharing and transfer through dialogue and collaborative problem solving. Freire (1970) emphasized problematization and dialogue as part of a critical pedagogy which could change mindsets of grassroots groups such as fisherfolk in this instance. In order to act as change agents Freire also highlighted the

need to balance reflection with action in order to achieve critical consciousness. The structure of the workshops and the secondary mediating tools used engaged the participants in dialogue, questioning and reflection, identifying problems but also proposing solutions, therefore enabling them to think more critically about their transformative role. The primary mediating tools of culture and traditional knowledge which form part of the activity systems enable authentic critical pedagogy and a decolonisation of the discourse/learning between the various actors in the Caribbean fisheries network. Traditional ecological knowledge was included as a pedagogical approach by Lozano *et al* (2017) and there is a recognition that this plays an important role in education for sustainable development.

The activity generated through the structured application of the various tools of facilitation mirrored the phases of transformative learning as proposed by Mezirow (2006). Though the transformative learning phases apply to the individual experience, I was able to map the phases to the Caribbean fisheries network as a community in the following way. The disorienting dilemma (Phase 1) was presented throughout the series of workshops during the SCFPG project. The disorienting dilemmas related to the international, regional and national challenges. Dialogue was inclusive of political, socio-economic, historic, cultural and locally situated contexts. Through group discussions and small group activities, the participants were able to engage with self-examination from the perspective of the collective (Phase 2) and critical assessment of assumptions (Phase 3). Learning exchanges, role play scenarios, field trips, the use of participatory videos and the continued sharing of experiences through dialogue enabled a better understanding that others had similar experiences and feelings (Phase 4). Through brainstorming, 'dotmocracy'/voting tasks and small group work activities participants were able to gain consensus, and explore new actions, relationships and roles (Phase 5) and work towards planning a new course of action (Phase 6). Within the SCFPG activity system new relationships and roles were formed through the FALG which focused on the development of leadership skills in the fisherfolk community, and through the TTM which focused on the development of mentoring skills in the wider Caribbean fisheries network and within the fisherfolk community.

The tertiary mediating tools also mirrored processes of transformative learning. The smaller activity system of the FALG and TTM provided the participants with the opportunity to gain knowledge and skills to implement the new course of action for the Caribbean fisheries network (Phase 7) and to test their new roles (Phase 8) through field trips, role plays, and small group work. As previously mentioned, the FALGs focused on leadership skills development and action learning, the TTMs focused on mentoring skills development and the FLEs focused on more practical knowledge and skills related to fishing practice and livelihoods. The NFWs sought to build the capacity of the NFOs and PFOs and did this by also taking the participants through phases of transformative learning, and by giving the participants of the FALGs and TTMs opportunities to test their new leadership and mentoring roles (Phase 8). Through ongoing engagement with the NFOs/PFOs and within the various activities of the SCFPG activity system the fisherfolk leaders and mentors were able to gain competency in their new roles (Phase 9). There was evidence that a new perspective was embedded within the individual participants and the Caribbean fisheries community (Phase 10). However, it was clear that work needed to continue after the completion of the SCFPG project.

Though the facilitation methods were not set within the context of education and learning, they did provide recognisable pedagogic approaches to changing mindsets, knowledge sharing and transfer. With regards to sustainable development and pedagogic approaches much of the literature has focused on formal educational settings and contexts and the language reflects concepts which are more aligned to primary, secondary and tertiary education such as sustainable development learning objectives and competences (UNESCO, 2017; Lozano *et al*, 2017). With regards to grassroots engagement in transformative learning for sustainable development, I believe these types of pedagogic tools facilitate transformative social learning (TSL) (Macintyre *et al*, 2018) through informal and non-formal environments where the grassroots communities and traditional knowledge custodians exist.

By mapping the transformative learning phases to the collective of the Caribbean fisheries network it was possible to illustrate how transformative learning was taking place in the complex SCFPG activity system. The use of the CHAT framework provided a useful set of concepts to explore the mediating tools which were used,

how they were distributed within the interconnected activity systems and the role they played in generating the transformative learning experience for the participants. The interconnected nature of the smaller activity system in Figures 12 and 13 illustrated both a horizontal and vertical dimension to learning (Daniels, 2008). Since the focus of the SCFPG activity system was the strengthening of the CNFO, there was naturally a greater horizontal dimension which reflected the nature and geographical spread of the Caribbean fisheries network. There was some learning within the vertical dimension across organisations and within the fisherfolk hierarchy. In terms of vertical learning in the fisherfolk network, there was more upward momentum at the level of fisherfolk leaders, with further work required to more fully engage the 'fisherfolk on the beach'. The involvement of the Caribbean fisheries community through all elements of the SCFPG activity system – subject, community, rules, division of labour, mediating tools and object – highlights that there was a focus on participation of the community at all levels, and therefore there was a strong element of social learning (Muro and Jeffrey, 2008), which connects to the notion of transformative social learning.

### **6.3 Inclusive participation and decision-making**

In the Caribbean, decision making has historically largely been top-down and this has led to limited inclusive participation of grassroot organisations in self-determination. The involvement of CANARI as a civil society organisation had a significant role in embedding participatory approaches into the SCFPG project. Participatory natural resource management has also been increasingly recognised as essential in relation to socio-ecological co-management (FAO, 2014; and de Kraker, 2017).

#### **6.3.1 Collective Action**

The FAO conducted a scoping investigation into collective action approaches within fisheries organisations around the world and identified elements which were key to ensuring development which was participatory, just, self-reliant and sustainable.

These elements were stated as (FAO, 2014 p68-70):

- *Collective agreement and resolve*
- *Vision for collective action*

- *Democracy and transparency in functioning and governance*
- *Trust in those elected to lead*
- *Resources and supportive institutional arrangements to formulate and implement strategies for action*
- *Accounting for gender*
- *Conviction to face odds and challenges*
- *Information/documentation on activities, achievements and failures; education to build capacity*
- *Building alliances with other like-minded organisations*
- *Processes to evaluate actions and envision changes for the future*

Participatory natural resource management involves dialogue and deliberation, and the facilitation methods and application of a critical pedagogical approach encouraged dialogue and reflection amongst participants. The building of trust was essential to the process. The SCFPG project, as a form of collective action, embraced these elements and the ethos of inclusion and participation.

Transformative learning was occurring from the level of the FAO who learned from local contexts, to the level of the fisherfolk organisations who were learning to use their voice and be more self-reliant. Participation therefore became less top-down, with fisherfolk becoming more empowered to engage in bottom-up decision making.

It is important to note that participation within the fisherfolk community was still not fully inclusive as it was unclear to what extent the fisherfolk on the beaches felt engaged. However, those that engaged in the SCFPG project felt that they had been heard and recognised. The primary mediating tools of culture and traditional knowledge were important in making their participation feel genuine. Additionally, the facilitation was mainly conducted by Caribbean organisations and individuals with no input from foreign 'experts'.

#### **6.4 Record Keeping and Documentation**

The importance of effective knowledge and information management through record keeping and documentation could not be underestimated. The availability of project documentation has generally been limited in Caribbean organisations/institutions and

this has been connected to poor organisational/institutional memory by the respondents.

#### **6.4.1 Institutional Memory**

Deustch (1966, p128-129) explained how organisational memory related to social systems:

*'A society or community that is to steer itself must continue to receive a full flow of three kinds of information: first, information about the world outside; second, information from the past, with a wide range of recall and recombination and third, information about itself and its own parts . . . The facilities for memory storage, and particularly the circuits for recall, recombination, new storage, and reapplication of memory data are critical here. There is no will, no conation, without some operating memory. The will of individuals or groups can be paralyzed by destroying their stored past information or by disrupting its flow into the system . . . autonomy in the long-run depends on memory.'*

Organisational memory was also connected to organisational learning by Argyris and Schon (1978, p19) and organisational effectiveness by Stein (1995). It influences the activities of the organisation which include leadership, communication, planning and motivation.

Poor institutional memory in the Caribbean has contributed to replication of activities over decades leading to a waste of resources, inertia in terms of development and sustainable capacity building, and a persistence of a dependency mindset which has led to low levels of autonomy. Institutional or organisational memory in the Caribbean has often been lost due to poor or inadequate documentation, paper records poorly stored without a system of retrieval, and the poor use of information technology to create databases.

However, as an outlier case, the SCFPG project was exceptionally well documented through various media from the start to the end of the project. At the end of the project, the importance of continued documentation of activities and future projects was highlighted to the fisherfolk in particular. Reasons centred on the use of records in succession planning, transparency and learning. Additionally, I would suggest that

open access to project activities through documentation increases trust with the various stakeholders. Effective knowledge and information management also connects to the notion of cognitive trails (Cussins, 1992) since these documents left a mark or record of the learning, dialogues, culture, traditions/traditional knowledge, challenges and lived experiences of participants. The record keeping and documentation within the Caribbean fisheries network has contributed to it maintaining a forward momentum in its development initiatives over many years, avoiding inertia and replication. Instead, such knowledge management has been instrumental in the transformation of the Caribbean fisheries activity system over time through stronger motivation, communication, and leadership. In that regard, from a CHAT perspective, the records and documentation acted as mediating tools which informed transition of and interactions between one activity system to the next.

## **6.5 Role of Support Organisations**

Within this theme, the findings highlighted the significant role of the various support organisations played within the SCFPG activity system, but also in the creation of it. Their engagement and the role they played was historically established over many years, influenced the cultural ethos of the Caribbean fisheries network in terms of participation, and utilized the expertise and knowledge of Caribbean experts, researchers, fisherfolk and other stakeholders.

### **6.5.1 Informed by cognitive trails**

The key support organisations were CANARI, UWI-CERMES and CFRM and they worked together through the project to build capacity of and strengthen the CNFO and the NFOs/PFOs. The historical relationship building activities and collaborative approach was maintained over many years and therefore created some stability within the Caribbean fisheries network. The notion of cognitive trails (Cussins, 1992 and Daniels, 2008) provides a useful conceptual metaphor for the anchoring and stabilization within the network where:

‘Cognitive trails ‘mark’ the landscape in which people have acted and they act as a means of support for future action.’ (Daniels, 2008 p 129)

‘Each trail occurs over time... It is entirely context dependent... a trail is not transitory: the environmental marking persists and thereby the ability to navigate through the feature-domain is enhanced’ (Cussins, 1992 p 674)



Cognitive trails are created through time and activity which was the case in this study. These trails enabled greater historical, cultural, social, political and ecological awareness in the Caribbean fisheries network which had an impact on the SCFPG project design and delivery.

Within the Caribbean fisheries network, through such cognitive trails, the key support organisations worked collaboratively to strengthen the CNFO which was the object of the SCFPG activity system. In order to do this, the key organisations conceptualised the components of the project and took a lead in meeting the objectives through facilitating the various activities.

### **6.5.2 Civil Society Organisations**

The role of CANARI was significant in the delivery and approach taken during the project.

‘The Caribbean Natural Resources Institute (CANARI) is a regional non-governmental research and advocacy organization dedicated to the equitable participation and effective collaboration of Caribbean communities and institutions in managing the use of natural resources critical to development in the insular Caribbean.’ (McIntosh and Renard, 2009 p161)

CANARI also defines itself as a civil society organisation (CSO) and is recognised for being effective and credible in their work. Civil Society is:

‘the set of organised non-state and non-commercial actors, including: conservation and development organisations, non-governmental networks and coalitions, natural resource user groups and community based organisations.’ (CANARI, 2019)

CSOs are viewed as a mechanism for generating ‘citizen’ and grassroot participation which can facilitate ‘emancipatory’ change and empowerment (Montoute, 2016).

CANARI’s focus on participatory natural resource management has enabled them to work across the region and internationally. Their core values include (CANARI, 2011):

- Equity – to overcome power imbalances and ensure fairness
- Empowerment – giving voice to the stakeholders

- Working in partnership – through meaningful collaborations
- Respect and Trust – respecting all types of knowledge (inclusive of traditional and local knowledge), and building trust with stakeholders
- Self-reflection and learning – as an ongoing action
- Building adaptability and resilience – through lessons learned and working in partnership
- Caribbean solutions to Caribbean problems – placing high value on Caribbean or local expertise in finding solutions to natural resource management

Key concepts which underpin CANARI's work are participatory action research, action learning groups, capacity building, coaching, mentoring, governance, influencing policy and livelihoods (ibid).

Based on CANARI's underpinning values and strategic focus, it was evident that CANARI strongly influenced the SCFPG activity system as a member of the Caribbean fisheries network community. However, more generally, CSOs tend to have weak influence and poor engagement in the Caribbean largely due to limited resources (Montoute, 2016). CANARI has advanced the significant role of a CSO particularly as it relates to building the grassroots voice and participation, thereby fostering a 'bottom-up' process for affecting change.

From the findings, it is clear that external individual influences from European agencies had a significant impact on the 'direction of travel' in terms of the work that was being done in the region at the time. Decisions regarding the shift in focus to policy coming from the CTA was a top-down decision. The regional attention was on formalising the CNFO. Despite the shift and the need to focus on policy in order to meet funding requirements from the European agencies, CANARI and the other organisations of UWI-CERMES and CFRM were still able to embed activities aimed at working towards formalisation of the CNFO. The Caribbean organisations considered the grassroots development needs within the process of applying for project funding.

CANARI with the other support organisations played a significant role in strengthening the structural elements of the CNFO activity system, in other words, they supported the fisherfolk to develop their leaders, their relationships within the Caribbean fisheries network and to build their capacity at the local and national levels. From a CHAT perspective, they helped the CNFO, NFOs and PFOs to develop object-oriented action, to develop the mediating tools to achieve the object, and worked with them to establish the community, the roles and division of labour, and the rules for the organisations. The aim was to give the fisherfolk a legitimate, informed voice at the centre of achieving sustainable development and transformative action, and to shift the dependency mindset. The dependency mindset extends beyond the grassroot level to political levels in the Caribbean (Girvan, 2013 and Karagiannis, 2003) which is reflected through weak political will to make significant change in issues such as fisheries governance, agriculture and socio-ecological challenges.

## **6.6 Responding to change**

The Caribbean fisheries network demonstrated an ongoing responsiveness to the major changes in the global fishing sector. These changes mostly related to 'rules' which were externally imposed from international organisations. Within the CHAT lens, this international activity system impacted on the Caribbean activity system, which initiated the long-term work and research in the Caribbean fisheries sector.

### **6.6.1 Transformability versus Resilience**

This historically embedded activity informed developments and steady transformation of knowledge, perspectives and mindsets of all the groups within the Caribbean fisheries network including the researchers, academics, technical experts, fisherfolk (to a small extent in the beginning) and other supporting stakeholders.

'The strengthening and networking involved participatory action research with many different kinds of actors planning together, implementing plans and learning from the processes and outcomes amid much uncertainty'

(McConney and Phillips, 2012 p207)

McConney and Phillips (2012) indicated that there was 'resilience thinking' behind the collaborative approach which sought to develop the fisheries networking initiatives within the complex adaptive sociological-ecological system of the

Caribbean marine ecosystem. The definition of resilience which was applied was ‘the capacity of a system to receive shocks or perturbations while retaining essentially the same function, structure, feedbacks, and therefore identity, and yet not shifting into an alternate regime’ (Berkes and Folke, 1998). Resilience thinking gained prominence with regards to sustainability of sociological-ecological systems particularly in the past decade. The concept of ‘transformability’ has also more recently also been introduced which is ‘the capacity to create a fundamentally new system when the existing system has become unsustainable’ (de Kraker, 2017).

It was necessary to consider the state of the ‘regime’, that is, was it ‘good’ or ‘bad’. It followed that knowing how to increase resilience was also important to engineering change which McConney and Phillips connected to the notion of transformation and transformative learning. My view is that the work of the Caribbean fisheries network through time and through the SCFPG project went beyond resilience since there was intention to change structures, interactions and participation. The system did receive shocks and perturbations, but this initiated transformative activity which moved it towards new functions, structures, feedbacks and identity or a new ‘regime’ which was required at the time. The identity of the system began to change as work became more focused, which suggested something more than resilience thinking.

There have been criticisms of the reliance on the concepts of resilience thinking and adaptive capacity building (Lotz-Sisitka *et al*, 2015).

‘... little is said about the fact that such a concept may well be inadequate or inappropriate for leading to sustainability, especially when viewed from a social science/learning perspective. There are many ‘unhealthy’ systems that are very resilient for instance.’ (Lotz-Sisitka *et al*, 2015 p74)

There has been some suggestion that resilience thinking can reinforce or promote the old ontological structures and norms which can actually be maladaptive. Sriskandarajah *et al* (2010, p565) describe maladaptive mental resilience as ‘a potentially unhealthy persistence of unsustainable ways of thinking and acting in light of emerging dangers, threats or pressures’. Shifting dependency mindsets (of the fisherfolk in particular) to an independent mindset clearly presented challenges and is still ongoing. Returning to Freire’s emancipatory pedagogy, through engagement of transformative activities which sharpened critical consciousness in the Caribbean

fisheries network it was possible to change old perspectives, attitudes, behaviours and skills of individuals and the Caribbean fisheries community.

Lotz-Sisitka *et al* (2015), through their critique of resilience thinking, made a case for transformative transgressive learning, engaged forms of pedagogy and learning through more disruptive efforts to transform. Transformative transgressive learning is viewed as a type of learning which can challenge and disrupt normalized unsustainable habits (Chaves *et al*, 2016 and Mukute *et al*, 2018). As I indicated in Chapter 3, transformative transgressive learning can be applied as a conceptual metaphor, since it is a construct which is still being developed. The journey from transformative social learning to transgressive learning, particularly in terms of post-colonial societies, requires ongoing opportunities for conscientization through transformative/transgressive pedagogy. The comment from a respondent that 'it is a work in progress' after decades of work suggests that disrupting and changing deeply entrenched mindsets in this instance is starting to happen but work continues.

The transformative potential of disruption and transgression can force people out of their comfort zone which can have a positive or negative effect, as Wals and Peters (2018) explains, the dissonance which arises can either block or encourage learning.

*'When dissonance is introduced carefully and dealt with in a proactive and reflexive manner, it can help participants reconsider their views and invite them to co-create new ways of looking at a particular issue and generate new thinking that can thaw frozen mindsets and break deeply entrenched systems and routines.'* (p45)

I believe that the various historical interactive processes within the Caribbean fisheries network, the skilled use of participatory facilitation methods and the critical pedagogical approach did cause transformative disruptions which moved the network towards new ways of viewing the challenges they were facing and how they could respond to these. This involved creating new structures, practices, knowledge, skills and alliances. The identity of the Caribbean fisheries network therefore changed throughout the historical activity, though this still embraced the Caribbean fisherfolk culture, the traditions and traditional knowledge. Activities were more reflective of transformative disruptive capacity building (Wals and Peters, 2018) rather than resilience thinking.

## 6.7 Establishing the Motivation

As adults engaged in informal learning activities it is important to acknowledge their motivations for engagement, as their motivations influence whether learning occurs at all. Illeris (2003) points out that adults select their learning opportunities based on their own motivations, and what they consider to be meaningful and of interest. The informed participants played a role in highlighting to the other participants what the external forces were which are acting on the Caribbean region. The interaction between the subjects and community of the activity system have contributed to ensuring that, as adult learners, they are motivated by the longer term objectives for Caribbean Fisheries, which extend beyond the object of the SCFPG Project, and their role within its sustainable development.

Establishing the motivation in the SCFPG project was focused mainly towards the fisherfolk community, since other international and regional elements of the fisheries network were already very motivated in acting towards achieving the object of the activity system. Within a CHAT context, motivation has also been linked to identity, and it is focused on the object of the activity system.

*'Motivation and identity are not independent constructs but are derivative, an integral aspect of an activity system in general...'* (Roth, 2007 p54)

With regards to identity, Roth noted that this is connected to memory and being clear on who the subject of the activity is. In my study, the subject of the activity system is the Caribbean fisheries network, which also comprises the community. The object of the activity was the strengthening of the CNFO to participate in governance. I believe that the identities of the support organisations were more clearly defined at the start of the project and therefore their motivations were clear in relation to the object of the activity. However, the fisherfolk organisations required development and this was embedded in the object of the activity. As a result, their identity as the CNFO was a 'work in progress' during the project and their motivations grew as the project progressed and they became clearer on 'who they were' at the local NFO/PFO level through the NFWs. The primary, secondary and tertiary mediating tools played a role in strengthening motivations and identity within the SCFPG activity system.

### 6.7.1 Goal-oriented Motivation

The emphasis on leadership and mentorship within the project was also implemented to build trust and to increase the motivations of the fisherfolk community towards the object and the outcomes of the activity system. Motivation, as a concept, has been theorised in different ways but there are common elements which are found in the various theoretical frameworks. These are competence beliefs, values beliefs, attribution and social-cognitive interactions (Cook and Artino, 2016). Motivation can be defined as *'the process whereby goal-directed activities are instigated and sustained'* (Schunk *et al.* 2008, p. 4).

In the SCFPG activity system the range of activities within the smaller activity systems/mediating tools of the FALGs, TTMs and the NFWs provided the goal-directed activities which were initiated and sustained over the 4-year period. Within the activities, the focus was on developing specific competencies, knowledge, skills and behaviours through 'learning by doing' which would empower the fisherfolk community to participate with confidence locally, regionally and internationally in terms of governance and policy. The content, facilitation methods and critical pedagogy embedded a focus on addressing competence, values, attributions and socio-cognitive elements which would support motivations towards the object of the activity system. This gave those who engaged in the project the self-belief in their abilities to act on behalf of their community, which strengthened motivations, particularly of the fisherfolk leaders. Work on sustaining motivations continued to be a 'work in progress'.

### 6.8 Trust

Trust was a particularly basic yet important element of the SCFPG activity system. There was recognition by the support organisations that trust was low in the grassroot fisherfolk community. Building trust was therefore a priority within the implementation of the project and this was supported through the primary, secondary and tertiary mediating tools. Within the context of transformative learning for sustainable development and capacity building, the social domain has been highlighted in terms of changing mindsets and practices (Boström *et al.*, 2018 and Westoby and Lyons, 2017). The role of the Caribbean fisheries network (as a whole from local to international members) was significant in terms of applying the most

appropriate approaches to addressing the barriers to trust through years of work preceding and including the SCFPG project.

Through the process of engagement with the SCFPG activity system, and in particular with the mediating tools, the barriers to trust were challenged by giving the community opportunities to recognise those constraints and challenges historically and culturally situated, but also those currently located within political, socio-ecological, organisational, international and local contexts. The importance of trust within the Caribbean network was critically important in terms of every aspect of the SCFPG activity system and the smaller systems which formed mediating tools. Establishing trust, particularly in the fisherfolk, encouraged better engagement and participation.

Engdahl and Lidskog (2014, p714) acknowledged that:

*'Trust cannot be achieved by being a spectator, by passively being fed knowledge, or by standing alone outside of social life. Instead, trust is created when citizens are emotionally involved, take part, have a say, and in some sense are able to recognize themselves in the recipient of their trust. Trust is not only relational, but also emotional.'*

The various methods of facilitation and critical pedagogical approaches enabled the participants within the network to take part, have their say and feel valued. The importance of friendships which were formed and the informal safe environment appeared to have an impact on encouraging communication which then stimulated participation. They were able to recognise that they were not individuals on their own dealing with challenges, but that they were part of a community who had shared experiences and common challenges. They were also participating in finding solutions and helping others. These activities changed the negative historically-located perceptions and feelings towards support organisations to a more positive perspective and experience. I believe that emotion did play a role in trust building since the participant feedback changed significantly from first to last engagements with the project becoming more positive towards the end. The pedagogical approaches led to strengthening trust which in turn led to deeper engagement and transformative learning. In terms of effective fisheries co-management Gutiérrez *et al* (2011) highlighted the critical role of trust within fisheries networks and linked this to



'robust social capital' which could buffer against global socio-economic, political, ecological and organisational changes.

## **6.9 Conclusion**

As an outlier case study, and through the lens of CHAT, the insight into how knowledge sharing and transfer has contributed to transformative learning in the Caribbean fisheries network has highlighted several new perspectives. The role of the community, as opposed to individuals, has been incredibly important as the community element has been a component of all parts of the activity system. The interconnected nature of smaller activity systems within the larger SCFPG activity system demonstrated the complexity of achieving transformative learning and of changing mindsets in local grassroot communities. The nature of mediating tools within these interconnected activity systems has also offered new perspectives on how mediating tools operate as primary, secondary and tertiary level in terms of transformative learning. At the core, primary tools of culture and traditions/traditional knowledge were important to engaging the fisherfolk since these would have played a role in building trust and underpinning their identity as well.

The secondary tools of transformative pedagogical approaches underpinned by a Freirean critical pedagogy were skilfully applied within the community to share and transfer knowledge but to also generate trust, goal directed activity and to stimulate participation and inclusive decision making. The activities also strengthened the smaller fisherfolk activity systems at the local level and therefore strengthened the integrity of the larger SCFPG activity system. Diligent documentation of the activities supported effective knowledge sharing and transfer, but also was important in establishing institutional memory and therefore strengthening the identity of the CNFO, NFOs and PFOs.

The critical role of CANARI as a civil society organisation was highlighted in terms of embedding participatory approaches, equitable and collaborative socio-ecological values, empowerment and purposeful action. Local expertise and knowledge were shown to be valued throughout the development of the SCFPG activity. The historical constraints of distrust and ambivalence by the fisherfolk in terms of working

with other organisations were changed through long term work over many years prior to the SCFPG project and through the establishment of new cognitive trails over time. The combined nature of these elements established the foundations for effective knowledge sharing and transfer, and transformative learning to occur within the Caribbean fisheries network.

Transformative learning occurred at the individual and community levels highlighting the social aspect of transformative learning. Additionally, within the context of managing and adapting to change, activities demonstrated more than resilience, but adaptation which was more aligned to disruptive capacity building. The final chapter will present final conclusions and offer some recommendations for future research and applications to practice, particularly within the context of International Development, education for sustainable development and socio-ecological learning communities.

## Chapter Seven: Conclusion – Research Implications and Recommendations

### 7.1 Introduction

This study aimed to identify how learning approaches could contribute to finding solutions to wicked problems through changing mindsets and sustainable development approaches in the Caribbean. The focus of this outlier case study was the SCFPG project where a level of success had been achieved in terms of engaging the fisherfolk grassroots community who were represented by the CNFO. I gained insight into how informal learning activities enabled effective knowledge sharing and transfer and facilitated transformative learning across the Caribbean fisheries network. There is relatively limited literature on informal learning in grassroots communities, so my study contributes to developing new knowledge in this area. The limited availability of project documentation that tends to exist for such international development initiatives, particularly in the Caribbean, would have presented a challenge, but this outlier case study was unique in that project documentation was substantial and comprehensive. The methodology applied yielded a rich set of data and interesting analytical perspectives.

This chapter provides a summary of my conclusions and reflections on the way forward. I come back to perspectives presented in Chapter 1 such as education for sustainable development and the need to focus on informal / non-formal educational contexts. I propose new perspectives on transformative learning and decolonising pedagogies in grassroots community settings which may offer useful approaches to addressing wicked problems.

### 7.2 Education for Sustainable Development

This study was set within the context of 'education for sustainable development' (ESD). The concept of ESD, as expressed within the UNESCO publication (UNESCO, 2017) focused on the role of individuals to become 'change makers', and also highlighted that ESD should be part of all educational contexts from formal primary to tertiary, and in non-formal and informal education. My thesis is therefore a contribution to ESD from an informal learning perspective. It reflects therefore the

nature of learning and knowledge sharing among the fisheries community. It is in this sense rather different from other contributions which have tended to focus on formal education.

'It asks for an action-oriented, transformative pedagogy, which supports self-directed learning, participation and collaboration, problem-orientation, inter- and trans-disciplinarity and the linking of formal and informal learning.'

(UNESCO, 2017 p7)

ESD was expected to enable individuals to engage with the SDGs and through this engagement as informed citizens they would encourage transformation within their society. UNESCO aimed to create a standardised approach to achieving the SDGs through a framework which set out learning objectives and key sustainability competencies. This language and approach aligned more closely with a formal educational context, and entirely disregarded the informal and non-formal contexts where the grassroots communities and environmental custodians exist.

Additionally, though ESD acknowledged working in communities and partnership, there was no direct importance placed on transformative education of communities or networks. The reference to 'self-directed' learning suggests learning by an individual, and this study highlighted that though the individual is learning and transforming, the focus in sustainable development should be on the transformative learning of the community or network. Sustainable development educational objectives at the local and community levels should be determined by the local community, and these set within the context of formal, informal and non-formal learning activities within the community. I highlighted the significance of the community and participatory approaches, and the transformative learning that occurred within informal and non-formal settings. As stated previously, much of the literature regarding sustainable development has focused on formal education and learning, disregarding the grassroots communities. 'Change makers' are individuals but they emerge from and engage within their communities in order to transform mindsets.

### 7.3 Informal Learning in Grassroot Communities

'Learning by doing' was identified as the most effective approach to engage the learners within the Caribbean fisheries network which included the fisherfolk. The transformative pedagogic tools which were used were skilfully applied by the facilitators. The informal learning activities were opportunities for critical dialogue, identification of problems and challenges, problem solving, negotiated action, and the development of new skills to be practiced within the local communities. The responsiveness to knowledge sharing and transfer was underpinned by a respect for history, culture and traditional knowledge. Each individual voice was valued in interactive and participatory sessions.

This established trust between the participants of the SCFPG project created an open and friendly environment for knowledge sharing and transfer. The role of fisherfolk leaders in decision making and planning throughout the delivery of the project created a sense of partnership, collaboration and equity. It was also significant that the main facilitators were Caribbean, working within Caribbean support organisations. Their historical involvement with the fisherfolk pre-dated the SCFPG project by several decades, and they were knowledgeable and mindful of the historical barriers to trust and change of mindset for the fisherfolk. The local 'experts' were therefore valued within the internationally funded project, and this was supported by international agencies such as FAO which recognised the importance of this approach. This gave a voice to the Caribbean 'expert' – as researcher, academic, or fisher – within the international arena, and therefore conferred legitimacy on the international, regional and local platforms. These wider activities provided additional learning opportunities.

The key elements which had added value here were:

- Respect for culture, history and traditional knowledge
- Time taken to develop trust with local fisherfolk leaders and representatives
- Transformative pedagogic approaches leading to critical consciousness
- Local experts/technicians/researchers/academics who led facilitation of workshops

These aspects played a significant role in moving towards a decolonised pedagogy and therefore a sense of empowerment and legitimacy. I believe that these elements

should be considered in any international development project in order to generate transformative learning for the grassroots and local communities.

#### **7.4 Transformative Learning – considering a spectrum**

Within the context of complex socio-ecological systems, there has been increased consideration of learning approaches that will support change in terms of sustainable natural resource management, environmental protection, conservation and tackling climate change (Lotz-Sisitka *et al*, 2016; Westoby and Lyons, 2017; Macintyre *et al*, 2017; de Kraker, 2017; Romina, 2014). Lotz-Sisitka *et al* (2016, p50) indicates that for complex environmental issues ‘engaging with such concerns requires learning, dialogue, collaboration and coordination, crossing institutional and social boundaries, expanding horizons, transgressing stubborn routines, norms and hegemonic powers’.

There is consensus that the learning is focused on adult learners, and what is sought is transformation and change. In terms of learning, there have been references to ‘transformative learning’, ‘transformative social learning’ and more recently ‘transformative transgressive learning’ with regards to socio-ecological challenges such as climate change which has an impact on the livelihoods of groups such as fisherfolk.

The focus therefore is not just individual learning but also social learning, developing knowledge, skills and behaviours that demonstrate transformation. Individuals as ‘change makers’ are not just thinkers, they are action oriented starting with their own actions, but extending to the community in which they live and work. Transformative learning underpins these transitions from individual to community and from change of mind to change of action. The ideal end point is transformative community action. I therefore propose that transformative learning can be presented as a spectrum.

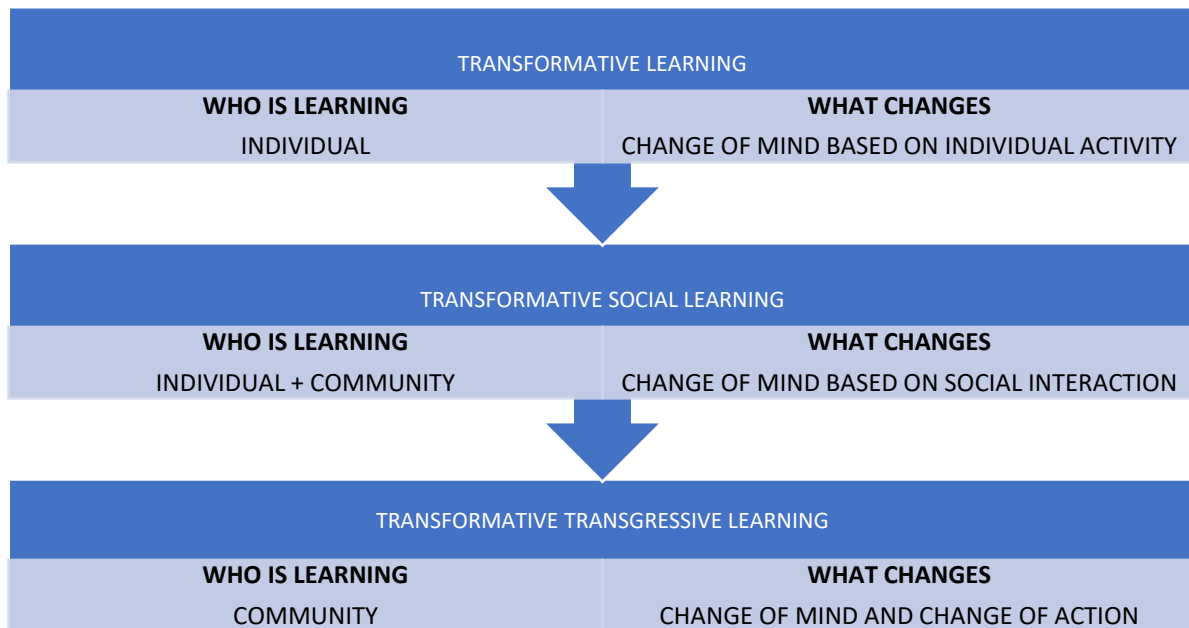


Figure 14: Proposing a spectrum of transformative learning

Within the context of post-colonial communities, changing mindsets and action at the local level requires learning that transforms and transgresses. Such transformative learning takes time and requires consistent action individually and socially towards decolonising thinking and mindsets.

### 7.5 Strengthening identity through activity contributes to transformative learning

The importance of having a clear identity within this project was highlighted through the CHAT lens. The community was reliant on all key stakeholders contributing, playing their roles, and acting with goal-oriented motivation towards the objectives of the project. Since motivation to achieve goals has been linked to identity (Roth, 2007) particularly of the subject of the activity system, the weakness of the national and primary fisherfolk organisations translated into weakness of the CNFO, a key stakeholder within the Caribbean fisheries network as part of the subject and community. However, through the inter-connected activity systems and activity, a great deal of work was done to strengthen the identity of the CNFO, NFOs and PFOs which therefore strengthened the activity system and the subject's focus on the object, which also happened to be the CNFO.

Primary, secondary and tertiary mediating tools, together with trust and building institutional memory through comprehensive project documentation contributed to the overall strengthening of motivation, identity, and therefore to transformative learning. Within the literature there is a need to build a better understanding of the role of identity, both individual and community-centred, in terms of transformative learning across the spectrum (as I proposed above). The role of identity in CHAT and within activity system analysis is another area that requires further exploration.

Before learning occurs having clear individual and community/organisational identities plays a role in motivation to learn and engagement in development activities. During and after learning, identities change within any level of transformative learning, and this can be progressive but also potentially disruptive. This again connects to the notion of transformative pedagogies which can be effectively used to transform – and decolonise – thinking, mindsets and actions.

### **7.6 Moving away from resilience thinking and moving towards transformative disruptive capacity building**

The concept of resilience has been used for many years in terms of natural resource management and planning. Resilience requires the ability of a system to absorb the impact of unexpected disorienting events and to respond to change. This position pre-supposes a fundamentally well developed and strong system. Resilient communities are able to organise and mobilise members to respond to events and are able to adapt (Ozawa, 2012). This pre-supposes a community which is grounded in trust, communicates effectively, and is self-directing. My case study reflects the weakness of the CNFO at the beginning of the SCFPG project, and the transformative activities which strengthened it throughout the project timeframe. This is still a work in progress and will take more years of trust and capacity building. Therefore, the notion of resilience is not aligned to the realities of these types of grassroots organisations where they are initially lacking in trust and motivation to participate, under-resourced, poorly empowered and disconnected. The wider community may provide a level of support in order to absorb change and adapt to it, but without working to strengthen the grassroots organisations through transformative learning and action, the ability to achieve collaborative resilience will always be unattainable. The principles of adaptation and resilience may also be flawed if it



mainly relates to re-establishing a system to norms that may be fundamentally flawed.

With new perspectives on transformative transgressive learning Wals and Peters (2018) have suggested shifting approach from resilience thinking to transformative disruptive capacity building. These perspectives are relatively new, and more exploration and research are needed to define both transformative transgressive learning and disruptive capacity building in terms of natural resource management and planning. The notions of both transgression and disruption entail people working and learning at the edge or outside of their comfort zones. Peters and Wals (2013) proposed three types of work:

- *The work of determining what is* – which involves ‘naming, framing and setting problems; identifying, observing and documenting physical, social, cultural and political realities, phenomena and behaviours; identifying and documenting views, opinions and needs; and identifying and articulating ideals, values and interests.’
- *The work of determining what should be done to close the gap between what is and what should be* – which involves ‘public deliberation and debate; the production of public judgement; the running of experiments; the development and testing of action plans, strategies and tools; determining what works with the changes that are desired (enabling forces and conditions); and determining what works against these changes (forces and conditions that work to keep things the way they are)’.
- *The work of determining, assessing and interpreting what happened and why and what to do next* – ‘which is done during and after taking action and running experiments.’

(Wals and Peters, 2018 p46)

I believe that transformative pedagogical approaches certainly encourage deliberation and action within the three realms of work. Such approaches may create conflict or resistance, but to avoid negative impacts of critical discourse and reflection, the underpinning principles of trust, inclusive participation and decision-making, motivation to change, and respect for culture and traditional knowledge can

create the environment for a positive transformative learning experience and sustainable capacity building.

### **7.7 Leadership and Mentorship in Grassroot Communities**

The roles of effective leadership and mentorship have been explored within the context of more formal educational contexts and within more corporate organisational settings. There is still limited literature on leadership and mentoring programmes within grassroot organisations in places such as the Caribbean. My study highlights the need to consider informal educational and learning environments more within International Development work and highlights the role of grassroot leaders and mentors. The Caribbean fisheries leaders and mentors played a significant role in establishing trust, goal-oriented motivation, and the identity of the CNFO.

Within this study the principles of leadership and mentorship are grounded in participatory approaches, and the ethos of civil society. The opportunity to practice new skills and learning reinforced collaboration and shared experience, challenges and solutions. Effective leaders have been able to make an impact at the local, regional and international levels. Effective mentors have enabled grassroot members to problem solve and find solutions. These individuals are key points of knowledge sharing and transfer between other groups and their own communities, enabling both horizontal and vertical communication, participation and learning.

### **7.8 Using the CHAT lens differently**

Using the principles of CHAT and the activity system as an analytical lens has produced some new perspectives of how activity systems, as mediating tools, can be inter-connected and embedded within a single, large and complex activity.

Furthermore, I have proposed that there are levels of mediating tools: primary, secondary and tertiary. Primary mediating tools were culture and tradition/traditional knowledge in this system. Culture is implied within the tools of the activity system but I have highlighted that culture and traditional knowledge should be given more attention as primary mediating tools. They have an influence on the way in which subjects will engage with secondary and tertiary mediating tools. This is particularly important in grassroot communities.

The use of CHAT as a theoretical framework, and the methodology applied was useful in gaining insight into hard to access grassroots activity. The retrospective longitudinal case study approach was effective in highlighting real solutions to real challenges. The use of an outlier case study where transformative learning could be demonstrated enabled the use of the activity system, as an analytical tool, to look more deeply at the flow of the activity system, instead of focusing on contradictions and tensions between elements of the activity system. This offered unique perspectives to emerge through the lens of CHAT and transformative learning. This study highlighted the importance of researchers to decolonise research methodologies by being innovative and creative, thinking 'outside the box' in order to investigate problems and find solutions of grassroots communities.

### **7.9 Trust, Community Learning and Sustainability**

My study makes an important contribution as it highlights the role that trust, participatory approaches and community learning play in sustainability and transformation. When the SCFPG project started it was evident that there was work required to build trust within the fisheries community. The participatory approach to facilitation offered opportunities for participants to engage in a transformative learning experience which naturally built and reinforced trust at the individual and community levels. Trust was strengthened through the informal, friendly and open learning environments, the respect for culture and traditional knowledge, the creative and democratic approach to dialogue and problem-solving, the support of various organisations, and the strengthening of the identity, confidence and role of the CNFO to lead and represent the fisherfolk.

Several years after the completion of the SCFPG project, there is ongoing evidence of continued growth. The CNFO have become more visibly active at local, regional and international levels. They have learned to overcome challenges by accessing support through the wider Caribbean fisheries community and organisations. The continued use of participatory approaches, the ability to adapt to change and to respond to environmental challenges, and the commitment to developing fisherfolk leaders and mentors are clear indicators of sustainable outcomes. Therefore, sustainability has been underpinned by ongoing transformative learning which has

been strongly supported by the element of trust. Without trust participants would not have fully engaged in forming connections, in sharing or valuing others' experiences, in being open to new perspectives, or in embedding new ways of working within their communities in a collaborative way. In simple terms, trust is necessary for transformative learning to occur which then enables sustainability.

### **7.10 Final Summary**

There are significant global challenges which have great impact on the poorest communities around the world. I started this thesis by indicating that the matters embodied in this case study have relevance to five SDGs which are:

- SDG1 - End poverty in all its forms everywhere
- SDG2 - End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- SDG3 - Ensure healthy lives and promote well-being for all at all ages
- SDG4 - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- SDG8 - Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

This study has highlighted the factors which played a role in how transformative learning has been achieved in the Caribbean fisheries network and has identified key elements which have contributed to this. I believe that education can play a significant role in changing dependency mindsets, generating transformative action and certainly in working towards the global sustainable development agenda.

There are real challenges with regards to climate change and its impact on sustainable livelihoods. In order to effectively meet these current challenges rural and grassroot communities will need to demonstrate the ability to transform, adapt and find new solutions which enable them to take urgent action to protect their communities, livelihoods and the environment.

I believe my study makes a valuable contribution to knowledge in the field of international development, education and sustainable development, and offers some transformative approaches and insights into working with grassroot communities that

may help, in part, to build sustainable outcomes which can ameliorate wicked problems.

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## A.1 APPENDIX 1

### Sample of reflections

April 2017 – shortly after approval to proceed to Thesis

Areas for clarification related to data collection:

1. What is the location?
  - a. island specific or regional?
2. Number of interviews?
  - a. Who are the key informants?
  - b. Should groups be approached?
  - c. Should small businesses be approached?
3. Documentation required?
  - a. Minutes
  - b. Organisational mandates
  - c. Memoranda of Understanding (if available)
  - d. Public Documents
  - e. Websites
4. The 'Network' – what defines membership?
  - a. What
  - b. Who
  - c. How
  - d. Why

July 2017

Thinking about Transformative Learning perspectives:

- Transformative learning for a new world view? (Jackson, 2008)  
'Learning to think differently'
- Community-based transformational learning – collective transformational learning → informal activities → Farmer Field Schools (FFS) → experiential and action learning
- Deep personal experience – holding beliefs and attitudes that connected their lives eg. Marginalizations

- Triggers for Transformative Learning (TL) –
  - Content of (educational) interactions and dialogues that take place
  - Participatory, socially committed action research ‘co-investigation’
- Role of facilitators eg Farmer Field School
  - Taking backseat (eg. FFS)  $\leftrightarrow$  Parental or Directive
  - Facilitators are interventionist and push for change
- Particular to the general – personal  $\rightarrow$  social
- Sustainability of transformative learning  $\rightarrow$  through networks, knowledge sharing and knowledge transfer
- Impact of culture in dialogue in TL
- ‘Learning occurs in dialogue’ – (Cranton, 1994)
- Need for longitudinal studies to determine sustainability

### August 2017

#### Post interview reflections

The participants were very forthcoming with information and were very generous with their time. Though learning is expressed within the objectives of the work that they do, it was clear that thinking about ‘learning’ in explicit terms was new. They offered many other leads to documents which would be useful within the documentary analysis. The role of CANARI was clearly significant and determined the nature of the project delivery and engagement with the fisherfolk and others. CANARI as a civil society organisation was referred to and it was emphasised that the project sought to be participatory and encourage ‘bottom -up’ dialogue.

### January 2018

Further to the interviews, data analysis required consideration of the theoretical framework. My observation is that the CHAT Activity System does not fully acknowledge aspects such as emotions, motivations and feelings. Themes/thoughts beginning to emerge around this:

- Participatory approaches  $\rightarrow$  motivations of the stakeholders?

- Are these acknowledged? → local experts and facilitators can have more meaningful interactions as they know the local groups and the issues... and their history

There is a difficulty/challenge in reaching the fisherfolk for interviews.... How should I address this? Do some reading on this.

#### April 2018

On the matter of emotions, motivations etc not accounted for in CHAT, see 'The Three Dimensions of Learning' in Handbook of Learning Theories (p20)

- Behaviourist / cognitive – only internal psychological processes
  - Social Learning – mostly external interaction.
- 'Incentive Dimensions' → feelings, emotions, motivations  
Impulses that initiate learning → coherent with constructivist model  
Ambivalence → Barrier to learning

On the matter of TIME within CHAT and therefore Transformative Learning, see 'Historicity' of Activity Systems.

#### August 2018

None of the pedagogical approaches necessarily fit International / Community Development contexts. These are considered with regards to the following:

- Development projects operate in informal contexts
- Traditional / Tacit knowledge
- Social Learning
- Different to 'vocational' and 'apprenticeship'
- Informal and non-formal learning, which is not being tracked/monitored
- Learning outcomes as embedded within development projects

More research is needed in this area, hopefully this study will contribute to this.

Event	Approach to delivery	Methods used	Additional notes
<b>First NFW Meetings</b>			
<b>National Fisherfolk Workshop,</b> Barbados 15 January 2014	Participatory and interactive	<ul style="list-style-type: none"> <li>• Icebreakers</li> <li>• Brainstorming</li> <li>• “Dotmocracy”</li> <li>• Powerpoint presentations</li> <li>• Small group work creative role play</li> <li>• Embedded reflection in various ways</li> </ul>	<ul style="list-style-type: none"> <li>• Objectives clearly conveyed to the participants</li> <li>• Evaluation to measure workshop achievements</li> <li>• Further objectives defined collectively</li> <li>• Mentors identified ‘Lessons learned’</li> </ul>
<b>National Fisherfolk Workshop,</b> Dominica, January 20 – 21, 2014	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations and discussions</li> <li>• brainstorming</li> <li>• voting</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Inclusion of mentors</li> <li>• Some indication of barriers to mindset change by fisherfolk</li> </ul>
<b>National Fisherfolk Workshop,</b> Jamaica, February 10 -11, 2014	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• brainstorming</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Role of the mentor</li> </ul>
<b>National Fisherfolk Workshop,</b> Saint Lucia, April 2 -3, 2014	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• brainstorming</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of mentoring</li> <li>• Identification, categorisation and analysis of problems facing fisherfolk (Problems, Root causes and Solutions)</li> <li>• Overview of global and regional policies such as the FAO Code of Conduct, Draft Small</li> </ul>



			Scale Fisheries Guidelines, Castries Declaration on IUU Fishing and the Draft Caribbean Community Common Fisheries Policy
<b>National Fisherfolk Workshop, Suriname, May 5 – 6, 2014</b>	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• brainstorming</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Participants went through an exercise where they identified the challenges facing the fishing industry in Suriname</li> <li>• Participants determined which should be selected for policy development and capacity building</li> <li>• Poor attendance by fisherfolk</li> </ul>
<b>National Fisherfolk Workshop, Saint Vincent and the Grenadines, May 5 – 6, 2014</b>	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• brainstorming</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Very good representation from fisher groups</li> </ul>
<b>National Fisherfolk Workshop, Grenada, May 29 – 30, 2014</b>	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• brainstorming</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Use of Problem Tree approach to identifying problems and then finding solutions</li> <li>• Use of Participatory Video demonstration in order to generate discussion about effective communication strategies</li> </ul>
<b>Second NFW meetings</b>			

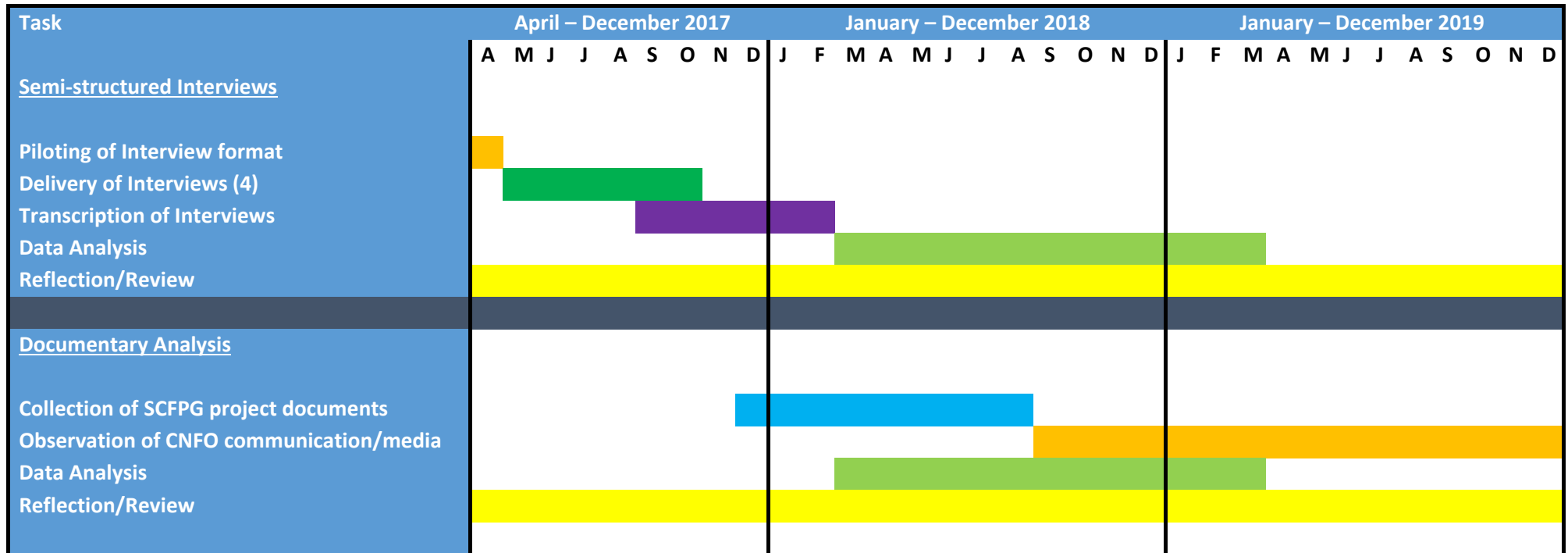
<p><b>National Fisherfolk Workshop,</b> Suriname, September 14-15, 2015</p>	<p>Participatory and interactive</p>	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Participants undertook an exercise to determine the right message for specific target audiences. The role play exercise helped them to understand the importance of targeting messages to suit their target audiences to be effective.</li> <li>• Participants identified communication within their organisations and with others outside their organisations as one of the major challenges.</li> <li>• The closing exercise was fun because all the participant had to draw a face to express what they would take back to others in their fishing community from the workshop.</li> </ul>
<p><b>National Fisherfolk Workshop,</b> Anguilla, September 17-18, 2015</p>	<p>Participatory and interactive</p>	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Impact of Mentor on developing the Anguilla Fisherfolk Association</li> <li>• Evidence of seeing change in participation and engagement</li> <li>• There are still challenges in getting fisherfolk to fully participate in wider national objectives</li> </ul>

<b>National Fisherfolk Workshop,</b> Barbados, October 13, 2015	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Problem Tree Analysis approach</li> <li>• What makes a good Project Manager Activity – drawing a body with characteristics illustrated, generated good discussion afterwards.</li> </ul>
<b>National Fisherfolk Workshop,</b> Saint Lucia, October 14-15, 2015	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Evidence of development of the fisherfolk participation</li> </ul>
<b>National Fisherfolk Workshop,</b> Saint Vincent and the Grenadines, October 20-21, 2015	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Well attended by fisherfolk</li> <li>• Lessons learned</li> <li>• Voting to establish challenges and priorities</li> <li>• Evidence of development of the fisherfolk participation</li> </ul>
<b>National Fisherfolk Workshop,</b> Jamaica, October 21-22, 2015	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• Lessons learned</li> <li>• Voting to establish challenges and priorities</li> <li>• Participants recognised the need for training in project planning and proposal writing so that they could access the funding arrangements that are available and that may become available.</li> </ul>
<b>National Fisherfolk Workshop,</b> Dominica, November 24-25, 2015	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> </ul>	<ul style="list-style-type: none"> <li>• similar format as previous</li> <li>• more conflict and negative perceptions</li> </ul>
<b>Mentors Workshops</b>			

<b>Regional Training of Trainers Workshop for Mentors, St. Lucia, November 19-22 2013</b>	Participatory and Interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> <li>• brainstorming</li> <li>• field trip</li> <li>• lived experiences of participants (experiential)</li> </ul>	A field visit to Laborie was undertaken to conduct a practical mentoring exercise with FFO representatives from Saint Lucia, using an organisational needs assessment approach.
<b>Final Regional Training of Trainers Workshop for Mentors, Anguilla, July 6-9, 2015</b>	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> <li>• brainstorming</li> <li>• field trip</li> <li>• lived experiences of participants (experiential)</li> <li>• discussion of the 'trust circle'</li> </ul>	A field visit to various landing sites in Anguilla, including Crocus Bay, Shoal Bay, Forest Bay, Blowing Point and Cove Bay was undertaken to highlight some of the challenges being experienced by fisherfolk in Anguilla.
<b>Fisherfolk Leaders Action Learning Group (FFALG) Workshops</b>			
<b>Regional Workshop for the Fisherfolk Leaders Action Learning Group, Trinidad and Tobago, 19-22 August 2013</b>	Participatory and interactive	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> <li>• field trip</li> </ul>	Participants undertook a one day field trip to a fisherfolk facility at Blanchisseuse on the northern coast of Trinidad to provide participants with an opportunity to conduct peer learning on communication for policy influence and how to establish and strengthen a local fisherfolk organisation. This was also an opportunity to practice some of the action learning skills discussed in plenary sessions.

<p><b>Second Regional Workshop for the Fisherfolk Action Learning Group</b>, Bahamas, 20-24 October 2014</p>	<p>Participatory and interactive</p>	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> <li>• field trip</li> <li>• creation of Participatory Video</li> </ul>	<p>The final two days of the workshop were dedicated to the creation of a Participatory Video (PV) by the participants that would capture a fisheries issue of importance to The Bahamas and the rest of the Caribbean region, for advocacy by the FFALG. As part of the PV sessions, participants were taken to two fish landing sites in Nassau (Montagu Ramp and Potter's Cay) to get footage and conduct interviews with local fishers and vendors.</p>
<p><b>Third Regional Workshop for the Caribbean Fisherfolk Action Learning Group</b>, Antigua and Barbuda, 5-8 October 2015</p>	<p>Participatory and interactive</p>	<ul style="list-style-type: none"> <li>• plenary presentations</li> <li>• discussions</li> <li>• panel discussions</li> <li>• small group work</li> <li>• field trip</li> </ul>	<p>The final day of the workshop was used to undertake an evaluation of a fishing group in Antigua.</p>

## A.2 APPENDIX 2 PROJECT TIMELINE



The data collected during the interviews directly informed the documentary data collection process and the observation of the CNFO and other NFO social media Facebook platforms.

### A.3 APPENDIX 3

#### CONSENT FORM

Dear Colleague,

As part of my professional doctorate, at the Institute of Education, I am moving into the final phase of my research which aims to investigate how knowledge sharing and transfer within local Caribbean agricultural networks facilitates transformative learning.

I would like to invite you to be interviewed for this research. The 45-minute semi-structured interviews will be carried out via Skype at a time that is convenient to you.

Throughout my research I will be following the Code of Ethics and Conduct from the BERA, including secure storage of any data and confidentiality guaranteed. All data from the interviews will be fully anonymised and will be included in my research report; at a later date it may be used in future research and possibly included in a published research journal.

I will email you or call you in 3-5 days to ask whether you are happy to take part, and, if you are, to arrange an interview. If you have any questions about this study or your participation, please feel free to contact me. I do hope that you will consider taking part and sharing your valuable experience.

Kind regards,

Tricia Tikasingh

IOE Doctorate in Education Research Student

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(For follow-up email)

#### **Statement of Consent:**

I am aware of the purpose and nature of this research interview and give my consent to participate. My participation in this research is voluntary and my data will be treated in confidence. I understand that I may withdraw from this research at any time and to request that any information already given be withheld. Any questions I have about the research have been answered to my satisfaction.

**Signature of Participant:**

**(Print name)**

**Date:**

Thank you for your assistance in this research.

Tricia Tikasingh

## A.4 APPENDIX 4

### Interview Schedule:

I gave participants an overview of the research and the rationale for selecting the fisheries sector as the subject of the case study via email and also at the start of the interview which occurred via Skype.

The participants started by giving a historical account of the development of the fisheries network in the Caribbean, and their involvement in that process.

The key questions were:

**Q1** – How does knowledge sharing and transfer occur between people in the network?

**Q2** – How do local actors learn to change their development approaches, mindset and actions as a result of engaging in collaborative initiatives?

**Q3** – How does learning emerge?

**Q4** – Do you feel that the way the fisherfolk see themselves has evolved over the years?

Follow up questions emerged from the flow of the information shared by participants. These served to add clarity and further historical and real-world context. Generally, participants were very open and provided extensive 'story-telling'.



## A.5 APPENDIX 5

### PARTICIPANT INFORMATION SHEET

# Exploring 'Outliers' – Learning within local Caribbean agricultural networks

## A research project

2017-2019

Information for Consultants, Experts and Professionals working in the Caribbean Agricultural Sector

Please will you help with my research?

My name is Tricia Tikasingh, and I am currently a doctoral research student at the Institute of Education, London, UK.

This introduction tells you about my research and I hope it will be useful. I would be pleased to answer any questions you have.

### **Why is this research being done?**

The Agricultural Sector in the Caribbean has struggled to redevelop and strengthen its position internationally for decades, largely due to global economic directives. This study will employ a case study methodology in order to investigate how knowledge sharing and transfer within local Caribbean agricultural networks facilitates transformative learning in order to stimulate change for future sustainable development.

### **What will happen during the research?**

You will be asked to participate in an initial semi-structured interview via Skype which will last about 45 minutes. Once I start data analysis I may ask you for a shorter second interview if I have further questions.

### **What will happen to you if you take part?**

You will be asked to confirm your willingness to participate in the study. All personal details and responses will be kept strictly confidential and names will not be used in any published work. Anonymity of all participants will be maintained.

### **Could there be problems for you if you take part?**

If you have any problems with the project, please tell me. My email addresses are [tikasingh@ioe.ac.uk](mailto:tikasingh@ioe.ac.uk) or [tikkimaria@yahoo.com](mailto:tikkimaria@yahoo.com)

**Will doing the research help you?**

I hope you will find this process useful, and that it will encourage some reflection of what some of the issues are for Caribbean agriculture and how these can be overcome.

**Who will know that you have been in the research?**

I will be the only person who will know that you have been involved in this research. Responses will be anonymised in any published work.

**Do you have to take part?**

You are not obliged to take part. If you initially agree and then change your mind, your responses will be withdrawn. Please email me at the addresses given and I can remove your responses from the data.

**Will you know about the research results?**

If you are interested in knowing about the results I would be happy to communicate this to you at the completion of the EdD. Please email me to indicate that you would like to receive this.

**Who is funding the research?**

This research is not funded.

**The project** has been reviewed by the Faculty Research Ethics Committee and has been reviewed by my research supervisor at the IOE.

**Thank you for reading this information.**

Tricia Tikasingh

[ttikasingh@ioe.ac.uk](mailto:ttikasingh@ioe.ac.uk) or [tikkimaria@yahoo.com](mailto:tikkimaria@yahoo.com)

## A.6 APPENDIX 6

### MAPPING OF RESEARCH QUESTIONS TO THEMES AND CHAT

Research Question	Key Themes	Activity System Element
<p>How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?</p> <p>What types of pedagogical practices promote transformative learning at the local and grassroots (fisherfolk), and the institutional (agency, government, research etc.) level?</p>	<b>Learning by doing</b>	<b>Mediating Tools</b> <b>Community</b> <b>Division of Labour</b> <b>Rules</b> <b>Subject</b>
How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?	<b>Inclusive participation and decision-making</b>	<b>Mediating Tools</b> <b>Community</b> <b>Division of Labour</b>
How do knowledge sharing and transfer approaches within a local Caribbean fisheries network facilitate transformative learning?	<b>Record Keeping and Documentation</b>	<b>Mediating Tools</b>
What other factors within the outlier network contribute to transformative learning?	<b>Role of Support Organisations</b>	<b>Community</b> <b>Division of Labour</b>
What other factors within the outlier network contribute to transformative learning?	<b>Responding to change</b>	<b>Culturally and historically embedded in the Subject</b>
What other factors within the outlier network contribute to transformative learning?	<b>Establishing the motivation</b>	<b>Subject orientation to the object</b> <b>Community</b>

<b>Research Question</b>	<b>Key Themes</b>	<b>Activity System Element</b>
What other factors within the outlier network contribute to transformative learning?	<b>Trust</b>	<b>Subject</b> <b>Mediating Tools</b> <b>Community</b> <b>Division of Labour</b> <b>Rules</b>

## A.7 APPENDIX 7

### THEMES FROM INTERVIEWS AND DOCUMENTS

#### Key Themes from Interviews

Key Themes	Codes	Activity System Element
<b>Learning by doing</b>	Experiential Learning Learning from each other Learning to communicate Action Learning Groups Mentoring Workshops Shared resources	<b>MEDIATING TOOLS</b>
<b>Participatory and collaborative approach</b>	Collaborative project development Creating Partnerships Participatory Delivery Participatory engagement Participatory environment International funding and partnerships	<b>COMMUNITY</b>
<b>Role of Support Organisations</b>	Creating strong representation Leadership roles Role of Civil Society Organization Role of partners in network development Capacity Development - CNFO Dependency to Independent Developing strong regional network	<b>DIVISION OF LABOUR</b>
<b>Responding to change</b>	Effect of global environment External Organisations - change in direction Fisherfolk gaining legitimacy Negotiating change Shifting perspectives	<b>OBJECT AND OUTCOME</b>
<b>Documentation and Record Keeping</b>	Institutional memory Documenting activities	<b>MEDIATING TOOLS</b>

### Themes from Documents

<b>Key Themes</b>	<b>Codes</b>	<b>Activity System Element</b>
<b>Participatory and Interactive Approaches to engaging learners</b>	Interactive Discussion Brainstorming Voting – ‘Dotmocracy’ Small group work Field trip Participatory Videos Grant writing (Fisherfolk Strengthening Fund)	<b>MEDIATING TOOLS</b>  <b>COMMUNITY</b>
<b>Learning from others</b>	Action Learning Groups Mentoring Fisherfolk Learning Exchanges Fishers Forum	<b>COMMUNITY</b>
<b>Trust</b>	Developing Fisherfolk Leaders Succession planning	<b>MEDIATING TOOLS</b>  <b>COMMUNITY</b>
<b>Establishing the motivation</b>	Setting objectives to engage, learn and act Continued challenges	<b>OBJECT</b>
<b>Inclusive participation and decision-making</b>	Types of Participation: from Functional to Self-Mobilization	<b>DIVISION OF LABOUR</b>
<b>Record keeping and documentation</b>	Maintaining Institutional Memory Sharing information effectively	<b>TOOLS</b>