

Developing and Testing a Cultural Change Process in the NSW Wild Harvest Sector

**A case study to facilitate a process towards co-management
for the NSW Northern Fish Trawl sector**

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Executive Summary

The Australian and NSW seafood industry has been impacted by several unrelated disrupters that challenges the efficacy of current business models and culture to support business success now and into the future. These and other disrupters are also creating challenges to the approaches taken by and culture of government to develop and implement regulatory and legislative frameworks to ensure the sustainability of marine resources. The challenges experienced by industry and government and their approach to resolve them are creating an increasingly difficult working environment that is impacting on industry development and the efficient and effective management of marine resources.

With increasing demand for Australian seafood both nationally and internationally consumers are seeking healthy, safe and sustainable protein. This is an opportune time for the industry and government to enhance their capacity and capability to adapt and respond to these challenges to maintain the sustainability of marine resources and support a vibrant seafood industry. Members from the NSW Department of Primary Industry- Fisheries (DPI Fisheries) and the NSW wild harvest sector agreed that major cultural change and leadership development was a key initiative that would support both the regulator and the industry to adapt to a changing world.

Specifically, the need for cultural change has been highlighted in the 2019 NSW Seafood Industry Council Strategic Plan (the Plan). The Plan described a bold new future for the NSW fishing industry. However, for the Plan to be realised, industry needs to reflect on itself and re-consider many of its engagement and leadership practices which requires major cultural change within and of the seafood industry. This includes the relationship with NSW DPI Fisheries. Without such change, many practices and behaviours will continue to dominate the industry jeopardising its ability to increase its role in fisheries co-management. This project arose from the seafood industry and DPI Fisheries realising that a collaborative approach to culture change within DPI Fisheries and the NSW fishing industry would be advantageous for the future of the industry and the management of the natural resource.

The focus of this project was to enable the NSW wild harvest sector, specifically, the NSW Northern Fish Trawl sector- (NFTS) and NSW Department of Primary Industry- Fisheries (DPI Fisheries) to embark on a journey to support:

- the industry to move from a culture based on an individualistic, reactive, production driven to a collaborative, responsive and market focussed sector; and
- DPI Fisheries to move from a centralist driven regulator to a collaborative approach to the management of marine resources.

It is believed that such a journey would be effectively contextualised by working towards a co-management approach of marine resources. Co-management has been recognised and demonstrated as an effective framework between industry and government for the management of marine resources in South Australia, Western Australia and Commonwealth fisheries. The overall intent of this project is to facilitate cultural change and develop leadership to support and enable the NFTS and DPI Fisheries to work towards the co-management of the fishery. Without this work, neither party would have the appropriate context to facilitate the foundations for a collaborative relationship.

Cultural change and leadership are foundational to the future development and performance of the industry and DPI Fisheries.

The Fisheries Research Development Corporation (FRDC) has funded a series of projects to explore the development and implementation of co-management approaches in Australian fisheries. These projects have built on each other to provide a consistent set of principles and practices that are required to facilitate the development of a co-management approach between the fishing industry and State and Commonwealth fishery regulators. This project takes the next step to support the NFTS and DPI Fisheries on a journey of change towards co-management. This report provides an overview of the rationale, methodology and results of a preliminary journey of the NFTS and DPI Fisheries working together towards developing a collaborative approach for the management of the fishery.

The purpose of the project was to align stakeholders from the NFTS and DPI Fisheries so they could develop a suite of initiatives to support the emergence of a new culture enabling both parties to develop a collaborative governance model for fisheries co-management. The culture of the NFTS and DPI Fisheries is considered as a Complex Adaptive System (CAS). It is from this worldview and that of Neuro Behavioural Modelling (NBM) that the project methodology is based on the principles and practices of these disciplines. The project was designed as a perturbation to begin the cultural change process by enabling participants to self-assess on past and current behaviours, review beliefs and assumptions about current ways of thinking and working, and by doing so develop a connection between each other that will support the growth of a deeper understanding of each other's reality; thereby begin the groundwork for developing trust.

The project was facilitated through four workshops where participants from the NFTS and DPI Fisheries worked together through a range of activities. The first two workshops focused on participants developing a shared systems map of their operating landscape by identifying the key factors and the relationships between them that shaped the observed industry and DPI Fisheries cultural dynamics. This process provided participants with the opportunity to challenge their beliefs and assumptions about their experiences of how these two cultures and the interactions between them had worked.

Participants gained a deeper appreciation of the culture of industry and government dynamics and how to address them by identifying key nodes and language feedback loops in the systems map. Feedback loops represent key factors that have an identified circular relationship between them. As with drawing the map, the development of the feedback loops provided participants with the opportunity to share their narratives about how the system worked. Some of these narratives reflected the deep hurt and trauma that people were holding in their bodies about their experiences working in the industry and with government.

The South Australian (SA) fishery provided important insights in how another jurisdiction has managed the journey towards co-management of a fishery. Speaking with a range of stakeholders provided a consistent set of messages and principles about embarking on the journey of co-management. While these principles were contextual to the SA fisheries and so may not all be directly translated to the NSW and NFTS context, they provide important guidance for developing projects and activities to support change. Some of the key principles to emerge from the SA include:

- An industry Association that supports transparent and sound governance processes;

- Strategic leadership through a committed and skilled group of industry and government leaders to support industry;
- People who are skilled and hold beliefs and values that support a co-management approach;
- A funding model that supports co-management;
- An independent single voice for each sector;
- A functional and close Industry-regulator relationship; and
- Data-led decision-making.

Part of the work of the project team was to take these principles and determine how to apply them in the context of the NFTS. The insights and principles were included in workshops three and four to guide the development of activities/projects that would assist to shape the NFTS and DPI Fisheries cultures to support a more collaborative approach in the management of the natural resources.

While workshops one and two were primarily about sensing what was happening in the industry and its culture, workshops three and four focussed on making sense of what was established in the previous workshops and designing activities/projects, principles/heuristics that would redefine the cultural dynamics into the future. The NSW Government Draft Policy for the Co-management of Fisheries and the co-management continuum, as referenced in Neville (2008, 2011), provided useful frameworks to guide participants to develop activities/projects under the headings: “What does Industry need to do?”, “What does DPI Fisheries need to do?” and “What do Industry and DPI Fisheries need to do together?”.

A large part of the focus of the workshops facilitated participants to learn to communicate with each other and through that process, learn about each other’s reality thereby developing a sense of rapport that in turn, catalyse purposeful, deeper on-going communication. The overall direction of this work was to develop the foundations for engendering trust between members of the NFTS and DPI Fisheries. Based on the comments from participants, there was a growing willingness for trust to develop between the parties. While this showed promise of developing further, the unresolved trauma that is residing just below consciousness for some of the participants would be triggered by a comment or an event. This would then ignite a range of emotions based on past experiences and destabilise the developing relationships and trust. Such patterns of behaviour are characteristic of being human and are a sign of active participation in the process and working through a transition from where people have been to where they are going. To a large extent the journey towards co-management is a journey of evolving personal and collective identities. This takes courage and effort and requires support and mentoring.

To enable the NFTS and DPI Fisheries to continue their journey of identity shifts and cultural change, four key areas need to be addressed (these key areas also form part of the suite of activities/projects that have been developed by the project team):

- Healing emotional trauma within Industry and DPI Fisheries
Members of the NFTS and DPI Fisheries have a long history of distrust and conflict-based relationship. Over time, the conflict-invoked-experiences have led people to store trauma-based emotions in their bodies. These emotions are stored out of conscious awareness until they are triggered by an experience. During the four workshops there were multiple discussions that triggered people’s unresolved emotions about the relationships between the NFTS and DPI Fisheries. A critical initial condition for developing a new management approach of the fishery will require the

leadership from the NFTS and DPI Fisheries to assist people to deal with the healing as a result of emotional trauma from past experiences. Through this process people will be better prepared by being centred, present and have internal coherence that is associated with better mental performance.

- Industry leadership

The NFTS will need to identify a leader(s) who is/are willing and capable to support industry members on a cultural change program. This leader(s) will also need to work with DPI Fisheries to determine what changes in policies, processes, and behaviour will enable collaborative management of the fishery. This was a very clear and important lesson from the trip to SA. There is also the critical need for the presence of an identified and recognised leader(s) from DPI Fisheries to work intimately with the NFTS leader(s). The NFTS leader(s) has a number of critical roles including:

- develop and present the narrative about change and to provide the context that explains the positive reasons for change and the associated challenges;
- translate key messages that make meaning for fishers at a personal level;
- identify key areas where small changes can lead to major shifts in behaviours and how they can be managed;
- explore the tribal issues (issues that arise from fishers that belong to a group from which they reference their sense of belonging and identity) that shape the culture of the sector and how to work through the differences to support the change program;
- to work through issues of personal identity as the program of change will require people not just to change practices but to also change beliefs about themselves, their sector, and how they work;
- know how to respond to and work through the transition phase between the current ways and the new ways of thinking and working;
- to determine what support the fishers may require, (including mental health and emotional) that will enable them to undertake the transition; and
- to monitor the progress of the change program for emerging patterns of behaviour. This is a critical intelligence role that provides insights and evidence to amplify and scale the change program or make appropriate changes so that the sector moves more in the desired direction and less in the current direction.

- DPI Fisheries leadership

As with NFTS, there is a strong need for leadership from DPI Fisheries at all levels. In the case of SA fisheries, leadership for change was envisioned and driven by Industry. For the NFTS, there are limited signs that this leadership and vision exists to start the journey towards co-management. Consequently, leadership for the change to enable the emergence of co-management of the natural resource will need to come from Government and DPI Fisheries. Change will happen when a number of initiatives are implemented that will influence both fishers and bureaucrats to change their behaviours and self-organise into new patterns of behaviour that support a shift from consultative to collaborative style of working.

At the end of workshop four, one member of the NFTS highlighted the need for evidence from DPI Fisheries to:

- take specific issues and work with industry collaboratively to progress and/or resolve them in a way that builds trust and confidence between the NFTS and DPI Fisheries; and
- demonstrate a signal of commitment from DPI Fisheries towards co-management, thereby catalysing commitment from other members of the NFTS to participate on the journey of cultural change. Leaders from DPI Fisheries and NFTS need to work collaboratively to determine the nature and form of a mutually acceptable relevant signal that will build confidence and trust.

Both of these are essential to begin establishing trust and confidence in the process.

- Developing capability for DPI Fisheries and the NFTS to co-lead and manifest the implementation of the change program- managing the interface between DPI Fisheries and the NFTS

People chosen from both the NFTS and DPI Fisheries to lead the change program will need professional assistance to enhance their skills to implement the activities/projects and adopt the principles/heuristics outlined in this report. Part of this implementation involves mentoring and coaching fishers from NFTS and staff from DPI Fisheries management, participating separately and collectively in developing individual and group capabilities in communication skills, issues management, working and understanding complex adaptive systems, leadership, facilitation and decision-making.

These key areas need to be addressed as part of a broader implementation process of the activities/projects.

The learning and recommendations from this project can be applied to other fisheries on the co-management journey. We strongly stress that care must be taken in how these learnings and recommendations are applied as each fishery has its own evolutionary pathway in the direction of co-management. A blatant “copy and paste” approach will fail because each fishery has its own context of issues that shape the dynamics of the nature of that fishery. While the principles for the journey of co-management presented here will apply, how they apply will vary from one fishery to another because of the context presented by each fishery.

This project demonstrated that processes can be designed, supported by external facilitation, to assist members from DPI Fisheries and the NFTS to embark on a journey of cultural change by developing the groundwork for trusting relationships. The next step is to address the critical areas described above to enable the journey to continue.

Developing and testing a cultural change process in the NSW wild harvest sector

A case study to facilitate a process towards co-management for the NSW Northern Fish Trawl sector

1. Introduction

1.1. Overview of the NSW Seafood wild harvest sector operating environment

The Australian seafood industry has been impacted by several unrelated disrupters including increasing ocean temperatures, access to international markets, bushfires, drought, spatial squeeze and Covid-19. These factors have multiple effects including: challenging the current business models of some fishing businesses, restricting access to marine resources, reduce the availability of different species and lead to increases in retail prices to the consumer. Response to change spans from early adopters to steadfast deniers. Acceptance of and adapting to change requires a culture shift in the NSW Northern Fish Trawl Sector (NFTS); from feeling a lack of control and being a victim of Government and regulatory decisions, to being part of an industry that supports growth and succession planning.

With increasing demand for Australian seafood both nationally and internationally consumers are seeking healthy, safe and sustainable protein. This is an opportune time for the industry to enhance its capability to adapt to respond to the changing consumer and broader operational environment. The NSW wild harvest sector has strong traditions in the supply of seafood. It is an industry with people who have generational knowledge about seafood, fishing the oceans, estuary systems and the environment. While the people within the industry are passionate and proud in their endeavours to support and maintain this long-standing industry, there are challenges that need to be addressed to ensure a vibrant industry in the future.

Like many other industries, NSW wild harvest sector is influenced by rising costs relating to fuel and energy, insurances, labour availability and equipment maintenance. These and other factors are challenging the financial sustainability of many businesses.

The NSW wild harvest sector has gone through a protracted structural adjustment program challenging already tense relationships between Government and Industry (Stevens 2012). Whilst this adjustment program has now largely been implemented the flow-on effects of this program are still playing out including the need to remove redundant regulation. Some operators within the sector have welcomed the adjustment program as providing some certainty for the future. However, many operators say they are worse off, resulting in a highly fragmented wild catch/harvest sector, with little confidence in Government and low morale. Barclay et al. (2020) highlight the sense of morale by saying:

“Two decades of changes in access to fisheries resources through the establishment of recreational fishing havens and sanctuary zones in marine parks, and then requiring fishers to pay for their existing fisheries access via the

Business Adjustment Program have undermined security in access to the resource by NSW commercial fishers, and eroded Industry trust in Government.”.

The NSW wild harvest sector is at a cross-roads in how it evolves into the future. Various fisheries in the sector are at different stages of growth and development depending on the breadth and depth of business philosophy and business acumen that is adopted and implemented by businesses within the sector and the strength of leadership and the nature of the relationships businesses have with stakeholders, Government and the staff from DPI Fisheries.

1.2. Why change?

To support industry development, the NSW Seafood Industry Council (NSWSIC) held a series of comprehensive workshops in 2019 involving industry representatives across the seafood sector (fishers, aquaculture, co-operatives, processors) to produce “The Industry Road Map Strategic Document” (Industry Vision). The Industry Vision (which included aquaculture) identified an urgent need to transform the seafood industry from the current state of a divided, production driven industry into an industry that is proud, respected, and highly engaged to ensure a vibrant sector into the future. However, all the strategic outcomes relied heavily on a willingness to participate and engage; therefore “barriers” to participation and engagement needed to be resolved before meaningful progress can be made.

Cultural change to enhance the effective management and productive operations of fisheries has actively been progressed in the Australian seafood industry with most notable examples in the jurisdictions of South Australia, Western Australia, and the Commonwealth. Noticing these emerging patterns in culture development- especially the productive relationships between industry and NSW DPI, led the Fisheries Research Development Corporation (FRDC) in 2006 to commission project [2006-068](#) to explore the nature of co-management, the potential benefits and the conditions necessary for its successful implementation (Neville, 2008).

A bottom-up approach to cultural change:

- had been progressed in the Maine rock lobster industry Acheson (2004); and supported by
- the FRDC who has continuously funded a National Seafood Industry Leadership Program and contributed to the Oceanwatch NSW Master Fishers program.

There have also been some examples of culture change in the Australian seafood industry and in government that have occurred organically allowing the move to co-management. For example:

- The South Australian Spencer Gulf Prawn fishery- (Hollamby et al., 2010); and
- FRDC funded project 2008-045 ([Bolton et al., 2015](#)) which was the pilot for co-management in the Commonwealth fisheries and included the Northern Prawn Fishery, which continues to be a successfully co-managed fishery 15 years later.

1.3. A call for change

The Neville (2008) report highlights that the best economic, environmental and social outcomes from fisheries requires:

....that managers must interact well with commercial, recreational and indigenous fishers and with other people in the community who seek to use fisheries natural resources. Genuine interaction and partnerships are at the heart of co-management, but practical ways of achieving it have proved exasperatingly difficult.”

More recently, in the context of climate change, Eurich et al (pg 16, 2023) highlights that effective governance processes provided a key attribute (from a number of other attributes) that enabled fisheries to build resilience to climate change:

“...socio-economic and governance flexibility played an integral role in the status and distribution of ecological to socio-economic asset conversion. Dynamic (*responsive* and *adaptive*) as well as just (*participatory* and *equitable and inclusive*) attributes of governance were particularly important in supporting *effective and efficient* governance in the context of climate change. Collective processes, such as *social capital*, *cross- scale integration* and *polycentric* governance, facilitated access to *knowledge diversity*, *learning capacity* and *wealth and reserves* further altering the ability of the fishery system to both benefit from and maintain ecological assets in relation to disturbance in the short term.”

Such a description aligns with the principles of co-management as outlined by Chuenpagdee et al (2007) cited in Neville (2011):

Co-management should be seen as a social process through which the partners gradually and voluntarily establish a close relationship of long-term duration through increased responsibility, commitment and trust.

FRDC funded projects on co-management identified culture change within government and industry as a prerequisite to co-management, eg “..attainment of a changed culture with increased trust, enhanced collaboration and joint responsibility for management” (Neville, 2011 FRDC project [2011-216](#)). However, there is no roadmap or tested process by which a facilitated culture change process can be adopted to support a significant shift in thinking and relationships between the NFTS and DPI Fisheries to allow co-management to readily be negotiated.

The FRDC 2020-2025 R&D Plan highlights at a national level, the importance of cultural change through Outcome 3: “Build a culture that is inclusive and forward thinking”. This is reinforced by Strategy II: “Strengthen adoption for transformational change”. These statements provide important context for the design and implementation of major cultural change programs for both the industry, the regulator and government that support the growth and resilience of fisheries in response to current and forthcoming challenges.

1.4. This project

1.4.1. Project context

This project arises from the recognition by decision-makers from Industry and DPI Fisheries that:

- NSW fisheries are in different stages of development and ability to be resilient in the context of changing business environment. The NSW wild harvest sector needs support with culture change skills to enable the realisation of the Industry Vision. The Industry Vision speaks to fisheries management built on co-management and stakeholder consultation. The current culture of the fishing industry is limiting the industry from being an active participant to this vision.
- to ensure that the journey of co-management was to be a success, DPI Fisheries needs to review the nature of its culture and determine ways to enhance the culture and its relationship with the industry.
- collaborative forms of governance such as co-management have been successful in:
 - South Australia and parts of Western Australia as a means to support industry development and build resilience; and
 - the Commonwealth between the Australian Fisheries Management Authority and the Northern Prawn Fishery
- from a national perspective, various FRDC studies and plans highlight the need for cultural change within industry, the regulator and government, where required, that will support the future of the sector.

1.4.2. Project purpose

The focus of this project was to align stakeholders from the NFTS and DPI Fisheries to develop a suite of initiatives to support the emergence of a new culture in both organisations. The goal was to enable the NFTS fishers and DPI Fisheries staff to facilitate the development of a collaborative governance model to work towards co-management of the resource.

1.4.3. Project objectives

The following objectives guided the progress and methods:

- To establish a group of NFTS and DPI Fisheries leaders/mentors to provide an enduring resource to assist the sector to facilitate cultural and strategic change to move towards an agreed co-management model and a profitable fishery;
- To design a set of activities/projects and principles/heuristics to assist the NFTS and DPI Fisheries to embark on a journey of shifting their beliefs and behaviours to support a viable and highly functional co-management process for the sector; and
- To enable stakeholders from DPI Fisheries and from the NFTS to participate in a co-management process that guides a stewardship framework to navigate the management, research, and compliance of aquatic resources

The following report provides an overview of the methodology for the project and the results from four workshops where DPI Fisheries and the NFTS worked together to explore dynamics of the current culture and their journey together to build a more collaborative culture.

2. What is the history of collaboration and co-management in the NSW wild harvest sector?

2.1. Introducing co-management in the NSW wild harvest sector

The thinking and design work for structural and governance transformation in the NSW fisheries towards more adaptive and sustainable approaches has been underway for over 15 years. Neville (2008) found that fisheries governance models were transitioning more towards collaborative structures rather than traditional centralised control models. This has been especially the case for South Australian and Commonwealth fisheries. Collaborative approaches were being found to be more responsive to a range of complex issues that are facing regulators and fishers alike. A more collaborative approach would include a number of benefits including:

- shared responsibilities for implementing sustainable management;
- a more transparent and effective cost structure, and more efficient delivery of services and functions;
- improved trust and working relationships among parties;
- more flexible and adaptive management processes;
- reduced necessity for political decision-making; and
- greater scrutiny of legislative frameworks and regulatory controls.

A report by Stevens (2012) provided an independent review of NSW commercial fisheries policy, management and administration which provided a suite of recommendations to reform the industry. This review led to the implementation of key recommendations concerning structural reform to the industry to respond to:

- past policy inconsistency in the development and implementation of share management;
- deteriorating relationships between DPI Fisheries and industry, and a consequent;
- frustration resulting from delays in the delivery of urgent reforms and restructuring within industry.

MacDonald (2014) provided a set of recommendations for the development of an industry representative framework for co-management in NSW fisheries. The report focused on:

“...recommendations to the Professional Fishers Association (PFA) (are) to support adoption of a range of constitutional and organisational reforms in order to meet the requirements expected by industry and government from a representative body for NSW fishers within an effective co-management engagement process. It also outlines the structures and operational arrangements it should consider, to be able to effectively engage the whole industry in the management process.”

2.2. This project

These bodies of work and the studies published about the development of collaborative approaches in New South Wales, South Australia and the Commonwealth, provided a wealth of information and direction for the advancement of new governance systems in NSW. This project was about applying the recommendations from these studies to embark on a journey to develop a collaborative governance system in NSW. The project focused on the relationship

between DPI Fisheries and the NSW NFTS as it was believed it was small enough yet had the scale to provide a context to trial the adoption of collaborative management.

The evolution of any cultural change journey is based on the state of the culture within each of the NSW NFTS and DPI Fisheries at the start of the journey. In the case of NSW NFTS, the cultural starting conditions have been exemplified by a lack of cohesion, ineffective leadership, highly politicised decision-making, conflicting voices, tribal feuding, lack of trust and fishers who are emotionally and mentally stressed by business conditions and the relationship with regulators. These traits were key patterns of behaviours that were consistently described and displayed by members of the industry. The patterns had been observed by members of the industry and DPI fisheries to take place between:

- members within the NSW NFTS;
- members of DPI Fisheries and the NSW NFTS; and
- the NSW NFTS and broader areas of government.

In such an environment the direct application of approaches from other jurisdictions in the development of collaborative practices will not be applicable in the NFTS context which has a history of distrust and hostility- they just cannot be mapped across as the context is considerably different. To enable a successful evolution to collaborative practices in NSW fisheries, the focus of this project has been to determine how to get industry and regulators to embark on a journey for collaborative practices given the distrust and lack of confidence aggravated by the commercial fisheries Business Adjustment Program (<https://www.dpi.nsw.gov.au/fishing/commercial/reform>).

2.3. Design of the methodology used in this project

The methodology for this project was based on the principles that arise from Complex Adaptive Systems (CAS) (Kauffman, 1996; Stacey, 2012) (see below for further details) and Neuro Behavioural Modelling (NBM). Both areas of study focus on identifying patterns in human behaviour and systems to determine what interventions can be used to disturb the human/system to create change that shifts the human/system to move from the current state/direction to a desired state/direction- keeping in mind that the state/direction could also change during this process.

Working with people in a context that is highly emotional, political and long lasting requires different values, beliefs, expectations and behaviours to methods that take a more structured and predictable approach. The work in this project required methodologies that could accommodate nonlinear relationships (relationships between factors are such that if a change is made in one factor, there will be a disproportionate response in other factors), emergent properties (when change happens in a system, the interactions between the components of the system and between the system and its environment lead to the arising of new structures and behaviours of that system with properties not previously exhibited) , and feedback loops (system behaviour in which an initial change in a variable causes a chain reaction that ultimately feeds back to create further change in the initial variable). Traditional approaches often fall short in capturing the dynamic interplay of diverse elements, and this is where a sophisticated methodology becomes indispensable. Methodology in the context of CAS is not a procedural toolkit but a conceptual framework that embraces the inherent intricacies of these systems.

The intended project outcomes and outputs are presented in the next section. This is followed by an overview of the methodology.

2.3.1. The desired project outcomes

- a) Engagement - An increased number of fishers and their industry representatives from the NSW NFTS are engaging constructively with issues such as redefining business models, collective approaches to market development, adoption of new technologies, work health and safety, approach to management of staff, on-boat culture, retainment of staff and succession planning that are relevant to the sector.
- b) Respectful interactions - increased positive interactions and a united approach to the future amongst the fishers from the NSW NFTS community, and DPI Fisheries for the NSW NFTS to ensure that meaningful relationships lead to desired results.
- c) Transformation - members of the NSW NFTS are willing to invest, undertake innovations, and adopt new approaches to support their businesses in the future.
- d) Approach to management of the fisheries - fishers and fisheries managers move from a top-down decision- making model to one that is based on collaboration and ultimately co-management.
- e) Capacity for ongoing adaptation to change - a cohort of leaders from DPI Fisheries and the sector who have the capability to consistently work with people to support on-going adaption to change.
- f) Succession planning - fishers in the sector have the confidence that they have a business that they can pass-on/sell to a younger generation, and young people perceive the sector as an attractive option for a career and business development.

2.3.2. The desired project outputs

- a) A set of nested meetings and workshops that enhance trust and working relationships between members of the NSW NFTS and between the sector and DPI Fisheries.
- b) Leaders and members within the NSW NFTS and DPI Fisheries have new models and frameworks that assist them to guide decision-making and support the co-management processes
- c) Leaders from the NSW NFTS and DPI Fisheries have agreed protocols that support and facilitate productive co- management meetings and other processes.
- d) Leaders from the NSW NFTS and DPI Fisheries have the confidence and competence to support and facilitate the co-management process.
- e) Fishers from the NSW NFTS have confidence in the leadership of the sector and DPI Fisheries that will convince them to participate proactively in the sector to collaborate to ensure that the sector is viable and attractive to younger people.

2.3.3. The approach to achieve project outcomes

In this section, we introduce a new way of thinking and understanding about culture and change in human systems. This new way of thinking and working is at the basis of our methodology for this project. We have adopted this approach because the prevailing and dominant perspective of linear cause and effect, with predictable outcomes and logical relationships (this is called the Newtonian worldview) is an approach taken by many decision-makers in both industry and government to make sense of and understand their lived experiences. It is the basis for decision-making for most people in government and industry. It is also the basis for most methods for working with cultural change.

While this lens/worldview has been very successful in many areas such as scientific research, manufacturing and other human-made constructs, it is not an appropriate lens/worldview to explore, understand and develop initiatives to respond to industry/organisational cultural change nor with many of the issues facing society such as, youth violence, closing the gap for indigenous people, economic development, climate change, homelessness, productivity, domestic violence and education (Uhl-Bien and Marion, 2008). The Newtonian lens/worldview has been the basis for shaping and guiding the great deal of investment of resources and time in many of these areas only to observe that these problems continue to escalate in scope and scale.

To continue using the Newtonian lens/worldview as the basis for exploration and developing a way forward for cultural change in this project will serve only to perpetuate the problem. Therefore, we have adopted a new lens/worldview that provides a more relevant, effective lens and worldview to study culture as well as many other human and natural phenomena as its principles and assumptions align much more closely with the dynamics observed in these areas. (Uhl-Bien and Marion, 2008). This new lens/worldview is called Complex Adaptive Systems (CAS).

For many readers who are unfamiliar with CAS we ask for your patience as we outline an overview of the dynamics of change and the human/institutional response to change programs using the CAS perspective. The overview provides new language, concepts and models that are used throughout the report. The overview is presented in a general setting and can be applied in many different contexts. We invite you to become acquainted with CAS as we believe it will provide a more appropriate frame for making sense of lived experiences and how to respond to them.

2.3.3.1. Understanding context

This section provides an overview of the importance of context when undertaking change programs. It is offered here as a general introduction that sets the scene for the methodology outlined below.

An understanding by people of the context for undertaking a cultural change program and their readiness to accept change has critical implications for the design and implementation of such a program. While it is not always possible to attain a detailed understanding, some key factors that can impinge on successful design can include:

- The rigidity of current protocols for ways of working and operating;
- Current ways and processes for decision-making;
- The physical location of people and production facilities;
- The lack of knowledge of restrictions and inability to navigate due to not being aware of these restrictive structures;
- The current power structures that exist between people throughout the industry/organisation;
- The current performance of certain parts of the industry that are producing exceptional results while other areas are operating below performance standards; and
- The extent the new plan is owned and the willingness of key decision-makers and other stakeholders with the will to want to support the changes. The willingness to support the change process will be critical for success. It is important to recognise that in many instances it is necessary to recognise what people *lose* through the

transition period from how things currently work and how they will look in the future (Bridges, 1980). Success in ownership of the plan will require highlighting what will be lost and how to manage that through the transition period.

The nature of these factors could be either working together to support the implementation of the plan or creating a sustained effort to dilute/neutralise the change effort. In many industries/organisations the process tends to reflect the latter rather than the former and for those people who have long corporate memories, we would hear them say: “the more things change, the more they stay the same”. This is reflective of the process whereby the dynamics of the business landscape work to neutralise/dilute the change process. So, we will see many changes, but their impact is negligible. We can explain this in the following way.

The current industry/organisation landscape/system has evolved to its current way of being because it serves a range of agendas that have evolved over time as some people leave and others enter the industry/organisation. Consequently, the official and unofficial rules of how the industry/organisation works correspondingly evolves. The rules of engagement shape how people relate and work with each other. The results of their interactions, defined by the rules, define the nature of the structural pattern that describes the business landscape/system and reflect the agenda and intent of those who established the rules of engagement.

When change is shaped from the top of the industry/organisation, decision-makers assume that people will adopt and implement the change as they had intended. The success of the change program can be compromised by prevailing personal agendas, power structures and personal performance. The change agenda is compromised because the current structural pattern, which represents the rules of engagement, norms and practices, provides the benefits to those who have contributed to and/or supported the pattern’s design and its continual existence. Now, the people that operate within the business landscape/system have more ways of operating (degrees of freedom) than management. So, when a change that is introduced that is not widely accepted or threatens the stability of the current structural pattern, people within the system will find ways to circumvent/alter/dilute/neutralise the change using a range of techniques including:

- Explaining how it will be detrimental to the business;
- Subvert the actions of those people responsible for implementation of the change program;
- Developing alternate protocols and processes to dilute the change;
- Create new rules and exceptions to dilute the efficacy of the change;
- Develop and distribute a narrative that actively discredits the change; and
- Refuse to co-operate and maintain the current protocols, knowing that after a time period, everything will return to its previous state of being.

All of these approaches relate to the culture of the industry/organisation and the vested interests that have been developed over periods of time to enable the system to evolve into the current form of the structural pattern. Such a structural pattern is very stable and embedded within the business landscape. Instructive examples of this principle include:

- the response to the global financial crisis of 2008. This was an opportunity to redefine the global financial system to one that was more appropriate for the emerging global society. This did not happen as vested interests worked tirelessly to save the current structure; and

- how most change efforts in industry/organisations fail and/or only partly succeed because vested interests within the industry/organisation have established strong relationships within and external to the business are able to dilute and/or negate the change program.

To enable a successful design and implementation of a change plan/intent/road map at an organisational level in the least, and at an industry level at the most will require:

- being aware of the presence of the structural patterns that defines and holds the current ways of working and the behaviours and results that are witnessed on a daily basis;
- identifying the key dynamics that hold these structural patterns in place, the key stakeholders that support and energise this structural pattern and an understanding of their agenda;
- identifying the underlying rules of engagement that enable the structural pattern to form; and
- the ability to develop new rules of engagement that motivate people to work differently and in so doing establish a new structural pattern that is synergetic with the Vision/roadmap.

2.3.3.2. Understanding the structural patterns of a system

For the purposes of this project, we define culture as a network of interconnected elements such as beliefs, values, and artifacts that evolve over time through dynamic interactions among individuals and groups within a team, group, community and society. Like other complex adaptive systems, culture exhibits properties such as emergence, self-organization, and adaptation to external and internal changes. It is shaped by feedback loops where behaviours and norms reinforce or modify existing cultural patterns, thereby influencing the system's resilience and capacity for innovation. This definition underscores culture's dynamic nature, its capacity to evolve, and its role in shaping and being shaped by human societies.

The structural pattern that emerges in the business landscape/system is essentially a representation of the culture of the industry/organisation. The culture emerges from the repeated interactions of many individuals working on a daily basis, guided by the rules of engagement that exist at any point in time at a local level. People learn from their interactions with each other at a local level and adapt their behaviour accordingly to their observations and how they make sense of them. The cumulative effect of this adaptation over time leads to a large-scale pattern of behaviour and is facilitated through the process of *self-organisation*. This means that all the individual processes combine to yield a macroscopic (large scale) pattern of behaviour that arises solely because of the rules of engagement and people adapting to each other based on those rules. There is no one dictating what these patterns look like nor directing people to respond in a particular way to create such a pattern. There is no overarching plan that says “this is how you work”. Stacey (2012).

We become aware of the pattern only when it forms and so it is referred to as being *emergent*. This means that the pattern cannot be predicted from the rules of interaction. The patterns are an entangled mix of order and randomness, with inherent levels of unpredictability. Critically, once the pattern forms it acts back (through feedback) on the people working together, constraining their day-to-day behaviour, introducing a paradoxical level of both stability and unpredictability into the structural pattern that emerges.

The combination of unpredictability, the randomness of the interactions, the ways people adapt and learn through the interactions shaped by local rules all work together through feedback at a systemic level, explains why culture is so difficult to change through direct means. Yet, the non-linear nature of these dynamics can enable a relatively small change directed at a targeted area to escalate into major systemic transformation.

To change culture (and hence the structural pattern that emerges), there is a need to act on rules, systems, protocols- the things that shape people's daily lives. Over time new structural patterns (culture) emerge. Acting directly on the culture will not necessarily lead to success.

2.3.3.3. The nature of complex adaptive systems (CAS)

The reductionist, linear cause and effect, scientific epistemology has and continues to dominate frames of reference, strategy and policy development in business and government. While this epistemology and ways of working have, and continue to be extremely useful in some contexts, they are not applicable to explore, design and enact change in CAS that embody the dynamic interplay of diverse people and their ever-evolving interactions. Understanding and navigating CAS necessitate a profound shift in methodology—one that transcends conventional approaches and embraces the inherent complexity of the phenomena at hand (Chapman, 2002; Morgan, 2005).

The study of complex adaptive systems acknowledges the limitations of reductionist methodologies in capturing the essence of interconnected and evolving entities. Unlike linear systems, CAS exhibit nonlinearity, emergence, and self-organization, demanding methodologies that can encapsulate the intricacies of these dynamic processes. In this context, methodology is not merely a set of tools; it becomes a holistic framework—a lens through which we decipher the nuanced dance of the components within complex adaptive systems.

Central to methodologies tailored for CAS is the recognition that these systems are in a constant state of change. People adapt, behaviours emerge, and the collective system evolves. Traditional research methods often falter when confronted with the unpredictability and interdependence inherent in CAS. In response, methods used in studying CAS provide a framework for understanding patterns, uncovering emergent properties, and navigating the adaptive nature of the connectivity between people.

Taking a CAS approach establishes a new set of expectations of how to work with people in an industry/organisation to make sense of the observed patterns, to design and enact change. Where applicable, the following principles will be used in this project to assist in facilitating the project team to design activities/projects that will have deep impact on the systemic structure that currently holds the current cultural in place:

- Learning about a CAS happens by interacting with it.
- A theory about the NFTS and their relationship with DPI Fisheries system is required that enables response to the evolving situation. There is no recipe book approach.
- A CAS can be best understood and managed as an evolving system. This requires a rethinking of risk management from probabilistic models based on possible outcomes, to an understanding of the degree of stability and volatility within the system.
- When working and enacting change in a CAS, the focus is to: (Kurtz and Snowden, 2003)

- determine a sense of direction for the system to evolve towards. The development of key outcomes and achievement of a future state are used to provide a nuanced sense of direction as opposed to a set destination;
 - develop a suite of safe-to fail (as opposed to fail-safe) small-scale activities that move the system in the desired direction and less in the current direction; and
 - identify emerging patterns of behaviour. Some of these patterns can be amplified if they support the system to move in the desired direction, others may need to be dampened, depending on the desired direction of the evolutionary pathway of the system.
- Once a system is sufficiently disturbed to the point where it is stable and unstable at the same time, the system has the potential to *self-organise* (the components **interact locally**) according to their own principles/rules, in the absence of an overall blueprint for the system they form. No individual component or group of components, directly determines the rules of interaction of others and *emerge* from previous behavioural states. Emerge here refers to the coming-into-being of novel, “higher” level structures, patterns, processes, properties, dynamics, and laws, and how this more complex order arises out of the interactions among components that make up the system itself into a new equilibrium state that is different to its previous state. This is the definition of transformational change.
 - If the components of the system are less constrained by external factors (Juarrero, 2023), then the system has the additional degrees of freedom that enable greater interactivity between the components. This can lead to new patterns of behaviour of the system.

The development of activities/projects to instigate change can reflect these principles that will affect all stakeholders in the industry/organisation.

The following example provides some additional distinctions between CAS and a more ordered, structured system that is characterised by linear principles and determinism (Jones, 2003).

Consider or recall an experience of a marching band which has a very linear structured organisation and design whereby the players are resigned to playing what has been designated by the leader. No one can play what they want. The rules are clear and rigid that will yield a particular result. If the players were replaced by another group of people, you will on average, get the same results over again. The outcome is pre-determined.

Unlike a marching band, a jazz ensemble has a much looser design and organisation. There are principles/rules that are shared by the musicians and these principles/rules are interpreted in the moment. The musicians are listening to each other and making sense of what they are hearing in real-time. They then respond accordingly. While listeners can develop an overall sense of the music that is being generated, one cannot predict the detailed rendering of the music. In the language of CAS, the jazz ensemble is a CAS whereby the musicians are *self-organising* in accordance with the principles that they share with each other. Through this process the music that is generated is *emergent*- meaning that it arises as a result of the *self-organising* process. No one person is directing how the music is created. It is an *emergent* response of all of the musicians, how they make sense of the principles they share and how they respond to those principles in real-time. If the musicians were replaced by another group who attempted to play the same music, we would find that while the overall

theme and characteristics of the music are the same as the previous group, the rendering of the music will be different. This highlights the nature of self-organising processes that lead to unpredictable results.

In the following section, the principles and ideas conveyed here are used to develop an overall approach to explore the uncertainty and complexity of the interrelationships between stakeholders from the NFTS and the NSW DPI Fisheries for enabling the emergence of a collaborative management approach to the industry. Neither the uncertainty, complexity nor the pending probable failure in some processes were a hindrance but a catalyst for understanding and transformation. This exploration is a process of gaining insight into the layers of complexity, shedding light on the strategies, models, and approaches that pave the way for a more profound comprehension of the intricate dance of the NFTS, DPI Fisheries and the relationships between them as an adaptive system.

2.3.3.4. Overview of the approach

Like any complex social system, the NFTS has a variety of structural patterns/cultures that maintain the current status of operation. Relationships between people have formed, changed and reformed in different ways that have led to the evolution of the current nature of the culture. The different patterns of behaviours that are observed arise from a diversity of people from the NFTS interpreting the rules that are co-developed between them at a local level and how they respond to the behaviours of others. We also find that members from the DPI Fisheries interact with people from the NFTS and respond to their behaviours through adaptation. Some of the broader patterns that are observed with:

- the NFTS include
 - a culture of victims, blame and entitlement;
 - lack of transparency and accountability for activities;
 - a focus on traditional practices and business models;
 - a culture of tribalism, geographic patch and territory; and
 - a culture of scarcity
- DPI fisheries include:
 - assuming that one-way communication is consultation;
 - a centralist approach to collaboration; and
 - a culture of hierarchy and command and control.

These and other structural patterns are limiting the development of the fishery and placing it at risk of continual fragmentation into the future. As indicated above, the nature of complex systems such as the cultures of the NFTS and DPI Fisheries require a change program that is designed to *act from within it* as opposed to *acting upon it*. Figure 1 highlights two pathways that can assist to affect cultural change to support the NFTS and DPI Fisheries to undertake a journey of collaborative management of the natural resource.

2.3.3.5. Affect change through core business practices

This section explains the difference between the command-and-control and the CAS (organic) approach to change. It is presented in a generic context to inform the reader about different pathways for change and the results that arise from each pathway.

A change process in an industry/organisation can be based on redesigning core business practices. While this is more feasible in an organisational context, at a sector/industry level

this becomes increasingly difficult as there is no overarching organisation that has the endorsement, the leverage or practices to facilitate such change. Such an approach is more about *acting on the system* than acting *within it*. Acting on the system aligns with a command-and-control approach to change and while useful in a chaotic context, it is not an approach that is well received by people- especially those who prefer the current ways of thinking and operating. Acting on the system does not give people the opportunity to be part of the design and implementation of the change process. There is less ownership and commitment to the change program. People respond by finding ways to dissolve/neutralise the change initiative.

Acting within the system provides a more democratic approach to change and energises many people to participate in the change program thereby garnering commitment and ownership for the process. People within the system understand the rules of engagement and so acting from within provides the opportunity to design a change program that considers and includes affecting the fundamental rules of engagement, enabling people to self-organise and emerge new patterns of behaviours that are aligned with the desired direction.

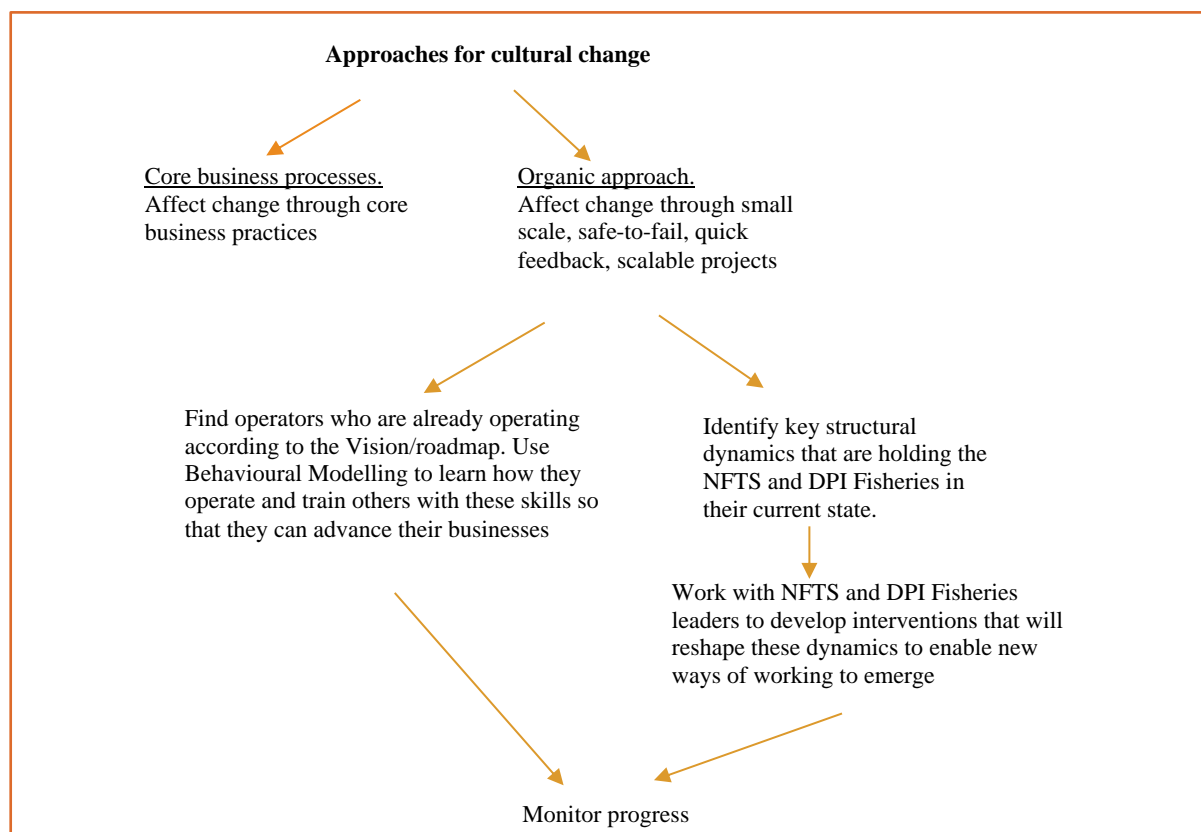


Figure 1
Two pathways that demonstrate approaches to cultural change

2.3.3.6. Affect change through small scale, safe-to-fail, quick feedback projects that are scalable

The second approach to affect core business processes involves an organic way of operating, with a focus on local, small-scale, safe-to-fail projects that begin to change the context for how people are to behave and to set a direction for a new culture to emerge. The successful small-scale projects begin to establish a disposition and a propensity of the system (of core business processes and the associated culture) to move more in the desired direction and less in the unwanted direction. The speed of change can be enhanced as these projects are scaled to support change program. Importantly, the failure of projects provides important feedback

and learning that assists to design other projects that will support the change program. (Snowden, 2024)

People who are early adopters to the new ways would be supported on their journey of change leading the way for many others to also adopt new processes. There comes a time when there are enough people undertaking new approaches that an industry/organisation flips into a new structural pattern that is characterised by:

- updated and expanded beliefs about how the industry/organisation works;
- new narratives that describe the new rules of how things are done;
- new ways of thinking; and
- new ways of working.

The new rules begin to define new ways of interacting and sharing information that will ultimately lead to the current structural pattern collapsing to self-organise into a new cultural pattern.

The organic approach can be developed using two concurrent initiatives. This first initiative involves finding people in the industry/organisation who are already exhibiting the desired practices for the future. These people may be working to high levels of sustainability, or employing young people, or are using big data, data analytics and advanced technologies to undertake their ventures. The aim is to identify key themes (eg. Sustainability, people and skills, transparency, use of technology) that need to be addressed and then locate people who are highly effective in achieving results for that theme.

2.3.3.7. Using NBM to identify how people are working collaboratively

Learning how people are successful in their field is called Neuro Behavioural Modelling (NBM). In the context of this project, a NBM approach would identify people within the NFTS, DPI Fisheries and other jurisdictions who currently demonstrate exceptional skills in leading others and enabling cultural change to support collaborative working relationships. These people would be chosen to participate in a NBM project to learn how they are achieving their results. The results from the NBM project would then be taken to others within the NFTS and DPI Fisheries to be trained based on the learning from the NBM project to accelerate their capacity for leading cultural change. This process continues until the new ways of working take over, creating a new structural pattern within the NFTS and DPI Fisheries.

2.3.3.8. Identifying key dynamics that are holding the culture in place and developing projects that will unfreeze the current dynamics enabling new dynamics to emerge

The organic approach also requires to determine with people from the NFTS and DPI Fisheries, the key dynamics that are maintaining the current structural patterns. These are dynamics that work to support the current ways of doing things in the industry and can be supported through such factors as: unintended effects of specific government legislation, businesses that have vested interests, larger industry forces that direct people to respond in a particular way, the demands of clients and minimal profit margins. Each of these factors and a range of others that inter-relate with each other, create a business landscape that influence the behaviours of people from the NFTS and DPI Fisheries to make decisions that enable them to survive in such an environment.

With support of people from the NFTS and DPI Fisheries a set of key dynamics are identified that when addressed, will enable the NFTS and DPI Fisheries to adapt and move towards new structural patterns that will better support the journey towards a collaborative approach to the management of the fisheries. The selected industry dynamics are addressed by co-design of interventions based on enlightened self-interest of the members of the industry and DPI Fisheries. The interventions are designed to neutralise and/or bypass these dynamics so as to enable new ways of working, new rules to be co-owned by people from the NFTS and DPI Fisheries.

As with the first initiative in the organic approach, small projects are designed and initiated to determine their relevancy and effectiveness. Frequent monitoring of processes would be required to determine the extent that the culture is moving more in the desired direction and less in the unwanted direction. Quick feedback followed by appropriate changes/corrections to the interventions are of prime importance to ensure that the projects have the best chance of demonstrating their effectiveness and to provide the learning about the nature of the prevailing culture. If the project can demonstrate successful shifts in behaviour, it is then initiated in other areas to determine if the desired results can be achieved in another context. This process continues until a decision is made on the success of the idea. Otherwise, the project is stopped and reassessed to determine what learning can be gained from the experience. If the project is demonstrating it is effective in disrupting the current dysfunctional dynamics that are holding the current structural pattern in place, the process is amplified, accelerating the change process to support the establishment of a new set of rules that lead to the self-organisation and emergence of the new culture/structural pattern that will support the evolution towards a collaborative approach to the fisheries.

Using these two key approaches, this project will pilot the design and real-time implementation of a culture change program never tried in the Australian seafood industry to:

- identify and explain the current relationship dynamics between members of the NFTS and DPI Fisheries;
- design and implement a suite of projects, principles and heuristics to transform the relationships to build a trusting and collaborative culture; and
- develop the framework and practices that will enable and support self-perpetuating culture change.

An overview of these 3 key activities and how they translate into a project map characterised by 5 steps is shown in Figure 2.

While the main purpose of this project is to develop a range of activities/projects and principles for implementation during stage 2, the actual process of enacting steps 1 to 5 is in itself a change initiative. A series of workshops will be designed to implement steps 1 to 5. Each step can be considered as activity/project in its own right to address the current set of cultural dynamics. There is an expectation that some of the workshop processes will only be partially successful or even unsuccessful depending on the response from the participants.

The next chapter of this report provides a detailed account of the implementation of steps 1 to 5.

Stage 1

Sensing what is shaping the cultural landscape of the NFTS

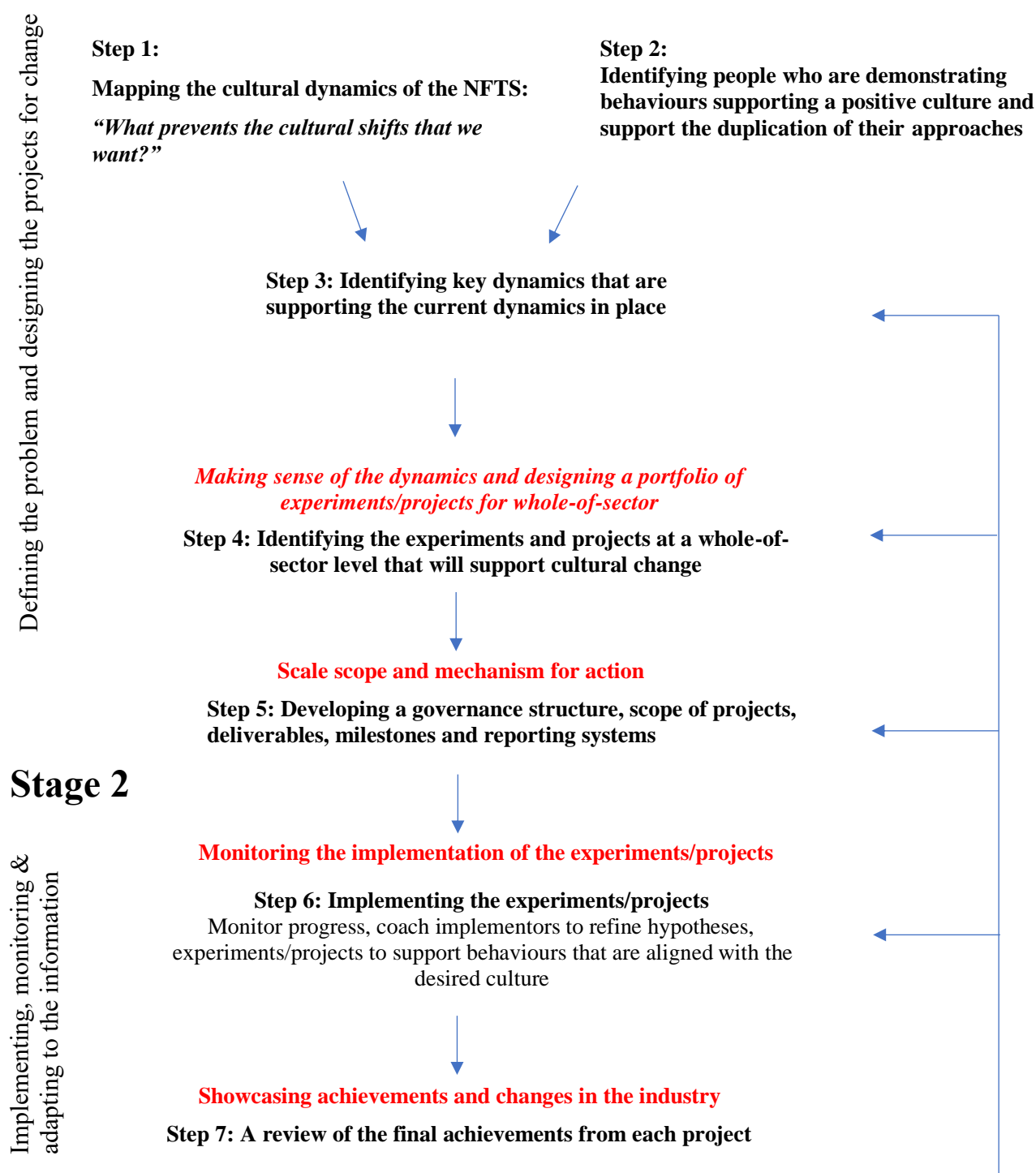


Figure 2

A 7 step approach for the design of a cultural change program

3. What was observed and learnt in each part of the project?

This chapter presents the results of the workshops that were conducted with members from the NFTS, the Professional Fisher's Association, the Newcastle Commercial Fishermen's Co-Operative and senior managers from DPI Fisheries.

3.1. Workshop 1: 9 and 10 February 2023

3.1.1. Purpose for the workshop

The purpose of this workshop was threefold:

- Firstly, to understand what is influencing the relationships between participants from the NFTS from DPI Fisheries. The quality of the relationships has a large effect on all aspects of the sector, including that influenced by DPI Fisheries. The current status of the relationships between stakeholders can be greatly improved.
- Secondly, to use the workshop process to develop amongst participants:
 - A sense of connectedness and feelings of closeness;
 - Lines of communication that enable rapport building and recognition; and
 - A shared sense of the culture and observed patterns of what is happening between them with respect to the management of the fishery.
- Thirdly, to construct a shared sense of a systems map of the NFTS operating landscape that explains what prevents stakeholders from developing productive relationships that lead to cultural shifts that we want.

3.1.2. Approach for facilitating the workshop

An exploration of relationships between the participants was facilitated by encouraging them to work together to develop an understanding of the operating landscape- the key factors and the relationships between them that led to the current behaviours. The workshop conversation was framed by the question:

“What prevents stakeholders from developing productive relationships that lead to cultural shifts that we want?”

The question was developed by the facilitators prior to the workshop and was tested at the beginning of the workshop with participants for relevancy. This is an important step in any future attempts to map the dynamics of a cultural landscape as it:

- provides the critical frame of investigation;
- shapes the attention of participants of what is being explored in this study;
- provides focus on the issue of concern; and
- provides context for participants to make sense of the current situation and to determine what activities could be possible to address the issue.

Ideally the question would be facilitated with participants and that process would provide an opening to highlighting a range of other issues and begin the healing in relationships. We decided that in this case the relationship between the NFTS and DPI Fisheries was not strong enough to support this conversation and it was developed outside the workshop process and refined in the workshop to enable the journey of cultural change to progress. The opportunity for workshop participants to explore, raise and debate issues was not diminished by developing the question outside of the workshop process.

The workshop was opened to participants to offer what they believed were critical factors and the relationships between them that prevented productive relationships. Most of the workshop was spent exploring the assigned question. The result of this process was to develop a systems map of the dynamics of “what prevents stakeholders from developing productive relationships that lead to cultural shifts that we want”.

The results of the mapping process is shown in Appendix A.

3.1.3. Observations of behavioural patterns from the workshop

- Participants from the NFTS used this opportunity to express their personal frustrations and the historical impacts (> 5 years ago) that they believed DPI Fisheries decision-making has had on their businesses and on the viability of the sector.
- Representatives from DPI Fisheries did not respond or outwardly acknowledge the content that was presented by the participants from the sector. This was due to:
 - their desire to allow industry to vocalise their frustrations without argument or dispute, and actively avoiding argument over the criticisms;
 - only one of the participants from DPI Fisheries had started in their role as the program was in full operation while the other DPI Fisheries participants were relatively new to their roles.
 - Public servants have a code of conduct that they are required to meet, and that any perceived lack of response was in part due to the delegation of authority provided, which is commensurate to decision-making capacity;
 - Most DPI Fisheries representatives in the room had little background on the issues raised by industry, and most critically no capacity to change past decisions;
 - DPI Fisheries representatives were neither prepared or trained to deal with challenging of DPI’s policies; and that
 - DPI Fisheries representatives engaged strongly in the mapping process and associated discussion providing evidence that they acknowledged the frustrations.
- The systems mapping process enabled participants to raise a plethora of issues that were captured on the map.
- Participants engaged in lengthy discussions about the relationships (represented by arrows) between the issues. The issues and the relationships between them were captured to develop the systems map. While there was still a lack of trust between the two groups, they started working together.
 - The more issues that were raised, the more participants from the NFTS felt the need to express their frustrations, fears and concerns. There was a lot of passion to what they considered as issues.
- A range of frameworks about culture, communication, conflict and human behaviours were presented to participants, who were all open and receptive to this material. They were open to learning about these frameworks and used them to shape and inform their exploratory conversations about the dynamics of the sector.
- They were willing to participate in the process even though they were not sure of how this was going to work.

3.1.4. What was achieved at this workshop

- A first draft of the systems map was developed, being populated with issues (called nodes) and relationships between the issues (represented by arrows).
- The mapping process represented a mechanism that enabled participants to work with each other to have difficult conversations. This facilitated participants from both DPI Fisheries and the NFTS to begin to engage in collaborative conversations.
- Some areas of misunderstanding and clarification were addressed through the conversation process.
- Participants from the NFTS were able to present their frustrations and issues without members from DPI Fisheries reacting nor arguing against their claims. This was a specific difference between the groups. Industry felt like the need to vent while participants from DPI Fisheries were focussed on outcomes so deliberately did not try to facilitate conflict and further delay discussions by prolonging points of contention.
- Foundations were laid for further conversations. Participants wanted to progress the map and see where they could achieve from this position.

3.1.5. What was learnt from this workshop?

- All participants from the NFTS and DPI Fisheries gained a more informed understanding of the complexity of the dynamics preventing the change required to start the journey to co-management. Each participant provided feedback at the end of the workshop of what they had learnt, what surprised them and what they had confirmed based on their experiences.
- There was trauma held in the bodies of participants from the NFTS that needs to be expressed through a facilitated process, which was outside the scope of this project.
- The personality and social dynamics of the group provided guidance on the design of future workshops and how to facilitate them. The design of future workshops required the following:
 - Additional time would need to be given to enable participants to express their concerns about their experiences from the past and their present situation. This is critically important to enable people to feel that they have been heard and recognised.
 - Processes need to be such that people could express their concerns without judgement and enable a trusting environment to be developed.
 - Processes need to be developed so that participants could develop relationships that would encourage rapport building, presentation of conflicting views and sharing of ideas.
- Participants from NFTS and DPI Fisheries had a high functional ability to adopt systems thinking by identifying the nodes and relationships between them. Participants were willing to work through the mapping process.
- Both groups could have disengaged from the project, but chose to remain. Each participant expressed during the feedback session, how they were gaining value from the process.

3.2. Trip 1 to South Australia fisheries- 9 & 10 May 2023

3.2.1. Purpose for the trip

The purpose of the visit was to undertake exploratory conversations with members of South Australian fisheries to discover the context, mindset and processes that initiated the co-management process and enabled it to evolve to the present. We wanted to learn the “secrets” of their success, using the principles of NBM and determine how, if possible, this learning can be applied to support a cultural change program that includes participants from the NSW NFTS and the NSW DPI Fisheries.

3.2.2. Approach for meeting people

Members from NSW DPI Fisheries provided a list of names of people from South Australian fisheries to interview. These included representatives from Spencer Gulf Prawn Fishery, Goolwa Pipi Co and the South Australian Government Department of Primary Industries and Regions South Australia (PIRSA). The meetings were designed for participants to have a conversation to elicit and understand the context of the SA fisheries, the context in each fishery that shaped the direction of co-management, the beliefs that were held by different stakeholders and the processes that enabled the co-management to emerge and evolve in the fishery.

3.2.3. What was learnt from the trip?

An overview of the insight and learning gained from each group visited is presented in this section. The material presented is based on themes that arose from the views of people interviewed. Additional detail for each group is presented in Appendix B. Each group provided specific context from which unique learning was gained. There were themes that arose from across the groups. These are outlined later in this chapter.

3.2.3.1. Spencer Gulf and West Coast Prawn Fisheries

The success of the Spencer Gulf and West Coast Prawn Fisheries is attributed to bottom-up leadership and self-regulation by pioneers in the industry through the Spencer Gulf & West Coast Prawn Association Inc (SGWCPFA) who represent the licence holders. Initially faced with limited Government interest, the industry pioneers formed an association focused on sustainability, overcoming internal conflicts through tribal leadership (the fisheries comprise of different groups/tribes each with their own leadership- they came together to resolve conflict). They implemented voluntary closures, creating a self-regulating fishery.

Transparency through a structured committee, documented meetings, data sharing and checks and balances ensure accountability and contribute a vital role to governance. The committee's structure, featuring an independent chair, elected representatives and an industry-funded scientist focused on data informed decisions. Science is highly valued, with the Association conducting its own R&D surveys to inform real-time management decisions. The Association can legally enforce decisions through government gazettes.

Real-time assessments, mottos like "the fishery always come" first," self-policing, and legal power to enforce decisions through a gazette, based on strong data-backed business cases, underscore their commitment to being a self-managed adaptive sector. Codes of conduct, collaboration with stakeholders, and a conservative approach contribute to working in a way that balances different needs and expectations.

The association prioritises building trust through longevity, reputation, and results. The association works to identify problems and develop solutions that it takes to government with a win-win approach. Their success relies on developing a majority support from their members that is engendered through transparency of governance processes, highly effective communication, sharing of information and education and building social license. The capability and capacity of the Executive Officer plays a critical role in enabling the sector to operate effectively. Having the right people at all levels with the belief to support a co-management approach is a critical ingredient to success.

3.2.3.2. Goolwa Pipi Co Pty Ltd

Goolwa Pipi Co emerged in response to the imposition of a quota on the fishery, which generated enduring bitterness in the industry. The Goolwa Pipi Co considered the regulatory changes from a mindset/worldview of a business opportunity that would support the creation of a company representing the operators that would generate profits. They took a pragmatic approach by undertaking research, collecting data and considering multiple perspectives and approaches that would enable a path forward to work with government in the decision-making processes that would enable them to build their brand. The company, chaired by an economist, facilitated the transformation from a collaborative 'Association' to a Propriety Limited company focused on shares, brand, and value transformation to increase profit per quota limits.

A Parliamentary enquiry in 2008 called for collaboration in setting up quotas, emphasising the role of quotas in driving competition or collaboration. Goolwa Pipi Co shifted its focus from controlling fishers to empowering them to manage stocks through policy and education, emphasising commercial professionalism and seeking best practices. The company based its policies on 'Economics, Science, and Equity'. With a business and collective philosophy, Goolwa Pipi Co is committed to Indigenous ownership, considering it an opportunity for meaningful involvement.

Goolwa Pipi Co's ethos centres on bringing solutions to the government, emphasising the importance of skilled leaders and qualified individuals. They employ an internal policy of not directly approaching the Minister in anger, reflecting a balanced approach. Key threats, such as recreational fishers, marine parks, and native title, are addressed through mobilisation around a common cause.

The company focuses on the dual pillars of sustainability and profitability, aiming to make money by increasing profitability per kilo within the quota to ensure viability. Information flow, facilitated by information technology, is crucial to overcoming distance barriers.

There are additional businesses who are exploring co-management in different contexts of the SA fishing industry. For example, one sector is working with many industry participants as opposed to a handful as with the Spencer Gulf and West Coast Prawn Fisheries. Developing a co-management approach with this sector may require additional conditions and approaches that do not arise with a smaller number of participants.

3.2.3.3. Primary Industries and Regions South Australia (PIRSA)

PIRSA emphasises the unique nature of the Spencer Gulf and West Coast Prawn Fisheries and the importance of their unique starting conditions with respect to the co-management journey. Having the right people with the right capabilities and personalities enable co-

management to arise in the industry. The success of co-management hinges on individuals, particularly scientists and leaders dedicated to the fishery. The SGWCPFA invests in governance structures, real-time data and information that supports real-time, transparent decision-making. Real-time data and information is supported by human processes and automated technologies that provide data in the present moment. Such in-the-moment access to data and information provides decision-makers with critical information about decisions on harvest strategies on a day-by-day basis.

Representatives from PIRSA have a consistent and clear description about what is enabling the industry to successfully operate in a co-management environment. They describe a sector where the Executive Officer's role is pivotal, requiring in-house decision sorting before engaging with the government. Good governance, a skilled and independent Chair, and effective management systems contribute to the industry's success. The physical presence of the Executive Officer provides fishers with an open invitation to receive, share and explore issues. The Executive Officer's scientific understanding is crucial for effective communication with fishers and other industry stakeholders. Building relationships during non-stressful periods is crucial for enabling frank and open discussions regarding what needs to be done, why, and how Government can work with Industry.

Associations like the SGWCPFA, that *really* represent the industry, make it easier for Government to work with them. The need for one voice supports processes to manage and respond to conflicting perceptions. Industries that are not cohesive are not *fully* representative and this leads to a lack of transparency. While Industry develops its frameworks and processes to support transparent decision-making for effective operations, in SA the Minister's decision-making is shaped by the Fisheries Management Act (2007) which leads to a fishery's Management Plan. The Minister must manage the industry/fishery according to the Management Plan. Co-management activities must be directly related to the checkpoints stated in the Management Plan.

It is important to have the co-management policy published and up on the wall so it is visible to stakeholders (co-management policies are published on the PIRSA website). The co-management policy outlines what the Government needs to see to enable co-management of the fishery.

The harvest strategy determines the rules of engagement for how those in Government make a decision, and this involves extensive dialogue with industry. The key is to use science to drive the co-management policy based on common interests and goals.

Government encourages industry self-investment. Transparent associations representing the industry enable smoother interactions with Government.

3.2.4. Summary of the results of the interviews and implications for cultural change for the NSW NFTS and NSW DPI Fisheries

The key themes that arose from the interviews of people from these organisations were:

- Strong leadership that mentored and guided people in industry and government;
- A unified industry voice that is solution focused;
- An industry association with transparent and sound governance and decision-making processes that were informed by science;

- An industry association that had a skilled and independent Chair and scientist who was trusted by all stakeholders and cared for the industry and the marine ecosystem;
- Inclusion of critical stakeholders such as business owners of the fishing enterprise, representatives from environmental groups and energy companies in the planning and decision-making processes;
- Industry association Executive Officers who had scientific understanding to be able to convey messages to fishing boat operators effectively and gain industry support;
- Use of technology for real-time data collection, decision-making, and industry management;
- Alignment between the fishers and the regulator on harvest strategies;
- A focus on the economic viability of the Association with creative self-funding strategies;
- The industry required stable regulatory frameworks from government that provide fishers with assurance over time of the rules by which to conduct their operations and business;
- A commitment from the industry to work with and through the government department along with an informal yet explicit 'rule' to avoid going directly to the Minister; and
- Chairs of the Association, executive and scientific officers who had very good communication skills.

As stated in previous sections, context matters in a CAS. Insights and initiatives that work in the SGWCPFA are in response to the unique dynamics of that fishery. The context of the NSW NFTS may have some contextually similar dynamics and so the initiatives can be successfully mapped across to the new context. When the context is different, different dynamics are at play and the insights and corresponding initiatives need to be considered and designed to respond to the new context.

There are additional businesses who are exploring co-management in different contexts of the SA fishing industry. For example, one sector is working with many industry participants, each representing multiple fish species as opposed to a handful as with the Spencer Gulf & West Coast Prawn Fishery with a focus just on prawns. Developing a co-management approach with this sector may require additional conditions and approaches that do not arise with a smaller number of participants and a single species. Additional investigations will be required to uncover the underlying dynamics of these sectors to determine the heuristics to support a co-management approach for the fishery.

While this trip highlighted a number of critical themes required to support co-management, it was believed that additional interviews were required from the perspective of the Chairs and board members of industry associations, other executive officers and other members from the Government, to gain a wider set of perspectives. This provided the basis for another trip to the SA fishery.

A more complete set of themes and explanatory notes are presented later in this chapter (section 3.4.3.6) that incorporate the learning from both trips to SA.

3.3. Workshop 2- 25 & 26 May 2023

3.3.1. Purpose of Workshop 2

The purpose of workshop 2 was threefold:

- Firstly, it was to continue the mapping process of workshop 1. Participants were sent electronic versions of the map to review, refine, and evolve the map and to prepare to provide feedback. Some industry participants were provided with a hard copy of the map and provided feedback through those mechanisms.
- Secondly, to use the workshop process to continue to develop amongst all participants:
 - A sense of connectedness and feelings of closeness;
 - Lines of communication that enable rapport building and recognition;
 - A shared sense of reality of what is happening between them with respect to the fishery.
- Thirdly, for participants to begin to interpret the systems map in more detail and to identify and explain feedback loops. These are systemic structures that create stable behavioural dynamics. Feedback loops are observed as patterns of repeated behaviours that in this context, prevent people from developing productive relationships that lead to cultural shifts. A list and description of a number of significant feedback loops are presented in Appendix C.

3.3.2. Approach for facilitating Workshop 2

As with Workshop 1, the approach was to facilitate a conversation that enabled workshop participants to deepen their sense of connectedness among each other, build processes for communicating, and construct a shared sense of reality. Participants were helped/supported to raise topics and engage with each other to develop these three areas of focus and concurrently, develop a shared understanding of the dynamics of their operating landscape.

During day 1 of Workshop 2, participants provided commentary and refinements to the map that provided systemic factors and the relationships between them that defined the stable cultural dynamics of the NFTS, DPI Fisheries and the relationships between those cultures. Examples of these systemic factors and cultural dynamics include:

- Quality of the data used for decision-making and the consequential trust in relationships between members of the NFTS and DPI Fisheries;
- Quality of the relationships between the fishers, DPI Fisheries and the government;
- The emotional and mental health of members from DPI Fisheries and of NFTS; and
- Effectiveness of processes for changing/ implementing targets

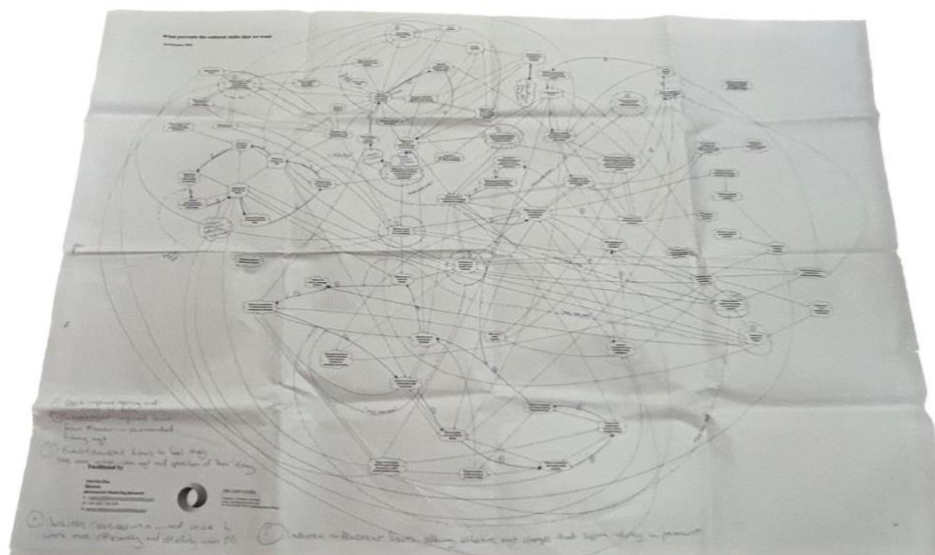
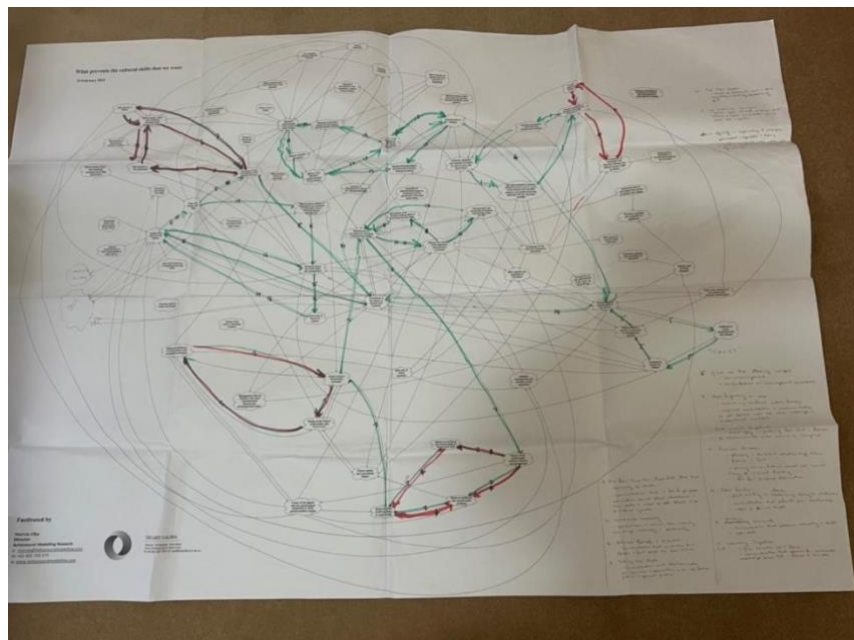
Day 2 focused on participants from the NFTS and DPI Fisheries working in mixed teams to read the map to identify feedback loops (See Appendix C) that would explain specific cultural behaviours that were experienced on a day-to-day basis.

The mixed groups enabled workshop participants to challenge each other's beliefs about lived experiences in the workplace and what they believed were the factors and the relationships between them that supported such behaviours. Participants were guided to choose their own experiences and then "read" the map to identify and design the feedback loops that best described the lived experience. The loops highlighted the dynamics that prevented participants from developing productive relationships that lead to the required cultural shifts.

Participants engaged in strong debates about their perspectives relating to behaviours that reflected the identified dynamics in the map. A shared understanding of these dynamics was presented in rudimentary stories and headings that groups assigned to each feedback loop developed. The highlighting of different feedback loops that were developed at the workshop from each group of participants is shown below in Figure 3.

The loops provided participants with a visual description of key factors and the relationships between them that create stable behavioural dynamics. Feedback loops are observed as patterns of repeated behaviours that in this context, prevent people from developing productive relationships that lead to cultural shifts. The feedback loops enabled participants to use the loop structures as a “third person” to discuss sensitive and contentious dynamics without referring directly to each other.

The loops provide the context to identify and develop initiatives to shift the dynamics more in the direction of supporting collaboration and less in the direction of individualistic approaches by NFTS and DPI Fisheries.



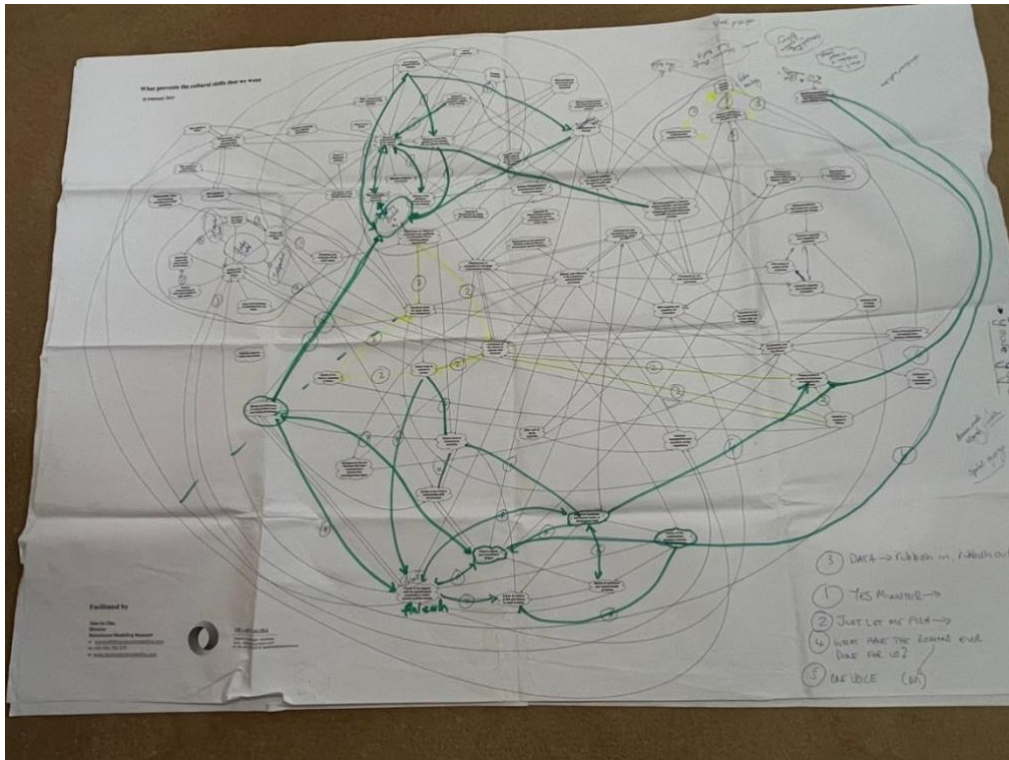


Figure 3

The draft feedback loops identified by the working groups at the workshop

The joint development of feedback loops and associated narratives about the current cultural dynamics enabled participants to reflect on current beliefs and cultural practices and how they are inhibiting the move towards a co-management culture. This is a critical step to assist participants to explore the co-development of new beliefs that will support the facilitation of co-management (project objectives 2 and 3). The following statements, found in the systems map in Appendix A, identify some of the factors that are shaping the system. They provide the basis to gain insights about prevailing beliefs that are shaping the nature of the system.

- Quality of the data used for decisions
- Shared beliefs, vision and underlying principles about managing the fishery
- Minister's understanding of the context of the fisher
- Strength of the "yes" culture within DPI
- Complexity of the rules and compliance processes
- Industry's capacity and capability for adaptation
- Fisher's capability to develop trust between all areas of DPI
- Managing a business as a profitable concern

Central to the mission of change is to identify and implement the safe-to-fail probes/experiments to start shifting the system to self-organise into more desired patterns of behaviour and as a consequence, new beliefs emerge as a response.

Post the workshop the principal investigators took the results from the workshop and used them as the basis to refine the feedback loops, identify additional loops and wrote up narratives for each loop. This provided background material for workshop 3. The results of this work are shown in Appendix C.

3.3.3. Observations of behavioural patterns from the workshop

- Participants from the NFTS continued their expression of frustrations and issues, repeating the issues raised from workshop 1. The expression lasted for a shorter time than in workshop 1.
- Once participants from the NFTS had completed their expression of frustrations, participants from DPI Fisheries acknowledged their willingness to make changes to improve the relationship with Industry. Participants from DPI Fisheries emphasised the relatively new leadership team in fisheries (two being represented at the workshop) so there was an appetite to make appropriate changes.
- Participants from both DPI Fisheries and the NFTS worked very well in teams to identify and define the feedback loops.
- All participants accepted with where the process was leading. Because of this observation, participants felt a sense of progress and continued to participate with diligence and stayed engaged throughout the workshop.

3.3.4. What was achieved at the workshop

- All participants realised they had context from which they could develop initiatives to resolve issues and move forward on the journey for collaborative management.
- Increased willingness to keep actively engaging in the process.
- The map was being developed with feedback loops to indicate potential critical feedback loops for areas to form hypotheses that could lead to significant change in the system.
- All participants developed a deeper understanding of how the system worked, a shared understanding of what was happening and the underlying reasons for the observed patterns of behaviour as they verbalised the dynamics of each feedback loop. They also gained an understanding of what were seemingly intractable dilemmas and dynamics.
- Feedback loops were developed and refined that would provide the context to develop a range of change of initiatives to redefine the culture towards collaboration.

3.4. Trip 2 to South Australia fisheries: 16, 17 & 18 August 2023

3.4.1. Purpose for the trip

The purpose of this trip was to build on the previous visit to SA by exploring the development of collaboration/co-management approaches from the perspective of the Chair/Board/EO level. Through this process we were able to obtain multiple perspectives on how to develop a co-management approach.

3.4.2. Approach for meeting people

As with the previous visit, participants from NSW DPI Fisheries provided a list of names of people from South Australian fisheries to interview. These included representatives from Spencer Gulf & West Coast Prawn Fishermen's Association, Northern Zone Rock Lobster Fishermen's Association, Southern Fishermen's Association, Saint Vincent Gulf Prawn Boat Owners Association, South Eastern Professional Fishermen's Association Inc, Limestone Coast Fishermen's Co-operative Limited and managers from PIRSA who were previously employed in that organisation. The meetings were designed to participate in a conversation to elicit and understand the context of the SA fisheries, the context in each fishery that shaped the

direction of co-management, the beliefs that were held by different stakeholders and the process that enabled the co-management to emerge and evolve in the fishery.

3.4.3. What was learnt from the trip?

An overview is presented in this section of the insight and learning gained from each group visited during trip 2 to SA. The interviewees were chosen based on suggestions from NSW DPI Fisheries as people who were heavily involved in the development and continuation of co-management practices in SA. Additional detail for each group is presented in Appendix B. Each group provided a specific context from which unique learning was gained. However, there were themes that arose from across the groups. These are outlined later in this chapter.

3.4.3.1. Glenn Davis, Chair of the Spencer Gulf & West Coast Prawn Association Inc

Glenn Davis, Chair of the Spencer Gulf & West Coast Prawn Association Inc, emphasises that having skilled people and developing trust are the keys to success for a collaborative relationship with PIRSA. A strong Executive Officer, unafraid to challenge fisher's prevailing thinking and approaches provides a critical role in enabling change within the sector. The Executive Officer has to spend time convincing the fishers to collect the data for self-regulation and to minimise interference from PIRSA. Glenn and the Executive Officer have to balance the tension of enticing the fishers to collect the data and the fishers not trusting PIRSA with the data as they believe the department will use the data to enhance regulatory control over them. Glenn highlights that PIRSA are often correct in their approach and that there are issues to be addressed whereas the fishers believe that "everything is good".

The Association is investing in moving from real-time to automated real-time catch and effort data collection and sense making. The process of sense making enables fishers to observe patterns in the data and to understand the state of the marine environment. This provides foundational information that support data-led decisions and frequent communication with PIRSA through formal and informal channels. The Association policy of "no data, no fishing" underscores the critical role that data takes in decision-making and developing the trusting relationships with PIRSA.

The SGWCPA has developed, implemented and consistently demonstrated processes with the associated culture that provide PIRSA with the confidence and trust that the Association can make sound recommendations based on the data and science that is collected through their protocols.

Glenn's approach involves operating the Association based on business principles which requires having clear goals and useful performance measures, formal accounting and financial protocols, quality systems to improve performance, holding people accountable for performance and a clear distinction between the board of governance and management of the Association. Compliance with Government regulations is considered as a key to building relations with PIRSA. It is supported by formal, signed agreements and negative reinforcement for accountability which have a powerful impact on shaping industry behaviours to comply with regulations. Glenn's focus on coaching, training and self-development of Association members helps to generate the "next generation" group to have the philosophy and skills to manage and lead the successful operation of the Association into the future using a co-management governance framework.

3.4.3.2. Kyri Toumazos, Executive Officer, Northern Zone Rock Lobster Fishermen's Association Inc

Kyri Toumazos draws parallels with successful co-management models like Goolwa Pipi Co. He emphasises the effectiveness of co-management at the Commonwealth level over the State level. Toumazos advocates an "Ethos of Co-management," which is focused on the relationship between PIRSA and Industry based on trusted provision and exchange of information and science-informed decision-making that supports a collaborative approach to the management of marine resources. There is also a requirement for PIRSA to shift its role and function from regulator to auditor after empowering fishers. He proposes a move from "social licence" to "community value" for measurable returns. From a community value perspective, everyone needs to know their roles in contributing to and improving community value. In this way, PIRSA and the industry are working together for community benefit and this builds the trust between all contributors.

For co-management to work, the industry is required to invest in the technologies and processes that provide trusted data about fish stocks; science-informed recommendations about where, when and how much to fish and the demonstrated capacity and capability to have an industry culture that is accountable to their code of conduct. PIRSA is required to state that "we're willing to work with you". PIRSA's statement of willingness signifies "we want and need to build trust with Industry" (for compliance with fisheries regulation). Co-management has a greater chance of succeeding if there is the right person to champion the cause and a Minister that is willing to back that person and support the Industry. Kyri stresses the importance of trust, respect, and a shared vision for successful co-management, with Industry playing a crucial role. Industry should offer expertise, set up expert panels, and shield PIRSA from political influence.

To enable co-management to emerge, Industry needs to:

- protect PIRSA and the Government regarding decisions;
- do the work for PIRSA and the Government and give them trusted advice;
- take the decision making away from politicians.

Kyri states that "...in 10 years, we have never bypassed processes to go directly to the Minister, it's always been through the Government/Department executives".

The Executive Officer of an Association plays a critical role in the co-management process:

- by co-ordinating research;
- by co-ordinating the collection, storage and retrieval of data;
- to enable consensus-building;
- have robust conversations;
- align everyone to agree on a recommendation/advice/decision and to take it to Government;
- is not to listen to what Industry wants and take that to Government. The Executive Officer needs to push back if what's wanted cannot be taken to Government without success; and
- to be willing to walk away from their position if they are not supported by the Industry.

The culture of the Industry requires highly effective communication, relationship-building skills as well as developing education programs, tailored to the Industry's preference for face-to-face interactions.

The move towards and maintenance of a co-management approach is built on trust. Trust-building elements include quota integrity, compliance education, alignment with common goals, and simplification of compliance protocols- a Ministerial responsibility. Kyri underscores the need for a champion within Industry and with PIRSA backing, emphasising personal relationships with political figures. Being apolitical facilitates collaboration across Government changes. A broader vision is crucial to dispel misconceptions about the seafood industry. You have to educate and expose the politicians to the work of the fisher. You have to get them onto the boats. It makes a huge difference when they understand what the fishers do. Industry is successful when Ministers and PIRSA officials show up to Industry events and dinners.

An Industry body structured to the needs of co-management is critical for success. A successful Industry association requires establishing:

- a Research Advisory Committee with an independent Chair;
- Management Advisory Committee (MAC) with an independent Chair; and
- various panels of stakeholders e.g. community, environment, scientists. It's also important that these are expert panels and not representative bodies.

Stability and sustainability are key priorities for fishers, emphasising the need for policies and practices that support the long-term health of the Industry. To a large extent, if the rules are there, people will play within those rules.

3.4.3.3. Marilyn Nobes, Southern Fishermen's Association and Keith Rowling, Saint Vincent Gulf Prawn Boat Owners Association

From an Industry perspective, Ms. Nobes believes that the success of co-management relies on a robust Association and Executive Officer. It is strongly based on developing relationships based on effective communication between members within the Industry and between Government and Industry. Transparent governance structures are essential to support the communication process and also to demonstrate explicit processes that engender Government confidence in how communication and information flows are being facilitated.

Effective communication is a foundational process that will shape the success of a co-management approach. Different communication styles will be required to meet the differing needs of Industry and Government stakeholders. This will especially be the case regarding delivery of scientific content and the ongoing one-on-one communication with fishers given their reluctance to attend formal meetings. This will need to be led by champions who will also need to chase up people to show up to meetings and workshops.

The Association must establish proper structure, processes and formalise decision-making policies. The basic model used and recommended by the Association utilises MACs that run with an independent Chair, from which their Industry is able to self-regulate and manage themselves. This is different to a peak body which has the primary role of representing the Industry/sectors. Effective co-management will require Industry having the capability to self-regulate and manage itself. Evidence from SA suggests that the MAC structure with an independent Chair provides an effective governance structure. Different models are used

across different fisheries. Fundamentally, Industry needs to self-organise and manage itself into a well-designed form that inspires trust and confidence from Government. This will enable Government to gain the confidence and trust to support a co-management approach with Industry.

A formal Association with an appropriately established governance structures characterised by clearly defined roles of board members and delegation authorities, well-defined meeting procedures, a clear strategic direction and risk register, formalised budgets and performance and accountability frameworks help to support more informed and structured decisions. Co-management is about decision-making. An important focus of cultural change within the Industry is to enable members of the Industry to talk to each other. They need to experience success in what this means for them.

Leadership is vital in enabling both Industry and Government to progress co-management. You need leaders who will step up. If they are not available then an outstanding independent chair is required who can facilitate conversations between members of the Industry as well as between Industry and Government. Part of the leadership role will be to support Industry to embrace greater risk. This is in contrast with Government's risk aversion.

Fishers need education and training on Government decision-making and data interpretation, seeking stability in decisions based on science and 5-10 year trends- not just from last year's figures. Understanding Government decision-making protocols will assist Industry decision-making process to line up with the Government decision-making cycle and to demonstrate how the Industry is delivering economic benefits that are aligned with Government decisions. Fundamentally, in a co-management arrangement, everyone needs to understand why and how decisions get made.

Co-management costs the Industry money. A key is cost recovery structures. In SA the Government set up the management committee and government pays for full cost recovery.

3.4.3.4. Nathan Kimber – Executive Officer, South Eastern Professional Fishermen's Association Inc

The Industry sought stewardship and control, benefiting from skilled people, strong governance structures and Industry wealth. The initial association structure, resembling a peak body with subgroups, was ineffective, leading to the adoption of a governance structure with an incorporated association, an independent Chair, an experienced Executive Officer, and dedicated committee members. The presence of an independent Chair and scientist enabled PIRSA to be confident in the Industry's recommendations.

A stable governance structure, combined with three to four executive committee members who:

- understand the benefits of co-management for industry and government and are willing to work together with an independent Chair;
- placed the priorities of the fishery/Industry first before their own gain;
- are not afraid of making the tough decisions about harvest strategy;
- understand how the political regulatory system works;
- are prepared to give up their time and resources, are respected in the community and often volunteer at local community groups/ activities; and
- are key is succession planning to ensure that there are future heroes.

provided the Association with a strong foundation for success.

The shift in cultural dynamics between owner-operators and corporate ownership in wealthy fishing industries poses challenges in stakeholder management as corporate owners may have different expectations with respect to sustainable profitability and business development over shorter time frames to those of the owner-operators. The difference in direction could lead to increasing tensions within the Association making it more difficult to establish a one voice. This could have a ripple effect in managing the relationship with PIRSA.

There is an emerging dynamic in the wealthy fishing industries in the difference in mentality of running a fishing business between those that are owner-operators and those who represent corporate ownership (investors). This difference is changing the cultural dynamics within the sector. For example, there is a superannuation fund with a \$50 million investment in several licenses. This establishes a situation where a lot of stakeholder management is needed as these commercial stakeholders are politically connected.

Personal relationships play a crucial role in fostering cooperation with PIRSA to maintain confidence in the Industry. The people that are chosen to work in the Association have to be skilled to maintain and nurture these relationships.

Adopting real-time electronic reporting of fishing activities over the past six years has enhanced transparency and eliminated surprises in harvest strategy. The reporting process has played an important role enabling PIRSA to develop the trust and confidence in our information and to provide fishers with what the harvest strategy will be before it gets formally set and therefore there are no surprises. Electronic reporting has required significant cultural change, with one-on-one support, cross-generational assistance, and a transition period allowing dual reporting. The Executive Officer played a major role being on call 24/7.

Maintaining a positive relationship with the regulator is vital, requiring Industry to strategically choose when to push back, focusing on significant issues and conceding on minor issues. If Industry makes poor decisions and recommendations, then PIRSA will lose confidence. You have to find out how to support and protect the regulator. You have to get past the 'us versus them' approach and instead work to common ground.

From a Government perspective, PIRSA has to be committed to a cultural alignment with co-management, particularly for managing staff turnover (especially compliance officers), emphasising the need for ongoing relationship management with Industry.

3.4.3.5. Justin Phillips- CEO, Limestone Coast Fishermen's Co-operative Limited

The success of co-management hinges on a financial perspective, emphasising the need for funding and a focus on cost recovery strategies. Notably, differences between South Australia's model based on a percentage of license fees and West Australia's model based on a percentage of GDP underscore the importance of choosing feasible options.

The distinction between Industry self-management focus, exemplified by MACs, and Industry representation focus, represented by peak bodies, is a major distinction that needs to be understood in the context of co-management. This nuanced understanding underscores the multifaceted nature of co-management strategies. Establishing best practices for a MAC is

crucial and centres around fostering effective relationships among Industry stakeholders, managers, scientists, and regulators.

Co-management leadership necessitates a willingness to accept compromises and recognise that this is a state-managed community resource and you have a license to fish. Phillips highlights that you don't ever take this for granted. Therefore, there is an ongoing need of engaging with Government proactively to navigate potential changes.

Acting in the Industry's best interest requires an independent Executive Officer who effectively manages conflicts of interest, particularly between commercial and Industry interests, to preserve trust.

3.4.3.6. Summary of the results of the interviews and implications for cultural change for the NFTS and DPI Fisheries

We have reviewed the topics that arose from interviews of Industry and Government representatives in the SA fishing sector (see Appendix B), to identify a set of themes. The themes represent important areas of focus that are believed to support the journey towards a collaborative and co-management approach.

- **Theme 1:** Necessary and critical conditions that Industry and Government need to have in place to support co-management.

There are some non-negotiable pre-conditions that need to be in place to enable a successful journey towards collaborative, co-management of the fishery. In the context of the NSW NFTS, these themes are partially existent, non-existent or are present and need to be enhanced.

- Strong leadership that mentored and guided people in:
 - Industry to:
 - gain a detailed understanding of the operational needs of Government to fulfil Industry role for co-management;
 - abide by and work to an agreed set of guidelines for harvesting of marine resources;
 - work together to develop a shared and agreed voice to Government that represents the position of the sector; and
 - participate in data collection and provision of fish stock numbers to contribute to the information base to inform decisions about harvesting of marine resources.
 - Government to:
 - gain a better understanding of members of the industry about their businesses and their capacity to fulfil the role for co-management;
 - recognise, appreciate and maintain the need for Industry stability when regulatory changes are enacted;
 - effective information sharing and communication with the Industry about issues of changes to regulations
- A unified Industry voice that is solution-focused to the operational and regulatory issues of operating and maintaining a fishing business;
- An Industry association with transparent and sound governance and decision-making processes that were informed by science;

- An Industry association that has a skilled and independent Chair and access to scientists who care for the Industry and the natural resources that is trusted by all stakeholders;
- Inclusion of critical stakeholders in the planning and decision-making processes;
- Industry association Executive Officers who have a scientific understanding of the marine environment to convey messages effectively and gain Industry support;
- Use of technology for real-time data collection, decision-making, and Industry management;
- Alignment between the Industry Association and the Government on harvest strategies;
- A focus on the economic viability of the Association with creative self-funding strategies;
- The Government has regulatory frameworks for managing marine resources that give the members of the industry the confidence to make commercial decisions that enable the sustainability of their businesses and of marine resources;
- A commitment by the Industry Association on behalf of its members to work with and through the Government department along with an informal yet explicit 'rule' to avoid going directly to the Minister;
- People who have very good communication skills.

Implications for the NFTS and DPI Fisheries

What does Industry have to do?

- Engage members of Industry on this journey towards co-management
- Determine the areas of focus for cultural change and what requires improvement

What does DPI Fisheries have to do?

- Determine the areas of focus that support cultural change within DPI Fisheries and within the Industry and what requires improvement
- Lead the approach for collaborative approaches for co-management of the fishery.

What does the Industry and DPI Fisheries have to do?

- Determine together the priority areas to focus upon.
- Determine how both groups will work together to enable the implementation of these themes?
- Determine together what gaps in capability for both groups that require building that will support the implementation of these themes. Some of these capabilities are addressed in Appendices E and F .
- Identify the unique context for the NSW NFTS and how these themes will be implemented for this context as opposed to the context of the SA fisheries.

- **Theme 2:** An Industry Association that supports transparent and sound governance processes

How the Industry is represented Government by an Industry Association is a critical element of success. Industry and Government understand the distinctions between Industry self-management using MACs and Industry representation (peak bodies). Experience in SA has demonstrated that self-management through MACs has been a more relevant and effective approach to enable the development of a sector's one voice.

MACs that prioritise relationships between Industry, managers, scientists, and regulators demonstrate strong and stable governance structures with independent chairs, independent scientists, and experienced executive officers. These all contribute to Government's confidence in Industry recommendations and minimize Industry turbulence.

Implications for the NFTS and DPI Fisheries

At the time of writing this report, NSW has announced the formation of the NSW Commercial Fishing Industry Association (CFIA) which will enable the NSW commercial fishing industry to be represented to Government, stakeholders, and the community. The Association provides an opportunity to facilitate the evolution of co-management in NSW fisheries including that for the NSW NFTS. The NSW NTFS has the potential to use the Association to present to DPI Fisheries the one voice from each fishing sector as opposed to the collective voice of multiple fisheries.

- **Theme 3:** People who are skilled and hold beliefs and values that support a co-management approach

People from within the Industry and Government with a strong focus for co-management need to have a shared set of beliefs and values such as:

- Open, transparent communication
- A one voice representing the industry
- Relationships based on trust
- Willingness to resolve issues directly with the regulator
- Respect for the diversity of ideas and approaches
- Collaborative decision-making
- Trust in the data provided about marine resources
- Science-informed decisions
- Managing the present with a focus on the future
- Sustainability of the marine resources and of the industry

to support its presence into the future. These people are highly skilled and play a strong leadership role. Key attributes about the people to advance co-management include:

- Having people from a diversity of backgrounds such as business and economics with strong communication, management, conflict resolution, systemic, and science-based skills will be critical for cultural change, because they introduce different and new ways of thinking and working that provides a catalyst to design and initiate change;
- An independent Executive Officer (EO) who is able to:

- communicate with the fishers about new ways of thinking and working that can be very different to current ways of operating their business;
 - be willing to walk away from their view on issues if they are not supported by the Industry;
 - address conflicts of interest promptly to prevent undermining of trust within the Industry;
 - develop and maintain strong personal relationships with government;
 - present the science to fishers that enables them to make informed decisions about their business operations;
 - push back 'f what's wanted cannot be taken to government without success.
- An independent Chair of the Association with a business background who has a strong emphasis on compliance and who has highly tuned communication skills. All these skills are used to manage the relationships with fishers and Government. There is also a desire to ensure the sustainability of the Industry and the business into the future by developing the next generation of leadership and skilled people.

Implications for the NFTS and DPI Fisheries

Once the Industry has established an appropriate Association structure, the Chair and Executive Officer will be critical in shaping the progression of the sector and the journey towards collaborative management of the fisheries. These people will play a pivotal role to: lead Industry, establishing governance structures, building relationships with DPI Fisheries and politicians, building trust between participants within the NFTS and between participants from DPI Fisheries, support participants who have suffered emotional trauma from past experiences with their healing.

- **Theme 4:** A funding model that supports co-management enabling an Industry association to operate effectively by supporting primary tasks such as:
 - being able to fund skilled people for the governance and operation of the Industry Association;
 - supporting and co-ordinating members' ability to collect and provide data to inform decisions for harvest activities;
 - having the access to and guidance of independent scientific officers;
 - enabling effective communications between the Industry Association and its members;
 - educating members of the industry on regulatory changes;
 - supporting cultural change; and

Implications for the NFTS and DPI Fisheries

A key component for the journey towards co-management will be information/data/science about the nature of and availability of the marine resources that is sensed and made-sense-of by industry decision-makers. This will require the Association and fishers to invest in scientists, technology and processes to ensure that the fishery and the Association has the information that will inform decisions about what, where, when, and how much to fish.

What will the Industry Association need to do?

The NFTS fishery is not a fishery with consistently strong market demand with high volumes of catch and prices that provides fishers with strong financial returns. Therefore, the newly formed Industry Association will need to determine the possibilities for funding its operations to enable foundational work to support a collaborative approach to managing the fishery.

What will DPI Fisheries need to do?

DPI Fisheries will need to provide support to the Industry Association to determine possible funding models. These models are yet to be researched and developed as a collaboration between the Industry and DPI Fisheries.

- **Theme 5:** An independent single voice for each sector

Each fishing sector has its own dynamics that are shaped by the physical conditions of where harvest is undertaken, type of equipment, the regulations, market demand, commodity prices, cost of operations, and availability of skilled people. Within the sector, fishers will have their own views on how to operate their business and expectations about what they want from their Association. The nature of the fishing industry and the NSW NFTS demonstrate that multiple perspectives, expectations and outcomes co-exist within any sector. The diversity of perspectives provides the opportunity to identify new approaches and different ways of working that could contribute to the future development of the industry. The challenge to multiple perspectives and voices is to have leaders within Industry and Government who have the willingness, confidence and competence to enable a space to be held so that members feel safe to express their views without the need to hold back their contribution. Additionally, these leaders need to be able to facilitate conversations amongst their groups such that the diversity of perspectives provide the basis for an emergent view that arises from the others that will inform effective decisions.

It has been repeatedly demonstrated in SA that an efficient and effective approach towards collaborative management of a fishery has been to facilitate a single voice for a sector. A single voice represents the agreed position that is held by members of the Industry. This provides the Industry with an agreed, member-based position to undertake conversations with Government. It also provides Government with confidence that Industry members support this voice. From the perspective of Government, working with a single voice from Industry, provides an efficient approach than attempting to work with multiple industry voices that could also be conflicting with one another.

Following the success in SA fisheries of an industry association working with one voice, a key function of the NSW Association is to facilitate the single voice and use that to develop policy, strategy and solutions that are then presented to DPI Fisheries.

Implications for the NSW NFTS

What does the Industry have to do?

- Developing a single voice on issues will require the NFTS to develop a collective group that represents its interest. This could be addressed through the design of the new Industry Association.
- The NFTS will need to create the leadership that will assist to shape a single voice on issues.
- The NFTS will need to develop policies and procedures that will enable a single voice to emerge from the collective.
- Set up a process where fishers can have alternative views and have a process to agree on a single output. The process is yet to be established and is best developed by members of the new Industry Association. This will give the Association and its members a sense of ownership and commitment to the process.

What does DPI Fisheries have to do?

- Assist the NFTS to develop protocols and processes to develop a single voice.
- Work with the NFTS to acknowledge the single voice and use this to develop policy, strategy and regulations.

- **Theme 6: A functional and close Industry-Regulator relationship**

A collaborative approach between the Industry and the regulator requires deep levels of trust, shared direction and a relationship space whereby shared and differing values and beliefs can be simultaneously held and respected. This requires leaders from both the Industry and Government to have the willingness, competence and confidence to recognise and value such an approach and be able to support people in their relationships with each other to develop and operate in such an environment.

Personal relationships between Industry representatives and regulatory bodies, such as NSW DPI Fisheries and PIRSA, are key to successful co-management because it is through personal relationships that:

- people open up communications with each other to gather information, make sense of it and share it so that they have the material to develop working relationships;
- people through communicating with each other are able to determine what is/is not important to each other and how to make meaning of their experiences together. The better that they are able to make meaning of and share their experiences, the greater is the chance of developing a collaborative approach if there is a willingness to explore and work with differences in perspectives and approaches to working each other; and
- as people explore the challenging issues and different perspectives through communication and effective sense making, a sense of affinity, rapport and connectiveness begins to emerge that reinforces the desire to communicate and develop a deeper sense of the experiences that they are exploring together.

How these principles are implemented will require trial and error initiatives supported by the leaders from both Industry and Government.

Part of the development of trust and rapport between the Industry Association and the Regulator requires the Industry Association having to find out how to support the

Regulator to have a productive relationship with the office of the Government Minister. Members from Industry and the Regulator need to share the belief that the sustainability of the marine resource and the Industry is based on a collaborative approach. Both groups need to work to move in the same shared direction and that there is no longer an Us and Them. The Industry and Regulator need to work together to satisfy a number of competing political agendas that exist at any moment in time.

Implications for the NFTS and DPI Fisheries

What does the Industry have to do?

- Industry will require leadership that enables members of the industry to:
 - reflect on their situation and consider other ways of thinking and working to help shift those who support from an adversarial approach to a more collaborative approach;
 - engage in conversations with DPI Fisheries to develop trusting relationships

What does DPI Fisheries have to do?

- Assist the Industry Association to develop protocols and structures that enable the communications to happen within the sector.
- Participate in the communication process with the aim to develop a working relationship with the NFTS

What does Industry and DPI Fisheries jointly need to do?

- Develop details about a shared sense of direction.
- Develop protocols and procedures about how they jointly communicate and share information with each other.

- **Theme 7: Data-led decision-making**

The marine environment is a natural resource that is available to all citizens. The maintenance of parts of the natural resource in SA is co-managed by the fishing Industry and Government regulators. Decisions about accessing and harvesting the natural resource is based on data and information sourced by the fishers and government-based scientists. A great deal of cultural change, funding, technology and education has been provided to enable parts of the Industry to develop real-time and automated data gathering to support decision-making about what, where, when and how much to harvest. The robustness and transparency of the processes in SA has given PIRSA the confidence and trust in the data/information that is received from the Industry because:

- Both PIRSA and the Associations have mutual trust in the scientists who do the work on behalf of or for each organisation;
- PIRSAA has direct relationships with the scientists that work for the Associations;
- PIRSAA has confidence in the role of the Chair in the Associations and how they manage the decision-making process based on the science and the data.

This enables Industry to self-manage its members in accessing and harvesting fish stocks in a sustainable way with minimal regulatory interference.

Implications for the NFTS and DPI Fisheries

What does the Industry have to do?

Industry will require adaptive leadership:

- to support its members to reflect on their situation and consider other ways of thinking and working;
- to assist members of the NFTS to shift their beliefs to value the collection of data and to trust how the data is used by DPI Fisheries; and
- that has the skills to initiate and facilitate communications with DPI Fisheries that begin the journey of developing real-time data collection processes.

What does DPI Fisheries have to do?

DPI Fisheries need to:

- review their role in the way data is collected;
- review how they make sense of the data collected to develop insights that inform decisions-making;
- enhance the transparency of their data collection and sense making processes and how it is used for decision-making;
- review and enhance how they communicate the insights gained from their processes that makes sense to members from the Industry; and
- develop a trusted relationship with NSW NFTS about the collection and use of the data

What does Industry and DPI Fisheries jointly need to do?

- Based on the principles of CAS, jointly develop processes for the collection and sense-making of the data. This can only be determined as people come together and explore the pathway forward as a self-organising, emergent process. It is not a process where pre-determined outcomes are defined.
- Based on the principles of CAS, jointly develop processes for using the data/information for decision-making about harvesting the fishery.

3.5. Workshop 3: 24 and 25 August 2023

3.5.1. Purpose for the workshop

The purpose of workshop 3 was to enable participants from DPI Fisheries and the NFTS to:

- develop a deeper understanding about the dynamics of the factors and the relationships between them that are preventing the emergence of a productive industry culture; and
- agree on the key pre-conditions for enabling a productive industry culture and to identify what is required to be actioned that assists to enable such a culture to emerge.

3.5.2. Approach for facilitating the workshop

Preparation for the workshop

The trips to the SA fisheries enabled the compilation of a necessary set of conditions that are required to shape a journey towards collaborative management. These conditions are listed below:

Communication

- Appropriate mechanisms for communication within and for the Industry to support education and decision-making.
- Appropriate mechanisms for communication for Industry to speak with DPI Fisheries.
- Mechanisms for enabling fishers to understand, learn and be educated about the data and other issues.
- Industry's capacity to talk to itself for collaboration.
- Industry's capacity to talk to DPI Fisheries.
- Availability of people with the skills to lead/align the Industry to develop a single voice.

Management

- An effective fisher organisational structure with good governance and an ability to communicate with all fishers and other stakeholders.
- A fisher organisation with sufficient resources and skills to implement and deliver services, or an ability to negotiate and attract such resources.
- Presence of expertise on advisory panels to bring an expert lens on the issues. This is different to having representatives on the panel.
- Mechanisms and platforms for revenue and funding of the industry association and for cost recovery that is enduring and resilient.
- Formalised transparent decision-making processes within the Industry.

New perspectives

- Fisher groups with a significant proportion of members wanting to move to co-management.
- Realisation that you cannot change from where you are. The Industry and DPI Fisheries both have to develop capability about understanding, design and implementing change programs.
- DPI Fisheries' commitment to work with Industry to negotiate alternative management and create models involving greater shared responsibility.
- Presence of the function of an independent perspective for Industry to come to reflect on its beliefs, actions, assumptions.
- Industry perception that DPI Fisheries always says "yes".
- Industry and DPI Fisheries exposure to experiences that demonstrate what is possible.
- Presence of expertise on advisory panels to bring an expert lens on the issues. This is different to having representatives on the panel.

Relationships

- Trusting relationships between Industry and DPI Fisheries.
- Respect for each other.
- A strong relationship between the DPI Fisheries, industry and the conservation sector has been built over time.
- Industry and DPI Fisheries are willing to support each other when required.
- The right people with the right skills.
- Clarity of the role of the executive officer of the industry association to facilitate cultural change of the industry.
- The availability of skilled people for appropriate communication and relationships development.

Leadership

- Capability and capacity of people in DPI Fisheries for leading.
- Leadership from the Industry to informally establish/maintain/work the relationship with DPI Fisheries.
- The presence of leadership for industry development- who has the big picture? Who is the visionary?
- Presence of a leadership succession plan to lead, support and take over the industry into the future.

Direction

- Agreement between Industry and Govt about shared outcomes for the Industry.
- Minister support for developing Industry vision.
- Alignment in the ethos between Government and Industry about co-management.

Governance and accountability

- Does industry have compliance structures that support good governance?
- Industry's capacity and capability to govern itself.
- Availability of an industry code of conduct.
- Function of the independent chair to replace incompetence.
- Capacity and capability of the industry to hold people accountable to a code of conduct.
- Capacity and capability for the Chair and executive officer within the industry group to be aligned and make hard and courageous decisions.
- Enabling nature of the legislation.
- Existence of a legislative basis to delegate powers.
- Ability to generate, and commit to, legally binding undertakings through an MOU, contract or other form of agreement between the parties.
- Ability for the fishers' organisation to legally enforce agreements through civil, contractual or company law.

Property rights

- A well-documented and researched fishery, including its ecosystem impacts and dependencies.
- Clearly specified and legally recognised access or property rights in terms of species, quantity, time and place.
- A fishery with clear geographic boundaries and low bycatch or environmental interactions.

Workshop process

At this workshop the context for the project was revisited by exploring the draft DPI Fisheries policy document for co-management. Revisiting the context would provide participants from both the NFTS and DPI Fisheries with confidence about a shared direction that supports the progression of the conversation, assists with the healing of relationships and to develop a new "working together" program.

Key insights from the SA trip were presented to participants to provide a reference point for what will be required to enable the NFTS to operate within a co-management framework. Based on the insights from the South Australian trips and the Neville report (2008) the set of conditions necessary that are required to shape a journey towards collaborative management

were presented to participants that would need to prevail to begin a journey towards the functional and productive operations of the sector between the NFTS and DPI Fisheries.

Based on the current state of the relationship between the NFTS and DPI Fisheries, participants were required to choose what they believed were the most important conditions that need to be addressed. These were: communication, management, new perspectives, direction. Throughout the discussion arose another theme described as “The right people with the right skills for communicating and relating”. Participants believed that the five themes were equally important.

Communication

- Appropriate mechanisms for communication within and for the NFTS to support education and decision-making.
- The NSW NFTS’s capacity and capability for its members to talk with each other to explore and resolve issues that will enhance collaboration.
- Availability of people with the skills to lead/align the NFTS to develop a single voice.

Management

- A fisher organisation with sufficient resources and skills to implement and deliver services, or an ability to negotiate and attract such resources.

New perspectives

- DPI Fisheries’ commitment to work with the NFTS to negotiate alternative management and create models involving greater shared responsibility.

The right people with the right skills for communicating and relating

- The availability of skilled people for appropriate communication and relationships development.

Direction

- Alignment in the beliefs between the NFTS and DPI Fisheries about co-management.

These conditions acted as a point of reference to:

- design a suite of safe-to-fail projects/activities that would support participants in shifting their beliefs and behaviours in a direction of “how do we do more like this” and “how do we do less like that” to enable a co- management process to emerge; and
- begin to establish a governance framework that will support a co-management approach.

Over time the seven pre-conditions listed above will need to be satisfied. This cannot be achieved quickly and will require a series of on-going activities/projects that will assist both the NFTS and DPI Fisheries to participate in a cultural and governance change program that will nudge the system more towards a collaborative and less towards a centralist approach to the management of the fishery. Due to the culture of this sector, strongly influenced by its history, members from both the NFTS and DPI Fisheries will require support, coaching and mentoring as part of the cultural change program.

Once these seven pre-conditions were chosen, another document (Appendix D) was presented to participants that:

- included the seven selected pre-conditions;
- the design criteria that arose from the NSW DPI Fisheries Draft Policy for the Co-management of Fisheries in NSW; and
- three questions that will help participants design the activities/projects to nudge the system towards a more collaborative culture:
 - What does Industry need to do to enable each of the seven pre-conditions to emerge?;
 - What does DPI Fisheries need to do to enable each pre-condition to emerge?; and
 - What needs to be done with respect to each pre-condition, to connect Industry and DPI Fisheries?

The seven pre-conditions and the design criteria from the draft policy on co-management were used as context to assist workshop participants to develop the activities/projects.

Day 2 required participants to take the output from Day 1 and refer to the systems map to identify the feedback loops and other nodes on the map that hinder and/or neutralise the journey towards enabling the pre-conditions to arise. The loops were presented to enable participants to gain a deeper understanding of the dynamics of the Industry and how the factors and the relationships between them shaped behaviours. Participants explored the impacts of some of these loops on how business is being conducted in the NFTS. They explored the dynamics that underpinned the:

- dysfunctional relationships between Industry and DPI Fisheries;
- lack of trust between participants from the NFTS present at the workshop and between representatives from DPI Fisheries present at the workshop;
- poor communication processes between the NFTS and DPI Fisheries;
- extent of unresolved stress that resided within the bodies of members from the NFTS that were present at the workshop;
- role the regulatory system was playing in limiting business development; and
- importance of collecting, sense-making and disseminating information.

The exploration of these loops enabled participants to share their experiences and gain a deeper sense of connection about the state of the various dysfunctional relationships that had solidified in the sector. Various behavioural patterns would appear such as “going directly to the Minister”, verbal abuse, anger and not participating in forums. During the workshop participants from the NFTS felt a relative sense of comfort and safety to express their concerns. When they relaxed, they became aware of the unconscious tensions held in their bodies, and to some extent, were able to release it. In doing so, these people were able to be more present in the session.

An increased sense of “presence” enabled all participants at the workshop to connect with themselves and others. The group was at the initial stage of attuning to each other. This was the beginning of the building blocks of developing trust. The result of this work was the awakening to the realisation that change was required.

Through this process participants were in a more productive and open presence to develop a suite of interventions that they believed would assist the culture to move more in the direction of collaborative management and less in the direction of a centralised, adversarial approach.

3.5.3. Observations of behavioural patterns from the workshop

- Participants continued to be highly engaged in the process and were collaborating to explore the meaning of the insights that were gained from the SA trip.
- The expression of frustration, issues and blaming became less of a focus of the session and participants from the NFTS integrated their frustration and issues into their conversations rather than holding up the workshop to express another set of issues.
- A lot of the initiatives that the NFTS and DPI Fisheries had identified to operationalise the pre-conditions had been formulated and expressed in a highly generalised way. They were not able to be specific about the initiatives about what the:
 - NFTS has to do;
 - DPI Fisheries has to do;
 - NFTS and DPI Fisheries have to do together; and
 - NFTS's and DPI Fisheries' development needs to operationalise the pre-conditions for change and participate on the journey.

This indicated the possibility that neither group knew **how to enable** the change to happen given the current capabilities that reside within each group and the nature of the culture of each group and the nature of the culture of the relationship between them. This begins to demonstrate the limits of a way forward if DPI Fisheries and Industry don't have a methodology to enable change within low trust, poor communication-based culture where there is no strong industry leadership. DPI Fisheries needs to demonstrate change by showing signs that will signal to Industry that "now it's different" to the past. This can provide Industry with the confidence to overcome their distrust and emerge new leaders to start a collaborative relationship of how to enable change. As has been demonstrated in the SA fisheries, the pathway towards co-management would be clearer given that the Industry leadership had been more evolved. While this was not the only influencing factor, it was a critically important modulator of behaviour to enable the emergence of co-management of the marine resources.

- Members from DPI Fisheries were participating in the workshops with more focused listening, enhanced responsiveness to the issues that were raised by participants from the NFTS and clarity of questioning for better understanding. There was an emerging dynamic of realisation and understanding between what Industry needed and what DPI Fisheries was trying to achieve. Participants from DPI were outcome focussed while participants from the NFTS were seeking acknowledgement of their past grievances. This was a mismatch in temporal perspective (DPI focus on the present and future; NFTS focussed on the past) and has been a container for holding a lot of the conflict, non-alignment and inability to develop a constructive relationship. This and other dynamics about relationships arise from each groups' respective cultures in which they work.
- The group was joined by the Managing Director of the Fisheries Research Development Corporation (FRDC) whose presence and contributions were invaluable in moving the group along with reference to some topics and conversations. They were in a position whereby they were not bound by the same expectations and accountability that were expected of members from DPI Fisheries. Their presence also gave a certain sense of credibility to the process.

3.5.4. What was achieved at the workshop

- The on-going conversations and work tasks during the workshop enabled all participants to deepen the affinity and sense of reality between them.
- Relative to previous workshops, the group demonstrated an increased level of collaboration and all participants worked with greater intent and energy.
- Participants from the NFTS and DPI Fisheries realised for the first time, the scale and scope of the change and development work that is required to begin and embark on a collaborative approach for management of the fishery.
- In the case of co-management in SA, Industry was instrumental in its leadership role to develop a collaborative approach to the management of the fishery. In the case of NFTS and due to its historical legacy this is unlikely to happen without a change in dynamics in the trust between the Government and the Industry- the starting point for the NFTS is different to other jurisdictions because there is no strong Industry leadership present. Because the Industry starts from a place of distrust, DPI Fisheries needs to lead the desired changes by demonstrating concrete results that re-establish trust so that the intention towards collaboration and co-management can be believed by members from the Industry, thereby supporting the emergence of new Industry leaders.

3.6. Workshop 4- 18, 19 & 20 September 2023

3.6.1. Purpose for the workshop

The original purpose for this workshop was stated as:

Design and facilitate a 2-day workshop to work with the project team to take the broad level activities/projects defined in step 5 and provide for each, details on how each activity will be implemented.

- Details of activity type, resources required, the sequencing and order of each activity and period of delivery will be developed.
- Develop a plan of legacy/support through meetings with stakeholders to identify potential funding sources (eg DPI Fisheries agencies, State Commercial Fishing bodies, FRDC).

The results of the previous workshop however led to the following revised workshop purpose:

- DPI Fisheries to determine what they believe are the requirements that will support co-management.
- Participants to refine the key pre-conditions for enabling a productive Industry culture and to identify what is required to be actioned that assists to enable such a culture to emerge.
- Participants to test the resilience of the actions based on the insights gained from the systems map to determine what prevents the desired culture to emerge and develop additional actions that will support the emergent culture.

The purpose of this workshop was to provide additional detail and structure to the projects/activities that were designed in workshop 3. However, a more important milestone was achieved- the development of additional projects/activities that were based on the co-management continuum (Neville, 2008).

3.6.2. Approach for facilitating the workshop

18 October 2023- 12.00pm-5.00pm

The focus of this session was to identify additional projects/activities that were based on the co-management continuum as referenced in the Neville report (2008). The framework highlights how the nature of management of a fishery can be modelled on a continuum matched against involvement from the NFTS and DPI Fisheries. This framework was used to recognise that transition phases of: centralised to consultative, consultative to collaborative and collaborative to delegated as part of the journey to achieve co-management. Participants found that these phases were particularly useful to frame the design of projects/activities. The minimum conditions that must be met to ensure that each transition phase is achieved were also included to assist with the framing of the projects/activities. The minimum conditions were sourced from the NSW Government Draft Policy for the Co-management of Fisheries. (December, 2020).

The resultant framework provided participants with a practical pathway for developing projects/activities based on the current starting position of centralised to consultative phase. These project/activities are shown in see Appendix E.

19 October 2023- 9.00-5.00pm

The majority of this day focused on working with participants to continue to design the activities/projects in response to the framework presented on the previous day. Following the structure of the model, participants developed the activities/projects required to fulfil the conditions for moving from:

- centralised to consultative management; and
- consultative to a collaborative management.

Given the current situation in the relationship between the participants from the NFTS and DPI Fisheries, one participant indicated that it was not possible for them to envisage completing the collaborative-to-delegated phase of the framework as it was conceptually and pragmatically too far away from the current situation.

In retrospect, the original milestone of developing the additional details to the projects/activities and develop a plan of legacy/support through meetings with stakeholders to identify potential funding sources as initially proposed, is best left to the implementation team to determine how they would implement the projects/activities designed in this project.

The latter part of this day was committed to the DPI Fisheries Deputy Director General (DDG) presenting his support and vision for the project. Prior to this, there was a formal announcement about the NSW Government's commitment to co-management during workshop 3 by one of the DPI Fisheries participants. The draft NSW Government Draft Policy for the Co-management of Fisheries was tabled as an indicator that DPI Fisheries was serious about co-management. However due to the Industry culture of mistrust in government authorities, this was not seen by participants from the NSW NFTS as a serious commitment to co-management, but as another piece of evidence that Government would tell Industry what to do, not work with Industry. Based on these responses we perceive that the journey towards a collaborative approach for co-management is still in its infancy with DPI Fisheries still operating from a centralised model.

During the presentation the DDG provided some historical context on the relationships between the Industry and DPI Fisheries in developing a co-management approach of the marine resources. One participant from the NFTS interpreted these comments as derogatory and inflammatory. After the DDG's presentation, the group reflected on the presentation with one Industry participant profoundly upset by the presentation. At this stage the workshop prematurely closed with that participant from the sector stating that they would not return to the workshop the next day.

That same evening DPI Fisheries had provided a media release about a regulatory issue. The issue was interpreted by one Industry participant who was unimpacted by this amendment, as a major issue "with no consultation". This provided further evidence to reinforce their distrust of DPI Fisheries. Consultation had in fact been conducted with fishers that were impacted by this regulatory issue.

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The opening session of this day heralded an announcement from the remaining participant from the NFTS who stated that they were not going to participate in the meeting and were leaving. This person believed that they were not consulted by DPI Fisheries about the regulatory change and this behaviour was characteristic of past dominating behaviours demonstrated by DPI Fisheries Management. They announced that the trust that was being built throughout the workshops was now lost.

The session was focussed on retaining the remaining participant from the NFTS to determine what they believe would be required to restore the trust. The participant stated that if they could see evidence that specific issues are on track to be achieved, he would have "a room full of people participating in this project".

The strong emotional responses of participants from the NFTS at each workshop highlighted the intensity and scale of negative emotions about their experiences in operating a fish harvesting business. As the relationships between the NFTS and DPI Fisheries began to change, the emotions and dysfunctional responses subsided. However as was demonstrated in workshop 4, it only required an appropriate stimulus to raise the emotional responses. Because people are not aware of their body sensations, they do not know how to manage their corresponding emotional responses resulting with poor communication and increasing lack of trust.

The transition from centralised to the consultative phase will require building capacity and capability within both the NFTS and DPI Fisheries to manage and respond to a range of human behavioural issues. Each group have capability issues that require addressing this first phase of the journey towards co-management. This can be achieved through a coaching and mentoring program that will assist participants from the NFTS and DPI Fisheries to participate in transformative change. It is this type of change that will enable the NFTS and more broadly, the NSW fishing industry to be adaptive and responsive in a volatile, uncertain, complex and ambiguous environment.

Changes to the nature of the culture within DPI Fisheries and the culture within the NFTS will determine the speed and scale of the change in the nature of the management of the marine resources. These cultures are based on past experiences and influence current and future behaviours. The emergence of collaborative work practices towards co-management will happen through a co-evolutionary process in and between both cultures. Capability

development will play an important role to enable the co-evolutionary process to unfold over time.

3.6.3. Observations of behavioural patterns from the workshop

- Participants worked with high energy to develop activities that would support the transition from centralised to consultative and on to collaborative and co-management of the fishery.
- Some participants were challenged by the envisioning activities that would enable co-management to arise from the current conditions.
- One participant from the NFTS commented to us that they began to develop a growing sense of trust after the DDG DPI Fisheries presentation.
- The presentation by the DDG DPI Fisheries presentation triggered an emotional response for some participants from the NFTS based on inherent unresolved emotional trauma from previous experiences.
- Some participants from the NFTS found it difficult to move past historical emotional trauma from Government decisions and be able to reflect on what they can do differently to enable the emergence of a new culture. The past orientation was a barrier in being able to envision new possibilities.
- A participant from the NFTS with a perspective and story about trust-worthiness of DPI Fisheries, quickly changed the perspectives of the other participants from the NSW NFTS. This dynamic demonstrated the underlying power of inherent stress disorders within people from the NFTS and their capability to undermine cultural change efforts despite the overall good intentions. This dynamic highlights the need to consider the influence of cultural stress disorders on how events and communications are interpreted/misinterpreted by Industry. One participant from DPI Fisheries was in shock to observe that such a simple event could cascade into such behaviour given that the regulatory change would provide positive outcomes for the Industry. The requested change by the Industry was responded to quickly by DPI Fisheries after consultation with Industry members.
- DPI Fisheries management needs to become more aware of how certain communication and consultation practices trigger some people from the NFTS emotional reactivity based on historical conditioning. This provides a useful example of how the current culture shapes capabilities and behaviours. Additionally, Industry is unaware of how their communication style and content issues reduces their influence with DPI (eg continually rehashing past issues).
- As representatives from the NFTS departed the room, DPI Fisheries management had asked questions to get an understanding about the NFTS's concerns about the current situation. One NFTS representative remained and through the conversation finally felt that they had someone from DPI Fisheries management finally listening to what they had to say. That experience highlighted to DPI Fisheries management the scale and scope of the gaps in the relationships.

3.6.4. What was achieved at the workshop

- A more detailed and completed list of activities and projects was developed to embark on the journey of change.
- A list of high priority issues was suggested by one participant from the NFTS that once addressed, would provide a strong foundation for building trust.

- Participants from DPI Fisheries gained a deeper appreciation of the impact of their communication and consultation processes on their relationships with participants from the NFTS.

3.6.5. What was learnt from this workshop?

- All participants at the workshop realised the challenge of the scale and scope of the capacity and capability required by the NFTS and DPI Fisheries that will be required to achieve the conditions for effective operation at each phase and to transition from one phase in the model to the next.
- That people from DPI Fisheries management and the NFTS have a number of development needs that will need to be addressed concurrently to enable the satisfaction of pre-conditions. This would lay the foundations to support the emergence of a new culture towards collaborative management.
- That DPI Fisheries management's communication and consultation processes are a risk to the change process and need to be urgently addressed.
- That DPI Fisheries resourcing for this project needs to be upgraded so that it can lead the cultural change program for the NFTS where there is limited leadership/strategic thinking by fishers.
- The role of historical emotional trauma that is residing within some members of the NFTS is significant and needs to be taken into account by the leaders of both DPI Fisheries and the NFTS in the design of a cultural change process. Most of the initiatives that need to be started will need to incorporate a professional healing process.
- Leaders from the NFTS need to identify suitable people to collaborate with DPI Fisheries management to lead the cultural change program. Without the people with the appropriate skills, beliefs and values, the journey to co-management will be stalled.
- Based on the journey towards co-management in the SA fisheries, the journey towards co-management in NSW would be better served working with another fishery that had some of the elements of the seven pre-conditions partially in place. A critically important pre-condition is the presence of strong and informed leadership present within the fishery to support the cultural change process.

4. What are the recommendations for advancing a collaborative approach for management of the fishery?

Based on the learning from the workshops and the fisheries co-managed in SA, we identified four critical categories that frame a suite of recommendations and pave a direction to establish a collaborative culture. We have also identified and outlined a suite of meta-patterns that have arisen from the facilitation of this project. The meta-patterns shown in Appendix F provide the evidence and rationale for the categories presented in this section.

4.1. Healing emotional trauma within the NFTS and DPI Fisheries

Specific to the NFTS fishery, it is important to recognise the role of its history of emotional trauma from the past relationship with DPI Fisheries. The role of emotional trauma limited the capability of participants from the NFTS to fully explore with participants from DPI Fisheries (who were not involved with this history and hence did not have the context to respond accordingly) developing a collaborative approach for management of the fishery. While participants from DPI Fisheries provided the opportunity for a fresh start to explore new possibilities, they could not do so without first meeting the needs of the participants from the NFTS for reconciling the past.

Over time, the emotions that have arisen from Industry's experiences have been stored in people's bodies. These emotions are all in the unconscious realm until they are triggered by an experience. A critical initial condition for collaboration will require leadership from the NFTS and DPI Fisheries to learn new skills and facilitate support to assist people to heal as a result of emotional trauma from past experiences. Some of the participants response during workshops to trigger-comments demonstrated the deep embodiment of emotional trauma that is held in peoples' bodies.

Tension, or even mere alternative views or suggestions will be perceived as a threat activating body-wide, danger-detecting neuroceptive networks that initiate a response that is fight, flight, freeze, fold, or move into an appeasing posture. These are unconscious responses that can jeopardise the best intentions to resolve conflict, present a perspective, or negotiate a new approach to respond to issues. Such responses are not constructive and take away from people's capacity and capability to centre themselves, to be grounded in the moment to recognise these feelings and be able to include and transcend them so that they are in a state that enables them to be present.

When not "being present" at a workshop/meeting, people will find it difficult to listen to others, develop empathy and connection so that they can have compassion for others. The lack of centredness and connection leaves people vulnerable to a downward cycle of continuous venting of anger and frustration, feelings of always being under threat, inappropriate thoughts and aggressive ways of being. This will happen for all participants concerned. It is therefore critical that people learn the skill of managing their embodied response to trigger-comments and other experiences so as to remain centred and present. This will enable them to access the wisdom of their unconscious mind to develop functional relationships that support a cultural change program for a new approach for managing the fisheries.

While both the NFTS and DPI Fisheries develop people to embody the leadership role, there is also the need to help these leaders and others within the sector and DPI Fisheries to

undertake healing so that they can build their sense of presence in a volatile environment. To support this aim, members from both the NFTS and DPI Fisheries are given the opportunity to individually and collectively explore healing processes around previously experienced trauma. When people's bodies are prepared by being centred, and present, they are in a greater psychophysiological coherence that is associated with better mental performance. (Blake, 2018)

The healing of emotional trauma is an important first step that needs to be resolved so as to facilitate the willingness for people to collaborate and engage in co-management processes. There is a conflict in how participants at the workshop from DPI Fisheries and NFTS had different perspectives about how they perceive and process time. This led to non-alignment, mistrust, and unresolvable tensions in the relationships between them. We had noticed that the:

- decision-makers at the workshops representing DPI Fisheries were focussed on the present time and the achievement of establishing and implementing co-management practices for managing marine resources; while
- participants from the NFTS who were present at the workshops were focussed on the past events and issues and how these events and issues shaped the nature of the conversations in the present.

To enable progress, both parties need to become aware of the difference they have about their perspective on time and resolve this discrepancy to have productive and collaborative conversations.

The following recommendations arise from this category:

- Both parties need to acknowledge the importance and impact of the discrepancy in their perspective of time and to decide if they want to resolve it in order to move towards greater collaboration for co-management;
- Both parties agree on the urgency of emotional trauma and determine when they will begin the process of reconciliation, including that of the conflict in their perspective about time;
- Both parties need to develop a series of dedicated conversations (formal and informal) to resolve emotional trauma;
- Both parties may consider 3rd party mediation to heal the emotional trauma and resolve differences about perspective on time;
- Both parties co-develop key milestones that represent success in progress to heal the emotional trauma that demonstrates change from the past.
- Both parties find examples from other sectors that had a similar problem and use that to realise that the situation can be resolved.

4.2. Leadership from the NFTS

The NSW fishing industry has a volatile, uncertain and complex environment with many stakeholders working to achieve their particular agenda. This is a highly demanding and challenging environment for leadership and management of an industry sector. There has been considerable effort invested to bring representatives from the NFTS together to respond to a range of sector operational issues. However, differences of opinion and internal politics has made the emergence of leaders to represent this fishery difficult. The journey towards collaboration for co-management requires members of the NFTS to identify a leader that will

unify the sector. These leader(s) must be willing to support members from the sector on a cultural change program with DPI Fisheries to embark on the journey of collaborative management of the natural resource. Equally, members within the industry need to respect and work with the leaders to achieve their intended outcomes. These are very clear and important lessons from the SA fishing industry. The presence of a leader in the context of the fishing sector, enables them to work intimately with the fishers:

- to develop and provide an Industry-owned narrative that describes a future direction for the Industry and thereby provides context and explains the reasons for change;
- assisting the members of the NFTS to translate key messages about collaborative work practices and co-management that make meaning for them at a personal level;
- identifying pressure and pain points about change and how they can be managed. Many of these pressure and pain points are identified and explained in the feedback loops presented in Appendix C;
- to explore the tribal issues that shape the culture of the sector and how to work through the differences to support the change program;
- to work through issues of identity as the program of change will require people not just to change practices but to also change beliefs about themselves, their sector and how they work;
- know how to respond to and work through the transition phase between the current ways and the new ways of thinking and working;
- to determine what support they may require, (including mental health and emotional) that will enable them to undertake the transition; and
- to monitor the progress of the change program for emerging patterns of behaviour. This is a critical intelligence role that provides insights and evidence to amplify and scale the change program or make appropriate changes so that the sector moves more in the desired direction and less in the current direction.

The following recommendations emerge from this category:

- Members of the NFTS need to acknowledge that they are not aligned and need to develop an intent to emerge the leadership that will facilitate alignment between members;
- Members of the NFTS be formally exposed to and learn from benchmarks in SA, in the Commonwealth and other jurisdictions to acquire proven and practical references for aligning and unifying the Industry for the journey on co-management. The possibility of a Government-appointed change agent to support the emergence of Industry leaders and catalyse the change process may need to be considered;
- The NFTS develop an industry body that is designed and structured to respond on behalf of all members, to the business issues specifically relevant to the interests of the sector. This will be a high priority for the NFTS sector. This may be a formal/informal body as an Industry organising structure;
- Members need to be coached and mentored in how to self-organise themselves as an Industry as opposed to being represented;
- Members will need to be coached in how to draw learning from other fisheries in how to organise themselves for collaboration for co-management;
- To lead the sector, the identified leaders need to be developed through training, coaching and mentoring;
- The NFTS needs to identify and support a range of conversation forums to facilitate the change process;

- Industry needs to acknowledge that they need to enable leadership to emerge and lead the change process with DPI Fisheries; and
- That the NFTS membership recruit people to lead the sector who have experience in the process of developing a fishery to the stage of and implementation of co-management with the government.

4.3. Leadership from DPI Fisheries

As with the NFTS, there is a strong need for leadership development from DPI Fisheries at all levels to encourage and enable the cultural changes required within DPI Fisheries and between it and the NFTS. In the case of SA fisheries, leadership for change was envisioned and driven by the Industry. For the NFTS, leadership for the change to enable the emergence of co-management of the natural resources may need to be initially facilitated by DPI Fisheries in collaboration with the NFTS. This will require senior DPI Fisheries leaders to develop a range of projects/initiatives in collaboration with members from the NFTS that will prompt shifts in both how DPI Fisheries think about themselves, their role and work practices as well as creating a perturbation that will disrupt the NFTS sector. Key areas of focus for DPI will be to:

- Lead the change process in an environment of mistrust. It will require nurturing relations, building the infrastructure to enable effective communication, developing shared meaning and rapport.
- Develop, through collaboration and not consultation, a shared narrative with the NFTS that provides a shared direction for what it means to undertake a change in approach to managing the natural resource.
- Determine for DPI Fisheries what it means and looks like to undertake a change in how industry is engaged when managing the natural resource.
- Develop new ways of thinking and working that will support the change program and monitor how those new ways are working/not working.
- Assisting staff in the transition period between current and new ways of working; and
- Enable skilled people with the time, funding, and resources to fulfil the leadership role.

The following recommendations emerge from this category:

- DPI Fisheries needs to modify their thinking and expectations of how to implement co-management in a sector like NFTS where the contextual conditions can be very different to other jurisdictions. DPI Fisheries will have to learn to lead from a context that is characterised by (unlike SA): no sector-specific Industry leadership, cultural trauma, high levels of mistrust, and limited funds.
- Leaders from DPI Fisheries need to recognise and embrace that the move towards collaboration for co-management is initially led by them and is not just an initiative to be managed and implemented while expecting the NFTS to get itself organised on its own merits;
- Leaders are coached and mentored by external professionals to lead and facilitate the collaborative processes for co-management starting from a cultural environment of mistrust and non-alignment within NFTS and between the NFTS and DPI Fisheries;
- Leaders are coached and mentored by external professionals to develop context-specific skills for communication especially in an environment characterised by cultural trauma and high levels of mistrust;

- Leaders are coached and mentored by external professionals in how to lead change and transformation in a context where there are multiple neutralising factors and dynamics rather than implementing a linear set of change initiatives;
- Leaders are coached and mentored by external professionals in how to recognise and stop tasks that they are doing that re-trigger trauma and reactivity in some influential NFTS members and be able to resolve the dynamic when it happens;
- Leaders within DPI Fisheries are coached and mentored by external professionals to expand their understanding to how communication works and does not work in the context of leading cultural change; and
- The possibility of a Government appointed change agent to emerge Industry leaders and catalyse the change process.

4.4. Developing capability for DPI Fisheries and the NFTS to co-lead and manifest the implementation of the change program- managing and facilitating the interface between DPI Fisheries and the NFTS

In the early stages of the change program, DPI Fisheries and the NFTS will need to focus on foundational areas such as:

- Healing trauma that has arisen from regulatory change and relationships between members of DPI Fisheries and the NFTS;
- Developing leaders within DPI Fisheries and within the NFTS on a journey of collaboration towards co-management.

While working in each of these areas will lead to improvements, extraordinary, generative change will only be achieved when attention and capability is given to the interface between DPI Fisheries and the NFTS.

Decision-makers from both DPI Fisheries and the NFTS need to address the capabilities that are missing to ensure that both parties can support and develop how they need to interact with each other. Currently, neither side has invested much time to review their capabilities for interaction. Both groups had no conscious awareness about the dynamics of interaction between them. The presentation of examples and linking it back to their lived experiences can provide evidence and a strong motivator for the need to pay attention to the issue of interface. The issue of interface between the two groups currently supports a range of unintegrated activities that are supported by different capabilities. These capabilities will enable *the chance* to support a change program to develop and evolve so that collaboration emerges to support co-management.

People chosen from both the NFTS and DPI Fisheries to lead the change program will need professional assistance to: enhance their ability to coach and mentor others, develop awareness of self and identity states, enhance communication skills, be able to take a systems perspective, lead self and others and facilitate meetings and conversations to implement the activities/projects outlined in this report. Enhanced capabilities in these areas are critical to enable both parties to implement the activities/projects outlined in this report to support the emergence of collaborative fisheries management practices.

The advancement to co-management requires support by external facilitators in cultural change to assist both members of the NFTS and DPI Fisheries management to continue their work on building relationships and trust that underpins all of this work.

Decision-makers from both DPI Fisheries and NFTS need to be aware of the necessity to become familiar with the need for enhancing how interactions between people are facilitated. We suggest the following five capabilities are critical to support the change program towards collaboration:

1. Industry healing from trauma

There were a number of instances throughout the workshops where the conversation triggered inherent trauma held within participants from the NFTS. The behavioural response from some participants from the NFTS would sometimes challenge the quality of the conversations and the interactions between the Industry and DPI Fisheries. If it is DPI Fisheries intention to move to a more collaborative, co-management approach, then the issue of Industry trauma becomes a shared concern.

A critical capability, therefore, will be for Industry and DPI Fisheries to work together to heal this trauma and so enhance the interactions between each other, thereby fostering enhanced communications, conversation processes, improving the culture for collaboration, and developing the foundations for adaptability and learning. To do this we recommend that:

- Individual members from DPI Fisheries go out and talk with Industry opinion leaders, developing one-on-one relationships and acknowledging the challenges of the past without blame;
- Once these relationships have been developed then it is time to develop a series of workshops that will be used to heal the relationships between groups. These workshops need to be externally facilitated. Participants from DPI Fisheries and the NFTS need to feel safe to come to the workshops;
- Representatives from NFTS, DPI Fisheries, and other stakeholders and networks co-develop a suite of symbols, signals, and behaviours as evidence that the relationship is changing.

2. Formal and informal platforms and channels for effective communication and Government/Industry relations

Effective means of communication are foundational to any change process and it is one of the most neglected areas of change management. The test of effective communication is based on the extent to which the intended results/impacts required from those communicating with each other are achieved from the communication process. Workshops throughout this project highlighted a high degree of miscommunication and misinterpretation of communications by both sides.

To enable members from the NFTS and DPI Fisheries to embark on their journey towards collaboration for co-management, we recommend that:

- DPI Fisheries and Industry leaders/representatives work together to establish informal, one-on-one conversations to establish formal platforms that enable them to work together;
- DPI Fisheries and the NFTS work together to determine what platforms and channels are effective. This provides the basis for amplifying what works and finding means to remedy what is not working to improve the situation; and

- DPI Fisheries and the NFTS ensure that the formal and informal platforms and channels are integrated into all decision processes impacting Industry. Equally, Industry needs to integrate these platforms and channels into their communication processes to inform and align with DPI Fisheries about its ability to comply with regulations and government policy outcomes.

3. Having the systems that ensure communications are effective

In the context of effective communications there is a difference between activities, processes and systems. An activity would be sending an email or making a phone call. They are tick-the-box, one-step tasks. A process is a series/sequence of activities designed to achieve a specific output. For example- a consultation process or a dispute resolution or planning process. A system is an inter-related set of processes that work together to attain an outcome.

Communications do not necessarily just happen. They are supported by infrastructure, processes and routines that assist people to interact effectively with each other. As humans, we have processes that ensure that the communication is happening and is being processed by the sender and the receiver. Throughout the workshops, it was evidenced that communication was not always effective between the parties because there were no effective systems that would enable processes to be enacted and completed. By this we mean that a system comprises of a number of inter-related processes and activities that together achieve a functional/desired outcome.

It is possible to have highly effective processes/activities that achieve unintended results. Each of the processes/activities can have an output, that combined would be problematic and ineffective.

We have observed patterns of behaviour that reflect a similar belief held by participants from DPI Fisheries and the NFTS that can be stated as: “by doing process/activity XYZ we have communicated”. For example, DPI Fisheries would correctly state that they have conducted consultations with members from the NFTS- an activity that DPI Fisheries would classify as “communication”. Equally members from the NFTS would also correctly say that they had spoken with the Minister- again, the NFTS would claim that they have “communicated”. Implementing a process and/or an activity will not necessarily realise effective communication.

To enable effective communications systems to emerge we recommend that members from both DPI Fisheries and the NFTS:

- Co-develop and establish effective informal communication channels as outlined above;
- Conduct design workshops (problem analysis and solution design) to:
 - Determine the current communication problems;
 - Know the communication system outcome that is to be achieved;
 - Assess the current state of the situation -
 - Is the outcome being achieved?
 - What is it about processes that are not operating effectively or are missing that does not facilitate the desired outcome?

- What is it about the inter-relationships between the processes that are/are not effective?
- How do we improve the inter-relationships between the following communication processes
 - Information flows?
 - Accountability- schedules and routines?
 - Consultation processes that all contribute to achieve the systemic outcomes?

4. Aligned rules of engagement for shared understanding and decision-making

Experiences throughout the workshops highlighted the differences in expectations of what constitutes proper engagement for communication and information flow. We found that each group's style, process, chain of communication, channel and media did not always lead to effective communication and at times, created blockages to advancing meaning making and shared understanding.

To enable both groups to enhance their communication interface with each other we recommend the following:

- Establish a process for periodic review of the rules of engagement for communication, consultation, alignment and decision-making to determine what is working and not working; and
- Conduct a series of design workshops to update rules of engagement. This will require DPI Fisheries and the NFTS to explore with each other what each party considers as an effective set of rules for engagement.

5. Adaptability and learning for evolving and maturing a relationship

Collectively, humans adapt and learn through conversations. However not all conversations are the same. Some lead to conflict, uncertainty and ambiguity. Therefore, to enhance conversations requires frameworks and processes that will guide the conversations. For example, we experienced a strong positive response from participants during the workshops as they explored contentious issues through the systems mapping process. Participants were also highly responsive to various models and frameworks that were presented at the workshops. Such an approach facilitated meaningful conversations and led to major insights and shared understanding about a range of issues.

There are processes that help members from DPI and the NFTS to have conversations that enable them to collectively learn, adapt, evolve, and transform themselves. To enable these conversations to happen requires the parties to learn and use a range of frameworks. To do this we recommend that:

- Meetings and workshops are facilitated by a neutral third party working to effective conversation processes for sensemaking, shared understanding, conflict resolution and collaborative decision-making. Different workshop outcomes require different conversation processes and conversation tools. Eg. A sensemaking workshop will require systems mapping processes and dialogue skills to uncover different perspectives. Conflict resolution is more of

a mediation process and decision-making workshops will require negotiation skills and solution generation skills.

- The parties develop an induction program for new members that enter the conversation who are not aware of the rules of engagement nor the models and processes in use. This will require a capture of the learning to support the capacity to adapt.
- The parties develop a set of markers that demonstrate their progress for adaptation and learning as they develop their relationship with each other. These markers will serve as proof points that demonstrate that their relationship is changing.

5. What is the alignment between the results from the workshop and the stated performance measures (PM) for the project?

The following PM were designed at the beginning of the project to inform the efficacy of the previously outlined methodology. In this section we provide an assessment of the extent to which the approach taken and response from stakeholders (actual results) aligns with the desired results that were to be achieved.

Performance measure 1:

Number of businesses from the NSW Northern Fishing Trawl participate in this project as measured by: the number of businesses that participate throughout the whole project, the number of businesses that participate in a sub-project, the number of businesses that participate in a sub-project and then continue to participate in other sub-projects.

Participation by members of the NFTS is critical for the success of this project as it provides the means:

- to develop peoples' skills for leadership and change. This provides the basis for succession planning, enabling people to continue this work into the future to help the sector change and adapt in response to emerging issues. It also enables people to develop skills now to support the sector as a whole to engage in the change program;
- to develop a narrative for change that is disseminated throughout the sector and Industry. This provides a context for the change program and supports a momentum for change; and
- to demonstrate to other members of the Industry how change can be beneficial for business success.

This PM assumed that there were members within the NFTS who were willing or could be supported to participate in this project and that processes would lead to successful experiences that would engender additional commitment and further participation from others within the Industry. It became evident that this was not the case. After many discussions, four people were willing to participate in the project. However, their willingness to participate was hesitant based on the nature of previous experiences with DPI Fisheries. Additionally, the NFTS was not aligned within itself and therefore the four participants did not necessarily represent a unified Industry view. Despite their experiences in previous project workshops, the four members continued to participate in all of the workshops.

As previously mentioned in earlier parts of the report, the processes designed for engagement during the workshops and outside those forums were enabling the four participants from the Industry and members from DPI Fisheries to engage in meaningful ways to begin the journey of building trust and working relationships. At workshop 4 the journey was stalled due to two incidents that each led to separate strong reactions from two separate participants from the NFTS. However, there was enough understanding between the NFTS and DPI Fisheries that this work needs to continue and that if DPI Fisheries can demonstrate to the NFTS progress towards addressing critical issues, there will be a greater representation of members from the sector in future workshops.

Performance measure 2:

Fishers from within the sector have a positive narrative about the future of their business and their relationship with DPI Fisheries/fisheries management as measured by the extent to which their narratives about: trusting relationships between themselves and government, joint projects between themselves and government have led to improvements in their business performance; fishing activities into the future reflect confidence about catch quotas; their relationships with government has enabled sharing of information that supports co-management and business performance through availability of fish.

The aim of this project and the workshops was to provide the facilitated space for participants from DPI Fisheries and the NFTS to develop effective ways of communicating with each other to enable rapport and feelings of connectedness. As this began to develop, participants from both groups were beginning to understand each other's context and circumstances, developing a deeper sense of each other's worlds and experiences. This in turn, deepened the rapport and relationship between both groups thus supporting a reinforcing feedback loop enabling trust to develop and grow. Unless there was a specific event/issue/comment that would trigger within participants a negative/hostile narrative about their business and their relationships with DPI Fisheries, the intensity, voracity, and frequency of negative narrative would decrease as the relationships between the NFTS and DPI Fisheries began to improve.

Periodically, the narrative would improve and both groups would begin to talk about a direction that they could work towards into the future. This was especially the case during the last half of workshop 3 and the first half of workshop 4 where participants from both groups worked together to develop a set of activities that would support the journey towards a collaborative approach to the management of the resources. The current starting position of the relationship between both groups and what is required to start and progress the journey towards collaborative approaches to co-management demonstrated to participants the large challenges ahead. This sense of challenge led to narratives that were more embryonic in nature about the future of fishing businesses, the quality of relationships and the ways of operating through a collaborative approach towards co-management. By the end of the fourth workshop, participants from both groups were still working to make sense of what they had learned during the four workshops and to imagine and describe a direction for the future.

Additional workshops would be required to develop richer and coherent narratives of the future as participants continued to engage in these conversations as well as participating in the implementation of the activities.

Performance measure 3:

Government/fisheries management staff have a positive narrative about the sector and believe they are effective in their jobs as a result of a new working relationship with the industry as a whole, as measured by the extent to which both government and fisheries management provide case studies: about behavioural changes that reflect a respectful and collaborative working relationships; that reflect that they are operating in a safe and welcoming work environment; that reflect fisher's confidence in improving/developing/investing in their businesses; reflect collaborative problem solving for the benefit of the

sector and natural resources; and increased numbers of fishers responding to EOI for working groups

One of the key aims of this project was to begin the work to achieve this PM so that participants have the experiences of collaborative working relationships that will reinforce behavioural change throughout NFTS into the broader industry.

The project team had developed a number of activities of differing complexity to be realised in the short, medium and long-term future to assist in developing the relationship between Industry and DPI Fisheries. The next step is to implement these activities at a basic level to encourage the building of trust and thereby accelerate the achievement of this PM.

Performance measure 4:

Observations that there is an adoption and use of new language by stakeholders in other sectors of the NSW fishing and aquatic resources industry request similar intervention as measured by: Government receiving requests (currently zero requests) to participate in a similar program; the number of other sectors approaching their professional representative groups (currently zero requests) to develop a similar program; there is interest from other States

The activities to achieve this PM have been defined in this project. The PM itself will be achieved once these activities have been implemented.

6. Summary

6.1. Factors that require change to maintain an economically, social and ecologically sustainable industry

There exists a range of factors that are shaping the Australian, the NSW fishing industry and the NSW NTFS in particular that challenge the ecological sustainability of the marine resources as well as the economic sustainability of the businesses that harvest the resources from them. The approach taken by Government within the context of resource management, has been more likely to make difficult decisions based on balancing the demands of a range of stakeholders (eg environmental groups, energy companies, recreational fishers) and science. This has at times negatively impacted the Industry. In some cases, businesses have not been able to adapt to the changes and have ceased to exist.

The sustainable management of marine resources for current and future generations has reached an increased level of complexity in managing different stakeholder perspectives and expectations. Consequently, continuation of current ways of thinking and working may not support a sustainable wild caught industry into the future. Like any other industry, change is required to reflect the current and emerging context of the business environment. The NSW Seafood Council, the Professional Fisher's Association and DPI Fisheries have realised that an alternate approach to managing the resources is urgently required to ensure the sustainability of wild caught species and the businesses that harvest the fish from them.

6.2. What type of change needs to be carefully considered

There is a strong recognition by The NSW Seafood Council, the Professional Fisher's Association and NSW DPI Fisheries for fishing businesses to evolve their business models and ways of working and for DPI Fisheries to work with industry to embark on the journey of co-management of the marine resources. These key initiatives are of critical importance to ensure the sustainability of the industry, the fish stock and ecosystem services. One class of change initiatives involves the design of projects that are defined within the current ways of thinking and working. The implementation of such projects will lead to continuous improvement and enhancement of what is currently in practice. A focus on just this approach to change will:

- temporarily deal with symptoms and relieve the pressure on relationships between the members of the NTFS and staff from DPI Fisheries;
- in the longer term, lead to increasing frustration and anger as it is not designed to address the deeper systemic issues that shape the current culture issues in the Industry;
- increase the political involvement in the sector and thereby increase the complexity of Industry dynamics; and
- not enable the NTFS nor DPI Fisheries to develop the capability to meet the current nor future challenges.

To avoid these issues and enable the direction of developing a collaborative approach to management of fish stocks also requires a systemic approach to change based on the principles of Complex Adaptive Systems (CAS). Such an approach will enable participants from the NTFS and DPI Fisheries to have the appropriate frameworks, principles, and processes to

develop a suite of initiatives and projects that will appropriately respond to the cultural dynamics of the Industry.

6.3. A cultural change project was designed based on the principles of CAS to bring Industry and DPI Fisheries together to design a suite of projects and activities to enable change.

The aim of this project was to design and facilitate a series of workshops that enabled the design of a suite of initiatives/projects (See Appendix D and Appendix E) which will support a cultural change program and would itself be an intervention that would help to shape cultural change involving participants from the NFTS and DPI Fisheries. The initiatives/projects were informed by the co-management continuum as referenced in the Neville report (2008). The framework highlights how the nature of management of a fishery can be modelled on a continuum matched against involvement from the NFTS and DPI Fisheries. This framework was used to recognise that transition phases such as centralised to consultative, consultative to collaborative and collaborative to delegated are part of the journey to achieve co-management.

Both the NFTS and DPI Fisheries realised the scale and scope of the change and the investment that is required to embark on achieving each stage of the continuum on the journey towards co-management.

The recommendations presented in Chapter 4 of this report provide a set of principles complemented by detailed statements that would guide the design of a cultural change program.

6.4. The cultural change project was an intervention of its own

Each workshop of this project was designed as a provocation to participants of the workshops as means to embark on the journey of change. They were designed to elicit beliefs, assumptions and an understanding about the current culture and explain why and how it operated. The sharing of experiences from both the NFTS and DPI Fisheries would provide participants with the basis of making sense of the events and together develop a collective meaning and insights, informed from each perspective. Various exercises had enabled participants to develop a deeper understanding of each other's reality, hence developing rapport and affinity on the journey of developing trust.

Emerging from the workshop process was the strong expression of emotion based on past interactions between and within members from the NFTS and DPI Fisheries. These emotions are deeply held in people's bodies and have contributed to shape their narratives about how they understand and relate to the world. Narratives were expressed throughout the workshops and would arise when triggered by particular comments. Participants who were carrying the embodied emotions would lose their centredness and ability to effectively communicate. When left unattended, these emotions can have significant effect on people's well-being.

A critical initial condition for developing a new management approach of the fisheries resources will require the leadership from the NFTS and DPI Fisheries to assist people to deal

with the healing as a result of emotional trauma from past experiences. Processes of healing will prepare people to be more centred and present. They will be in a greater psychophysiological coherence that is associated with effective mental performance. From this healing, people need to be supported to develop new narratives to include and transcend the past to provide a new point of reference that will support participation and commitment towards collaborative management of the fisheries.

Failure to address the embodied emotions and associated narratives could provide an obstacle to developing meaningful relationships between Industry and DPI Fisheries and the inability to build the trust that is required for constructing collaborative approaches to managing the fisheries.

6.5. South Australian (SA) fisheries provide insight into the co-management journey

Two trips to the SA fisheries highlighted a number of consistent approaches and principles required to embark on the journey towards collaborative and co-management of a fishery. Some of these include:

- Strong leadership from both Industry and Government;
- A well-designed and governed industry association that presented one voice on behalf of the fishing sector;
- An independent Chair of the industry association, independent executive and science officers who have exceptional communication skills and ability to connect with science, Government and members of the Industry;
- An industry association that had the capability to transparently gather data and information that gave Government the confidence in the integrity of the data;
- Trusting relationships between Industry and Government; and
- Decisions that were data informed.

These are factors that need to be equally nurtured for the NFTS. However, the context of the NFTS is different to that of the SA fisheries and so these context-dependent factors need to be addressed in the unique conditions of the NFTS and the NSW fisheries environment to enable the emergence of a new culture. Any attempt to realise these factors in the same way that was developed in SA will not be successful.

6.6. Recommendations for continuing the journey towards collaborative and co-management of the NFTS fishery

The journey forward requires the attention of multiple recommendations some of which will be implemented concurrently. The following 4 key areas need to be addressed to enable the NFTS and DPI Fisheries to continue a program of change towards developing their capability to participate in collaborative management of the fishery.

- The NFTS and DPI Fisheries agree to continue their journey of developing collaborative management of the marine resources.
- Assisting members from within the NFTS and DPI Fisheries to heal the embodied trauma that resides within them to enable them to be in a more resourceful psychophysiological state that enables them to be centred in their bodies and present to address current and emerging challenges.

- The NFTS will need to identify a leader(s) who are willing and able to support industry members on a cultural change program. These leaders need to have strong communication, facilitation, systems thinking, mentoring, sense-making, understanding of marine science, managing stakeholder/member, governance and business performance skills to assist the Industry on its cultural change program. They also need to be able to lead themselves, lead others, lead for conditions (understanding the dynamics of what is happening within the Industry and beyond), leading culture, leading for performance, leading for results and leading for managing members/stakeholders.
- As with the NFTS, there is a strong need for adaptive leadership from DPI Fisheries at all levels. In the case of SA fisheries, leadership for change was envisioned and driven by Industry. For the NSW NFTS, the initial leadership to start the change process will most likely need to come from Government and DPI Fisheries to support Industry to develop its capability to co-lead the process;
- People chosen from both the NFTS and DPI Fisheries to lead the change program will need professional assistance to enhance their skills to implement the activities/projects outlined in this report. Part of this implementation involves mentoring and coaching members from both the NFTS and DPI Fisheries participating separately and collectively in developing individual and group capabilities in communication skills, issues management, working and understanding complex adaptive systems, leadership, facilitation and decision-making.

The advancement to co-management will require support by external facilitators in cultural change to assist both members of the NFTS and DPI Fisheries management to continue their work on building relationships and trust that underpins all of this work.

6.7. Concluding observation

The NSW fishing and aquaculture industries are at point where a range of external factors are reshaping the operating landscape. Many changes are required to enable the sector to maintain its operating and economic sustainability. One of these changes is to begin the process of moving from a centralised control of the fishery by DPI Fisheries to a more collaborative approach. The process can begin with small projects in specific areas that can demonstrate cultural change.

There is latent leadership within the NFTS that can be awakened to undertake this journey. It will also take leadership from DPI Fisheries to enable this vision to become reality and to demonstrate its commitment to developing a collaborative approach. A meaningful and consistent overture by DPI Fisheries to the NFTS will need to be actioned as a catalyst to inspire the NFTS to want to participate in such a journey. Equally the NFTS will need to respond to the overture from DPI Fisheries and begin a journey of self-alignment to develop an industry voice that will support a stronger relationship for a collaborative approach.

By providing committed resources and support for a handful of passionate and skilled people from the NFTS and DPI Fisheries, the journey towards a collaborative approach to management of the fishery can be achieved.

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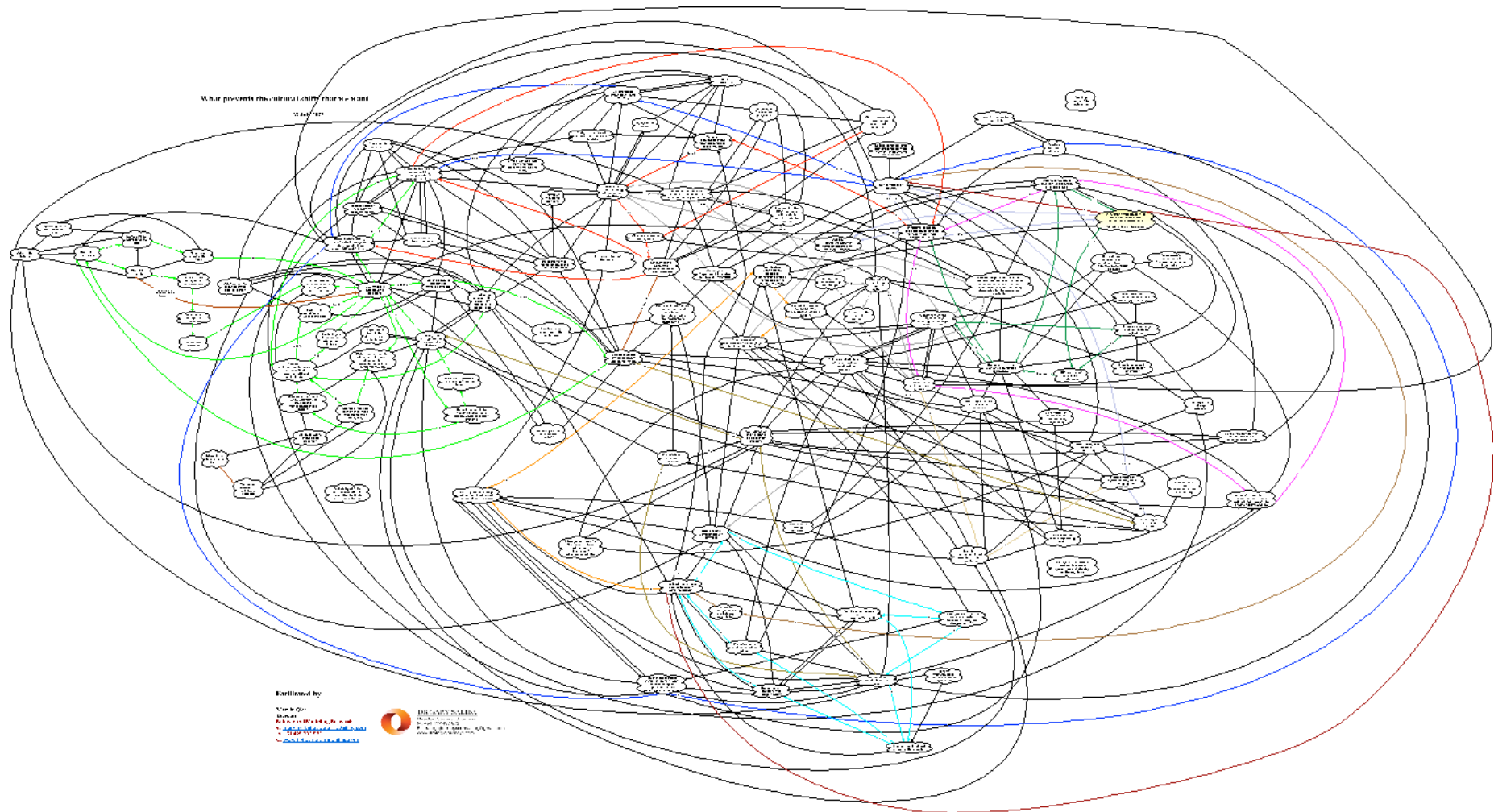
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Appendix A

A systems map that highlights the factors and the key relationships between them that are shaping the dynamics of “What prevents the cultural shifts that we want?”. This version also shows feedback loops that are shaping the dynamics. Details for each loop are shown in Appendix C.



Appendix B

Themes that were deduced from the interviews of groups in the South Australian fishery

Trip 1 to South Australia fisheries: 9 & 10 May 2023

Spencer Gulf & West Coast Prawn Association Inc

1. Bottom-up leadership is key:

- Successful fisheries management can be driven effectively by bottom-up leadership, where pioneers and leaders take initiative in self-regulation.

2. Enabling constraints for self-regulation:

- Limited entry agreements at the inception of the fishery (1967) served as enabling constraints, allowing pioneers to self-regulate and establish sustainable practices.

3. Social Acceptance and Organisation:

- The right people at the right time was an essential factor. The original pioneers/leaders assumed they needed social acceptance to not over-fish, so they organised themselves without government guidance.
- There is a social aspect to all of this that is often overlooked. It is also connected to the moon cycles that affect when fishers went fishing
- The fishers started to become a self-regulating fishery with self-imposed voluntary closures through 'gentlemen's agreements'

4. Association for Majority Representation:

- Government needed a majority view of the fishers about solutions and vision in order to support any changes. Hence the need for an association of some type that represents the majority of fishers in the sector/industry.
- Forming an association representing the majority of fishers focusing on future sustainability helped secure government support for changes, ensuring a collective vision and solution. This was only achieved through tribal leadership that drove the group to counter and manage individual views

5. Transparent Governance Structure:

- Transparency is essential for effective governance. Documented meetings, shared data log books, and checks and balances within the association contribute to transparency.
- The association has checks and balances that ensure transparency. Any breakdown in transparency will be detrimental to the fishers.
- The fishers have a stringent management plan with 25 policies. Their policies resolve conflicts so they never happen again. Their policies include conversation processes and decision processes.

6. Independent Chair and Committee Structure:

- An independent chairperson and a committee structure with representation from each boat are important for quality conversations and decision-making.
- The three major roles are the management committee, the independent Chair and the scientist.

7. Reliance on Science and Research:

- There is a strong reliance on the science person who cares about the natural resources and the fishers. The continuity with government is through the science. This allows the government to not be involved in the committee.
- The association values science for understanding the fishery. Investing in research, tagging programs to know the growth of the fishery and types of species that are available and self-conducted surveys contribute to informed decision-making.
- No commercial fishing is conducted until they have the scientific data to inform decisions about “go/no go” harvesting.
- Surveys determine the fishable areas and this information informs self-determined closures of areas.

8. Real-Time Management and Continuous Assessment:

- Real-time management based on continuous assessment of the fishery, led by a coordinator at sea, helps adapt to changing conditions.
- Fishing grounds are opened only after a survey has been conducted. Spot surveys are industry-led, industry-funded, and industry-conducted.

9. Legal Enforcement of Group Decisions:

- The association has the power to legally enforce group decisions through gazettes, enabling real-time adjustments based on strong business cases supported by data.
- The association has the power to legally enforce a group decision through a Gazette that the association asked government for the power to make changes at anytime for real time adjustments. They are able to do this if they can provide a strong business case based on data

10. Organizing Principles and Codes of Conduct:

- Principles like "the fishery always comes first" and a code of conduct for skippers and various committees contribute to self-policing and accountability within the industry
- Social peer pressure is used to address issues in real time at sea, and boats are named on the radio if they demonstrate recalcitrant behaviour.

11. Collaboration with Stakeholders:

- Working with stakeholders from other sectors and proactive engagement with potential antagonists help build a collaborative approach and avoid conflicts.

12. Building Trust Through Longevity and Results:

- Trust is built through longevity, reputation, and consistent results. Continuity of knowledge, particularly through long-term relationships with scientists, contributes to trust.

13. Proactive Approach to Government Issues:

- Staying ahead of government issues and offering solutions beforehand helps maintain a positive relationship and avoids conflicts.
- The scientist is the connection between government and industry.

14. Self-Funding and Financial Sustainability:

- Being self-funding is a critical leverage point for the industry. Financial sustainability addresses key issues related to funding and resource allocation.

15. Building Social License:

- Building a social license through programs like 'Gulf Care' demonstrates commitment to environmental responsibility and community engagement.

Goolwa Pipi Co Pty Ltd

1. Quota Imposition and Industry Response:

- The imposition of quotas by the Government led to bitter feelings within the fishery. These feelings were transformed by people to establish the Goolwa Pipi Co that began a journey toward co-management. This contrasts with the response by the NSW Northern Fish Trawl sector which have become constraints and left the sector fractured.

2. Enabling Constraint and Quota System:

- The 2008 Parliamentary Inquiry emphasized the need for collaboration in setting up quotas. The implementation of quotas can drive either competition or collaboration within the industry.

3. Transition to Pty Ltd for Increased Profitability:

- Goolwa Pipi Co transitioned from an Association with collaboration issues to a Pty Ltd focused on shares, brand, and value transformation. Their emphasis on increasing profit per kilo involves adapting to market dynamics and supply-demand considerations.

4. Commercial Professionalism and Best Practices:

- The culture of "commercial professionalism" guides Goolwa Pipi Co, leading them to seek and implement best practices for the benefit of the industry and the state.

5. Policy Basis in Economics, Science, and Equity

- Goolwa Pipi Co is strongly informed through the lenses of economics, science, equity and business. These frames of reference informs and shapes decision-making. Their philosophy is about developing a sustainable business and will

consider a variety of opportunities to ensure business success. One of those opportunities is to include indigenous ownership of the business, reflecting their commitment to meaningful engagement and participation.

6. Empowering Fishers and Shifting Control:

- Goolwa Pipi Co shifted from a mindset of "controlling the fishers" to "empowering the fishers to control the stock via policy and education."

7. Leadership and Policy Advocacy:

- The Goolwa Pipi Co believes that skilled leaders are crucial for presenting well-thought-out policies and solutions to the government that supports efficient collaboration.
- Critical to this process is to present one voice
- They have an internal policy of not going direct to the minister but always working through the department. The goal is to establish good relationships. A subsequent internal policy is to never see a minister while in anger. They stated "we're lovers not fighters".

8. Key Role of Qualified Individuals:

- The key to success lies in having qualified individuals within the organization, emphasizing the importance of expertise and competence.

9. Collaboration through Common Cause:

- Identifying a common cause is essential to mobilize Industry stakeholders, such as Recreational fishers, Marine Parks, and Indigenous Title. A unified cause can bring diverse groups together.

10. Stock Sustainability + Profitability = Viability:

- Goolwa Pipi Co's formula for success involves balancing stock sustainability with profitability per kilo within the quota, ultimately ensuring viability.

11. Utilising IT/Technology for Information Flow:

- Information flow through technology is critical for overcoming geographical distances and maintaining effective communication within the Industry.

12. Government Relations and Positive Engagement:

- Positive relationships with government departments are crucial. Goolwa Pipi Co's internal policies include not going directly to the minister and avoiding meetings in anger, emphasising positive and constructive engagement.

Department of Primary Industry and Regions South Australia (PIRSA)

1. Unique Starting Conditions Impact Success:

- Recognise that the success of co-management is influenced by the unique starting conditions of the fishery, as seen in the case of Spencer Gulf.

2. Real-Time Management for Economic Returns and Sustainability:

- Co-management should prioritise real-time management to maximize economic returns while ensuring sustainability, as evidenced by the focus on Spencer Gulf.
3. **Alignment with Management Plan:**
 - The Minister must align industry activities with the Management Plan, emphasising the importance of adherence to established guidelines.
 4. **Complete Transparency in Association Operations:**
 - Complete transparency within the Association, including decision-making processes, is crucial for effective co-management.
 5. **Counteracting Boom-Bust Economics Through Sustainability:**
 - The economics of the Industry has been based on either a boom-bust cycle or an even level of revenue every year. It has been demonstrated that a focus on sustainability counters the boom-bust cycle and achieves even, predictable revenue every year.
 6. **Importance of Personalities and Leadership:**
 - Success in co-management is highly dependent on having the right people with the right personalities, including scientists and leaders who need to genuinely care about the fishery.
 - Educating the fishers is an important part of the role of the scientist.
 7. **Investment in Governance Structures:**
 - Investing in good governance structures, a competent and independent Chairperson, and an effective Executive Team contributes to successful co-management.
 8. **Role of Industry Association Executive Officer and their preparation:**
 - The role of the Executive Officer is critical. They need to:
 - be able to manage conflicting perspectives
 - have a basic level of scientific understanding to take messages back to Industry and sell it to them
 - get their decisions sorted in-house *before* engaging with the government.
 - do their homework and preparation *before* talking to government
 9. **Building Relationships Over Time:**
 - The building of relationships during non-stressful periods and over an extended period is critical for effective co-management. It is the basis of developing a shared sense of the experiences and developing trust.
 - The physical location of the Executive Officer is critical to build relationships. For the Spencer Gulf & West Coast fishery, the Executive Officer's office is located across the pathway from where the fishing boats are docked.
 10. **Role of Chairs in Managing Diverse Perspectives:**

- A skilled and independent Chair is crucial for facilitating conversations and managing diverse perspectives within the Industry.

11. Government Relations and Industry Investment:

- Industry investment in itself, good organisation, and strong compliance lead to lower cost recovery through licenses, fostering positive government relations.

12. Importance of Industry Representation:

- Associations that genuinely represent the Industry make it easier for the Government to engage, fostering transparency.
- The expectation to have one voice from Industry is a critical process to counteract conflicting perceptions among fishers.
- A one voice from Industry supports transparency with Government and with the fishers.

13. Harvest Strategy and Dialogue with Industry:

- The harvest strategy determines decision-making rules, requiring extensive dialogue with the Industry. The key is to use science to inform the thinking and develop co-management policies based on common interests.

14. Publish Co-Management Policies:

- Having co-management policies published and visible promotes transparency and outlines what the government needs to see for effective co-management.

15. Legislative Framework and Service Level Agreements:

- The Fisheries Act leads to the Management Plan, which shapes assessment criteria.
- Legislative frameworks and Service Level Agreements (SLAs) with licensees establish important ground rules that set expectations and influence the where the effort needs to be focussed by fishers.
- Cost recovery requirements from Government shape the contractual arrangements with the industry association.

Trip 2 to South Australia fisheries: 16, 17 & 18 August 2023

Glenn Davis

Chair of Spencer Gulf & West Coast Prawn Fishermen's Association

1. Success Keys:

- The two primary keys to success are having good people and building trust within the industry.

2. Cooperative Relationship with Government

- Establishing a cooperative relationship with government is crucial. An independent figure overseeing the collaboration can enhance effectiveness.

3. Need for the Right People:

- Success often hinges on having the right people from the start, including those with a business background and a commitment to compliance.
- You need a capable Executive Officer who can communicate with the fishers about new ways of thinking and working that can be very different to current ways.
- There is sometimes the need to tell the fishers when they are wrong and being stupid when the Government is right about issues.

4. Data-Led Decision Making:

- Data-led conversations and decisions are crucial for effective fisheries management. There is a critical need to balance data versus passion informed decision-making about fishing.

5. Proactive Issue Management:

- Frequent engagement with government and proactive issue management are vital to prevent escalations. A combination of numerous informal back channels and formal meetings are used to inform conversations and decisions.

6. Business Background and Compliance Stance:

- A Chair with a business background is considered more essential than a legal one- operating the organisation as a business.
- A strong emphasis on compliance is crucial for building a relationship with government.

7. Behavioural Shaping through Agreements:

- Behaviours are shaped by formal, signed agreements, and negative reinforcement for accountability.
- Transparency is maintained for performance against values and standards.

8. Investment in Self-Development:

- Investment in coaching people for self-development. This occurred over a period of years and people are now self-regulating with their own self-development and formal training.

- There is a “next generation group” of emerging leaders that the association formally invests in their development, give them exposure to critical experiences.
- The Association has explicit succession planning strategies for the future of the business as a fishery.

9. Persistence and Good Business Practices:

- Persistence is key, and the fundamentals of good business practices must be explicitly addressed and implemented for long-term success.

10. Alignment Between Chair and Executive Officer:

- The Chair and Executive Officer need to be aligned to have challenging, courageous conversations. Real leadership is embodied through this alignment.

11. Data Policy for Fishing:

- Implementing a policy like 'no data, no fishing' emphasizes the critical importance of data for self-regulation and minimizing government interference.

12. Collective Sense-Making of Data:

- The management committee engages in collective sense-making of data, encouraging open discussions and feedback from all members.

13. Building Trust with Government:

- Convincing fishers to collect data for self-regulation requires building trust with government. Understanding the value of data for mutual benefit is essential.
- PIRSA now trusts the group and their processes to the point that they don't do anything anymore, they don't even attend the committee meetings. They just rubber stamp the recommendations put to them

14. Role of Independent Chair:

- The independent Chair and the Executive Officer play a critical role in challenging group thinking establishing a code of conduct, enable transparency, and effective communication are established.

15. Focus on the Big Picture:

- Keeping people focused on the main thing and the big picture is a major responsibility for the Chair. For Spencer Gulf, the big picture is to be the best-managed fishery globally.

16. Organizing Principles/Values:

- Four major organising principles/values are sustainability, compliance (no cheating), optimising revenue channels for financial sustainability of the Association, and people (safety).

17. One Voice in a Multi-Species Fishery:

- In a multi-species fishery, achieving 1 Voice is still possible by using a handful of indicator species to represent the multiple species caught in a catch.

Kyri Toumazos

Executive Officer, Northern Zone Rock Lobster Fishermen's Association

1. Diverse Backgrounds Contribute to Success:

- Individuals with diverse backgrounds, such as an economics degree and business experience, can bring valuable perspectives to fisheries management.

2. Co-Management Efficiency:

- Co-management has been more effective at the Commonwealth level compared to the State level, emphasising the importance of learning from successful models.
- The Commonwealth co-management processes use a Go Fish app whereas State jurisdiction approaches have a lot of inefficiencies with no co-management structures.
- Scotland has a successful self-regulatory co-management approach.

3. Ethos of Co-Management:

- A successful co-management approach requires working from the "Ethos of Co-management"- focusing on the relationship between Government and Industry rather than just legislative compliance.
- A critical aspect is for government to transition from a regulatory to an audit role, empowering fishers to operate and ensuring compliance through auditing.
- A major key is respect and trust that we are all working together for a common vision.

4. Shift from Social License to Community Value:

- Shifting the conversation from "social license" to "community value" provides measurable outcomes and tangible returns, fostering trust and collaboration.
- Social license is not measurable whereas community value is measurable. Community value is where the returns of co-management can be seen.
- Within the context of community value, everyone needs to know their roles in contributing to and delivering value- we are all working together for community benefit.
- You need a larger vision and you need to tell the story of the seafood and fishing industry to counter the common misunderstandings and perceptions e.g. they are a major source of protein for the community and is the lowest carbon emission protein.

5. Industry-Led Decision Making and Expert Panels:

- What it all takes: the right person to champion the cause and a minister to back that person

- Industry should provide people to lead decision-making processes, set up expert panels, and conduct research to offer trusted advice to the government, reducing reliance on politics.
- Industry needs to:
 - protect the government regarding decisions
 - do the work for government and give them trusted advice.
 - take the decision making away from politics
- For co-management to work, the heavy lifting needs to be done by Industry. Government just needs to offer an olive branch of “we're willing to work with you”. The olive branch is where government says “we want and need to build trust with Industry”
- In 10 years, we have never bypassed processes to go directly to the Minister, it's always been through the government/Department executives

6. Executive Officer’s Role in Decision Making:

- The Executive Officer plays a role in research, facilitating robust conversations, aligning stakeholders, and presenting unified recommendations to the government. It is NOT to listen to what Industry wants and take that to government.
- The Executive Officer needs to be willing to walk away from their position if they are not supported by the Industry.
- The Executive Officer needs to push back if what's wanted cannot be taken to government without success.

7. Importance of Trust-Building:

- Building trust requires maintaining quota integrity, education for compliance, alignment to common goals, and simplification of compliance processes.
- Minister and government attendance at industry events and dinners indicates successful establishment of trust through personal relationships.

8. Education and Exposure of Politicians:

- Developing personal one-to-one relationships with government officials, ministers, and politicians is crucial for effective collaboration
- Educating and exposing politicians to the work of fishers, such as inviting them onto boats, enhances understanding and support for the Industry.
- Maintaining an apolitical stance allows for collaboration with different political parties, providing opportunities for support as governments change.

9. Fishers’ Desire for Stability and Sustainability:

- To a large extent, if the rules are there, people will play within those rules;
- Stability and sustainability are key priorities for fishers, emphasizing the need for policies and practices that support the long-term health of the Industry.

10. Industry Association Structures:

- Establishing key structures within the industry association, such as:
 - a Research Advisory Committee with an independent Chair;
 - Management Advisory Committee with an independent Chair; and

- panels of various stakeholders e.g. community, environment, scientists. It's also important that these are expert panels and not representative bodies

Merilyn Nobes

Southern Fishermen's Association and Keith Rowling, Saint Vincent Gulf Prawn Boat Owners Association

1. Association and Executive Officer's Role:

- Successful co-management hinges on a strong Association and capable Executive Officer, highlighting the importance of leadership and organizational structure.

2. Cost Recovery Structures:

- Co-management comes with costs, and establishing effective cost recovery structures is essential to sustain industry involvement and collaboration.

3. Communication Among Industry Members:

- Effective communication within the Industry and between Industry and Government is crucial, emphasizing the need for governance structures to facilitate transparent dialogue among stakeholders.
- Fishers prefer one-to-one communication on their boats, and effective communication styles and strategies must be employed, especially when conveying scientific information.
- The capability to keep talking one to one with people on an ongoing basis is a critical industry function to support co-management. This is the role of the champion leading the changes. This person needs to keep talking to people and tell them why they need to engage. You need mechanisms, platforms, forums for ongoing conversation

4. Transparent governance and Decision Making:

- There are levels of governance that need explicit structures and processes so that government knows everything is in order
- Structured decision-making processes are a major key to successful co-management, preventing breakdowns and ensuring efficient collaboration.
- Stakeholders must understand the why and how of decision-making processes, fostering a shared understanding and commitment to co-management objectives.
- The basic governance model is to use management advisory committees which our industry run with an independent chair. However, different models are used across different fisheries
- Conducting mock MAC meetings with role-switching between Government and Industry can provide valuable insights and foster collaboration.

5. Cultural Change for Government and Industry to Engage in Co-Management:

- Co-management requires a cultural shift, and industry members need to experience success in collaborative decision-making for this change to occur.

- Demonstrating economic benefits, such as full-time employment and job creation, is a major factor influencing government support for co-management.

6. Leadership Function and Risk-Taking:

- Leadership is crucial for facilitating conversations, and industry members must be prepared to take risks, even if government tends to avoid them.
- The group needs the leadership function fulfilled. You need leaders who will step up. If not, you need an outstanding independent chair who is skilled in facilitating conversations

7. Government Engagement Processes:

- Government should initiate processes that engage Industry in conversations about total allowable catch-setting, meetings, and conversations, requiring department champions to shift government culture.
- A major key is how to deliver the science content so that fishers can understand and relate.
- There's a need to unpack complaints about 'no consultation' and explore opportunities for effective consultation, addressing issues related to processes, structures, and communication.

8. Industry Self-Organization:

- A well-organized industry enhances collaboration with the government, highlighting the need for industry to get its act together.
- You need champions to chase up people to show up to meetings and workshops.
- A collective voice doesn't necessarily require an association but demands ongoing communication and mechanisms for dialogue between industry members.

9. Industry Education on Government Decision-Making:

- Fishers need training on how government decision-making is done, including understanding metrics like CPUE (catch per unit effort) and interpreting data trends.
- Fishers desire stability and need education on Government decision frameworks, including how decisions based on science data consider long-term trends.
- Industry decision-making processes should align with the government's decision-making cycle to facilitate effective collaboration.

10. Visible Change During the Project:

- Visible change is essential during the project to maintain stakeholder engagement and prevent withdrawal from the co-management initiative.

Nathan Kimber

Executive Officer, South Eastern Professional Fishermen's Association Inc

1. Industry Readiness for Co-Management:

- Co-management is more effective in wealthy industries.
- The Industry's readiness and desire for co-management are crucial for its success.
- The Industry will only be ready when it has the people with the beliefs, values, passion and skills for the co-management of the Industry. You need three to four heroes on your executive committee. These are people who:
 - “get it”;
 - place the priorities of the fishery-industry first before their own gain;
 - are not afraid of making the tough decisions;
 - get how the political regulatory system works;
 - are prepared to give up their time and resources and are often community heroes who volunteer at their local footy club; and
 - are also planning for future heroes through succession planning.

2. Governance Structures:

- Effective co-management requires strong and stable governance structures with independent chairs, independent scientists, and experienced executive officers. These all contribute to Government's confidence in Industry recommendations and to avoid and minimize turbulence.
- They originally had an Association that was more like a peak body with subgroups per sector and it didn't work. The views and recommendations to government were too chunked up and one person can't represent multiple sectors.
- Whether or not the function of the MAC can be done internally within the incorporated industry Association depends upon the maturity of the Industry, their willingness to pay for governance structures, and their stock performance.

3. Industry Dynamics:

- Differences between owner-operator and corporate ownership mentalities impact cultural dynamics.
- Stakeholder management is crucial, especially when commercial stakeholders are politically connected.

4. Electronic Reporting and industry cultural change:

- Real-time electronic reporting enhances transparency and eliminates surprises.
- Culture-shaping activities, 1:1 handholding, and support for fishers during the transition to electronic reporting are vital.
- Regarding the culture shaping activities for adopting electronic reporting, there was a lot of 1:1 handholding of people through the change. This is not a 9-5 job, it is a 24/7 job for an Executive Officer.

- The introduction of new ways of working was also about fishers helping fishers and it was cross generational with younger fishers helping the older fishers with the technology.
- You also have to make sure there is a period of transition for the adoption of the technology. For 1 to 1.5 seasons, they allowed dual reporting [paper plus electronic] and PIRSA supported this.

5. Industry-Regulator Relationship:

- The relationship with the regulator is crucial, and poor industry decisions can erode confidence.
- Personal relationships between industry representatives and regulatory bodies, such as PIRSA, are key to successful co-management.
- You have to find out how to support and protect the regulator. You have to get past the US versus them approach and instead work to common ground.
- Finding common ground with the regulator is essential, and maintaining a positive relationship is key.
- Strategic engagement with the regulator involves picking battles wisely, focusing on significant issues, and conceding on less critical matters. This maintains the relationship and it also lets the regulator know that when you do fight for something, it's a big thing.
- On the government side, the Department has to be into co-management so that it can manage its own employees [especially compliance officers] for relationship management with industry. It's important that this is cultural because this will become a critical issue when there is staff turnover within the Department.

Justin Phillips

CEO, Limestone Coast Fishermen's Co-operative Limited,

1. Financial Perspective and Cost Recovery:

- Co-management requires financial consideration, emphasizing the need for funding.
- There is a requirement to focus on developing cost recovery strategies to sustain co-management efforts.
- There's a difference between the South Australia (% of license fees) versus the West Australia (% of GDP) models. People will take the easier option if the other is too hard.

2. Best Practices for MAC:

- Establish best practices for a Management Advisory Committee (MAC) that prioritize relationships between Industry, managers, scientists, and regulators.
- Understand the distinction between Industry self-management (MACs) and industry representation (peak bodies).
- Acknowledge the different focuses and consider the most appropriate approach for the specific context.

3. Co-Management Leadership:

- Co-management leaders must accept that compromises are necessary; not all desires can be fulfilled.
- Recognize the state-managed nature of community resources and engage with government with a cooperative rather than combative attitude.
- A key mindset to adopt is that: “this is a state managed community resource, and you have a license to fish in it”. Don't ever take this for granted.
- You need to engage with government accordingly and remember that things can change overnight. Therefore, do you want to go and with an attitude of being combative or do you want to do it better? If yes, do you agree and accept that you're not going to get everything you want.

4. Independence of the Executive Officer:

- An independent Executive Officer is essential for acting in the Industry's best interest.
- Address conflicts of interest promptly to prevent undermining of trust within the Industry.

5. Balancing Commercial and Industry Interests:

- Managing the balance between commercial self-interest and Industry interest is critical.
- Failure to address this balance undermines trust within the co-management structure.

Appendix C

Feedback loops that define key cultural dynamics in the NSW Northern Fish Trawl sector

Notes:

- The phrases that are italicised below represent the “clouds” on the map.
- Please read each loop definition referencing the systems map
- The following feedback loops are draft. They will need to be refined at the next workshop.

1. Real-time, trusted data is required to inform fishery management

1a. Believe it or not, the number of boats in the fleet determines the quota?!???

The *Quota for the fishery* has a major influence on the *Costs/kg for harvesting the fish*. If the *Quota* decreases, many fishers may find that the cost is too much to absorb and the fisher decides that they can no longer operate a business. So the *Number of boats in the fleet* will fall. A smaller *Number of boats in the fleet* covering the same physical location does not enable a comprehensive coverage to collect fish population and so the *Quality of the data used for decisions* falls.

Influenced by the Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science and Shared beliefs, vision and underlying principles about managing the fishery fishing regulators are Making sense of this data to enable decisions that lead to Decisions about the stock status and management of the fishery. These decisions subsequently inform the Quota for the fishery.

1b. It's gotta be easy for me to report on fish populations otherwise I won't be bothered to do it

If the Quality of the data used for decisions is below standards, then the Department's role to develop efficient and effective data collection systems has to increase so that fishers have the equipment and protocols for the Ease and timeliness of reporting. With improved Ease and timeliness, fishers will provide enhanced Quality and type of data that will yield Quality data used for decisions.

1c. You want me to do what?!??- I just wanna go out and fish I don't wanna be a fisheries manager.

The requirement for Quality data used for decisions will require a shift in the Fisher's understanding of the need to collect data and the implications for their economic viability. This will require a Change in the role of the fisher in the management of the fishery to have greater responsibility and accountability for data collection. This shift in responsibility will require an enhanced Degree of collaboration between fishers and Govt to design the R&D and collect data. Part of this collaboration will enable the development and provide the Availability of independent data for each fishery thereby dramatically enhancing the Quality data used for decisions.

1d. Why do I have to change?- I am happy being a fisheries scientist

The requirement for Quality data used for decisions will require an update in the Department's role to develop efficient and effective data collection systems. Such an update can also require Changes in the role of fishery scientists to support the management of the fishery. Corresponding with this role update, is the need for how scientists and fishers work together and so the future of quality data will require enhancing the Degree of collaboration between fishers and Govt to design the R&D and collect data. A more collaborative approach will enhance the sense of purpose and ownership of the task thereby raising the Quality of the mechanisms to collect the data leading to improved Quality data used for decisions.

1e. Do I really trust the data that is used for the R&D to inform the decisions about fisheries management and quotas?

The *Quality of the data used for decisions* is used as the source to support the *Sense making to enable decisions* about fishery management and quotas. The insights and conclusions drawn can challenge the validity of the decisions and hence the data used to make the decisions. The degree of discontent and questioning challenges the *Trust in the results of the R&D and how the data is being used*. To enhance Trust and commitment from fishers to collect the data for decisions about the fisher, both the fishers and the DPI Fisheries need to enhance the *Degree of collaboration to design the R&D and collect data*. This will improve the *Quality of the mechanisms to collect the data* and thereby enhancing the *Quality of the data used for decisions*.

1f. We need to agree on a set of beliefs, direction and operating principles about fisheries management so that we have a framework to design a trusted data collection process that will inform decisions

The *Quality of the data used for decisions* provides important context for developing a set of Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science that shape the Shared beliefs, vision and underlying principles about managing the fishery. These two primary factors provide context and guidance for developing Collaboration between fishers and DPI Fisheries to design the R&D and collect data. This will:

- enhance the Quality of the mechanisms to collect the data; and
- support the Availability of independent data for each fishery.

Both of these factors contribute to enhance the *Quality of the data used for decisions*.

2. Hey Minister...we know what we are talking about, aren't we great!

The DPI Fisheries *Minister's understanding of the context of the fishery* is shaped by a suite of factors including:

- Power of Ministerial advisers;
- Style, charisma and voter attraction of the lobbyists;
- Power of the media;
- Social pressures;
- Alignment of the DG's agenda for the industry with the industry direction;
- Capacity of Department to advise the Minister/DG/DDG;

- Efficacy of Commfish to represent specific fisheries; and
- Perception of the management of the natural resources.

These and other factors are competing to gain and shape the *Minister's attention and agenda*. This can profoundly influence the *Efficacy of the Minister's political direction for the industry* and depending on the nature of the political direction, it could be in tension with *Decisions about the stock status and management* of the industry leading to a range of large unintended instabilities and behavioural changes not previously considered. Past decisions has led to many fishers losing their businesses and creating a hostile culture between DPI Fisheries and the fishers.

The *Minister's political direction for the industry* Provides context and influences the nature of the:

- Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science; and
- Shared beliefs, vision and underlying principles about managing the fishery.

These shared beliefs, principles, vision and plans for the industry provide context for *Industry's capability and capacity to prepare its case to work with DPI Fisheries*. With a strong sense of purpose, informed by *Quality of the data used for decisions*, the industry has established a strong foundation to be a trusted stakeholder in shaping the direction of the industry and thereby become an important factor in shaping the *Minister's perception of the reputation, respect of the industry* and consequently influence the *Minister's understanding of the context of the fishery*.

3. Hey Minister....why did you do that?

The Government *Minister's understanding of the context of the fishery* is shaped by a suite of factors including:

- Power of Ministerial advisers;
- Style, charisma and voter attraction of the lobbyists;
- Power of the media;
- Social pressures;
- Alignment of the DG's agenda for the industry with the industry direction;
- Capacity of Department to advise the Minister/DG/DDG;
- Efficacy of Commfish to represent specific fisheries; and
- Perception of the management of the natural resources.

These and other factors are competing to gain and shape the *Minister's attention and agenda*. This can profoundly influence the *Efficacy of the Minister's political direction for the industry* and depending on the nature of that political direction, the *processes for changing and implementing quota targets* and other fishery management restrictions can quickly raise concerns for the *Certainty of access for fishers*. This will raise *Fisher's fear of closure to access* and erode their *Confidence to operate their business*.

Ongoing erosion of *Confidence* has an impact on *Fisher's trust in DPI Fisheries promises* and erodes the *Quality of the Fisher's relationship with DPI Fisheries*. This downward spiral continues with Fisher's complaining to the Minister, thereby influencing the *Minister's*

perception of the reputation, respect of the industry and shaping Minister's understanding of the context of the fishery.

4. Having a shared set of beliefs, vision and principles will support a cohesive industry

4a. Where is the map for R&D and science that will us leave the laggards behind and build a cohesive industry?

Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science provide a reference frame for how fishers and DPI Fisheries perceive the world, make sense of it to craft decisions and to enact upon those decisions. With enough people committing to such frame, the *Power of the laggard with the psychological propensity to resist/prevent positive change* is reduced and thereby reducing the *Conflict between fishers*.

Reducing conflict aids to develop the *Cohesiveness of the industry* which enables increased *Co-ordination between the DPI and the industry*. This provides a crucial foundation for developing and enhancing the *Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science*.

4b. Where is the map for fishery management that will help us become a cohesive industry?

The *Quality of the data used for decisions* provides important context for developing a set of Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science that shape the Shared beliefs, vision and underlying principles about managing the fishery. Transparency in the formulation of these principles and development of industry direction provides the reference frame and benchmark for stakeholders to commit to an expected set of behaviours that support and enhance the Cohesiveness of the industry. With a more Cohesive and united industry, there is greater energy for developing the Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science.

5. Yes Minister, we have it all under control

5a. Capacity and capability of DPI to respond to Ministerial workplan

The depth and breadth of the *Minister's understanding of the context of the fishery* provides important context to inform both:

- Alignment of the DG's agenda for the industry with the industry direction; and
- Alignment of the DDG's agenda for the industry with the industry direction.

These in turn, provide context to enhance the Strength of DPI leadership for change that is required to enhance and develop the Cohesiveness and functionality of working relationships within the DPI. Enhancements in the Cohesiveness and functionality of working relationships will also enhance DPI staff capability to balance political direction and the needs of the industry and scientific evidence and social/community demands with the resources available. This enhanced Capability will:

- assist Departmental staff with the increased *Capacity to advise the Minister/DG/DDG* of the complexity of the operating landscape; and
- improve the *Stability/TRANSPARENCY* of DPI Fisheries decision-making processes.

Each of these factors will contribute to provide enhanced depth and breadth of the *Minister's understanding of the context of the fishery*.

5b. The DPI culture and its influence on industry culture

The depth and breadth of the *Minister's understanding of the context of the fishery* provides important context to inform both:

- Alignment of the DG's agenda for the industry with the industry direction; and
- Alignment of the DDG's agenda for the industry with the industry direction.

These in turn provide context to enhance the *Strength of DPI leadership for change*. Such change will shift the historically based, currently perceived strongly "*No*" *DPI culture* to a more balanced approach. Supporting the change in the "*No*" *culture* requires shifts in a number of different factors including:

- the Risk appetite of DPI Fisheries decision-makers; and
- DPI staff capability to balance political direction and the needs of the industry and scientific evidence and social/community demands with the resources available.

Changes in both:

- Strength of DPI leadership for change; and
- Strength of the history of a "*no*" *culture*

will help to influence the development of the *Strength of the "yes" culture within DPI*. A shift towards a more informed approach to the *DPI culture* and how the business operates, enhancements in the *Cohesiveness and functionality of working relationships within the DPI* and growth of *DPI's trust of the industry to be a responsible and accountable stakeholder* all contribute to increasing the *Speed of transition to a collaborative culture*.

A shift towards a *collaborative culture* and:

- improvements in the Confidence of the fishers to operate their business;
- enhancements to the Effectiveness of processes for changing/implementing targets;
- improved Efficacy and efficiency of communication and consultation processes; and
- reduction in the Extent of caution of DPI and fishers to meet in safety

can contribute towards building Fisher's trust in Government/DPI promises. The building of this trust in Government/DPI promises with:

- improved recognition by the Government/DPI of the industry association;
- greater receptivity and willingness of Fishers to participate by a reduction in their *apathy and consultation fatigue*;
- reduction in the impact of the degree of cultural trauma in the industry;
- improved Efficacy and efficiency of communication and consultation processes; and
- enhanced Trust in the results of the R&D and how the data is being used

will all contribute to improving the *Quality of the Fisher's relationships with Government/DPI*. This will help to shape the *Minister's perception of the reputation, respect of the industry* and assist the Minister to have a more balanced and informed *understanding of the context of the fishery*.

6. Standing in our shoes

Enhancing the Capability of Departmental people to understand and be connected to the world of the fisher will, along with:

- improving the Extent of emotional and mental health of Government staff;
- enhancing the Strength of DPI leadership for change;
- strengthening Industry's capability and capacity to prepare its case to work with DPI Fisheries;
- reducing the Strength of the history of a "no" culture;
- hastening the Speed of transition to a collaborative culture;
- building the Efficacy and efficiency of the legislation, administration processes

support and enhance the Speed of decision-making between DPI Fisheries and the industry. Improvements in the Speed of decision-making along with:

- building the Efficacy of the Minister's political direction for the industry;
- enhancing the Stability/TRANSPARENCY of DPI Fisheries decision-making processes;
- developing the Capability of Departmental people to understand and be connected to the world of the fisher;
- improving the Cohesiveness and functionality of working relationships within the DPI;
- building the Efficacy and efficiency of the legislation, administration processes; and
- supporting the Adaptive management and evolution of the regulations

combine to enhance the Effectiveness of processes for changing/implementing targets. With better and informed processes for changing/implementing targets, Fishers gain an enhanced sense of access to the fishery that reduces their fear of closure to access and enhances their Confidence to operate their business. With improved business confidence and:

- building the Efficacy and efficiency of the legislation, administration processes;
- improving the Opportunity for fishers to understand and contribute to information that is informing fishery management;
- reducing the Extent of caution of DPI and fishers to meet in safety;
- increasing the Speed of transition to a collaborative culture; and
- developing the Efficacy and efficiency of communication and consultation processes

all contribute to building the Fisher's trust in Government/DPI promises. The building of trust will support the Quality of the Fisher's relationships with Government/DPI and progress the Efficacy and efficiency of communication and consultation processes that will help to develop the Capability of Departmental people to understand and be connected to the world of the fisher.

7. Can the industry pull up its socks?

Factors such:

- a reduction in the *Conflict between fishers*;
- enhanced *Shared beliefs, vision and underlying principles about managing the fishery*;
- improved *Cohesiveness of industry*;
- reduction in *Fisher's apathy and consultation fatigue*;
- a reduction in the *Complexity of the rules and compliance processes*

contribute to shape *Industry's capability and capacity to prepare its case to work with Government/DPI*. With improved capability and capacity to work with Government/DPI, the industry has strong foundations for supporting the *Speed of transition to a collaborative culture*. This consequently shapes Industry's perception of its impact on working with Government/DPI to enact effective change. Along with:

- responding to the Cost of the decisions is not equally worn between stakeholders;
- deepening DPI's trust of the industry to be a responsible and accountable stakeholder;
- building Consistency of messages and direction between the different areas of DPI to fishers;
- reducing the Complexity of the rules and compliance processes;
- building DPI staff capability to balance political direction and the needs of the industry and scientific evidence and social/community demands with the resources available;
- developing Stability/TRANSPARENCY of DPI Fisheries decision-making processes;
- building Capability of Departmental people to understand and be connected to the world of the fisher

Industry's perception of its impact on working with Government/DPI to enact effective change will support Fisher's capability to develop trust between all areas of DPI. This will provide strong foundations in developing Industry's capability and capacity to prepare its case to work with Government/DPI.

8. Having an informed and trusted voice will win Ministers

Enhancing the *Cohesiveness of the industry* over the long term requires multiple approaches. History has shown that in the short term, *Cohesiveness* has been improved through *Shared common issue that drops the barriers between members of the industry*. While these experiences can support *Cohesiveness* in the long term, such events are useful but not sufficient. Other factors such as:

- DPI's trust of the industry to be a responsible and accountable stakeholder;
- Profitability and functionality of the fishery; and
- Fisher's sense of control of outcomes in managing the industry; and
- Industry's capability and capacity to prepare its case to work with Government/DPI, itself informed by:
 - Quality of the data used for decisions

will act to reinforce and contribute to *Cohesiveness of the industry*, provide fishers with a sense of comfort enabling them to respond to other issues than drain their energy with fundamental factors that are important to them.

An increasingly *Cohesive industry* will reflect an informed voice that represents the issues, needs and direction of the industry that is supported by the *Quality of the data used for decisions*. The enhancement in industry *Cohesiveness* will help to develop *Govt/DPI recognition of the industry association* and contribute to the *Quality of the Fisher's relationships with Government/DPI*. The improved *relationships with Government/DPI* will assist to shape the *Minister's perception of the reputation, respect of the industry* which will help to support the *Minister's understanding of the context of the fishery*. A more informed

Minister can help to direct the *Minister's attention and agenda* to develop the *Efficacy of the Minister's political direction for the industry*. This direction provides critical context to inform the development of:

- Shared beliefs, vision, plans for the industry and underlying principles about R&D and Science; and
- Shared beliefs, vision and underlying principles about managing the fishery

that provide important context and direction to enhance the *Cohesiveness of the industry*.

9. Emotional and mental distress are creating barriers between us

There have been many events over the years that have contributed to develop a *Strong dysfunctional history of relationships between industry and Government/DPI*. The *Strength of the relationship* has strongly shaped the:

- emotional and mental health of Government/DPI staff;
- emotional and mental health of fishers.

and that this situation has developed a strong sense of *cultural trauma in the industry*. This depth of *trauma* has:

- deepened a state of caution of DPI and fishers meeting with each other in safety. This dynamic is accentuated by the Power of the laggards within the industry with the psychological propensity to resist/prevent positive change.
- increased Fisher's apathy and consultation fatigue.

Both of these factors and:

- the Trust in the results of the R&D and how the data is being used;
- Govt/DPI recognition of the industry association

impact on the *Quality of the Fisher's relationships with Government/DPI*. While both Fishers and Government/DPI recognise the reality of this situation, the lack of affinity/rapport between the groups is low and so the *Efficacy and efficiency of communication and consultation processes* have been ineffective. This contributes to lowering the *Fisher's trust in Government/DPI promises* thereby *Strengthening the history of the relationships between industry and Government/DPI*.

10. Don't lock us out!

10a. Data for quotas and access to fisheries- the holy grail of fishers

World class fisheries management is dominated by the collection of trusted data collected by the fishers to inform fisheries management decisions. In the context of the NSW Northern Fish Trawl sector, factors such as:

- Clarity of the rules in operating a fishery;
- Decisions about the stock status and management;
- Effectiveness of processes for changing/implementing targets

contribute to *Certainty of access for fishers*. The current dynamics of the Northern Fish Trawl sector are such that there is less *Certainty of access for fishers*. This raises *Fisher's fear of*

closure to access and correspondingly leads to the decline in the *Emotional and mental health of fishers*. Lower levels of emotional and mental health as well as:

- Consistency of the enforcement of the rules by the judiciary;
- Cost of the decisions is not equally worn between stakeholders;
- Profitability and functionality of the fishery;
- Fisher's sense of control of outcomes in managing the industry;
- Industry's perception of its impact on working with Government/DPI to enact effective change;
- Management fees for Northern fish trawl endorsements (license fee) activating latent effort;
- Value of the fishery;
- Trust in the results of the R&D and how the data is being used;
- Strength of the history of a "no" culture; and the
- Efficacy and efficiency of the legislation, administration processes

all contribute to differing extents in shaping *Confidence of the fishers to operate their business*. A drop in *Confidence* can be a contributor to alert fishers about the *Quality and the type of the data* that they provide to support and inform the *Quality of the data used for decisions*. Ultimately the *quality of the data* will shape the extent *sense-making can be effectively completed to enable decisions* about the *stock status and management of the fishery* and consequently be part of the process for shaping the *Certainty of access for fishers*.

10b. We need to stick together, develop one voice and do our homework to work collaboratively

A perceived/actual drop in *Certainty of access for fishers* can with:

- Cost of the decisions is not equally worn between stakeholders;
- DPIs capacity and capability for innovation

raise Fisher's sense of control of outcomes in managing the industry. This sense of control along with:

- Conflict between fishers;
- DPI's trust of the industry to be a responsible and accountable stakeholder;
- Profitability and functionality of the fishery;
- Industry's capability and capacity to prepare its case to work with Government/DPI;
- Shared common issue that drops the barriers between members of the industry;
- Shared beliefs, vision and underlying principles about managing the fishery;

contribute in different ways to shape the *Cohesiveness of the industry*. The current dynamics of the industry indicate that *industry cohesiveness* is relatively low and that this will impede on *Industry's capability and capacity to prepare its case to work with Government/DPI*. Without a strong case to work with DPI Fisheries, the current dynamics are such that the *Stability/TRANSPARENCY of government decision-making processes* are not accepted by the industry. This can reduce the *Effectiveness of processes for changing/implementing targets* thereby challenging the *Certainty of access for fishers*.

11. Trust goes a long way

As Industry's capability and capacity to prepare its case to work with Government/DPI is developed, DPI develops the trust of the industry to be a responsible and accountable stakeholder. With greater trust developed by the two stakeholders, there is a greater opportunity for DPI staff capability to balance political direction and the needs of the industry and scientific evidence and social/community demands with the resources available. This can contribute to supporting the Stability/TRANSPARENCY of government decision-making processes that can underpin Industry's capability and capacity to prepare its case to work with Government/DPI.

12. If we work together, the rules don't have to be so complex

As Industry's capability and capacity to prepare its case to work with Government/DPI is developed DPI develops the trust of the industry to be a responsible and accountable stakeholder. With increasing trust, DPI could reduce its need to have a sense of control of the outcomes. With reduced sense of control, there is an opportunity to reduce the Complexity of the rules and compliance processes thereby supporting Industry's capability and capacity to prepare its case to work with Government/DPI.

13. A cohesive industry will help to support transformative change

A Cohesive of industry will support Industry's capability and capacity to prepare its case to work with Government/DPI. Industry's preparation to work with Government/DPI will support the Speed of transition to a collaborative culture and thereby underpin the Adaptive management and evolution of the regulations. As fishers sense a shift in the evolution of the regulations, there is an opportunity that they develop a sense of control of outcomes in managing the industry which contributes to build a Cohesive of industry.

14. A cohesive industry will help to support trust and collaboration

A Cohesive of industry will support Industry's capability and capacity to prepare its case to work with Government/DPI. Industry's preparation to work with Government/DPI will support the Speed of transition to a collaborative culture and thereby underpin Fisher's trust in Government/DPI promises. The fisher's trust in the Government/DPI promises will strongly contribute to develop the Quality of the Fisher's relationships with Government/DP and build on DPI's trust of the industry to be a responsible and accountable stakeholder. This will correspondingly support the strength of the Cohesive of industry.

Appendix D

A list of activities/projects developed by workshop participants informed by additional design criteria arising from the draft DPI Fisheries Draft Policy for the co-management of Fisheries in NSW.

Design criteria based on NSW Govt policy	Issue Pre-condition for co-management	What does industry need to do?	What does Govt need to do?	What needs to be done to connect industry and Govt?
<p>Decide where you want to start on the co-mgt continuum</p> <p>What are the processes required for the conversations? (co-ordination)</p> <p>How will ensure that you will have one voice when interacting with Govt?</p> <p>How will you choose the leader to present the Voice?</p> <p>How will you capture the decisions?</p> <p>How will you align with each other to do this?</p>	<p>Industry's capacity to talk to itself for collaboration</p>	<ul style="list-style-type: none"> • Determine the industry structure for how to represent a one voice for the Northern Fish Trawl sector <ul style="list-style-type: none"> ○ Establish one voice within PFA ○ Establish one voice as an external organisation • Identify leader/facilitator to work out what co-management looks like. • Develop a code of conduct. • List of current active fishers – regions and ports and best contacts for each region, find regional spokesperson, Start with two or three calling around to test appetite to work together. • Develop a list of common objectives or what changes are looking for to improve industry. • Agreed talking points (based on vision/mission/purpose statement) 	<ul style="list-style-type: none"> • Agreed talking points. • Govt leads with policy intent and criteria and industry leads with the how. • Govt agrees industry is leading the conversation, Govt. supporting the process. Get on board. • Recognising and respecting consensus viewpoint from industry. • Willingness to progress co-management with this consensus. • Provide all necessary information. 	<ul style="list-style-type: none"> • Touch stone – to keep within boundaries, de-risk issues. Ability to have the Maxwell Smart discussion. • Develop joint statements of intent.

		<ul style="list-style-type: none"> • Travel and meet to discuss with groups and individuals. • Willingness to go ahead with a majority viewpoint as the position. Needs to happen without group fracturing and work out concessions of position to ensure no splintering occurs. 		
<p>What is the structure that you will use for collaboration</p> <p>What are the products and services the organisation will deliver?</p> <p>What are the funding and cost recovery models for the organisation?</p> <p>What is the governance framework for the organisation?</p> <p>What are the expectations that Govt and industry have of each other from the start?</p> <p>How do we develop the skills to enable collaborative relations to develop?</p>	<p>A fisher organisation with sufficient resources and skills to implement and deliver services, or an ability to negotiate and attract such resources.</p>	<ul style="list-style-type: none"> • Put PFA on the sideline as a starting point. • Business plan to outline steps and resourcing (payment, in-kind equality in pay) – phased approach. • Look at PFA members in the list. Get together and identify spokes person(s). • Identify skills required for the group to be successful. • Look for external training support to build capacity of fishers. • Build a committee of fishers, set of agreed rules to operate, then the identify someone who can help facilitate committee going forward. • Identify and develop leaders, fishers talk to one another. • Develop a statement of intent. • Develop a vision and story to inspire the industry. 	<ul style="list-style-type: none"> • Minister's commitment. • Support and validation of the process being undertaken by the Ocean Trawl. • Not to listen to squeaky wheels outside of the process. • Prioritise to commit resources and leadership to engage and support industry vision. • Engage DPI leaders for support. • Help identify skills and training required by industry (FRDC has a role). 	<ul style="list-style-type: none"> • Once committee has been formed can identify integration of DPI. • Trust building events

		<ul style="list-style-type: none"> • Get bi-partisan parliamentary support. 		
	Availability of people with the skills to lead and align the industry to develop a single voice	<ul style="list-style-type: none"> • Training to facilitate process to support the leaders (rules about how you can talk, park discussions, deal with noise and history). • Industry champions/leaders to make a commitment to leadership activities. • Require access to mentoring/coaching 	<ul style="list-style-type: none"> • Training Govt with skills on how to operate in a collaborative environment, i.e. let industry lead. • Facilitate opportunities for mentoring/coaching (FRDC to work in this space). 	<ul style="list-style-type: none"> • Mapping of skills and capabilities to ensure there are the right skills and capabilities to work in development of co-management
What is the design for the mechanisms for communication?	Appropriate mechanisms for communication within and for the industry to support education and decision making.	<ul style="list-style-type: none"> • Set of rules or code of conduct. Rules determined by the working group. • PFA contacting members on FRDC project results. Fisher to fisher communication 	Govt aware of rules and agreed to meet the principles set in the co-management	<ul style="list-style-type: none"> • Develop a MOU with industry. • FRDC develop a template of options - Co-mgt MOU and constitutions
	DPI Fisheries commitment to work with industry to negotiate alternative management and create models involving greater shared responsibility	What do you need to operate? BEP -documented for NFT Prioritised List.	<ul style="list-style-type: none"> • DPI work with industry on reviewing and implementation of the list. • Govt, work through red tape to assist with being able to adapt. • Negotiation for immediate, low risk management changes to engender trust in DPI's commitment to changing management 	
	The availability of skilled people for appropriate			

	communication and relationships development			
How do we make sense of the draft policy document as a reference to get on the same page about this policy?	Alignment in the ethos between Govt and industry about co-management	Articulate what their vision of a co-management is.	<ul style="list-style-type: none"> • Identify governance elements working in with industry vision. • Working out what is possible in legislative responsibilities 	<ul style="list-style-type: none"> • Annual anonymous survey on delivery. • Come together in a co-management working group to see where alignment between co-management vision of industry and legislative restrictions (or Gov policy?)

Appendix E

Activities/projects that support the implementation of the policy in sections 4.1 and 4.2 of the Draft Policy for the Co-Management of Fisheries in NSW

The draft policy document provides the NSW NFTS and DPI Fisheries with clear conditions that must exist to enable the transition to enable a co-management approach. The following sections outline a NSW NFTS/DPI Fisheries perspective to ensure that these conditions are met.

Section 4.1 Moving from Centralised to Consultative Co-Management

- a) There is a representative body, incorporated and financially secure organised fishing body or incorporated association with a sound governance structure

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> Identify leaders from NFTS to coordinate people, drive people 	<ul style="list-style-type: none"> Govt to assist industry by providing links that support body formation 	
<ul style="list-style-type: none"> Industry needs to provide the time to get together 	<ul style="list-style-type: none"> Government needs to provide the time to get together to discuss how we engage with the new industry body and our own comms and external relationships 	
<ul style="list-style-type: none"> Industry to develop the value proposition that will unite the industry 		<ul style="list-style-type: none"> Industry and Government to develop the value proposition that will unite the industry
<ul style="list-style-type: none"> Industry needs to support and trust its industry body 		
<ul style="list-style-type: none"> Need to develop the appropriate financial model to support the operation for the representative body 		
<ul style="list-style-type: none"> Develop a business case for the representative body 		
<ul style="list-style-type: none"> Industry to develop the governance framework 		

- b) There is active leadership in the fishing body (Eg exec officer/president level) providing a capacity to constructively engage with government and authorities

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> • Industry needs to determine its goal with its relationship with government. This will bring industry together as a group • Industry needs to identify its key players to be leaders. • Those players are willing to communicate they are willing to play in comgt. • They need to identify the what are the projects that we want to work with Government • Industry to invite Government to a meeting that announces the commitment on a journey to co-management. The authority to act arises from the group in the context of co-management. <ul style="list-style-type: none"> ○ How does industry work with industry in a co-mgt process? • A critical mass of people from the industry self-organise with intent for collective action towards co-management <ul style="list-style-type: none"> ○ Start with a smaller subset of people with the principle of inclusivity to expand the group of leaders. Coalition of the willing • The leaders need to demonstrate a value proposition to the collective. • Industry needs to support its leadership 	<ul style="list-style-type: none"> • Ministerial announcement welcoming the establishment of the NSW trawl co-management commitment. And is supportive of this initiative. • Government needs to respect and make the time for invited meetings • Government needs to support and facilitate leadership training and capability development for the NSW Northern Fish Trawl collective and for Government staff • Government staff to be provided with the authority to engage conversations for co-management • Government needs to recognise that co-mgt is a priority that requires resourcing. This needs to be included into the investment plans. • Government to develop the courage to take the risks when some initiatives are not working. How does Government not revert back to the old ways? 	<ul style="list-style-type: none"> • Developing a shared vision/direction and boundary setting and expectations • Recognise other stakeholders that are part of making co-mgt a reality <ul style="list-style-type: none"> ○ SFM ○ AMSA ○ Rec fishers ○ Other research orgs ○ Establish and implement platforms that include other stakeholders ○ NSW Farmers ○ Co-ops • Develop MOUs of collaboration between other stakeholders • Industry and Government work together to support industry development

<ul style="list-style-type: none"> • Industry needs to work as a team to understand ways of reaching consensus • Require leadership who understand the boundaries of what can be done to enable constructive engagement. • Industry to provide quick wins as signal to Government that they are on the path towards co-mgt • Industry to develop the courage to take the risks when some initiatives are not working. How does Industry not revert back to the old ways? 		
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- c) There must be mutual trust and respect established between the organised fishing body, DPI and key stakeholders and third parties, and this needs to include a respect for the best available science, as good clear advice is essential to support decision-making

Done to date

1. Drafting a co-management policy.
2. FRDC supporting a program, to investigate options and DPI investing resources.
3. Reform and business adjustment program to shift to an engagement process.
4. New peak body process, supported by election commitment.

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> • Show signs of broader engagement and collaboration by all fishers in considering moving towards co-management models 	<ul style="list-style-type: none"> • Statement from govt saying if industry started a consultative process that government would wholly support it. 	<ul style="list-style-type: none"> • Signal Govt, in partnership with peak body, to support and recognise a sector body (or group), in the absence of squeaky wheels.
<ul style="list-style-type: none"> • Sectorial – representative majority of volume and value (ensure there is a mix), with a good governance structure (set of rules/independent Chair). Both fishing business owners/endorsed fishers. Statement of intent from the sectorial body: i.e. no 	<ul style="list-style-type: none"> • Have managers to do port visits • Government to change the log books to enable the collection of data. Changes need to include: <ul style="list-style-type: none"> • Target species, • Shot by shot entry • In addition to other data to be collected 	

illegal activity, do accept criminal intent.		
<ul style="list-style-type: none"> Discuss with Stay Afloat to assist with past trauma from the reform. Invest in RUOK program. 	<ul style="list-style-type: none"> Acknowledgment of accountability of previous decisions on impacts to business. Answer questions on why history to determine allocations changed towards the end of the process and these changes caused massive impacts on businesses moving forward and industry developing. History of individuals in trawl fishery 'controlling' how decisions are made. 	
<ul style="list-style-type: none"> PFA task with a monthly NSW trawl newsletter- starting a conversation with a sector. 	<ul style="list-style-type: none"> Look for some easy wins in management changes that done impact sustainability but increase fishing efficiency. Eg. Open up some closed areas that don't have sustainability impacts. 	
<ul style="list-style-type: none"> Stock assessment training, workshop/opportunity to have input, nominated person from industry to provide input. Data sharing. 	<ul style="list-style-type: none"> Govt will work with 3rd party accreditors to provide information to feed into accreditation processes 	
<ul style="list-style-type: none"> Potential secondment into sector body and visa versa in dealing with issues. 	<ul style="list-style-type: none"> Government needs to provide the time to get together to discuss how we engage with the new industry body and our own comms and external relationships 	
<ul style="list-style-type: none"> Leadership program – build own culture on Governance and capacity building around leadership and industry representation “Catch the Drift training” Australian Maritime Academy 		
<ul style="list-style-type: none"> Ownership: Australia interest consultation 		
		<ul style="list-style-type: none"> Industry partner with Government to develop a method to capture shot by shot data. Need to check legal requirements

Section 4.2 Moving from Consultative to Collaborative Co-Management

- a) The organised fishing body must have sound governance structure including an independent chairperson, an executive officer and appropriate stakeholder involvement

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> Review and upgrade the business plan to reflect the enhanced needs of the organisation 	<ul style="list-style-type: none"> Government respects the role of the independent of chair 	<ul style="list-style-type: none"> Industry and Government to work on expectations for the governance structure
<ul style="list-style-type: none"> Enhance skills of board members to reflect the advanced way of working 	<ul style="list-style-type: none"> Government commits to work with the chair 	
<ul style="list-style-type: none"> Choose the correct independent Chair with the appropriate values, beliefs and skills 		
<ul style="list-style-type: none"> Industry to ensure the involvement/consideration opinions of stakeholders when necessary 		

- b) Resources must be available for the organised fishing body to engage in activities and functions. This means that the fishing organisation must demonstrate its capacity to take on greater management responsibility (this includes responsibility for any decisions)

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> Develop a legal structure and the skills to operate a legal structure 	<ul style="list-style-type: none"> Government to consider a service level agreement with the industry body for specific areas 	<ul style="list-style-type: none"> Government and industry to jointly develop a fisheries management plan. The plan includes a decision-tree about how to deal with social licence to operate
<ul style="list-style-type: none"> Need the financial resources to run a legal structure (eg insurance, ASIC registration etc) 		
<ul style="list-style-type: none"> Refine and review the business plan to reflect the complexity of the work 		
<ul style="list-style-type: none"> Find the right people with the right skills to operate the structure 		

- c) Recognition by DPI Fisheries and the organisation that co-management arrangements must contain mechanisms for monitoring and auditing

This means:

- In the context of co-management, this is about doing more for monitoring for science. Industry to collect data and have mechanisms in place so that data is stored, accessed and analysed and presented as per the co-management arrangements
- Auditing the processes of data collection
- Auditing against the policy preconditions, MOUs

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
No entries were provided at the workshop		

- d) A risk assessment should be undertaken in relation to all co-mgt functions to ensure all potential risks associated with moving towards more collaborative co-management are considered and appropriately managed

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> • Develop a risk and governance framework that supports the functions and responsibilities for which the industry body is responsible 	<ul style="list-style-type: none"> • Review the risk and governance framework to respond in the new management environment 	<ul style="list-style-type: none"> • Agree on the categories of risk and the how to mitigate the risks
<ul style="list-style-type: none"> • Identify the risks that are specific to their area 	<ul style="list-style-type: none"> • Identify the risks that are specific to their area 	<ul style="list-style-type: none"> • Agree on new risks that arisen because of moving towards collaborative co mgt
<ul style="list-style-type: none"> • Industry to develop a risk register for the fishery 	<ul style="list-style-type: none"> • Where appropriate government adopt the mitigated measures identified through risk assessment 	
<ul style="list-style-type: none"> • Where appropriate industry adopt the mitigated measures identified through risk assessment 	<ul style="list-style-type: none"> • Update business plan to reflect the costs of risk mitigation 	

- e) Recognition that all parties will need to demonstrate flexibility in the development of co-management arrangements because issues need to be worked through carefully and thoroughly. This acknowledges that some issues may arise that are not anticipated and for which there are no simple resolution. It requires that all parties need to be prepared to work through issues constructively and cooperatively when and if they arise.

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> Industry is to develop a single voice 	<ul style="list-style-type: none"> Government enters the dialogue in good faith, respecting the single voice from industry 	<ul style="list-style-type: none"> Govt will work with 3rd party accreditors to provide information to feed into accreditation processes
<ul style="list-style-type: none"> Industry needs to enter dialogue in good faith 	<ul style="list-style-type: none"> Govt seeks to be as agile and responsive to industry requests within reason 	<ul style="list-style-type: none"> Industry and Government develop a shared issues management framework that supports a transparent decision-making process
<ul style="list-style-type: none"> Industry needs to develop a set of principles 	<ul style="list-style-type: none"> Government needs to use the tools at this disposal to enable progress within an acceptable timeframe 	<ul style="list-style-type: none"> Recognition will depend on the function.
		<ul style="list-style-type: none"> Industry and government can move at their own rate of development to implement practices to improve flexibility

f) There exists minimal conflict with other stakeholder groups, and/or clear mechanism or demonstrated capacity to address conflict exist

What does Industry need to do?	What does Government need to do?	What do Industry and Government need to do?
<ul style="list-style-type: none"> Industry have developed an agreed pre-emptive messaging, with agreed speakers to deal with conflict 	<ul style="list-style-type: none"> Government has an agreed pre-emptive messaging, with agreed speakers to deal with conflict 	<ul style="list-style-type: none"> Govt will work with 3rd party accreditors to provide information to feed into accreditation processes
<ul style="list-style-type: none"> Industry need to recognise that there is a shared problem 		<ul style="list-style-type: none"> Government and industry recognise their responsibility to communicate with other stakeholder groups to generate a shared risk register for appropriate management processes
		<ul style="list-style-type: none"> Industry and Government to recognise that there is a need to recognise a conflict exists and secondly, that there is joint process to resolve the conflict

Appendix F

The meta patterns

What did we discover from the workshops- the meta patterns- lessons that are scalable to the rest of the NSW fishery and other jurisdictions?

The following is a list of meta patterns based on observations, insights and lessons learnt from this project that would provide important guidance to support the journey towards co-management of a fishery.

Establish an explicit, shared, common understanding and agreement between the regulator and industry that there is a clear intent for co-management

An explicit pronouncement by the regulator and Industry towards a collaborative management of the resources is a critical requirement at the beginning of any journey. Such an announcement demonstrates that such an intent is agreed upon by both parties. Once agreement has been achieved, the organising principles for what it means for a collaborative/co-management approach needs to be shared at the start of the project. By doing so, both Industry and the regulators have a shared understanding of what is required by Industry, what is required by Government and the regulators and what is getting in the way of enabling co-management to arise. This will provide a sense of the scale and scope of the journey towards co-management.

Identify and define the initial status of the Industry culture as context to determine the design and approach for supporting cultural change

An understanding of the degree of critical cultural conditions (eg cultural trauma, tribal conflicts, strength of the leadership) and other Industry/sector-wide emotional issues provides important context to the design, approaches and time required to facilitate the cultural change. It also determines what can/cannot be achieved at various stages of working together. A word/phrase can be misinterpreted and can catalyse a cycle of stress triggers and emotional responses that demotivates people to want to participate, continue and/or lead the project. Any unresolved stress and/or emotional issues need to be addressed early on in the workshops so that the program of work can be realised rather than being stalled throughout the project.

Use workshops to catalyse collaboration and cultural change

The cultural change program is a very relational process and requires face to face processes to build communications, relationships, understanding and trust. The shift from a centralised to a collaborative approach will require well designed and facilitated workshops focused on trust and sense-making to enable participants to participate in the journey of cultural change. The workshops provide the medium to enable the move towards collaboration. The speed and depth that this will happen will depend on the starting conditions of the nature of the relationship between the participants and the parties that they represent.

If there is a lot of mistrust for example, (as we found with the NFTS), then a lot of the emphasis of the workshops will be focused on participants venting about their issues that are creating

them most concern. This requires facilitation processes to support participants to move beyond the venting. A critical part of the facilitation is to ensure that participants vent to the relevant context and do not wander into a range of issues that are not relevant to the direct relationship between the fishers and the regulators. Otherwise, the process degenerates into victim and blame modes, “Us vs Them” dynamics. This requires that the parameters of the project need to be very clear otherwise participants will over generalise their comments.

Prior to beginning a project, ensure that Industry has committed leadership to catalyse and lead people on the journey of change or that there is the high potential to find/emerge such leaders

A key success for cultural change relies heavily on the availability of people who are willing to lead others in the change process. This means that they:

- care about the sector and the seafood Industry as a whole;
- are open and/or willing to work in a collaborative way;
- have a sense of direction for what can be for the sector and the businesses that are embedded within it;
- have a story of why change is required;
- have a story about the current ways and a story about how the Industry/sector can be different in the future;
- have the time to work with people on a one-on-one basis;
- are willing to show up at meetings. This provides an indicator on whether or not the project is worth doing/not doing; and
- are willing to see the change process through its cycle.

Without the appropriate/identified potential leaders there will no one to catalyse the process and so make it impotent.

The Industry/sector can demonstrate to regulators that it has the capability to be a valued partner in the collaborative management of the resources

The Industry/sector needs to be able to ensure that it is aligned with itself. This means that members within the sector have:

- a level of trust between them that will enable collaborative processes to emerge;
- an agreed direction;
- an agreed set of rewards and sanctions that hold members accountable for their behaviours;
- a one voice with a shared message; and
- an agreed set of cultural norms and beliefs that guide decisions and behaviours.

Leadership will play a crucial role to support the alignment process.

Identify and define the context to determine whether the change is primarily led by the Regulator or the Industry

The nature of the relationship between the Regulator and Industry sector will determine how the change process will need to be led. With a context that is characterised with an Industry that is self-organised, then the change process can be more Industry led. This influences what Regulator can expect from Industry during the change process.

In contrast, where the Industry is not self-organised, the change process needs to be primarily led by the Regulator. This impacts what the Regulator can/cannot expect from Industry and has implications for the capabilities that the Regulator has to build /develop for itself to lead the change.

The Regulator and Industry are to develop clarity about the difference between running/managing Vs Leading a co-management change program

There is a distinction between operating and managing a co-management process versus leading the change and transitioning to co-management. To prepare to operate in a co-management environment, the Regulator will be required to develop a number of approaches including the establishment of a management/operational framework and associated processes. There is a danger that the Regulator could focus on this aspect of the change program without considering the more challenging and complex leadership role.

A critical element of the leadership role is to understand communication styles, the timing of responses and all of the symbolic communication signals that get sent when things happen and don't happen. In an environment of low trust, the Regulator needs to be extremely sensitive to the efficacy of the communication processes as the Industry can easily misinterpret messages and unintentionally trigger a range of emotions that have arisen from past experiences. This can raise cultural trauma that can jeopardise the progress of developing effective working relations.

Additionally, in an environment of low trust, the Industry can develop an unrealistic expectation that the Regulator behaves in a way that symbolises a collaborative approach despite they are still operating from a more centralised approach. Such an expectation can be a barrier in how the Industry will interpret what is happening. To move out of this centralised approach, the first step for the Regulator and Industry is to recognise and acknowledge where they are on the co-management continuum and align their expectations about communications and consultation accordingly.

Part of the cultural shaping process is to design the workshops such that they are part of the change process. The workshops serve as a function to enable consultation, conversation, collaboration, communication, and alignment. They also serve to produce the products such as the map of the dynamics of the culture and the basis for developing a suite of interventions to further shape the culture. In the early stages of the project, in a low trust environment, workshops need to be designed to explicitly include processes to:

- enhance alignment between the Industry and the Regulator;
- enable participants to vent and heal thereby becoming freer to begin working in a collaborative way. It could be argued that this enables Industry to play the role of victims. However, the process is designed to facilitate participants to psychologically move out of victim mode, out of the past and into the present to create a mutually desired future. Until they feel that they have been heard, they will continue to be in the victim mode;
- enabling participants to heal through mediation sessions. This requires both the Industry and the Regulator to have a response and a willingness to explore how:
 - “we can move forward”;

- “can we heal the hurt, the upset, the anger and the relationship”.

Experiencing and acknowledging each group’s hurt, frustrations and anger is not enough. Both the Industry and the Regulator need to engage in the conversations to heal the relationship and build a pathway forward to enable a collaborative working relationship to arise from this work. To enable this to happen, it is essential that representatives from both groups need to have the licence to undertake the mediation process to promote healing and build relationships by:

- working through the mistrust issues;
- developing a shared sense of the outstanding issues that are affecting the relationship between industry and the regulator; and
- building a sense of a productive future.

When there is a high level of trust such processes are not needed.

Industry needs to organise itself with enabling structures to have one voice to the Regulator and the Government

Critical to the success of co-management is the capability of the Industry/sector to represent its ideas, issues and concerns as one voice. The Government/Regulator will not want to consult with multiple, conflicting voices. This will require the Industry to undertake the work to enable a coherent and concise voice that can be developed and presented to the Government and the Regulator.

Organisational structure to support the voice- representation versus management structure

The Industry will require an appropriate structure to organise people and to develop the voice. The single voice can arise from many possible structures including: a division of an industry association, a division of a peak body, or an independent sector association. Whichever option is chosen, there needs to be a clear distinction between a management structure as opposed to a representation structure. A peak body for example, will talk about representing its members. In the context of co-management, this is not what is required. The key function of the structure to enable one voice. This is facilitated by a management structure.

So, to enable the Industry voice to be developed, the Industry will need to develop a structure such as an Industry sector association that is able to manage the variety of opinions and ideas in such a way that the majority of members agree to and believe that this will reflect their needs.

Ensure that people in critical positions have the appropriate beliefs, skills, intention and background to fulfill their roles

Critical positions required for future success require an: independent chair, the executive officer and the science officer. The change program from a centralised, adversarial to a collaborative approach requires having people:

- with beliefs that align with the principles of collaboration and co-management;

- who have intentions for the sustainable development of the whole industry/sector given the broader set of existential factors that are shaping the Industry;
- with the appropriate communication and relationship development skills; and
- with the time to work with members of the Industry and the Regulator to lead the change program;

Ensure that the Industry body appoints an independent Chair of the organisational structure for the voice of the Industry

The appointment of an independent Chair of the board of management plays a critical role in establishing and developing relationships between members within the Industry association and between the association, the regulators, and at times, the Minister.

The Industry association needs to ensure a strong intimate relationship between the itself and its member fishers by maintaining close physical connection, easy access and frequency of communication.

The fishing and seafood Industry operates in a very tangible and concrete way. The work requires being present in the moment. Therefore, relationship development, expression of voice and communication in general, has to be facilitated in the moment. This requires that members from the Industry need to have close physical proximity to their organisation where they can quickly and easily express their concerns, vent their frustrations, present new ideas and provide advice.

Close physical proximity of fishers to their organisation has a significant impact in developing a single voice. Where it is not possible, people have to travel to manage relations.

Both Industry and the Regulator need to be aware of and develop the methods and channels that effectively support workable communications in operating contexts.

The approach to communications and relationship development within the Industry will depend on the culture of that sector. An awareness of current methods and channels of communication provide important guidance on how communication needs to be designed and facilitated into the future. This would also include an understanding of how people prefer to sense information and the way they make sense of it to inform decisions and guide behaviours. For example, a sector that is more traditional in its nature will require much greater human interaction to enable effective communication and relationship development. The reliance on electronic communication in this case will be minimal or non-existent. Therefore, effective communication will require being able to be physically present at the boat or on the docks.

Prioritise and invest in the role of education to enable people to be informed about what is happening in the Industry ranging from legislative and regulatory changes to natural ecosystem change, shifts in market conditions and consumer tastes.

Informed decision-making by the Regulator and the Industry plays a critical role in the speed at which consultative vs collaborative management is adopted in a sector. Having up-to-date information that is communicated effectively will enable decision-makers to have the confidence to make decisions that enables purposeful progress of collaborative management.

This will require leaders in both the Regulator and the Industry being able to help people understand:

- why certain issues are being/not being addressed;
- the rationale behind certain regulatory changes;
- the science that has led to legislative and regulatory changes;
- why certain decisions have been taken; and
- why “you have to make decisions this way as opposed to that way”.

The provision of information, education, and explanation need to be of high priority for Industry and the Regulator to support a cultural change program. The provision of information and education determines whether or not people will/will not support the transition to a collaborative management approach.

Industry and the Regulator need to recognise and factor in how people can perceive time differently. This will influence their expectations, values and emotional needs for how workshops are facilitated and people are coached through the change process.

In general, people understand the world from three different time perspectives- the past, the present, or the future. While people *live in the present* they perceive and make sense of the present based on:

- experiences and learning from the past. Much of their present existence is filtered through their learning, issues, experiences from the past. Therefore, the past provides meaning for the present and the future. They live *from* the past;
- experiences and learning from the present. Much of their present existence is filtered through their current learning, issues, experiences. There is *only the present moment* for these people with limited reference to the past and the future.
- experiences and learning from the future. Much of their present existence is filtered through their learning, issues, and expectations of the future. Therefore, the future provides meaning for the present and the future. They live the present *from the future*.

By listening to people’s linguistic patterns, we can ascertain their preferences for time orientation. This provides critical information about how they will respond to change initiatives and how they interpret a range of issues. It provides a context to how the change process is designed and implemented. Key areas that would require focus include:

- supporting both the Industry and the Regulator to acknowledge their time orientation preferences and the implications this has for how they make sense of the world and the decisions that are taken;
- supporting people who have a past time orientation to address/resolve the issues of the past. This is a pre-requisite to solve current and emerging problems in the present; and
- enabling change requires orchestrating events. Designing events in the present will assist people to resolve issues in the past/present. Once the events happen, they are now in the past and therefore provide a reference for “past time sorters” to reference them to resolve past/present issues.

Additional strategies would need to be considered depending on the context of the group when the change program is initiated.

The venues and forums where meetings are held need to be designed so that people feel safe to speak openly

The Regulator and Industry will tend to approach the world from differing worldviews and identity states. It is important to understand how people from the Industry and from the Regulator perceive themselves and the impacts this has in how they perform in meetings and workshops. For many fishers, sitting in meetings and workshops exploring conceptual models and talking about culture would be foreign to their day-to-day operations and may feel they don't have the skills to participate in the conversations. On the other hand, many of the people from the Regulator would find such an experience normal part of conducting business.

The perceived differences that people can have in capability and sense of self can lead to power differences in the workshop, thereby increasing exclusion and alienation and impacting on relationship development. Enabling all participants to feel comfortable, safe and believe that they have a contribution in shaping the relationship between each other is an important facet of developing a collaborative culture.

All participants need to be willing to enhance their capability to see things from the other people's perspective

As humans we believe that in most instances, that our perspective is correct and that our approach is the best way. In many instances this may be the case. However, when working with others to enable a collaborative culture, being willing and able to place ourselves in other people's shoes to develop a more connected and meaningful understanding of their perspective plays a significant role in:

- developing rapport with others;
- gaining different perspectives that contribute to new learning and understanding; and
- developing innovative solutions to issues and problems.

People participating in a journey on developing co-management will need to be willing and able to see things from other people's perspectives. This may require personal coaching and development to enable them to fulfil this task.

Combined with the strong leadership, people representing the Regulator need to have the imprimatur to act and make decisions throughout the process

People from the Regulator need to be empowered to have the imprimatur and decision-making capability to champion, lead and "go and make a collaborative approach a reality". These senior leaders need to believe and feel they have a mandate to enable the change with the Industry and other stakeholders to happen and so are able to make decisions with the sector to shape a path forward towards co-management.

Equally, participants from the Industry also need to believe and feel that they have a mandate to enable the change with the Regulator and other stakeholders and so are able to make decisions with the Regulator to shape a path forward towards co-management.

The Industry and the Regulator need to acknowledge their unrealistic expectations of the process of change to enable the progression to collaborative management

Given past events both the Industry and the Regulator need to realise that they may be operating from unrealistic expectations about what can/cannot be done within time frames. This can be difficult to overcome if either or both stakeholders live out strong beliefs about their position. For example, if the Industry plays the role of victim, then the unrealised expectations that have not been fulfilled will be continually brought up as an issue. This gets in the way of progressing the journey of collaborative management.

Rather than blaming each other about unrealised outcomes, each stakeholder is facilitated to:

- recognise the position (eg victim, persecutor, rescuer) they are taking in presenting the unrealistic expectations;
- acknowledge the unrealistic expectations; and
- determine what they can they be empowered to do about enabling their expectations to be realised.

In some instances, the position taken by either or both groups can be dominating and stagnate the change process. In this case, individual and group coaching for personal development is required to enable people to broaden their perspectives and have additional ways of operating to navigate their world.

The cultural change program needs to be framed appropriately to support collaborative management. This will attract who will be part of the Industry group to lead the change process.

Framing the cultural change program is essential for the design of the change process, how its facilitated and who would emerge from the Industry to help lead the transition. Working with the “industry point of contact” to develop the appropriate framing will help to provide a narrative that would appeal to people who are concerned about the whole Industry and its future viability. Once these people have agreed to participate, they need to be briefed on a one-on-one basis to engage each fisher in the cultural change process.

Use systems mapping to understand the nature of the operating landscape to work in a complex adaptive environment of cultural change

Understanding the operating landscape of culture early in the project provides the context to:

- create an informed narrative about the dynamics that are shaping the current set of cultural behavioural patterns. This narrative assists people to make sense of the dynamics and explains why the behavioural patterns emerge in the way they do;
- identify key factors and the relationships between them that are shaping the culture and contributing to the patterns of behaviours that are observed on a daily basis;
- identify feedback loops that are creating meta stable patterns of behaviour that are either functional/dysfunctional towards a collaborative approach;
- identify various red herrings that were collectively considered as important, where not important; and

- surface and challenge assumptions about the Industry as a whole and how it is currently being managed.

From a behavioural perspective, the systems mapping process give participants:

- a point of focus to have a functional conversation about the dynamics of the culture. Through this process they are making sense of their experiences using a different approach;
- the reason to come together and start conversing with each other;
- the ability to explore the dynamics of the map, including the feedback loops and starting to understand of each other's perspectives;
- the means to vent their frustrations and at the same time, develop a deeper understanding about the nature of those frustrations; and
- the opportunity to identify a range of issues that were shaping the culture. Some of these issues are quickly identifiable while others are identified until later in the process. Additionally, some issues that are initially considered only minor in their influence on the culture, could later be found to be critically important.

The nature of the relationship between the Industry and the Regulator will determine where the mapping process sits in the sequence of projects and what is mapped. Where the level of trust is low, systems mapping would ideally be at the start of the project. However, where there is high levels of trust, the mapping process will sit after some investigative workshops are conducted so as to identify the topic of the mapping process.

Benchmarking other fisheries is essential.

Conversations with people from other fisheries who have been on the journey of co-management provide a range of insights about their transition from a centralised to a collaborative approach to managing a fishery. The benchmarking process highlights the very nuanced pathways to co-management. This would provide participants with signals to avoid and/or embrace in the change program.

Showcase how co-management has evolved in other fisheries would make a difference by showing what's possible.

A cultural change program is a major and impactful process on the people of an organisation, business, and Industry. The process can be difficult and challenging with seemingly no sense of success. To maintain a sense of purpose, energy and commitment to the project as well as providing important insights for how the change program can be pursued, it is important to provide people with a showcase of what other fisheries, eg rock lobster, have achieved on their journey to co-management.

The showcase process provides a context for convincing people that it is possible to operate in a co-management environment. Presentations from individuals who have been involved or currently involved in co-management provide tangible evidence about the process and the journey towards co-management. The challenge for people within the system is to adapt what they hear and use it to find the change initiatives that would pave the way towards co-management that is contextually relevant to them.

Ensure that key figure heads from Industry and the Regulator participate in the workshops to demonstrate the commitment to and credibility of the process

Key decision-makers need to be part of the workshop process as their presence provides a symbolic message about the need and commitment for change to happen. In an environment of mistrust, meaning is going to be made of who is/is not there. The presence of senior decision-makers sends a strong message to all stakeholders of the importance of this work given these people have the influence and decision-making delegation. Their input can very quickly dampen the instability in the workshop when entrenched perspectives are presented.

Both the Industry and the Regulator need to be aware of what they do that contributes to mistrust and change their approaches accordingly

Complex adaptive systems such as the Regulator and the Industry carry history in the beliefs sets of their people, their processes and in their rules and regulations. The history is important as it provides the context from which the system evolves. The current cultural behavioural patterns are emergent from this embedded history.

In an environment of low trust, it is critically important to gain an understanding of this history as it provides important information about what each stakeholder group does that reinforce mistrust. Both groups need to be willing and able to be wary of these artefacts and work to reappraise them to ensure that they do not re-occur, thereby contributing to increased mistrust- especially in an environment where trust is low.

Both the Industry and the Regulator need to have a high degree of self-awareness about their beliefs and judgements impacting how they interpret each other's communications and behaviours.

As part of being human, people form beliefs and judgements based on how they perceive the world that they experience. Some of these beliefs are functional while others are dysfunctional. In a cultural environment where there are high levels of mistrust, dysfunctional perceptions can abound. Dysfunctional perceptions are happening on both sides leading to a myriad of finger pointing and blame on each other. This can fuel a vicious spiral of blame and contempt thus reinforcing and heightening mistrust.

Being on a journey of co-management requires people from Industry and the Regulator to develop self-awareness about their dysfunctional beliefs, judgements and perceptions and be able to suspend them. This will enable people to listen in a new way to each other to clarify and resolve issues. Failure to suspend judgements can work as a barrier for people to hear each other and arrive at the heart of what really matters to each group. This will only fuel the cycle of blame and heighten mistrust.

Part of the journey towards co-management requires participants to be willing and able to learn to suspend their dysfunctional beliefs, judgements, and perceptions.

Establish a range of platforms and processes that enable people to communicate and learn from each other to build relationships to support change and the transition to co-management.

The journey towards co-management requires robust relationships, a deep understanding of the issues for both the Regulator and the Industry and a lot of trust that arises from relationships and understanding. Much of this is achieved through communication.

To enable effective communication to flourish throughout a change program requires designing a range of platforms and processes that facilitate and provide the opportunities for people coming together. Platforms include meetings, workshops, information sessions, visits to boats, showcases, trial projects and much more. These platforms provide both the Industry and the Regulator with the channels to negotiate, collaborate, explore issues, ideas, processes and to define and work through their issues.