

# **Understanding Fishers' Wellbeing through Participatory Processes in Fisheries Management**

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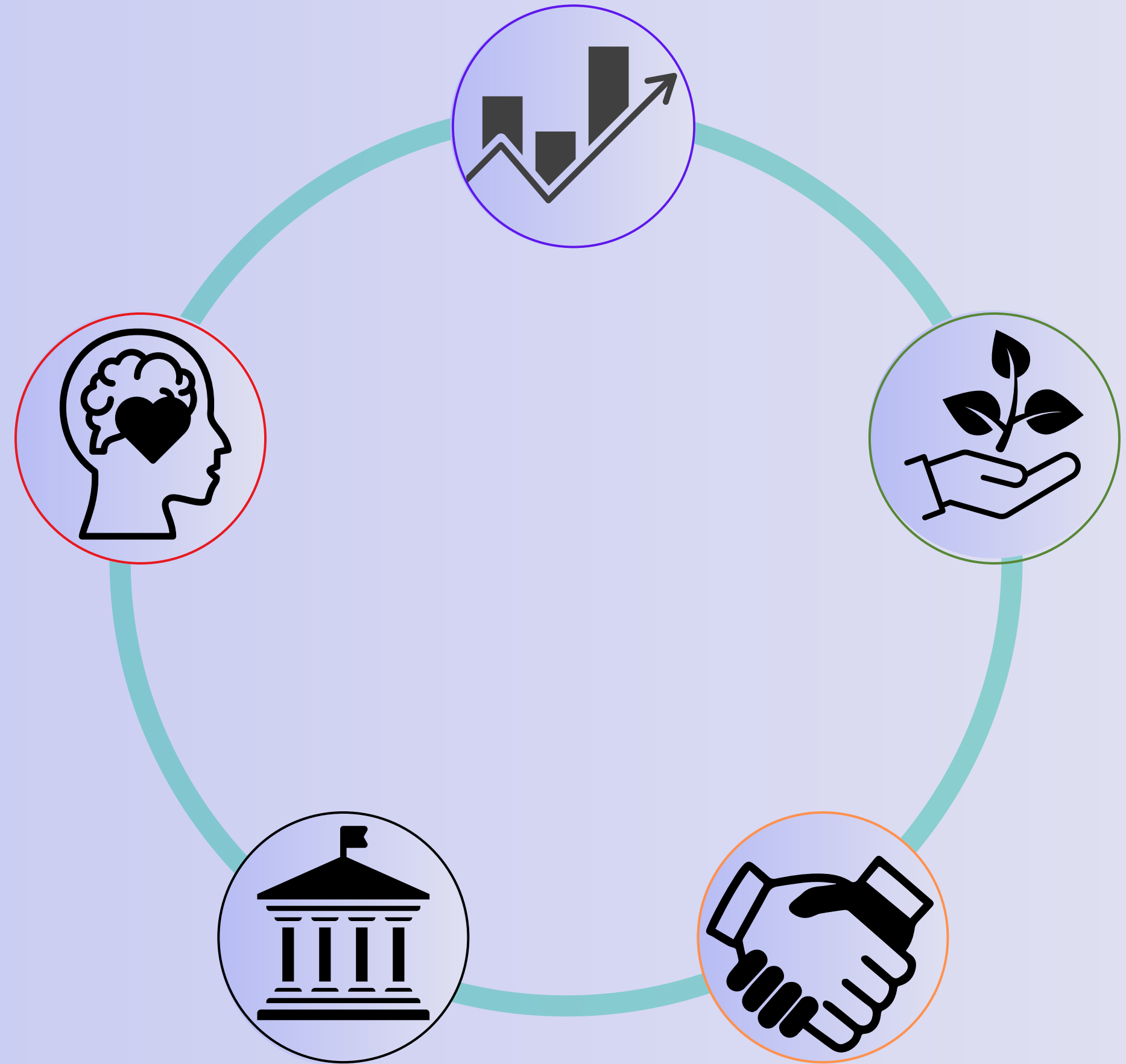
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# Research foundation

Well-being is a:

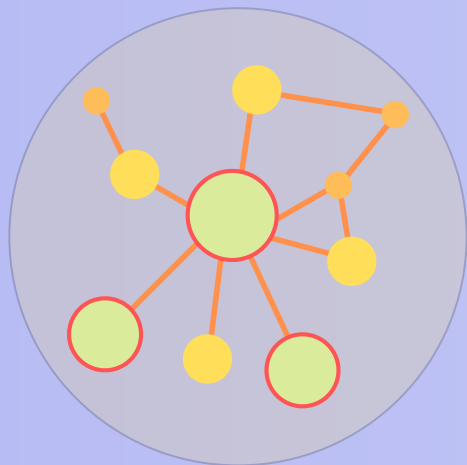
- Complex
- Dynamic
- Circular

system

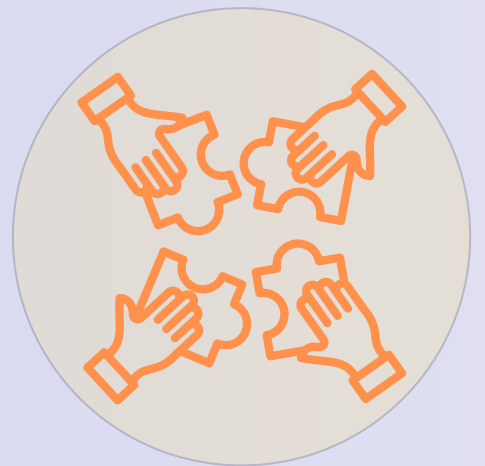


# Rationale

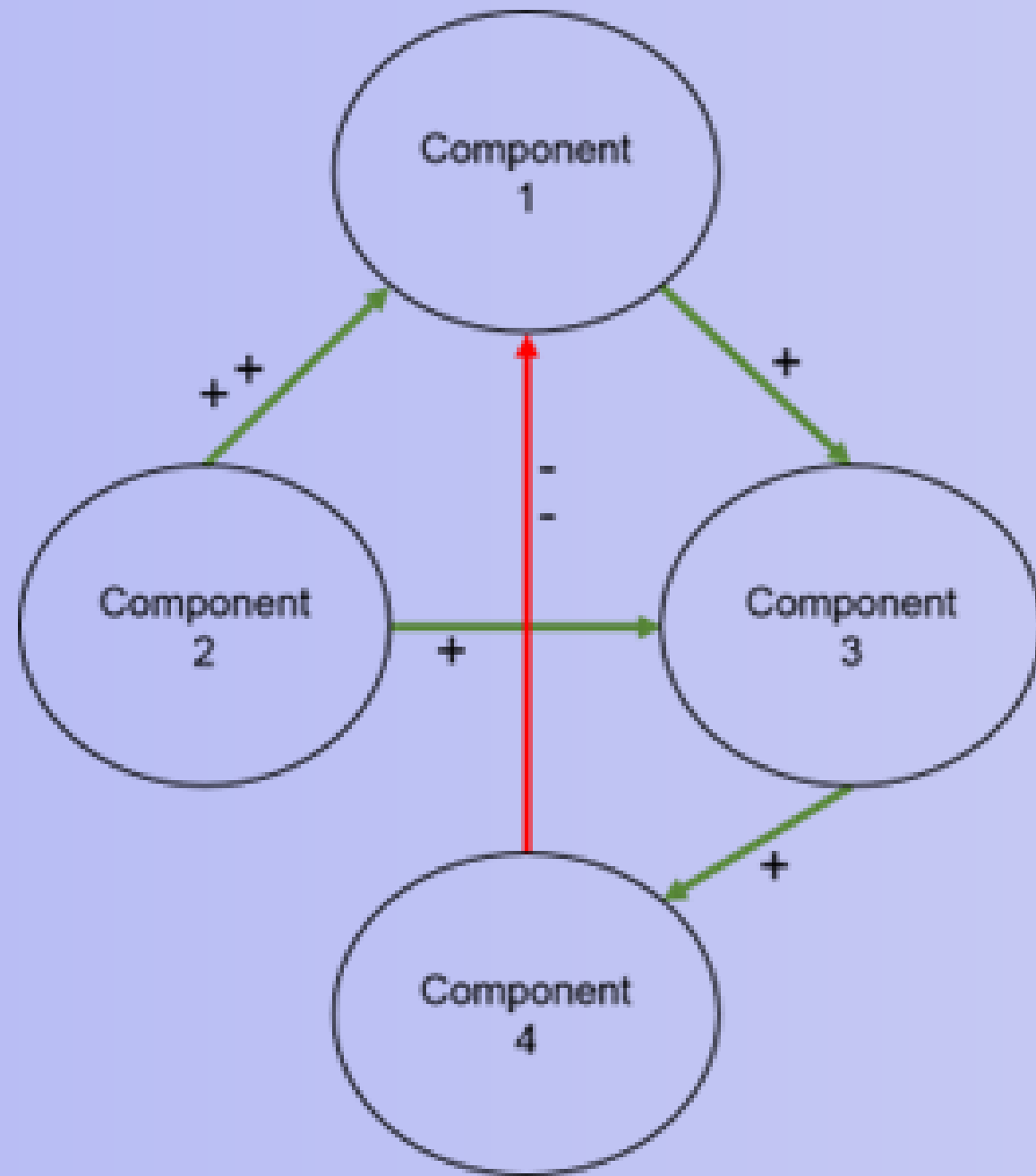
- Well-being often is not addressed as a holistic system in fisheries
- Conflicting stakeholders interests and goals
- Different definitions and perspectives
- Accessibility and influence on policy making



This research uses participatory methods to see what would well-being “looks like” as a system and how its elements dynamically interact with each other



# What is a Fuzzy Cognitive Map?



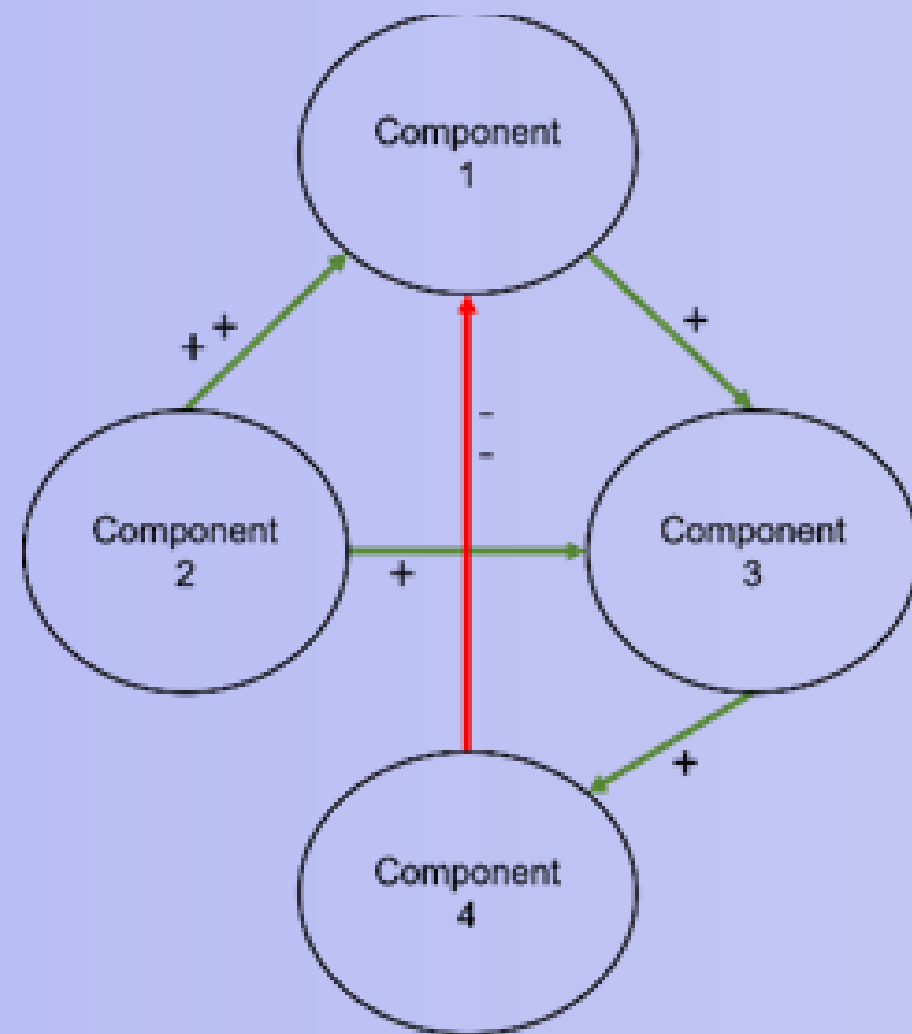
- A model of how a system operates.
- Depicts the system as a graph.
- The relations between components are numeric
- Allows for the quantitative description of the interactions within the system.

Circle = concept/indicator

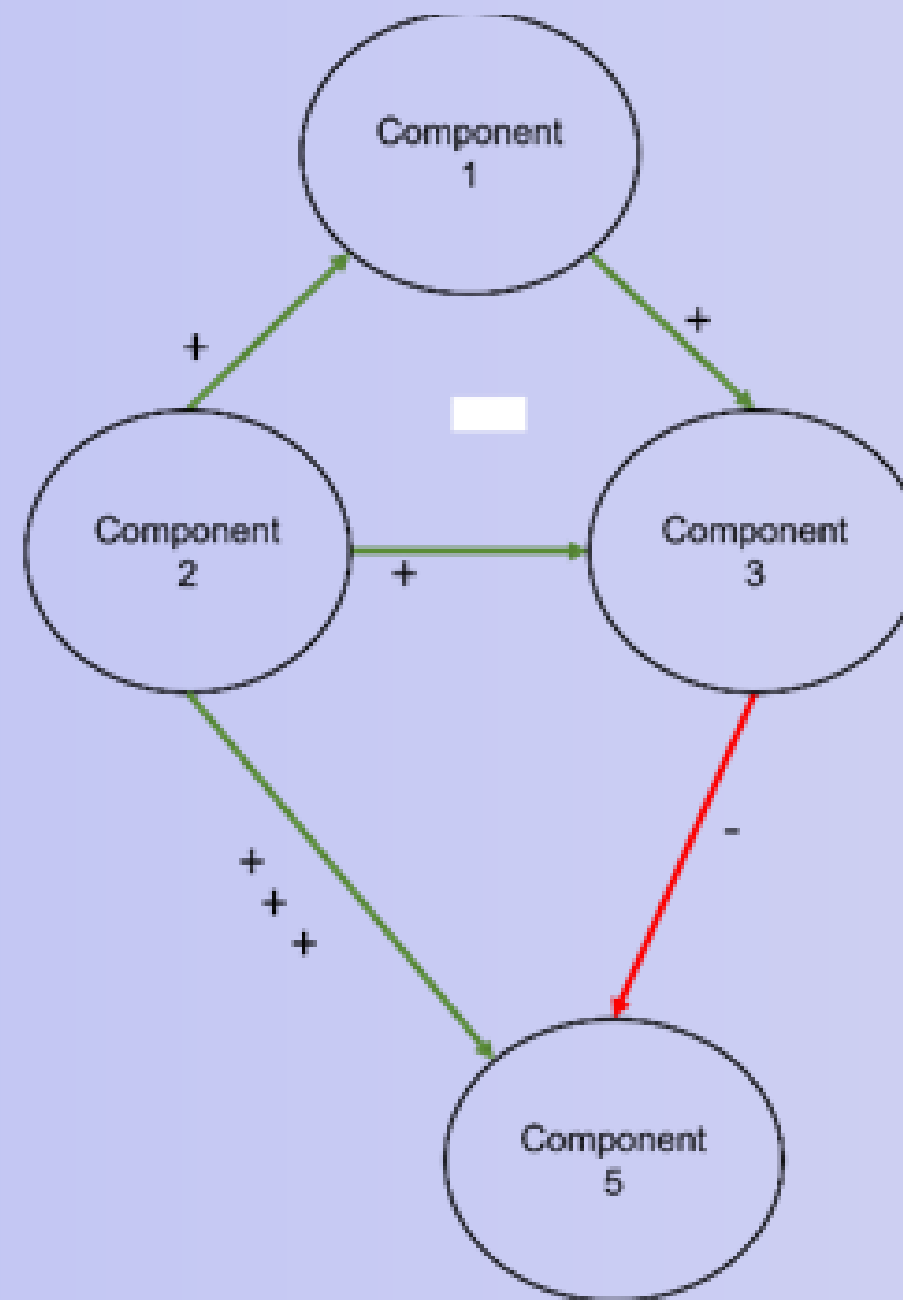
Arrow = direction of influence

Symbol = nature & strength of influence

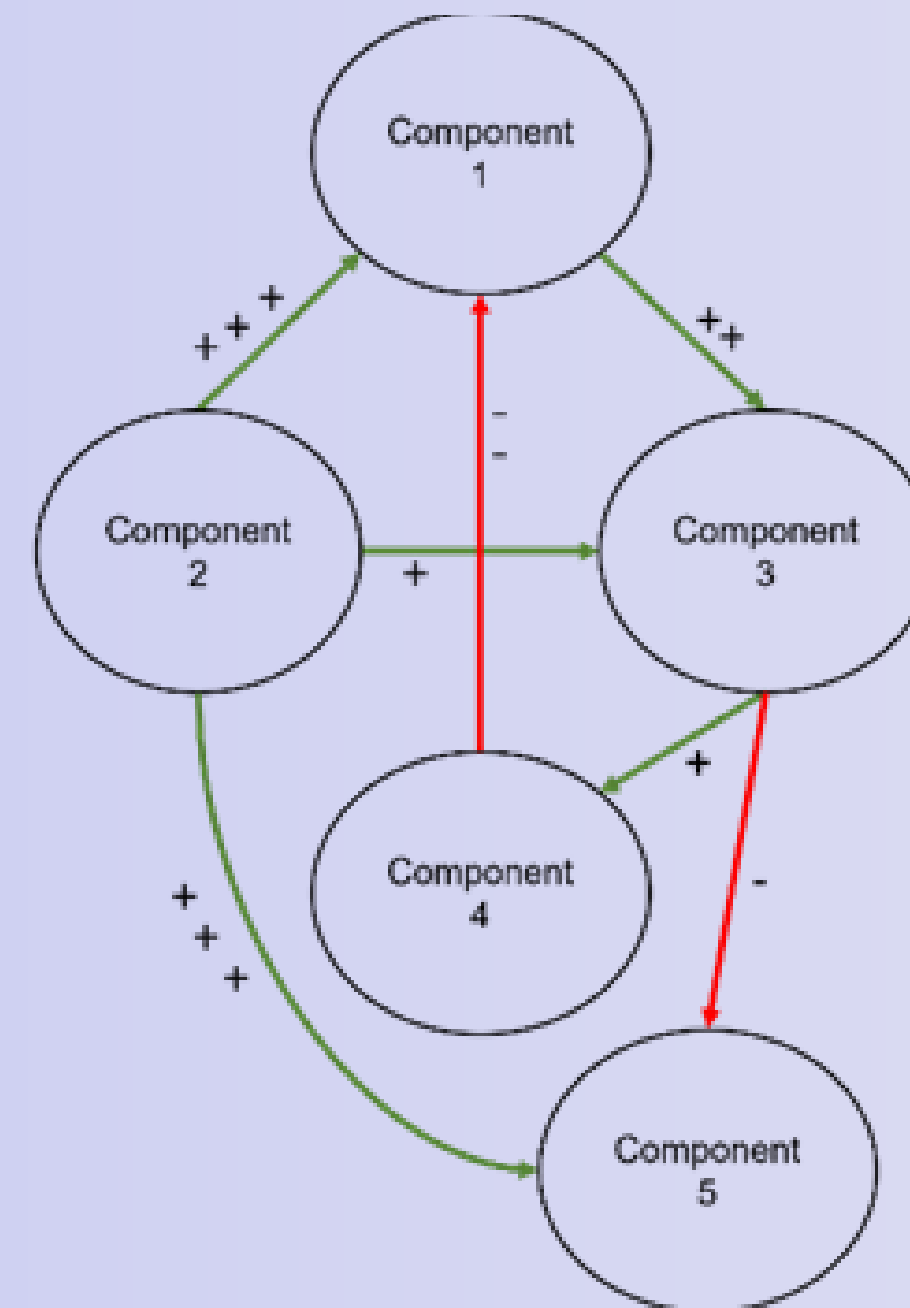
# How can we use FCMs in research?



Stakeholder map 1



Stakeholder map 2

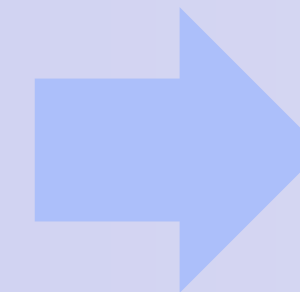


Combined map

Individual maps



Stakeholder group maps



Community map

# Methods and data collection

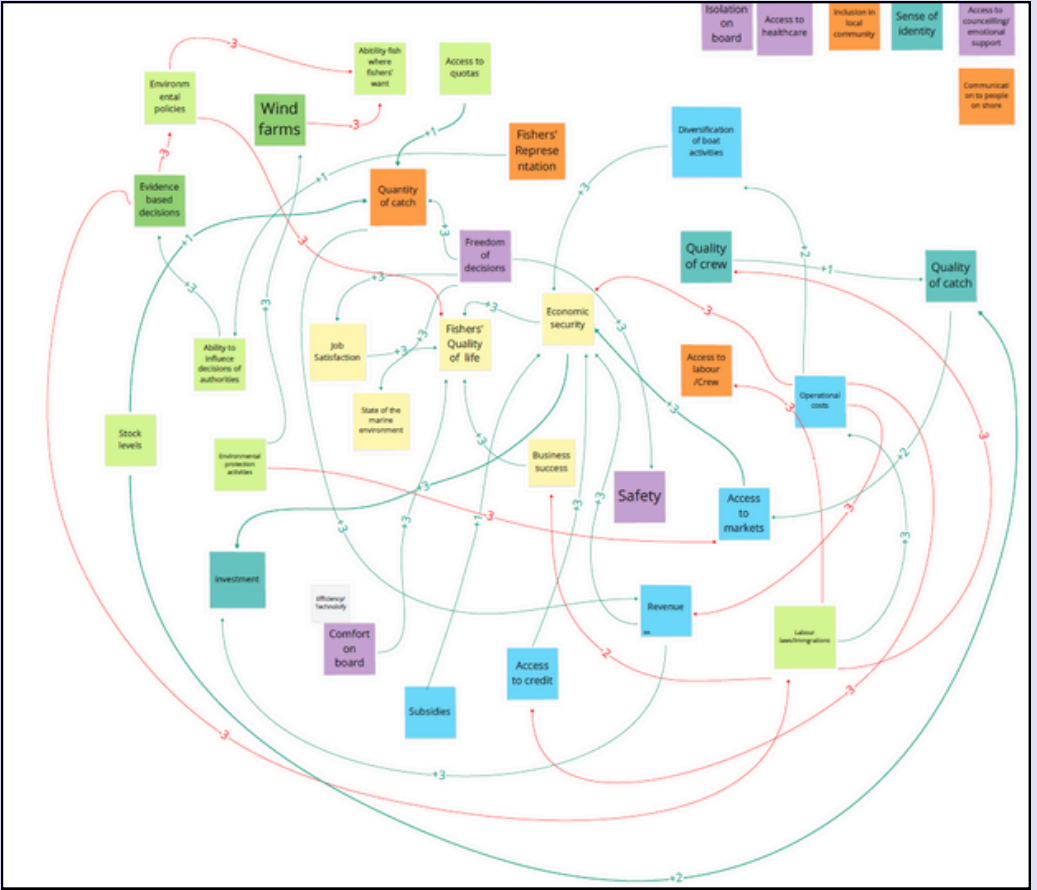




The conceptual map illustrates the complex interplay of various factors influencing the sustainability of the fishing industry. The nodes are categorized by color and connected by arrows with numerical weights representing the strength and direction of the relationships.

- Green Nodes (Environmental/Policy):** Environmental policies, Evidence based decisions, Stock levels, Environmental protection activities, Ability to influence decisions of authorities, Wind farms, Ability fish where fishers want, Access to quotas.
- Orange Nodes (Fishers/Industry):** Fishers' Regressive Intention, Quantity of catch, Fishers' Quality of life, State of the marine environment, Business success, Access to credit, Subsidies, Comfort on board, Efficient technology, Investment.
- Purple Nodes (Social/Well-being):** Freedom of decisions, Fishers' Quality of life, Economic security, Safety, Access to markets, Access to labour/crow, Operational costs, Quality of crew, Quality of catch, Isolation on board, Access to healthcare, Inclusion in local community, Sense of identity, Access to counselling/emotional support, Communication to people or shore.
- Blue Nodes (Operational/Market):** Diversification of boat activities, Quality of crew, Quality of catch, Operational costs, Access to labour/crow, Operational costs, Quality of crew, Quality of catch, Access to markets, Revenue, Labour working conditions, Access to credit, Subsidies, Comfort on board, Efficient technology, Investment.
- Yellow Nodes (Economic/Well-being):** Economic security, Business success, Access to markets, Revenue, Labour working conditions, Access to credit, Subsidies, Comfort on board, Efficient technology, Investment.

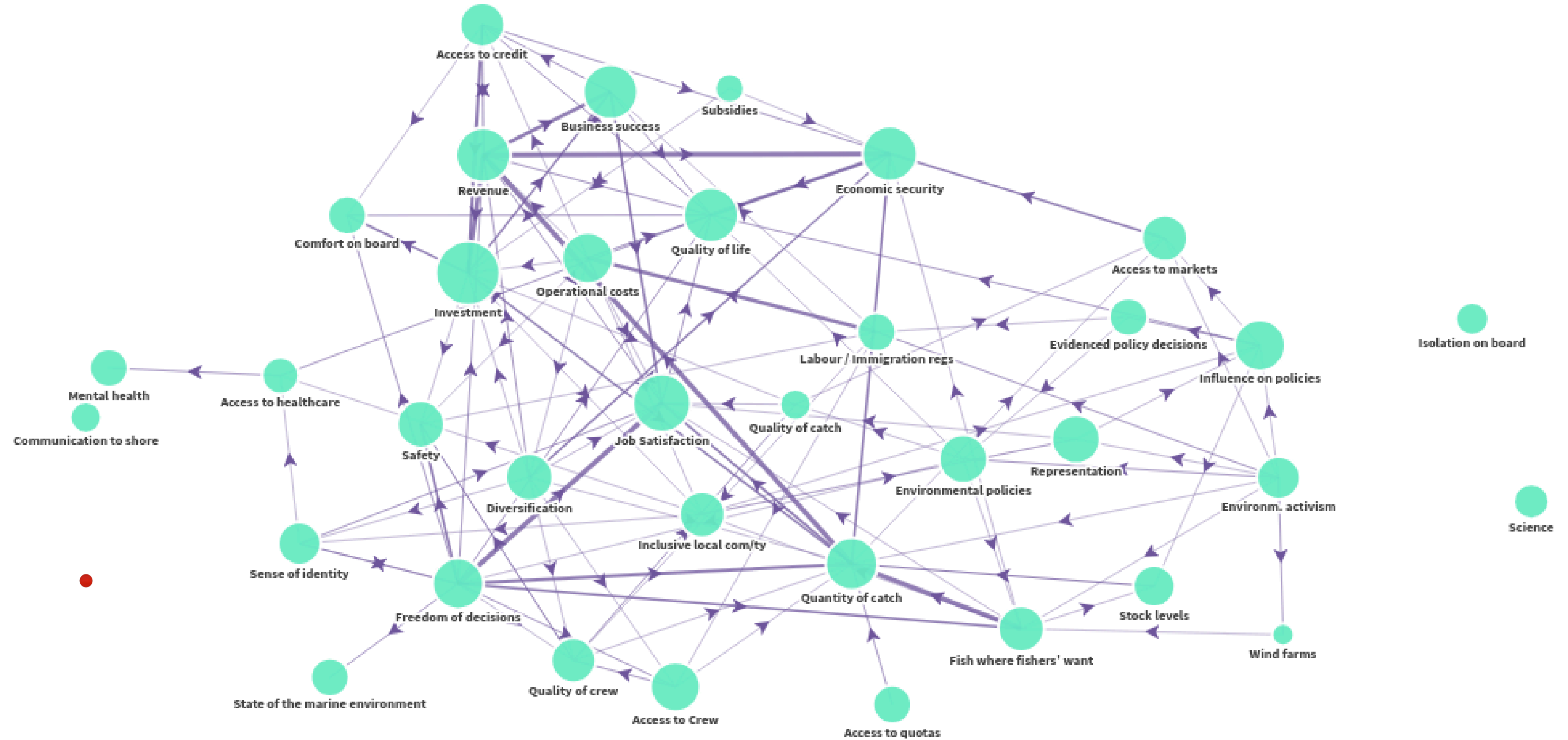
The map shows a dense network of relationships, with many nodes having multiple incoming and outgoing connections. The arrows are labeled with numerical weights, indicating the strength and direction of the relationships. For example, 'Wind farms' has a positive relationship (+1) with 'Quantity of catch' and a negative relationship (-1) with 'Evidence based decisions'. 'Fishers' Regressive Intention' has a positive relationship (+1) with 'Quantity of catch' and a negative relationship (-1) with 'Fishers' Quality of life'. 'Economic security' has a positive relationship (+1) with 'Fishers' Quality of life' and a negative relationship (-1) with 'Business success'. 'Quality of catch' has a positive relationship (+1) with 'Operational costs' and a negative relationship (-1) with 'Quality of crew'. 'Operational costs' has a positive relationship (+1) with 'Access to labour/crow' and a negative relationship (-1) with 'Quality of catch'. 'Access to labour/crow' has a positive relationship (+1) with 'Operational costs' and a negative relationship (-1) with 'Quality of catch'. 'Safety' has a positive relationship (+1) with 'Access to markets' and a negative relationship (-1) with 'Access to labour/crow'. 'Access to markets' has a positive relationship (+1) with 'Access to labour/crow' and a negative relationship (-1) with 'Quality of catch'. 'Access to labour/crow' has a positive relationship (+1) with 'Operational costs' and a negative relationship (-1) with 'Quality of catch'. 'Operational costs' has a positive relationship (+1) with 'Quality of crew' and a negative relationship (-1) with 'Quality of catch'. 'Quality of crew' has a positive relationship (+1) with 'Quality of catch' and a negative relationship (-1) with 'Operational costs'. 'Quality of catch' has a positive relationship (+1) with 'Operational costs' and a negative relationship (-1) with 'Quality of crew'. 'Isolation on board' has a positive relationship (+1) with 'Access to healthcare' and a negative relationship (-1) with 'Inclusion in local community'. 'Access to healthcare' has a positive relationship (+1) with 'Isolation on board' and a negative relationship (-1) with 'Inclusion in local community'. 'Inclusion in local community' has a positive relationship (+1) with 'Isolation on board' and a negative relationship (-1) with 'Access to healthcare'. 'Sense of identity' has a positive relationship (+1) with 'Access to counselling/emotional support' and a negative relationship (-1) with 'Communication to people or shore'. 'Access to counselling/emotional support' has a positive relationship (+1) with 'Sense of identity' and a negative relationship (-1) with 'Communication to people or shore'. 'Communication to people or shore' has a positive relationship (+1) with 'Sense of identity' and a negative relationship (-1) with 'Access to counselling/emotional support'.



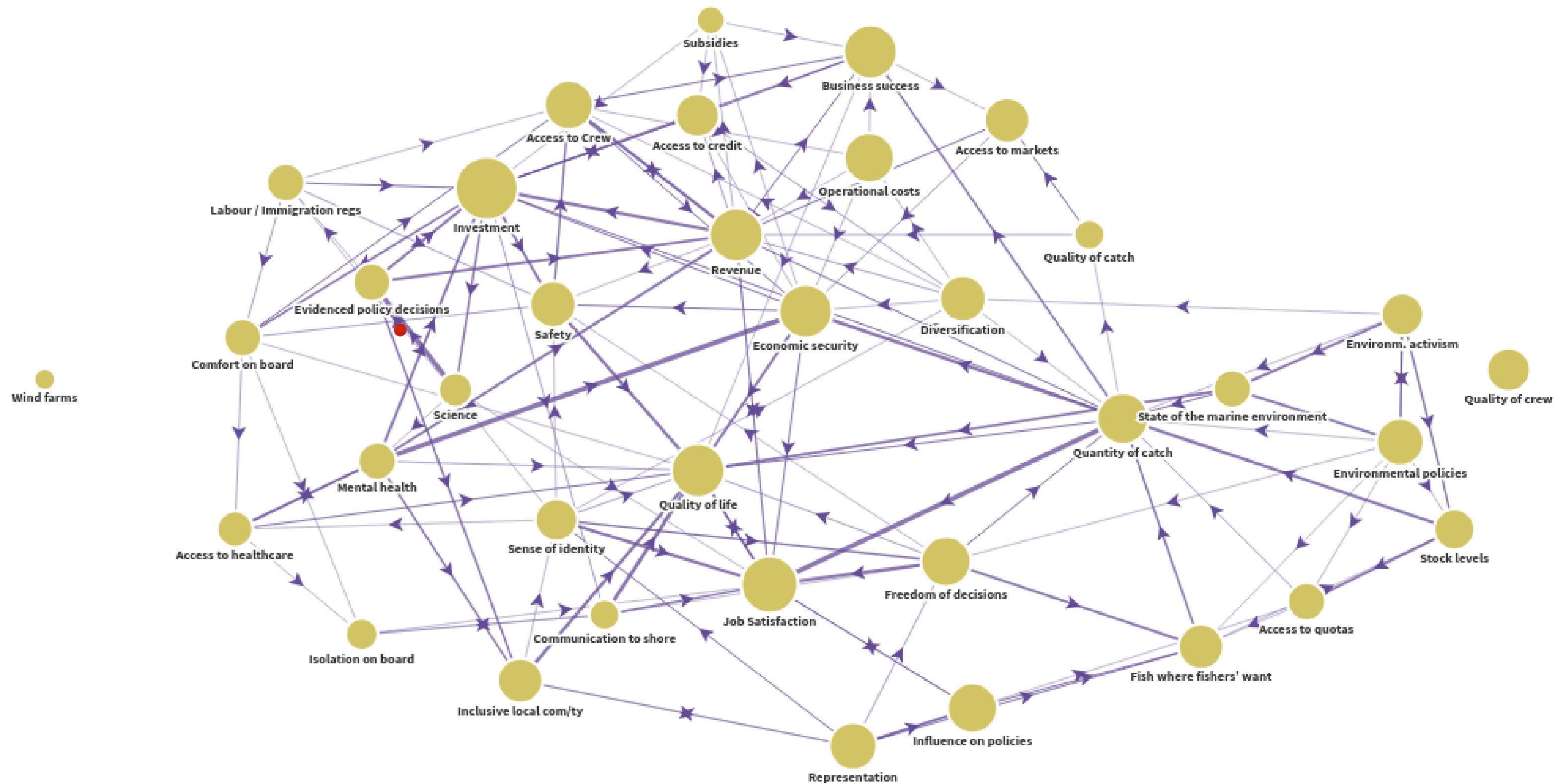
	Fishers	Research	Representatives	Civil society	Government	Community
Number of participants	5	3	3	4	3	17
Number of indicators	34	35	35	35	37	37
Number of connections	107	130	111	168	114	301



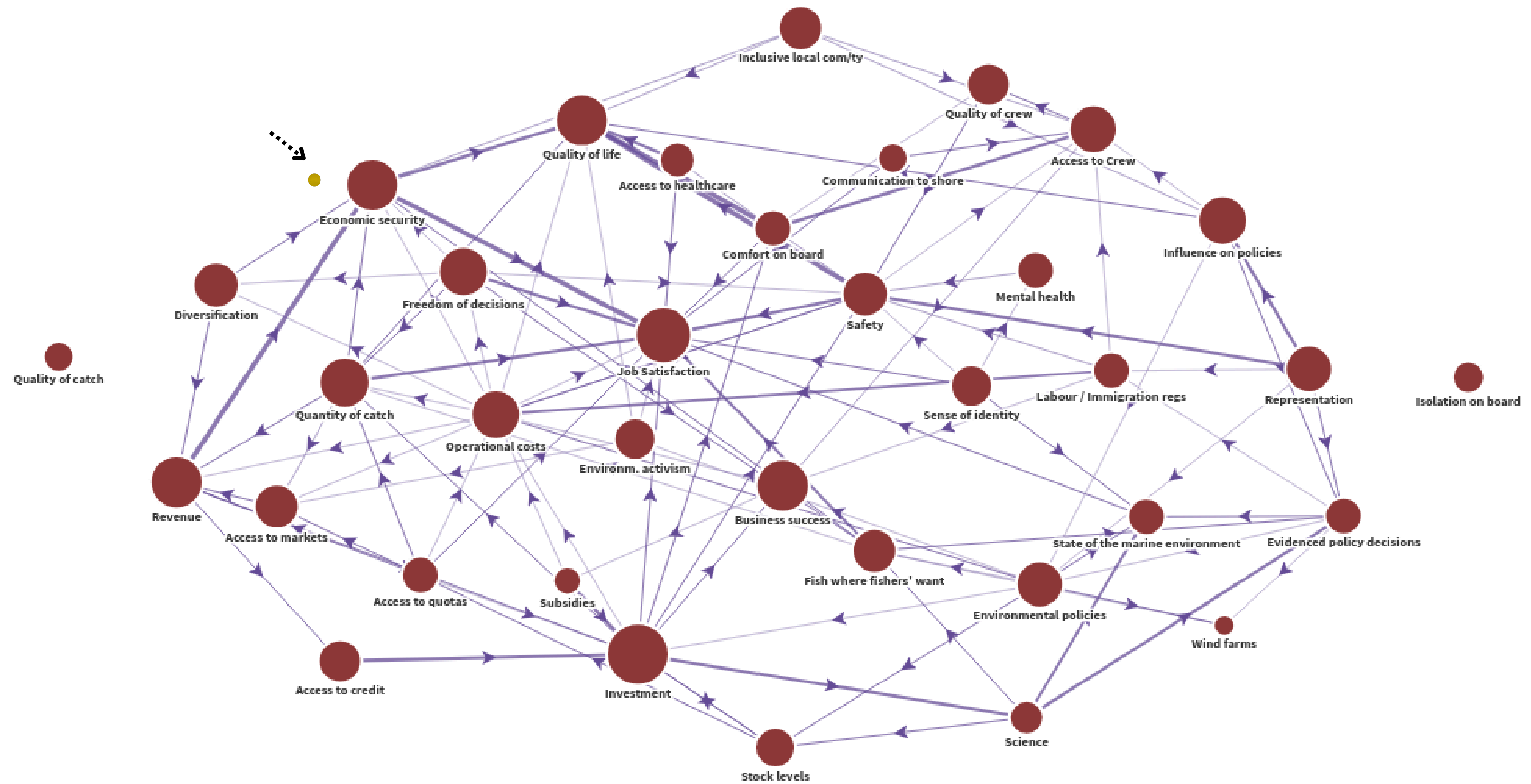
# Fishers' map



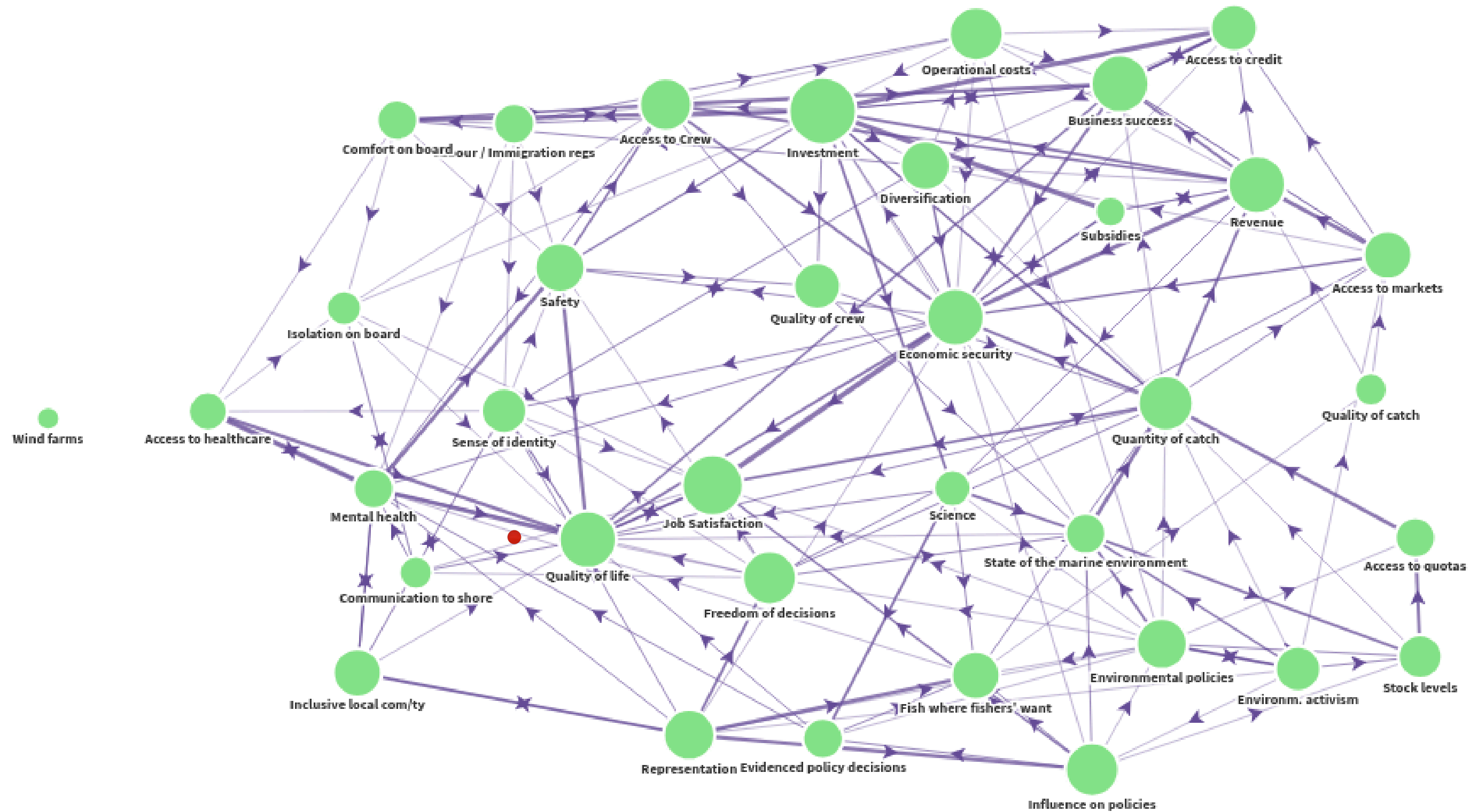
# Researchers map



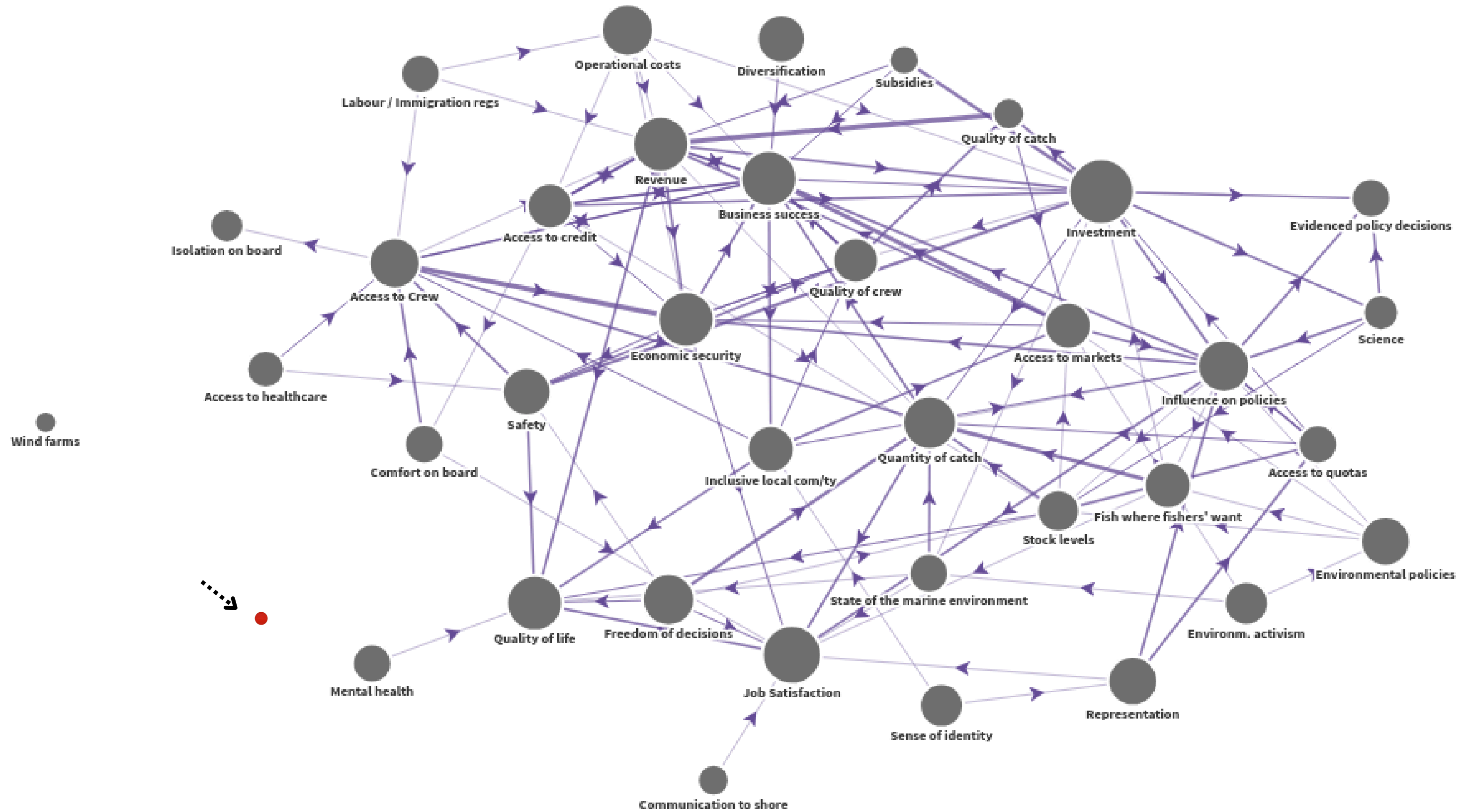
# Representatives map



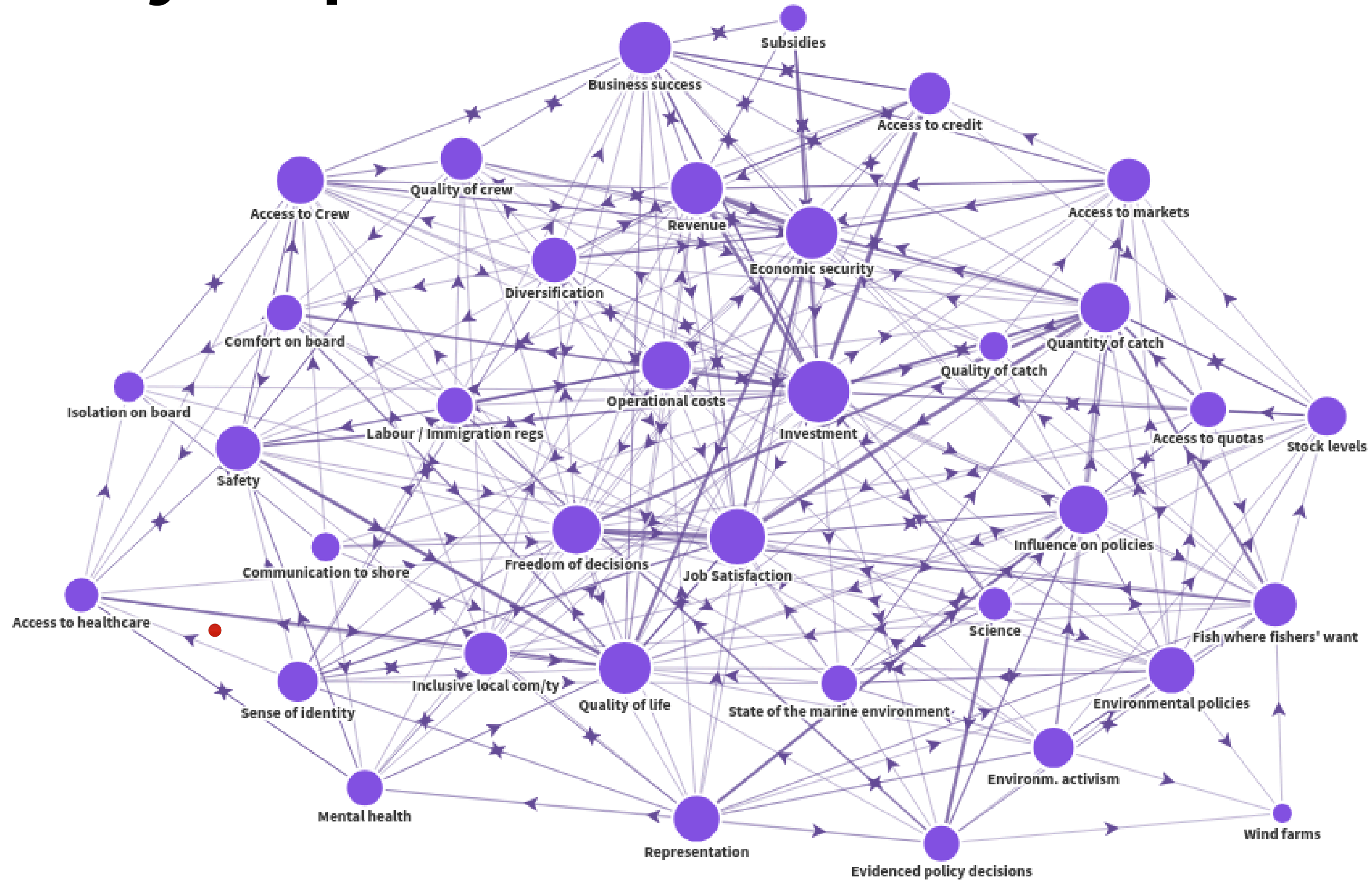
# Civil society map



# Government map



# Community map





# Key messages

- We must not only ask fishers what “works” but also those who have an interest in **supporting and researching** fishers’ well-being
- Mental health is a core element **affects and is affected** by wellbeing indicators like freedom of decisions, sense of identity and profitability
- We must **ask everyone** and create a holistic system map where then elements can be **identified and examined as part of the system** according to policy interest.

thank you

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