Swedish Institute for the Marine Environment

BLUE ECONOMY AND COASTAL DEVELOPMENT – SHARING SWEDISH EXPERIENCES

An overview over conditions, challenges, enablers and lessons from seven practical initiatives of local and regional collaboration for a sustainable blue economy

2021-11-15

REPORT BY THE SWEDISH INSTITUTE FOR THE MARINE ENVIRONMENT REPORT NO. 2021:5

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COMMISSIONED REPORT

This report has been produced by the Swedish Institute for the Marine Environment, for the Swedish Agency for Marine and Water Management. The authors are responsible for its content and conclusions, which does not imply any statements by the agency itself.

Report No. 2021:5

Delivery date: 2021-11-15

Title: Blue economy and coastal development – Sharing Swedish experiences

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Please refer to this report as: Morf, A., Sandsten, J., Prutzer, M. and Lindroth, N. (2021) *Blue Economy and Coastal Development – Sharing Swedish Experiences: Conditions, challenges, enablers and lessons from seven initiatives working with local and regional collaboration for a sustainable blue economy*. Report No. 2021:5, Swedish Institute for the Marine Environment, Gothenburg.

The Swedish Institute for the Marine Environment is a collaboration between University of Gothenburg, Stockholm University, Umeå University, Linnaeus University and Swedish University of Agricultural Sciences.

Cover Image: A. Morf

PREFACE AND ACKNOWLEDGEMENTS

A growing economy relies on coastal and marine natural resources and ecosystem services, but how far does it actually promote flourishing coastal communities and an economic development benefitting these? This is not necessarily the case and needs to be explored further. The focus of the Swedish Institute for the Marine Environment is, according to its governmental assignment, on environmental aspects. However, environmental problems are problems of society. This requires a transdisciplinary perspective beyond identifying the environmental status to links and processes in society and means encompassing both social and technical sciences, humanities and reaching out beyond science towards traditional and practical knowledge. For this study, we have combined a qualitative social sciences approach with practical knowledge from a number of knowledgeable people with highly varying background. Our acknowledgements and warm thanks go firstly to the case owners for sharing their knowledge and discussing their insights with us and for responding to a draft report, to the experts from SwAM for providing us with background information and valuable comments on earlier versions of the report, to our colleagues Milena Arias Schreiber, Andreas Skriver Hansen, Kajsa Tönnesson for their comments on different versions of the draft report, and to Maria Bengtsson Lewander for professional help to design the key synthesis figure in this report. Thanks also to two anonymous reviewers for helpful comments to finalise this report.

A short reading guide:

Busy readers: the executive summaries (Swedish & English) provide an overview.

Interested in the essentials: chapter 8 synthesises identified key enabling and inhibiting conditions thematically and extracts concrete strategies. It also discusses the results in relation to a broader context and future development of research and development on collaboration for coastal blue economies. If a specific theme is of interest, the reader can go back to chapters 6 and 7.

Looking for inspiring examples: depart from chapter 4 and then explore the rest.

2021-11-15, Andrea Morf, Ph.D. Swedish Institute for the Marine Environment

CONTENT

SVENSK SAMMANFATTNING

Det finns en växande blå ekonomi som baseras på användningen av naturresurser och ekosystemtjänster som kust och hav erbjuder. Men hur långt bidrar den faktiskt till en hållbar utveckling i kustsamhällena? Svaret är: inte nödvändigtvis. Därför behöver frågan utredas och erfarenheter delas både i Sverige och globalt.

Denna konsultrapport som har tagits fram av Havsmiljöinstitutet delar erfarenheterna från sju svenska fall i lokal och regional blå ekonomi, insamlade genom en workshop och intervjuer med väl insatta personer. Rapporten är riktad till en allmänbildad läsarkrets intresserad av samverkan kring utvecklingen av en hållbar lokal och regional blå ekonomi. Havs- och vattenmyndigheten är beställare. Rapporten ska bidra till kunskapsbasen för myndighetens projekt, *SwAM Ocean* (= förkortning för Swedish Agency for Marine and Water Management). Projektet fokuserar på lokal och regional blå tillväxt och hållbar utveckling i Östafrika samt västra Indiska Oceanen och finansieras av SIDA (Swedish Development Agency) och att främja ömsesidigt lärande mellan Nord och Syd.

Rapporten baseras på en kvalitativ studie av sju komplementära, illustrativa svenska fall där blåa näringar, kustsamhällen och myndigheter på olika nivåer framgångsrikt har samarbetat med fokus på lokal och regional blå ekonomi och hållbar utveckling i kustsamhällen. Fokus är att extrahera viktiga utmaningar, förutsättningar, möjliggörare och relaterade strategier. Studien har som syften: a) att ge inspirerande aktuella exempel på initiativ som arbetar med sin egen tolkning av en agenda för blå ekonomi och hållbar utveckling i kustsamhällen, b) att kartlägga hur de hanterar utmaningar och möjligheter de stöter på, c) att extrahera och dela gemensamma övergripande lärdomar, inklusive fungerande strategier, för att inspirera och främja reflektioner, utbyte och lärande över gränser och oceaner. Studien inkluderar därför följande frågeställningar:

- Vilka institutionella, infrastrukturmässiga och andra faktorer bidrar till att initiativen uppnår sina mål?
- Vilka viktiga utmaningar och vilka möjliggörare går att identifiera?
- Vilka strategier bidrar till att hantera utmaningarna och utnyttja möjligheterna?

Baserat på frågorna har ett analysramverk utvecklats för att samla in data från personer som har bra kunskap om fallen (fallägare). Huvudmetoder och källor inkluderar en datainsamlingstabell som fallägarna fick fylla i själva eller som fyllts i gemensamt i semistrukturerade intervjuer samt en digital diskussionsworkshop med fem fallägare. Vetenskaplig litteratur och rapporter har varit ytterligare källor.

Sverige har en lång och varierande kustlinje med både fjordar, skärgård, klippor och sandstränder omgärdas av marina områden som är mycket olika i sina geofysiska strukturer och resulterande ekologiska karaktärsdrag: från Skagerrak, Kattegatt och Öresund i väster till Östersjön och Bottniska viken i öster. Havsområdena delas med nio nationer. Användningarna omfattar både mer traditionella sådana såsom fiske, transport, boende, rekreation och turism, materialutvinning, dumpning och försvar. Under de senaste åren har dock nya

användningar börjat testas och etableras, från havsbaserad energi och vattenbruk till allt fler olika typer av rekreation och bioprospektering. Genom havets användning men även landbaserade aktiviteter uppstår en del miljöproblem såsom övergödning, biodiversitetsförlust, föroreningar och skräp samt klimatförändringens effekter inklusive försurning av havet.

De gemensamma miljöproblemen och insikten om att det krävs samarbete för att hantera nyttjandebehoven och miljöproblemen på ett mera hållbart sätt har lett till olika typer av gränsöverskridande samarbeten och institutionell utveckling såsom utvidgning av landbaserad planering till havs och tematiskt breda samarbeten genom bland annat Europeiska unionen och Nordiska ministerrådet samt för Östersjön inte minst HELCOM för miljön och VASAB för planering och regional utveckling. För att samarbeta om havsrelaterade frågor i Sverige behöver alla tre politiska och administrativa nivåer vara involverade - från regeringen, riksdagen och nationella myndigheter till regionerna och kommunerna; detta för att ansvaret för olika frågor ligger på olika nivåer. Till exempel är nationella myndigheter ansvariga för fiske och naturskydd och havsplanering i den ekonomiska zonen, medan ansvaret för ekonomisk utveckling och infrastruktur ligger hos regionerna medan kommunerna svarar för fysisk planering på land och i Sveriges territorialvatten. Med undantaget av pionjärer bland kommuner och regioner har blå ekonomi först nyligen blivit en fråga för nationell politik. De sju fallen täcker ett brett urval av blå ekonomi- och bevarandeteman samt olika typer av aktörskonstellationer på olika geografiska och administrativa skalor. De sju fallen utgörs av (se figur 1-1, sid. 17):

Tre gränsöverskridande initiativ:

- *Maritimt gränsforum* Skagerrak: ett internationellt samarbetsprojekt mellan Sverige och Norge som drivs av Svinesundskommittén i samverkan med myndigheter, kunskapsaktörer och blå näringar i gränsområdet.
- *Land-Sea-Act* Interreg projektet: ett internationellt samarbetsprojekt av myndigheter och kunskapsaktörer med fokus på kustplanering och förvaltning som drivs i Sverige av Göteborgsregionens kommunförbund.
- PERISCOPE Interreg projektet, ett internationellt samarbetsprojekt som drivs av Business Region Göteborg.

En pionjär i maritim klusterbildning: det *Maritima klustret i Västra Götaland,* en samverkan mellan regionen, kunskapsaktörer och blå näringar

Ett mellankommunalt kustplaneringsinitiativ: *Blå kustplan Blekinge* - ett projekt som har drivits av myndigheter på lokal och regional skala

Två lokala initiativ med olika teman:

- *Symbioscentret* i Sotenäs kommun med fokus på att skapa samverkan och synergier inom lokal blå ekonomi.
- *Kosterhavets nationalpark*, Sveriges första marina nationalpark med fokus på en kombination av bevarande och hållbar utveckling och nyttjande.

Jämförelsen mellan fallen i förhållande till initiala styrkor, svagheter, möjligheter och hot samt generella utmaningar, möjliggörare och grundläggande förutsättningar för framgång har resulterat i ett antal viktiga faktorer som har klustrats i olika temaområden och lämnat förslag på hur faktorerna kan hänga ihop (se figur A).

1. Blå ekonomi och hållbar utveckling som teman (blått i figur A) kräver en medveten matchning som behöver bygga på ett antal viktiga främjande faktorer. Blå ekonomi som tema tenderar att vara brett både när det gäller resursanvändning och vilka aktörer och kunskapsområden som är relevanta. Dessutom behöver själva begreppen definieras, för att de används olika. Jobbar man med utveckling av blå ekonomi behöver man även vara medveten om att fördelningen mellan nyttor och kostnader i miljö och samhälle kan vara ojämnt fördelade. Detta är utmanande och kräver ett systemperspektiv och samverkan mellan många olika typer av aktörer och framtagning och delning av relevant kunskap.

2. Samverkan (mörkgrönt) utgör därmed en grundläggande förutsättning (och möjliggörare) för att jobba med en blå ekonomi på lokala villkor. Här behöver den klassiska samverkansformen mellan myndigheter, akademi och näringar utvecklas för att inkludera även civilsamhället och dess organisationer; detta både av legitimitets- (4) och kunskaps skäl (6), men även för att ha ett bredare perspektiv på problem, behov och kopplingar. Där kust- och havsområden delas mellan olika nationer behöver samverkan även gå över gränserna. Här blir samverkan speciellt svår i initialfasen, då man behöver hitta en gemensam nämnare och ett gemensamt språk och samarbetssätt som länkar olika administrativsystem, olika politiska prioriteter, språk, samt samverkans- och brukarkulturer - både inom och över nationsgränserna. Samverkan innebär mycket "learning by doing", dvs. man lär genom att göra saker tillsammans, t.ex. om arbetssättet och om varandras perspektiv. Genom respektfull samverkan om något gemensamt kan ömsesidig förståelse och förtroende byggas. Samtidigt ska man inte försöka åstadkomma för mycket - lagom och kompromiss är nyckelord i sammanhanget. För att samverka behövs det både digitala och fysiska mötesplatser.

Detta stöds av ett antal grundläggande förutsättningar och möjliggörande faktorer som kan summeras inom fyra olika temaområden - både "mjuk" och hård infrastruktur: **3. Mandat och ägande** (violett), **5. Kapacitet och resurser** (gult), relevant **6. kunskap och know-how** (ljusgrönt), samt **8.** den nödvändiga **lokala,** "hårda" **infrastrukturen**.

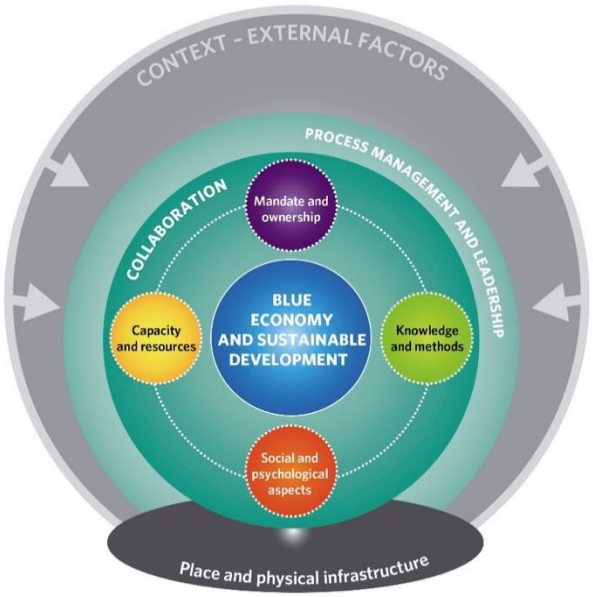
4. Processledning och ledarskap håller ihop samverkansprocessen och dess innehåll. Även **tid och timing** spelar en viktig roll. Samverkan och förtroende kräver tid för att växa fram. En bra processledning behöver behålla överblicken över både processen och det som händer runt omkring och fånga tillfällena som erbjuds för att förankra eller driva initiativet vidare. En bra processledare behöver även vara medveten om **maktskillnader** mellan olika involverade parter och hur de ska hanteras.

7. Ytterligare viktiga "mjuka" faktorer som är lätta att missa, men kan bidra med mycket drivkraft eller bli ett hinder är **sociala och psykologiska aspekter** (turkost): medvetenheten om den blåa ekonomin samt initiativet, engagemang av nyckelaktörerna och

byggandet och upprätthållandet av förtroendet inom samverkanskretsen samt andra attityder och tankesätt som kan hjälpa eller stjälpa processen.

8. **Stödjande platsbaserade aspekter**, inklusive fysisk infrastruktur.

9. Sist men inte minst är k**ontexten** viktig och behöver hanteras genom möjlighets- och riskanalyser, och beredskap att agera när något ändrar sig.



Figur A: Visualisering: Överblick över teman och hur de kan vara länkade - se text. Figurkälla: Författarna och Maria Bengtsson Lewander (grafik).

Våra resultat stämmer väl överens och kompletterar insikterna från de andra delstudierna i *SwaM Ocean projektet* samt resultat i andra forsknings- och praxisområden där samverkan och tvärande över kunskapsområden, gränser och havsområden behövs - såsom integrerad kustzonsförvaltning, havsplanering, landsbygdsutveckling och naturresursförvaltning och bevarande. När det gäller Sverige finns ett antal utmaningar kvar att hantera i förhållande till samverkan kring lokal och regional blå ekonomi och hållbar utveckling: bygga upp kunskap och data samt möjligheter till utvärdering och lärande på lokal och regional nivå, fortsätta att främja det gränsöverskridande samarbetet på alla institutionella nivåer, riskmedvetenhet och riskhantering av olika slag, kapacitetsutveckling för både lokala myndigheter och havets brukare samt att tänka och länka mellan hav och land i rummet även över tid. Det finns flera intressanta spår att jobba vidare med inom temat, både genom att skapa utbyte mellan Nord och Syd och genom att driva fram metodutveckling och systematisk datainsamling för uppföljning och utvärdering, samt att bedriva forskning för att fördjupa de intressanta slutsatserna i förhållande till främjande och hindrande faktorer som studien kommit fram till.

EXECUTIVE SUMMARY

A growing economy relies on coastal and marine natural resources and ecosystem services, but how far does it actually promote flourishing coastal communities and an economic development benefitting these? Not necessarily - which is why the question needs to be explored further and experiences mapped and shared across the globe.

This commissioned report maps and shares experiences from seven Swedish case studies, providing an overview based on information collected through workshops and interviews with persons with deep knowledge about the cases. It is targeted towards an international general readership interested in collaboration to develop a local and regional blue economy in coastal areas. The Swedish Agency for Marine and Water Management (SwAM) has commissioned the report to broaden the knowledge base of its international development programme *SwAM Ocean* (focusing on local and regional blue economy and development in Eastern Africa and the Western Indian Ocean and financed by the Swedish Development Agency) and to promote sharing and learning between the North and the Global South.

The report is based on a qualitative study of seven complementary cases of illustrative Swedish experiences, where marine sectors, coastal communities, and authorities at various levels have collaborated with focus on a local and regional blue economy and sustainable development in coastal communities. Its focus is on extracting key challenges, prerequisites and enablers and related strategies. The study aims to:
a) to share state-of-the-art experiences from Swedish actors working with their own interpretations of blue economy and sustainable development agendas in coastal areas,
b) to map how they deal with challenges they encounter and exploit related opportunities,
c) to extract and share common lessons across cases, including working strategies,
in order to inspire and promote reflection and exchange across borders and oceans.

The questions of this study include:

- Which institutional, infrastructure-related and other conditions facilitate initiatives that fulfil their aims?
- Which important challenges arise and what are related enablers?
- What strategies can be identified to work around challenges and mobilise enablers?

These questions have been translated into a framework to collect data from respondents. Main methods of data collection have been a data table to be filled in by the respondents themselves (4 cases) or together in a semi-structured interview (3 cases), and cross-case presentations and discussions in an online workshop, which was complemented by information from reports and scientific literature.

Sweden features a long coastline including fjords, archipelagos with soft and hard seabed-features. It is enclosed by marine areas that differ considerably in their bio-geophysical features (e.g. salinity gradients): from the Skagerrak, Kattegat and Öresund in the West to

the Baltic Sea in the South and the Gulf of Bothnia in the East. The marine areas are shared with nine nations. The more traditional marine uses include fisheries, transport, residency, recreation and tourism, materials dumping and extraction, and national defence. More recent use developments include renewable energy production, aquaculture and a diversification of recreation and bio-prospecting. Important environmental problems to address include the cumulative impacts of intensifying human activities such as eutrophication, biodiversity loss, pollution and littering, and the effects of climate change and ocean acidification.

The perceived common need to address the above environmental problems across marine basins and to promote a more sustainable and effective use of marine and coastal space has led to a number of cross-border collaborations and institutional development such as expanding existing coastal planning to the Exclusive Economic Zone and collaborate across borders within the European Union, the Nordic collaboration, but also across specific marine basins, e.g. with HELCOM and VASAB in the Baltic Sea. For Sweden to collaborate about marine issues, all three institutional levels - from national government and sector authorities to regions (County Councils) and municipalities need to be involved, as the responsibilities for different topics are situated at different institutional levels with economic development situated with the counties and the municipalities with the main authority for spatial planning in territorial waters and onshore. The representative democracy and the planning system also implies regulatory procedures for citizen participation and appeal against decisions. All of this makes the overall "soft" infrastructure for developing a sustainable blue economy. However, with the exception of pioneering regions and municipalities, developing a sustainable blue economy has only recently become a national political issue. The seven cases cover a broad range of blue economy and conservation themes and different types of actor constellations at varying geographical and institutional scales (see map fig. 1-1 on p. 17):

Three cross-border initiatives:

- The Maritime *Border Forum* Skagerrak an international collaboration project between Sweden and Norway including authorities, enterprise and knowledge actors at different levels/scales.
- The *Land-Sea-Act* project, an international collaboration project of authorities and knowledge actors focusing on coastal planning and management.
- The *PERISCOPE* project, an international collaboration project.

A pioneering regional blue economy cluster:

- The *Maritime Cluster* of West Sweden, a blue economy initiative driven by a regional authority in collaboration with other authorities, enterprises and knowledge actors.

A cross-municipal coastal planning initiative:

- The *Blue Plan Blekinge* Coast, cross-municipal coastal planning driven and financed by authorities.

Two local initiatives with different thematic focus:

- The *Symbiosis Centre* in Sotenäs Municipality focusing on combining and developing local blue enterprise in a coastal municipality;
- Sweden's first marine national park *Koster Sea* focusing on conservation together with sustainable use of marine resources.

The initial strengths, weaknesses, opportunities and threats and overall general challenges and related enablers and basic prerequisites mapped from each case could be compiled in a number of common thematic clusters, suggesting nine overarching types of important conditions and including sub-aspects (see figure B). In relation to each of these thematic clusters, we try to identify and discuss key enabling and inhibiting aspects aware that these may be interlinked (see chapter 8).

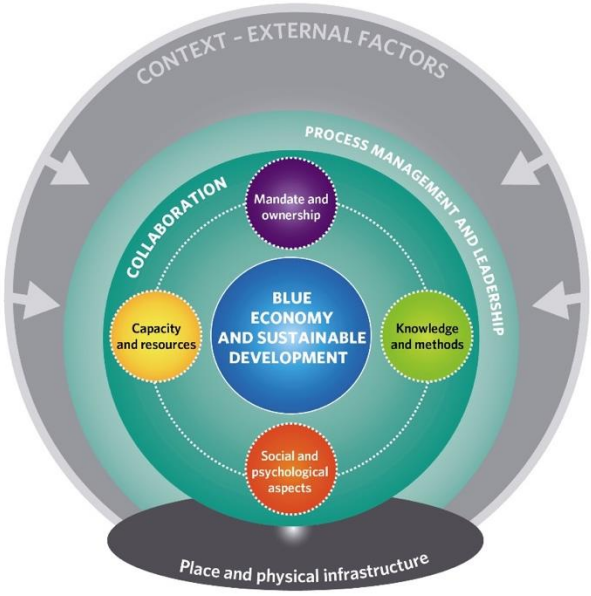


Figure B: Visualisation model: Overview over key themes and how they may be connected - see text. Figure: authors and Maria Bengtsson Lewander (graphics).

1. Blue economy and sustainable development (blue colour in figure A) need conscious matching and support by a number of other enabling conditions. Overall, the blue economy tends to be rather broad and in terms of resource uses and relevant actors also highly locally and regionally specific, which can be challenging. Moreover, the understanding of the term itself can vary and require clarification. Work with a developing blue economy needs to be aware of the distribution of environmental and social costs and benefits among the actors involved and in society at large. All of this can be challenging and requires a systems perspective and collaboration of a multitude of different actors and the development and sharing of relevant knowledge.

2. Collaboration (dark green) can be considered as a basic prerequisite to work with a development of a blue economy based on local terms. Here, the classical triple-helix of

academia, business and government needs to be complemented by civil society and its organisations and engagement - among others for legitimacy (4) knowledge (6) reasons, but also to have a complete view on problems, needs and linkages. Where coasts and marine basins are shared between nations, collaboration has to reach across borders. Here especially the initial challenges are enhanced - finding a common ground and language to work across different institutional frameworks, political priorities, languages, cultures of collaboration and resource use domestically and across borders. Collaboration requires learning by doing, but also building trust and mutual respect, and possibly not overloading the basket - starting small and embedding within wider initiatives. Interaction between different actors and sharing places, both digital and physical, are important.

There are some basic prerequisites and conditions helping initiatives to succeed. These can be summarised under four thematic clusters including the mobilisation of both "soft infrastructure" of **3. mandate and ownership** (purple), necessary **5. capacity and resources** (yellow), relevant **6. knowledge and know-how** (light green), and **8.** the necessary **place based and physical** "hard" infrastructure (dark grey).

4. Process management and leadership supporting and encompassing the process of collaboration and its content together with relevant skills and facilitation capacity needs take all of these into account. Here, **time and timing** of activities are important. A collaborative process requires time. Skilful process management implies context awareness and catching windows of opportunity when time is ripe. Moreover, a skilled facilitation of a collaborative process also requires equalising **power** imbalances that unavoidably can be found between different actors.

7. A further important type of "soft" type of condition is easily neglected but can both enable and impede: **social and psychological aspects** (turquoise), encompassing e.g. awareness and engagement of key actors and building and maintaining of positive attitudes including trust among those involved in a collaboration.

8. Supporting place-based aspects, including physical infrastructure**.**

9. **Contextual factors** requiring awareness and -analysis and related risk and opportunity management and continuous evaluation and adaptation to changes.

Our results resonate well with the other three studies in the SwAM Ocean project and with findings from a number of different fields of research and practice, where collaboration and integration across disciplines, boundaries and marine basins is needed (e.g. integrated coastal management, marine spatial planning, conservation, and rural development). Remaining problems also in Sweden include: relevant knowledge and data and evaluation with a local and regional perspective, continuing to develop working across borders at all institutional levels, risk awareness and risk management for different types of threats, capacity development of local authorities and marine users for collaboration and that competition for space also over time remains and needs to be managed also across the land-sea interface. We also point at a number of further steps to continue work with blue economy and coastal development and promote exchange and learning.

ACRONYMS

BE	Blue Economy (key concept and topic)
BG	Blue Growth (key concept and topic)
BRG	Business Region Gothenburg (local actor)
CAB	County Administrative Board (regional actor)
EU	European Union
GR	Gothenburg Region (local actor)
HELCOM	Baltic Sea Marine Environment Protection (Helsinki) Convention
MSP	Marine Spatial Planning
NGO	Non-Governmental Organisation
OSPAR	Oslo-Paris Convention on the protection of the marine environment
SD	Sustainable Development
SDG	Sustainable Development Goals (17 goals by the United Nations)
SIDS	Small Island Developing States
SwAM	Swedish Agency for Marine and Water Management
SWOT	Strengths, Weaknesses, Opportunities, Threats (analysis code)
VGR	Västra Götaland Region (or County Council)

1 INTRODUCTION

This report is targeted towards an international general readership interested in local and regional blue economy initiatives and collaboration efforts in coastal areas. It provides an overview on insights from seven selected Swedish initiatives working collaboratively, and with varying focus, at local and regional scale – with their own interpretations of blue economy and sustainable development agendas. The purpose is to inspire and share state-of-the-art experiences directly from Swedish actors working with these themes and how they search for opportunities and deal with the challenges they encounter. The approach is qualitative and explorative – based on grey literature, a cross-case workshop and complementary interviews with leaders of these initiatives – aiming to extract and synthesise practical experiences in relation to impeding and enabling conditions to achieve their goals and how these could be addressed.

1.1 BACKGROUND TO THIS REPORT

The report has been commissioned by the Swedish Agency for Marine and Water Management (SwAM) as a part of the international development programme SwAM Ocean, focusing on local and regional blue economy development in Eastern Africa and the Western Indian Ocean. Three earlier reports have investigated how sustainable local blue economies[1] can be promoted in developing countries, focusing on coastal communities in the Western Indian Ocean (WSP 2020; Carneiro et al. 2021; GroundTruth 2021).

Coastal ecosystem services and marine resource use can promote local and regional economic development in coastal communities. Still, a growing economy based on marine and coastal resources and amenities does not necessarily contribute to flourishing coastal communities or an economic development benefitting these; economic growth can also jeopardise local livelihoods and exacerbate inequalities (see e.g. Ertör-Akyazi, 2020; Arias Schreiber et al. 2020; Said & MacMillan, 2020). Identifying and strengthening the link between resource use and local sustainable development is seen as key to support the goal of the international development programme SwAM Ocean at the Swedish Agency for Marine and Water Management. The programme is financed by the Swedish International Development Cooperation Agency (SIDA) and aims to assist poverty alleviation through strengthening a sustainable use of marine ecosystem services. Importantly, the programme aims to strengthen target 14.7 of the global Sustainable Development Goals (SDGs), to “increase the economic benefits to Small Island Developing States [or SIDS] and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism” (UN, 2015).

Various studies and guidelines point at several general preconditions to link the access to

[1] There is a broad discourse about so-called Blue Growth and Blue Economy, both within academia and policy with partially overlapping and confusing use of terminology. Here, we use Blue Growth referring to any kind of marine and coastal economic development, not necessarily equal and long-term sustainable. The term of Blue Economy is used referring to long-term sustainable marine and coastal economies also considering and balancing ecological and social sustainability aspects and not necessarily growing in quantity and economic turnover (for an early document see e.g. FAO, 2014).

natural resources to local economic growth (FAO, 2015). However, few studies, with an emphasis on marine and coastal resources and development, analyse further the role of this link and the key factors that promote favourable conditions for an economy based on coastal and marine resources benefitting the local population and communities. Also in Sweden, locally and regionally produced marine goods and services are increasingly seen as valuable for small, coastal communities' long-term development and economic sustainability (Hultman et.al. 2018), even if the full economic value chains are not yet fully established. The earlier three studies in the SwAM Ocean programme, established on a general level the importance of i.a. local level capacity and co-management, well-functioning value chains and presence of post-harvest, as well as the vital role of basic infrastructure and strategic planning. Overall, these make key factors promoting local social and economic wellbeing derived from marine resources in the investigated region. Those studies are summarised here.

- The first study (WSP 2020) gathered experiences from grey literature on successful cases in the region. Besides the above general results, the study indicates the importance of cooperation and co-management and implementation and enforcement to sustainably use marine resources by e.g. establishing stricter regulations and cooperating to monitor illegal activities. Further factors such as knowledge sharing, access to credits in the initial phase, information, innovation and new technology were highlighted as important to success.
- The second study (Carneiro et al. 2021) conducted a meta-analysis of scientific reviews establishing that wealth and income were more likely to increase if key factors such as value chains, post-harvest processing and enhancement, trade, social development, education and training were in place. Indirect evidence also supports the importance of policy coherence, institutional coordination and collaboration, along with good resource management. Other enabling factors found were local capacity and organisation, legal frameworks and policies, and lastly environmental regulations.
- The third study (GroundTruth 2021) explored through a spatial analysis the role of basic infrastructure for local blue economic growth and/or socioeconomic development in 11 case studies from the region. It identified positive correlations between basic infrastructure and economic wellbeing with the presence of roads, airports and electricity as most important factors. Moreover, the presence of strategic planning was also closely related to economic and social wellbeing. Lastly, the type of marine economic activity communities engaged in appears to play a role, where communities engaged in marine tourism tend to have higher economic wellbeing.

This fourth, complementary study was commissioned to promote sharing and learning between the North and the South from a practitioner's perspective. It focuses on concrete Swedish experiences in promoting a sustainable local and regional blue economy (here shortly *blue economy*) in coastal communities – based on experiences shared by persons well acquainted with these initiatives. It provides a perspective on which *institutional, infrastructure-related and other conditions* facilitate initiatives that fulfil their aims and

interpretations of blue economy over time and what challenges can arise, when trying to work with coastal and marine resource uses (e.g. fisheries, aquaculture, tourism etc.) with the goal to promote their aims towards long-term sustainable local and regional economic development. This focus includes the role of collaboration among institutional actors, not the least in relation to spatial planning and marine protection. There is an increasing amount of regional and local blue economy initiatives all over Sweden working with an integrative and/or ecosystem perspective with varying thematic focus, understandings and constellations of actors. Our choice of seven cases encompasses illustrative examples covering this broad range from different perspectives: three cross-border initiatives, one cross-municipal planning project, Sweden's first regional maritime cluster and two local cases from different areas in South West Sweden (Fig. 1-1). As some cases are more continuous, while others are transitory projects, we use the terms of "cases" and "initiatives" to refer to both types and "projects" for transitory initiatives only.

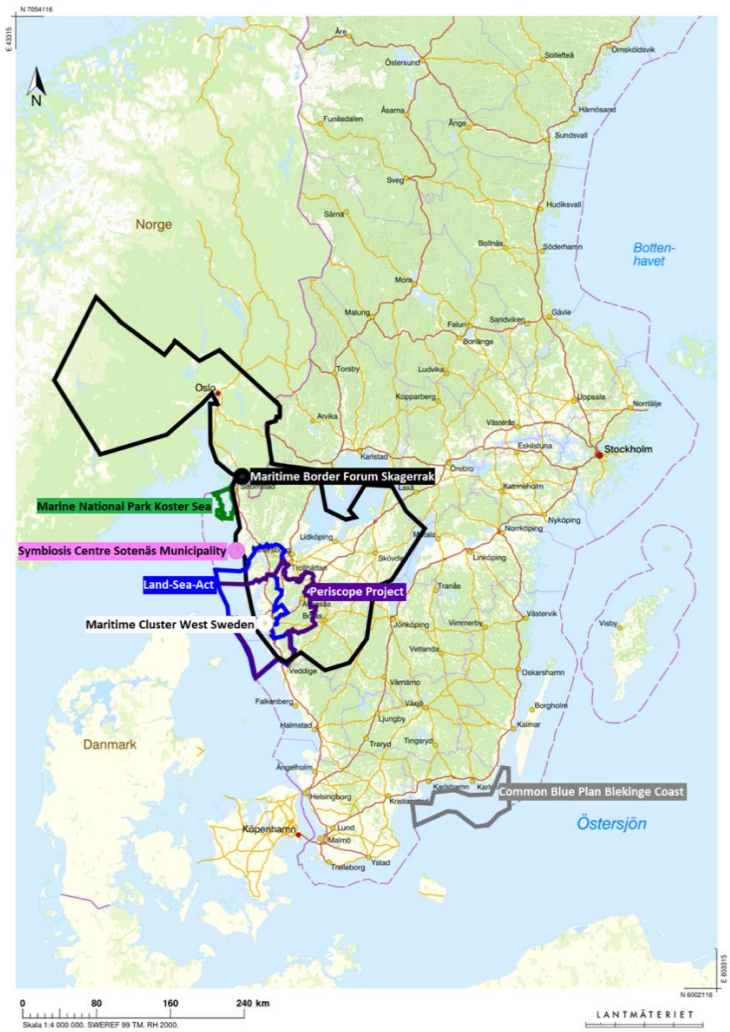


Figure 1-1: map of southern Sweden and Norway indicating the case areas. Source: authors.

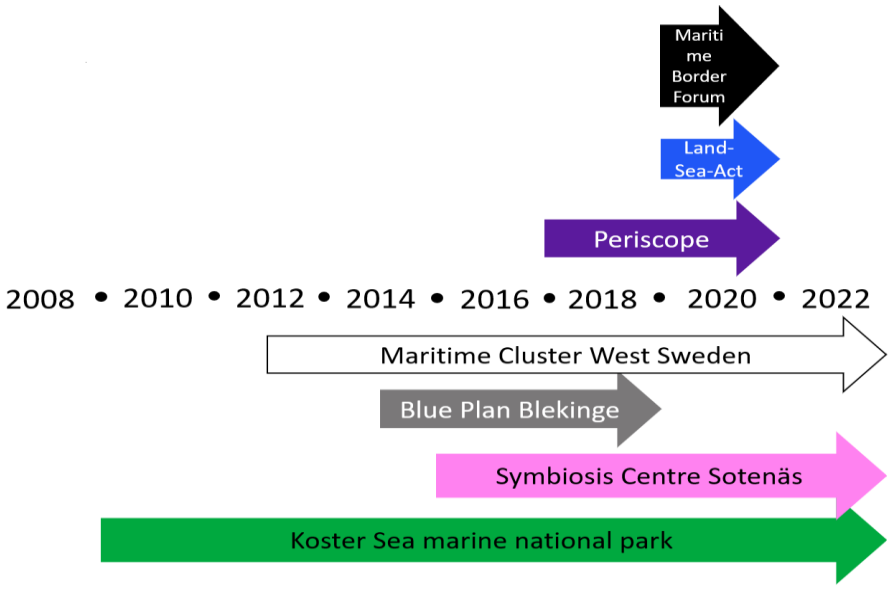


Figure 1-2: Case timelines, from start to end and in three cases continuing. Source: authors.

1.2 AIMS AND QUESTIONS

This report aims to share state-of-the-art experiences from Swedish actors working with their own interpretations of blue economy and sustainable development agendas in coastal areas in order to inspire and promote discussion and exchange across borders and oceans. This is done by capturing– from a selection of complementary and illustrative cases[2] – how different types of actor constellations at varying institutional scales collaborate around blue economy and coastal sustainability and how they deal with challenges they encounter. A further aim was to extract common lessons across cases and provide working strategies.

With widely differing situations across oceans and borders and highly context dependent experiences, it is necessary to provide basic information on the overall context and the cases to allow a reader to identify, interpret and transpose relevant experiences to the own context. To promote applicability and sharing, the study follows two complementary tracks: i) providing individual case descriptions including links for contacts and further deepening; and ii) a cross-case compilation of more general lessons in terms of enabling and inhibiting conditions and concrete strategies how to work around the latter to collaborate and develop initiatives coupled to a coastal blue economy.
The first part of the results focuses on the Swedish context and case information, while the second part tries to compile and synthesise across cases.

[2] Note that the selection of cases is practical and inspirational rather than for evaluation/benchmarking or scientific purposes (e.g. not aiming to evaluate the effects of initiatives or to compare which is more effective, or mapping all blue economy initiatives in Sweden). There is no claim to draw conclusions that are directly applicable to other contexts, this is up to the reader based on the information provided here.

The questions answered here are - with the relevant chapters in parenthesis

1. Context: What kind of environmental and institutional context is the Swedish coastal blue economy embedded in (chapter 3)?

2. Cases: What are the cases about and what are their key conditions and outcomes (4)?

3. Across cases:
   a) Which initial and longer-term institutional, infrastructure-related and other conditions facilitate initiatives to fulfil their aims? Which obstacles arise and what are related enablers (6 and 7)?
   b) What strategies can be identified to work around challenges and mobilise enablers and what further general conclusions can be drawn (8)?

1.3 READING GUIDE - DIFFERENT APPROACHES

Busy readers*: the executive summaries (Swedish & English) provide an overview.*

Interested in the essentials*: chapter 8 synthesises identified key enabling and inhibiting conditions thematically and extracts concrete strategies. It also discusses the results in relation to a broader context and future development of research and development on collaboration for coastal blue economies. If a specific theme is of interest, the reader can go back to chapters 6 and 7.*

Looking for inspiring examples*: depart from chapter 4 and then explore the rest.*

For all other readers, the report is structured as follows: Chapter 1 provides the background and linkages to the overall project and the aims. Chapter 2 describes the methodology. Chapter 3 covers important geographical and institutional overall context for Sweden. Chapter 4 introduces the cases in figures, tables and text. Chapter 5 introduces nine key themes identified in the material when sorting enabling and impeding conditions across cases - including a visual synthesis figure. Chapter 6 provides a thematically sorted cross-case extraction focusing on strengths, weaknesses, opportunities and threats to the initial situation of the initiatives. Using the same structure, chapter 7 presents a cross-case extraction of identified challenges and related enablers or basic prerequisites, which, according to the case owners, have affected initiatives' possibilities to proceed and achieve intended results. Chapter 8 provides an overall synthesis and discussion across themes, including strategies and recommendations and concludes with an outlook. The appendix contains references and specifies the methods and sources further.

2 METHODS AND SOURCES

2.1 OVERALL APPROACH

This study applies a qualitative, inductive and explorative case study approach, covering a broad range of illustrative examples working with their interpretations of blue economy and collaboration at the "leading edge of change" (Ward Shofield 2000). Its scope is limited, allowing for case-based narratives and a cross-case extraction of enabling and inhibiting conditions for this type of collaborations and strategies to address the latter. The study does neither include impact evaluation nor cross-case comparison and benchmarking, which would require much more systematic sampling and encompassing collection of qualitative and quantitative data. Main methods and sources have been qualitative written and oral case information collected by way of a data collection table, to be filled in by the respondents themselves (6 respondents; 4 cases) or together in a semi-structured interview (3 respondents; 3 cases), cross-case presentations and discussions in an online workshop (7 respondents; 5 cases). Further complementary sources include the power points provided by the respondents during the workshop and project documents, reports and scientific literature (see reference list). A more detailed description of the methodology including the limitations of the study can be found in the appendix.

2.2 CASES AND RESPONDENTS

The cases were chosen in discussion between the authors and SwAM experts with knowledge and experience in sustainable development and coastal planning and management in Sweden. The aim was to have a broad selection of initiatives (if necessary: successful[3] collaboration initiatives at the forefront of development in Sweden) that could be relevant for a broad readership, encompassing different blue economy sectors (fisheries, aquaculture, maritime transport, energy and/or conservation etc), actor constellations (enterprise-public/politics-knowledge-civil society), institutional scales.

- The Maritime *Border Forum* Skagerrak
- The *Land-Sea-Act* Project driven by the Gothenburg Region
- The *Periscope* Project, with Business Region Gothenburg as driving partner on the Swedish side
- The *Blue Plan Blekinge* Coast**
- The *Maritime Cluster* West Sweden
- The *Symbiosis Centre* in Sotenäs Municipality**
- Sweden’s first marine National Park *Koster Sea*

Many cases stem from the Southwest of Sweden. This does not mean that there are no other relevant initiatives in the rest of Sweden. However, that there is a high diversity of also well interconnected initiatives here can be explained by the fact that there are strong

[3] Successful/fulfilling their aims: here meaning the initiatives have survived over time, progressed according to their plans and/or achieved their targets (according to the respondents - without further external evaluation).

historical linkages to the sea (fishing, quarry, transport, tourism) and a more recent history of broad collaboration and innovation around blue economy and related coastal planning in these areas. The respondents (here also called case owners) selected have deep and long-term knowledge about the initiatives and the capacity to be self-reflective and critical. They either have been or still are leaders or co-leaders of the specific initiatives (asterisk marking cases** with two respondents with complementary perspectives on the cases).

2.3 DATA COLLECTION AND ANALYSIS

Data collection and analysis proceeded as illustrated in Figure 2-1. As a first step, based on the study's questions an analytical framework was developed. Based on this, a data collection table was constructed and sent to the respondents (see appendix). The basic data about each case included: 1) general descriptive information regarding the cases' actors, thematic focus, aims, timeline with important steps and achievements so far; 2) the case owners' assessment of the initiatives' initial situation in terms of strengths, weaknesses, opportunities and threats (SWOT-analysis; e.g. Narayanasamy, 2009: 259f - a relatively well-established easy-to-apply method to map what has been important at the outset and encourage the inclusion of critical points); and 3) the case owners' overall-assessment of challenges and enablers and basic prerequisites for the initiative to proceed and fulfil its aims (enabling focus on both difficulties encountered and what has allowed them to proceed and what was especially important for the case). The respondents provided primary input by filling in the table. Five of them also presented their case in an online workshop and compared their observations and conclusions across cases. The same data table made the guideline for three complementary semi-structured interviews. The material was then coded and if necessary, restructured according to the analytical framework and the revised data tables verified by the case owners.

Processing implied that the descriptive parts on the cases were compiled into the case overview chapter (4). The initial situation's strengths, weaknesses, opportunities and threats and the overall challenges and enablers were extracted and the coded information compiled in two tables across cases (SWOT and challenges, enablers and basic prerequisites). The emerging common topics were coded and clustered, resulting in 9 main themes and related sub-aspects and then compiled into text. For each theme, relevant strategies and reflections and recommendations were extracted. Report drafts were sent for final verification with SwAM experts, case owners and researchers.

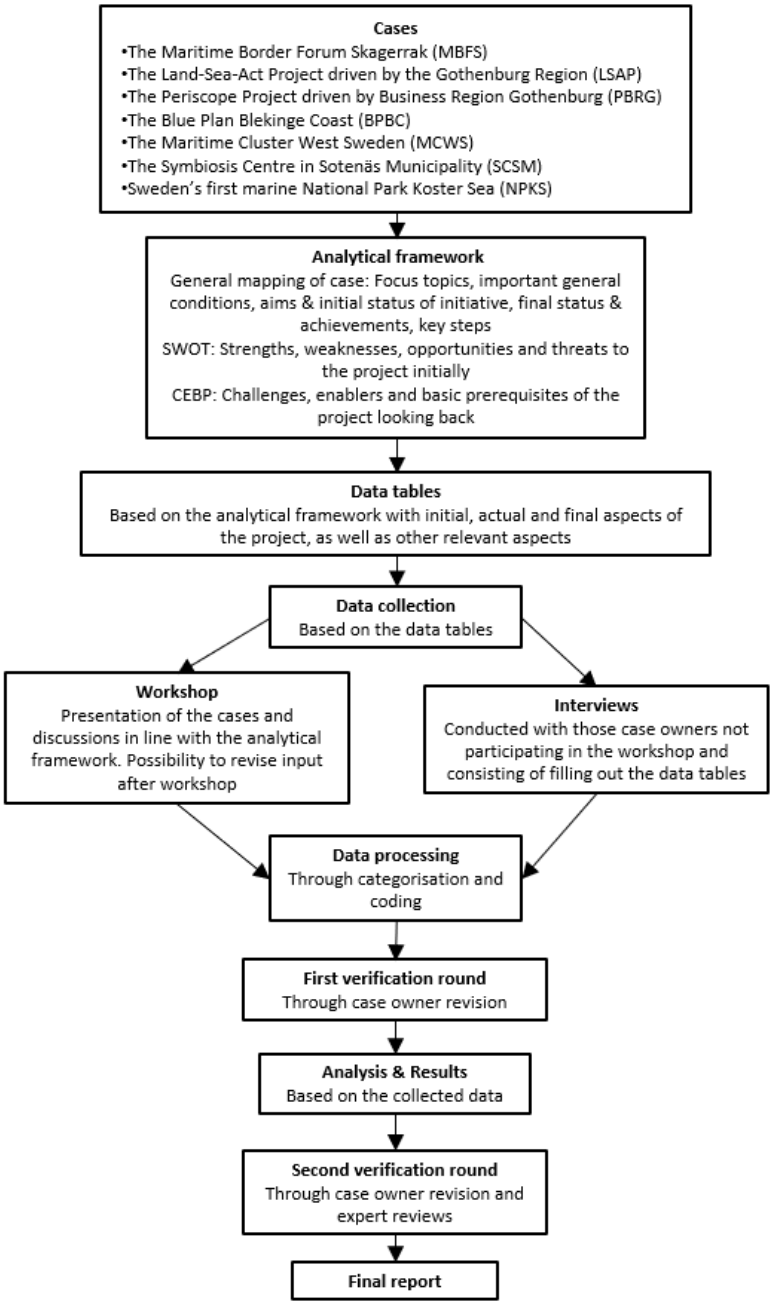


Figure 2-1: Methodological flowchart with main steps including case selection, analytical framework, data collection and analysis and verification. See text and appendix for details.
Source: authors.

3 THE SWEDISH CONTEXT: BALTIC AND NORTH SEA

Biogeographical and blue economy characteristics

Sweden features a long coastline and is encompassed by the marine areas of Skagerrak, Kattegat and Öresund and the Baltic Sea and the Gulf of Bothnia. The marine areas are shared with altogether nine nations - from the west: Norway, Denmark, Germany, Poland, Lithuania, Latvia, Estonia, Russia and Finland and the independent region of Åland in the East (Fig. 3-1). The varying shore types include both rocky and sandy seashore and blends thereof, a few fjords and six archipelago areas plus the larger islands of Gotland and Öland. The coastal and marine areas of Sweden are subject to a temperate climate and in some areas are covered by ice during wintertime. This is especially so in the Baltic Sea, where the water has very low salinity but can also in the more saline cover the coastal waters in very cold winters and leads to strong seasonal variations of some types of human activities, especially recreation and tourism, but also fisheries and shipping. All of this affects the natural resources and landscape characteristics relevant for human activities.

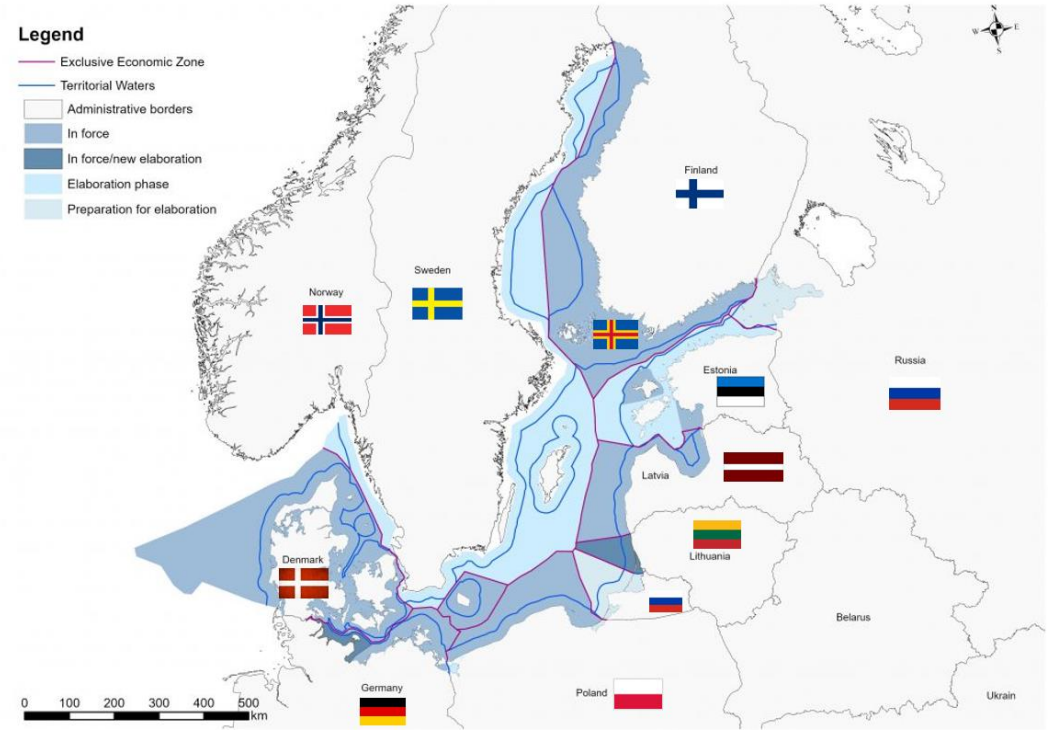


Figure 3-1: The shared seas around Sweden including the distribution of planning and management responsibilities in the neighbouring countries from Skagerrak in the West to the Gulf of Bothnia in the East.
Sources: Map: https://vasab.org/wp-content/uploads/2021/10/MSPA_Oct20201-1024x724.jpg (acc: November 2021). Flags: www.wikipedia.org

The coastal areas of Sweden range from very rural and natural resource based in the north and the south to highly urbanised and industrialised around the three population centres of

Gothenburg, Malmö and Stockholm. Historical uses of the latest centuries include coastal and offshore fisheries, marine transport, quarry and coastal recreation and tourism – with renewable energies and aquaculture more recent phenomena (see e.g. Svedäng 2015). Likewise, and with the exception of some regional and local forerunners in the late 20th century especially on the West coast (aquaculture & marine energy testing, Maritime Cluster of West Sweden - see cases, ICZM and Blue Plan in Northern Bohuslän and activities in Blekinge and Scania counties), maritime activities and the related economic potential have not been much of an issue in overall Swedish society and national politics. This has changed relatively recently, and also implied a diversification in terms of activities towards renewable energy, testing new forms of aquaculture (from fish to crustaceans, mussels, algae for human consumption and animal feed) including professional and experimenting with marine-based gardening plus other types of harvesting marine benefits, such as biotechnological applications. This is closely linked to marine knowledge production - mainly university based, hosted by applied research and development projects at different science-policy innovation centres throughout Sweden.[4]

Institutional framework and decision making

Sweden is a parliamentary democracy with three levels of government, national, regional and local (Table 3-1). The three levels meet at the regional geographical scale through national agencies (county administrative boards), the regional county councils and municipal collaboration organs. This has become especially relevant for coastal and marine governance, as these three levels carry different responsibilities and coastal and marine basin and watershed based geographical delimitations from an ecological point of view may be more meaningful. Roughly said, Swedish marine management is centralised regarding many marine use policy sectors, while economic development and spatial planning and coastal management decentralised to the regional and local level respectively. The national level is responsible for overall sector and cross cutting policies for the sea (e.g. the maritime strategy of 2015) and cross-border collaboration. At the regional geographical scale all three administrative levels are represented - with slightly different focus and tasks. The County Administrative Boards represent national sector authorities. The County Councils are responsible for regional development and transport, including the blue economy and transportation infrastructure. The permit system includes both permits issued by national authorities and the County Administrative Boards; for environmental permits environmental courts are located in several regional centres.

Since the late 1980s, a coastal planning system has been in place through the Planning and Building Act (1987, SFS 2010:900) with the municipal and cross-municipal level responsible for the planning in the territorial waters and across the land-sea boundary. The responsibilities for marine spatial planning (MSP) in the exclusive economic zone has been established only recently, with the Swedish Authority for Marine and Water

[4] Examples include from the West to the East: the research stations in Tjärnö and Kristineberg working with e.g. aquaculture, fisheries technology, anti-fouling paints, Chalmers Lighthouse for maritime transport, RISE for seafood, SEA_U Malmö and the Baltic Sea Science Centre in in Stockholm working with public awareness, the Marine Centre Simrishamn, and field stations of e.g. Lund, Stockholm and Umeå university and the Swedish Agricultural University SLU Aqua.

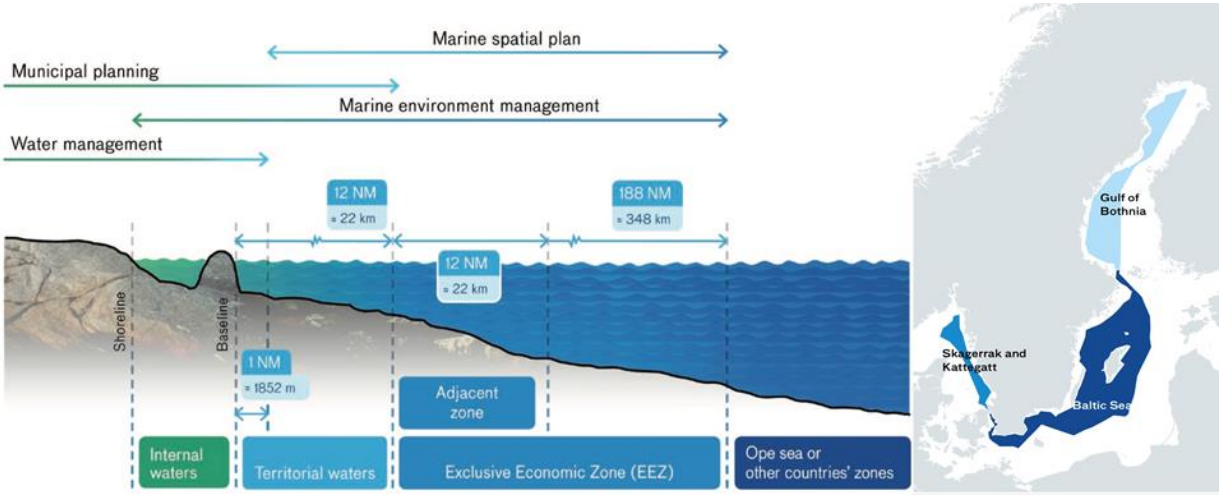
Management (SwAM) as main responsible and the County Administrative boards as key actors linking to the local level and coordinating in three complementary marine planning areas: the Gulf of Bothnia, the Baltic Sea and the Kattegat and Skagerrak area (figure 3-2a/b; Environmental Code 1998:808 and MSP ordinance SFS 2015:400).

Table 3-1 Distribution of responsibilities in Swedish marine and coastal management.

GEOGRAPHICAL SCALE	ADMINISTRATIVE LEVEL	AUTHORITY TYPE	RESPONSIBILITIES
NATIONAL	National	Government (executive & strategic) Parliament (legislative) National sector authorities	Exclusive Economic Zone Sector policy and regulation for different use sectors (e.g. national defence and security, coast guard, transport and related infrastructure, energy, fisheries, material extraction, natural and cultural heritage conservation) Overall economic development strategies International collaboration through different conventions
REGIONAL	National-regional	County Administrative Boards representing national sector authorities	Territorial waters Managing selected use sectors at regional scale including permits and integrating across sectors (e.g. checking and approval of municipal planning, agriculture, freshwater fisheries, natural and cultural heritage conservation and environmental quality)
	Regional	County Councils political and administration	Territorial waters Themes among others: economic and rural development, public and private transport infrastructure, culture, health care. Possibility to gain responsibility for regional spatial planning on national appointment.
	Local-cross municipal	Municipal collaboration organs based on municipal political decisions and administrative support	Territorial waters Possibility for thematic management and ICZM and spatial planning and across municipal borders - on municipal agreement and regional spatial planning on national appointment.
LOCAL	Local	Municipalities political and administration	Territorial waters Broad cross-cutting responsibilities including local infrastructure and provision of a wide array of services, local natural and cultural heritage conservation, environmental quality, local enterprise development and emergency responses. Spatial planning onshore and offshore, can be used for ICZM.

There are established procedures for public participation in decision making according to environmental and other sector legislation and spatial planning, including minimum requirements with regard to information and consultation and rights of appeal. Over the last decades, also in connection with a global paradigm shift in administration (e.g. Agenda 21, Biodiversity convention) more interactive forms of involvement have been tested in planning and sector management, ranging beyond information and consultation towards collaboration and co-management for citizens and marine users (e.g. Cedergren et al.

2020 for fisheries co-management, Morf et al. 2019 for MSP, Prutzer et al. 2021 for water co-governance; Sandström et al. 2014). Rooting in various citizen movements there is a tradition of local cooperation and community action with local and regional organisations driving community development and other themes in rural and urban areas (e.g. Píriz 2004 for coastal fisheries, Ronnby 1995). Worth noting is that Sweden has a low level of severe poverty (1.6 % live in serious material poverty (EAPN, 2019)) and is the 7th highest developed country globally (UNDP 2020). Thus, deep poverty is less of an issue in Swedish coastal planning. Still, there is a connection to jobs and livelihoods through a local blue economy. The corruption level (see Corruption Perceptions Index (Transparency International 2020) or Global Corruption Index (Global Risk Profile) and both interpersonal and social trust is comparatively high in Sweden, even if there are groups with lower trust (Holmberg and Rothstein 2020). High social trust is suggested to link to a perceived high confidence in the governing systems (ibid.). A low level of corruption and high trust provide a good base for collaboration between institutional and other actors.



Figures: 3-2a: Overlapping coastal and marine planning and management systems in Sweden and 3-2b: Swedish MSP areas.
Sources: a: SwAM (2019; p. 13); b: (2018; p. 8).

The forums for cross-border collaboration include a wide array of global organisations and conventions within the framework of the *United Nations* and different transnational regional organisations. The *European Union* (EU) is important for sector management in the EEZ (e.g. energy, fisheries, conservation), regional development, and is funding of different types of international collaborations. For the Baltic Sea, the Helsinki Commission (HELCOM) with focus on environmental issues and Vision and Strategies around the Baltic (VASAB) for regional spatial development have a collaboration on marine spatial planning through a special MSP working group. The Skagerrak area is encompassed by to the Oslo-Paris (OSPAR) Commission for the North Sea and the Atlantic.[5] Also the

[5] https://helcom.fi/; https://vasab.org/; https://www.ospar.org/.

Nordic Council of Ministers promotes collaboration on marine issues and regional development. These organisations make important social infrastructure for cross-border collaboration at a high level of integration (Kidd & McGowan 2013).

4 RESULTS: THE CASES

Here, the cases are presented, first in an overview and then case by case. Deeper case information is available on the websites of the cases (see case tables).

4.1 OVERVIEW

The initiatives are situated in the South of Sweden (Fig. 1), with one example in Blekinge in the Southeast of Sweden and the others on the West coast, including the border area in South Norway. Here, the blue economy has been strongest as a topic and initiatives in the forefront of development could be found (see fig 1-2 case timelines). The seven cases cover a broad range of blue economy and/or conservation topics and different types of collaborating actor constellations at different geographical and institutional scales. Below, cases are sorted according to the geographical focus of the collaboration, starting with the international cases, then the regional and cross-municipal ones and lastly the local cases – note that all are also linked across scales.

Three cross-border initiatives:

- The Maritime *Border Forum* Skagerrak, an international collaboration project between Sweden and Norway including authorities, enterprise and knowledge actors at different levels/scales.
- the *Land-Sea-Act* project, an international collaboration project of authorities and knowledge actors focusing on coastal planning and management.
- the *PERISCOPE* project, an international collaboration project

A regional blue economy cluster at the forefront of development:

- The *Maritime Cluster* of West Sweden, a blue economy initiative driven by a regional authority in collaboration with other authorities, enterprises and knowledge actors.

One cross-municipal coastal planning initiative:

- *Blue Plan Blekinge* Coast, cross-municipal coastal planning driven and financed by authorities.

Lastly, two local initiatives with different thematic focus:

- the *Symbiosis Centre* in Sotenäs Municipality focusing on combining and developing local blue enterprise in a coastal municipality.
- Sweden's first marine national park *Koster Sea* focusing on conservation together with sustainable use of marine resources.

An interested reader may use the Table 4-1 and Figure 4-1 below to get a further

overview over the cases and identify the ones that might be of most interest to study more deeply.

Table 4-1 Overview over important focus areas in all cases, sorting the main topics according to three overall categories - based on the focus of this study: Blue Economy, Flourishing Communities, and Institutional Development and collaboration (definitions, see data collection table in appendix).

CASE NAME	BLUE ECONOMY	FLOURISHING COMMUNITIES	INSTITUTIONAL DEVELOPMENT & COLL.
MARITIME BORDER FORUM SKAGERRAK	Aquaculture, recreation, tourism.	Regional and local business development - also across borders. Knowledge for sustainable development.	Cross-border and transdisciplinary collaboration on local, regional level (authorities, users, academia and other knowledge actors, business networks); Spatial planning.
LAND-SEA-ACT PROJECT AND GOTHENBURG REGION	Preconditions for maritime businesses in municipal planning.	Knowledge about blue economy.	Cross-municipal collaboration; International collaboration (authorities, users); Coastal and marine spatial planning for BE & SD; Multi-level Governance.
PERISCOPE PROJECT OF BUSINESS REGION GOTHENBURG	Regional BG and blue business development (incl. digitalisation, automation, electrification, energy, 3D, offshore).	-	International and regional collaboration (authorities, users, business); maritime and financial sectors.
MARITIME CLUSTER OF WEST SWEDEN	Seafood, maritime tourism, maritime operations, marine biotechnology, marine energy.	Knowledge and research support for local-enterprise development and collaboration.	Regional collaboration (authorities, users, academia); Ocean governance intersects all cluster parts.
BLUE PLAN BLEKINGE COAST	Balancing BG and conservation through a strategic coastal plan with a proactive perspective on which marine resource uses to promote where (proactive, suitability).	–	Cross-municipal/regional collaboration; Multi-level governance; Coastal and marine spatial planning.
SYMBIOSIS CENTRE SOTENÄS MUNICIPALITY	Closing material and energy cycles between different users (fisheries, aquaculture, processing industry, water treatment plant).	Local blue economy and development in Sotenäs municipality; social and economic symbiosis based on local resources.	Local collaboration (municipality, higher-level authorities, business, research and development actors).
KOSTER SEA NATIONAL PARK	Conservation, research and learning, sustainable use (fisheries, aquaculture, recreation, tourism).	Maintenance and management plan linked to in-depth municipal spatial plan, decision-making forum (co-management), participatory process, locally based management forms.	Adaptive and integrative management design, national and regional level conservation planning; Local and regional spatial planning, national resource (fisheries) and environmental management (conservation).Cross-border collaboration with Ytre Hvaler/ Ferder/ Raet/Jomfruland NP:s in Norway.

The seven cases cut in varying ways across topics and institutional arrangements. They also partially overlap geographically and have played into each other (Fig. 4-1). The main focus topics for the study have been blue economy and conservation, flourishing coastal communities, authority collaboration, and planning (darker blue in top row), based on the wider focus of the SwAM Ocean programme (see table 4-1 above). Moreover, the selected cases cut across further potentially interesting topics for collaborative development initiatives: knowledge, political involvement and cross-border collaboration (top row, lighter blue). The authority and political involvement columns also indicate the administrative levels covered in each of the cases. All cases include at least to some extent the topics blue economy, knowledge and authority collaboration. Four cases have a cross-border component.

ASPECTS / CASE	Blue economy	Conser-vation	Know-ledge	Coastal Commu-nities	Authority collabora-tion	Political involve-ment	Planning	Cross-border
MARITIME BORDER FORUM					Regional Local	Regional Local		
LAND SEA ACT					Regional			
PERISCOPE					Regional Local			
MARITIME CLUSTER WEST SWEDEN					Regional	Regional		
BLUE PLAN BLEKINGE					Regional Local	Local		
SYMBIOSIS CENTRE SOTENÄS					Local	Local		
KOSTER SEA MARINE NATIONAL PARK					National Regional Local	Local		

Figure 4-1: Overview over the cases and their focus. The colour gradient indicates the importance of each aspect in the overall study (top row) and per case. Darker blue indicates a stronger focus and the lighter blue indicates less strong focus.
Source: authors

4.2 THE MARITIME BORDER FORUM SKAGERRAK

The Skagerrak makes a shared border and marine area between the West coast of Sweden and southern Norway; a sea which has been less acknowledged nationally in both countries (workshop, 11 June 2021). The project *Maritime border forum Skagerrak* (MBFS) was initiated in 2019 and ends in 2021. The project owners include the committee of Svinesund - a collaboration between Swedish and Norwegian municipalities, the Viken county council in Norway and the Västra Götaland Region in Sweden, the University of Gothenburg through Tjärnö Marine Laboratory and the County Administrative Board of Västra Götaland (Lundgren et al. 2020). The goal of MBFS is to strengthen Skagerrak as a viable environment and blue growth region by cross-border and transdisciplinary collaboration, while in parallel protecting the national parks on both sides of the border and their role for a long-term sustainable environment (Lundgren et al. 2021).

Table 4-2 Case characteristics for Maritime Border Forum Skagerrak in terms of key initial conditions, final status, and key steps.

THE CASE	MARITIME BORDER FORUM SKAGERRAK
IMPORTANT INITIAL CONDITIONS	• Politically established decision in the Committee of Svinesund to work with BG in the region. • Pilot studies.
PRESENT STATUS	The project is ongoing, evaluation reports by Nordregio so far conclude that: • Project logic and processes so far have enabled growth and development possibilities for trade and industry, as well as businesses within the marine sector participating in the project (Lundgren et al. 2020). • Several platforms have been established within for example research, aquaculture and business (see case description above). Through a learning process and shifting attitudes, and in connection with the oil crisis allowing for more commercial interests, this project has become a foundation enabling BE as a new focus topic within *Viken Fylkeskommune* (Norway).
KEY STEPS	• Pilot studies. • Utilising political decisions as a base for the project. • Appoint a process leader who can keep a balance within the project. • Establish clear goals to address in a short-term or long-term perspective. • Include mother organisations with a mandate which can take the results to the next level after the project.
KEY INFRASTRUCTURE (SOCIAL & PHYSICAL)	During the covid close-down digital meeting technology and the capacity to use it has developed. The participants chose to focus on opportunities instead of the obstacles, which the closed border was and partly still is.
HOMEPAGE	https://svinesundskommitten.com/blatillvaxt/marint-gransforum/ (in Swedish)

Sources: project owners; see also references.

The project is financed by EU-Interreg[6] Sweden-Norway funding and builds on previous projects and studies. Its aim is to establish long-term collaboration forms and partnerships between different authorities on a regional and local level, as well as businesses across borders to work with business development, coastal- and marine planning, research, digitalisation and addressing obstacles to cross-border interaction (workshop, 11 June 2021).

The project has so far succeeded in establishing platforms and networks for collaboration between researchers, public actors within coastal- and marine planning, as well as between blue enterprises (workshop, 11 June 2021). The two interaction platforms and networks established by the project within oyster- and algae cultivation are appreciated among the participating companies and have to a high degree contributed to the knowledge building in the two marine industries (Lundgren et al. 2020: 13).

4.3 THE LAND-SEA-ACT PROJECT AND THE GOTHENBURG REGION

The *Land-Sea-Act* project is still under way (2019-2021). This case is also an EU-Interreg funded collaboration – of especially local and regional, but also national authorities, as well as stakeholders from various sectors from six countries. The aim is to improve coastal governance and promote capacity and knowledge to work across the land-sea interface in marine and coastal planning (Interreg Baltic Sea Region, n.d). The project partner from Sweden is the Gothenburg Region (GR), an association of 13 municipalities around Gothenburg who collaborate in different ways, such as development projects like Land-Sea-Act. Here, the six coastal municipalities in GR and two municipalities north of GR participated with the aim to develop a draft for a regional maritime strategy to facilitate the integration of business development and blue growth in the municipal planning (Göteborgsregionen, n.d.; workshop, 11 June 2021). There was a perceived lack of knowledge on regional and spatial requirements of maritime businesses and a need to develop relevant capacity to integrate this perspective in municipal planning. Moreover, there was a strong will amongst the participating municipalities to highlight such issues (workshop, 11 June 2021).

The project builds on an earlier three-year project, where a joint and politically decided strategy (Structural vision for the coastal zone) was developed, making the foundation for continued work and facilitating the participation in Land-Sea-Act. In the project, the preconditions for blue enterprise in the area have been investigated with a special focus on spatial aspects, also exploring possibilities for co-existence and shared spaces between different maritime sectors and interests (workshop, 11 June 2021).

Instead of the initially planned economic strategies, the project has promoted the creation of relevant knowledge and provided input to overall project outputs and outcomes, including a multi-level governance agenda. Especially knowledge on maritime enterprise in the area and related needs and spatial prerequisites has been developed. A further result is

[6] The Interreg funding programme for European territorial cooperation, has this as one of two goals in the EU cohesion policy. It promotes and supports cooperation across borders to work jointly on common issues and finding shared solutions. Funding is project-based and in turn funded by the European Regional Development Fund (Interreg, 2021).

the collaboration and learning process described by the participating municipalities (The Gothenburg Region, 2020).

Table 4-3 Case characteristics for Land-Sea-Act driven by Gothenburg Region in terms of key initial conditions, final status, and key steps.

THE CASE	LAND-SEA-ACT AND GOTHENBURG REGION
IMPORTANT INITIAL CONDITIONS	• Earlier three-year cooperation project where a joint, and politically decided, strategy between the eight involved municipalities was developed. • Key contacts within the network. • Will among the participating municipalities. • External funding.
PRESENT STATUS	The project ends in December 2021. It will not produce a finalised maritime strategy, but rather a foundation for future work on this topic. • Draft for a regional blue economy strategy with recommendations on further work. • Tutorial for business development in coastal areas. • Mapping of BG perspective through different methods. • The main result of the project is the collaboration, and the learning process municipalities has described. • Interreg project's main outputs: Multi-level Governance Agenda on Blue Growth and Spatial Planning in Baltic Sea Region, Policy brief on key messages on Land-Sea Interactions and Blue Growth initiatives, Action Plan on "Entrepreneurship and Blue Growth" and Blue Growth Check -report.
KEY STEPS	• Politically decided joint agreements as a foundation. • Municipalities pointing out maritime business development as an interesting theme to explore further. • Receiving external funding. • Involvement of maritime business stakeholders, in project activities. • Workshops with business developers and planners within the municipalities. • Participation through GIS, where businesses and municipalities has established areas of importance for maritime businesses today and in the future.
HOMEPAGES	https://land-sea.eu/ https://goteborgsregionen.se/GR/toppmenyn/om-goteborgsregionen/in-english.html

Sources: project owners; see also references.

4.4 THE PERISCOPE PROJECT OF BUSINESS REGION GOTHENBURG

The EU-Interreg-project *Periscope* (2017-2021) is co-funded by the EU through the Interreg North Sea programme and by the 12 participating project partners from Sweden, Norway, Denmark, Germany, the Netherlands and the United Kingdom. The project partner from Sweden is Business Region Gothenburg (BRG). BRG is responsible for the business development in the Gothenburg region and is a non-profit subsidiary organization owned by Gothenburg City Hall, which in turn is owned by the City of Gothenburg (BRG, n.d.a).

Table 4-4 Case characteristics for The Periscope project driven by Business Region Gothenburg in terms of key initial conditions, final status, and key steps.

THE CASE	PERISCOPE PROJECT AND BUSINESS REGION GOTHENBURG
IMPORTANT INITIAL CONDITIONS	• A certain knowledge base is needed, otherwise it is hard to operate such a large project. • Important with the "right" people with the "right" knowledge from the beginning who will stay throughout the whole project and have personnel resources.
PRESENT STATUS	Increased understanding for how different countries view the maritime and blue sectors. • An increase in each other's knowledge, challenges and prerequisite conditions. • New innovations, for example a project idea about 3D-printing spare parts onboard ships. As well as several other project ideas that hold interest among stakeholders, beyond the Periscope project. • The creation of a network of actors for future contact.
KEY STEPS	• A good communication and dialogue with project management. • Consensus. UN climate goals are not only applicable for a few actors, but all of us. • A common strategy is important for reaching UN, national and local goals. • Prioritisation of innovation ideas to be involved in the project.
HOMEPAGES	https://periscope-network.eu/ https://www.businessregiongoteborg.se/

Sources: project owners; see also references

The project partners involved in the Periscope-project are mainly strategic rather than operational and include among others, different maritime organisations and company clusters, a regional managing authority, two universities and offshore renewable energy industry groups (Interreg North Sea Region, n.d.). The aim of the project is to establish a permanent "innovation ecosystem"[7] in the North Sea Region to grow transnational innovation partnerships for sustainable business development in emerging blue markets. Periscope aimed to promote Interreg North Sea's objectives "Thinking growth" by strengthening cross-sector blue growth innovation capacity by bringing together different actors in the North Sea Region for knowledge sharing, acceleration and launch of new innovation-projects for sustainable business development. The actors included were i.a. businesses,

[7] Granstrand and Holgersson (2020) proposes a synthesised definition of innovation ecosystems and concludes that: *"An innovation ecosystem is the evolving set of actors, activities, and artifacts, and the institutions and relations, including complementary and substitute relations, that are important for the innovative performance of an actor or a population of actors."*

entrepreneurs, clusters, research and universities, investors, customers and users, regional and local authorities and business support agencies (BRG, n.d.b). The Periscope project's ambition was to establish a permanent platform for partnership and business development to strengthen the North Sea Region's maritime and marine sectors' global competitiveness (BRG, n.d.b; interview, 22 June 2021).

The project has increased the contact networks and developed knowledge on how the different participating countries perceive maritime and blue sectors, as well as the varying conditions, knowledge bases and challenges the different participating countries have. Periscope has also generated several new cross-border project applications, e.g. within electrification (interview, 22 June 2021).

4.5 THE MARITIME CLUSTER OF WEST SWEDEN

The *Maritime Cluster of West Sweden* is one of the earliest BE initiatives in Sweden and has been operating in western Sweden since the early 2010s. The Cluster is a "network for collaboration on innovation and knowledge-based blue growth" and collaborates with the Västra Götaland Region (VGR), Chalmers University of Technology, University of Gothenburg, The Swedish Research Institute (RISE), Your Maritime Solutions Partner (SSPA), the Swedish Agency for Marine and Water Management and the County Administrative Board of Västra Götaland (Maritime Cluster, 2021).

In 2008, the VGR adopted a new maritime strategy (Västra Götalandsregionen, 2008), which led to an investigation on how to strengthen the maritime sectors in the region. This gave rise to the report "*Maritime Clusters in Västra Götaland 2012"* and the creation of the Maritime Cluster of West Sweden (Maritima Cluster, 2021). Its aim was to strengthen the maritime sectors in the region through innovation and development initiatives. By connecting relevant actors within and in between respective fields of blue growth, the goal was to find common connections within the five main cluster themes: seafood, marine tourism, marine operations, marine biotechnology, and marine energy – all within an ocean governance perspective.

Today, the cluster works as an overall umbrella, connecting the different cluster themes and respective blue economy platforms. It acts as a foundation, network and mediator for collaboration between various cluster stakeholders. This means that businesses within the cluster do not operate in isolation but rather in collaboration and in close consultation with research and academia. This has given rise to fruitful results and new start-ups, especially within the seafood sector. Possible future steps could be an adaptation of the initiative for cross-border collaborations, for example Sweden-Norway or EU level.

Table 4-5 Case characteristics for The Maritime Cluster of West Sweden in terms of key initial conditions, final status, and key steps.

THE CASE	MARITIME CLUSTER OF WEST SWEDEN
IMPORTANT INITIAL CONDITIONS	• Baseline study to establish actors and issues to address. • Funding for this type of development projects. • Base in wider context: here EU-level blue growth agenda.
PRESENT STATUS	A good collaboration and network have been achieved. • A foundation of actors and a structure allowing for businesses to work collaboratively with University of Gothenburg, Chalmers University of Technology, Research Institute of Sweden and more. • Further projects have been generated, within e.g. seafood (Scary Seafood – the new food from the sea) and marine biotechnology (Marine Biotechnology Conference 2019 and 2020). • Six working groups have evolved into their own specific platforms for other projects. • Annual conferences with the aim to promote a better collaborative climate and dialogue in the region. • Open networking meetings allowing municipalities to participate. • An umbrella organisation allowing industries to better collaborate. • Increased general trust between actors than before. • A few start-ups, mainly within the seafood sector.
KEY STEPS	• Predecessors within the project realised the importance of blue growth and its potential for the region. • Baseline study. • Bringing together different actors and starting a dialogue. • Collaboration agreement providing structure and mandate.
HOMEPAGE	https://www.maritimaklustret.se/en/

Sources: project owners; see also references.

4.6 COMMON BLUE PLAN BLEKINGE COAST

In the county of Blekinge in southern Sweden, the four coastal municipalities, consisting of Karlskrona, Ronneby, Karlshamn and Sölvesborg, have in collaboration agreed on a common cross-municipal *Blue Plan* for the use and protection of their shared sea area. The process towards this blue plan was initiated in 2014 by Biosphere area Blekinge Archipelago (an NGO) and the County Administrative Board of Blekinge. In 2016, the coastal municipalities adopted a project plan and applied for and received project funding from the Swedish Agency for Marine and Water Management's assigned funding for municipal planning in governmental cooperation. The final plan was politically adopted by each municipality in 2019 (Sölvesborg municipality et.al., 2016).

The aim of the cooperation for a common blue plan was to specify the municipalities' aims and development priorities regarding the use of coastal waters within the planning area and, by providing a plan with strategic priorities, to promote predictability for marine

users. The goals included coordination with the on-going national marine planning process, identifying compatible and non-compatible marine interests and uses, and to define the spatial conditions for both conservation and use (Sölvesborg municipality et.al. 2016).

Table 4-6 Case characteristics for Common Blue Plan Blekinge Coast in terms of key initial conditions, final status, key steps and infrastructure.

THE CASE	COMMON BLUE PLAN BLEKINGE COAST
IMPORTANT INITIAL CONDITIONS	• Political will, a formal statement and a politically given mandate to the administration to prioritise this collaborative work. • Financial support/grant and financing by personnel hours, some data gathering/analysis and a consultant as a project leader. • A leading actor (*Biosphere Reserve in Blekinge*) with strong will and drive. • Support and contributions from responsible higher-level authority supervising municipal planning and linking to the national process (County Administrative Board).
PRESENT STATUS	An in-depth comprehensive plan was adopted by all four municipalities. • The municipalities who have adopted new comprehensive spatial plans has also made connections to the blue plan and marine spatial planning. • A collaborative structure has been established.
KEY STEPS	• The Blekinge offshore energy project triggered a common realisation that there is a need for proactive planning. • Involving relevant stakeholders. • Political support to provide the time and financing to focus on the task. • Open-minded discussions across administrative borders. • Common goals. • Connecting the project to the regular planning process legitimising its application in other planning processes.
KEY INFRASTRUCTURE (SOCIAL AND PHYSICAL)	• An openminded and committed project group. • Making use of the "smallness" of the county and reaching across administrative borders. • Multiple expertise from different areas such as marine biology, spatial planning, marine archaeology etc.
HOMEPAGES	https://www.karlskrona.se/samhallsplanering-och-trafik/stadsutveckling/strategisk-planering/havsplan-for-blekinge/ https://www.ronneby.se/bygga-bo--miljo/oversiktsplan-och-detaljplaner/oversiktlig-planering/havsplan-for-blekinges-kustkommuner.html https://www.karlshamn.se/kontaktkort/havsplan-for-blekinges-kustkommuner/ https://www.solvesborg.se/bygga-bo-och-miljo/oversiktsplan-och-detaljplaner/oversiktlig-planering/havsplanering.html

Sources: project owners; see also references.

The municipalities have agreed on how to sustainably use marine resources in accordance with intentions in national marine spatial planning (workshop, 11 June 2021). The blue plan geographically covers the sea area 300 meters from land and islands, towards the territorial boundary. The sectors covered by the plan include cultural heritage, tourism and recreation, commercial fishing, aquaculture, extraction and dumping of materials,

aviation and shipping, infrastructure, defence, energy, and nature conservation - also in line with the topics covered by the national plan. The main outcome of the project is a common strategic Blue Plan covering the coastal waters of all municipalities (Sölvesborg municipality et.al. 2016).

4.7 THE SYMBIOSIS CENTRE IN SOTENÄS MUNICIPALITY

In the municipality of Sotenäs on the West coast of Sweden, *Sotenäs Symbiosis Centre* is located. The process towards establishing the centre was driven by new environmental legislation which forced the (already well established) local marine food industry and its processing chain to adopt a more circular model regarding their wastewater management. A political decision to support and invest in the establishment of Symbiosis Centre was a further key step (workshop, 11 June 2021).

The centre is the first of its kind in Sweden, with its activities starting in 2015 (Persson, 2019: 22). Its aims and goals focus on a) saving local industries and jobs while also creating new job opportunities and businesses, b) being a relevant example of symbiosis in Sweden, and c) to be an innovative hub for marine sustainable development promoting human contact and constituting the base for the transition to a circular society (workshop, 11 June 2021; Persson, 2019: 22).

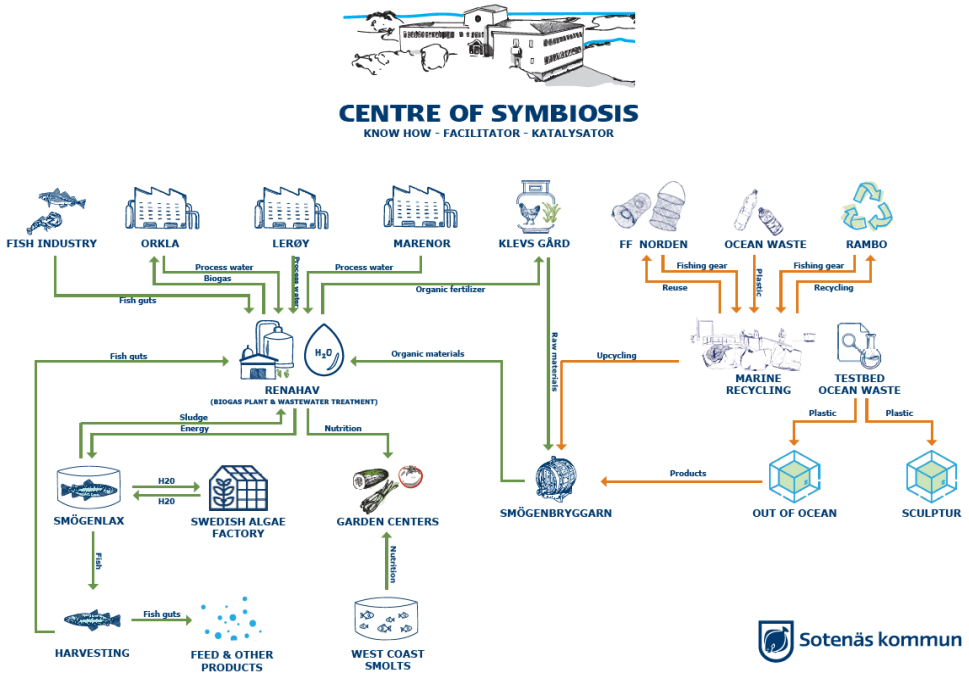


Figure 4-2: Industrial symbiosis at the Symbiosis Centre in Sotenäs municipality. For a description see the text. Source: case owners, Sotenäs municipality.

The centre is an active meeting place and a knowledge centre where businesses, universities and education, and officials from the municipality can meet to promote and work with industrial and social symbiosis to create conditions for new green employment and a more resource effective and sustainable society (Figure 4-2; Symbioscentrum, 2021). In

the industrial symbiosis, residual waste from one actor becomes the raw material for others. As illustrated to the left in figure 4-2, the industrial symbiosis in the municipality involves the fish industry and four major marine food producers whose waste and process water feeds into a biogas plant and a wastewater treatment plant, where biogas and organic fertilizers is fed back to the food producers and a local farm. Energy from the treatment plants is led into a land-based aquaculture, as well as nutrients flow to garden centres. Everything is connected in a shared symbiotic value chain, where circular and systems thinking is key. As a second chain (illustrated to the right in orange in figure 4-2), the centre hosts the first marine recycling centre in Sweden for end-of-life fishing gear and beach garbage, where marine waste is recycled, mended or turned into new products instead of being burned or deposited in a landfill. The social part of the symbiosis focuses on human encounters, interaction and capacity development to promote the building of relations and of collaboration.

Table 4-7 Case characteristics for Symbiosis Centre in Sotenäs Municipality in terms of key initial conditions, final status, key steps and infrastructure.

THE CASE	SYMBIOSIS CENTRE SOTENÄS MUNICIPALITY
IMPORTANT INITIAL CONDITIONS	• Constitutional law for sustainable development. • Regulatory challenge in environmental legislation demanding action. • Public funding. • Common goal to succeed and avoid local recession. • Strong enthusiasts. • The "right" people and organisations were close to each other in both distance and communication. • Focus on waste from production rather than from consumption.
PRESENT STATUS	No end status but an ongoing initiative. *"The symbiosis network has today grown and include several value chains."* • Symbiosis, through collaboration get out more. • Arena for development with several different parts within industrial and social symbiosis. • Test beds for aquaculture on land. • The first marine recycling centre in Sweden for end-of-life fishing gear and beach garbage. Also includes a test bed.
KEY STEPS	• Detailed development plan both for land and sea is of importance for a coastal municipality. • A study trip to Kalundborg centre of symbiosis – showed the concept of symbiosis in real life. • The political decision to go for Sotenäs Symbiosis Centre.
KEY INFRASTRUCTURE (SOCIAL AND PHYSICAL)	• The regional and national/international innovation- and funding system. • A small municipality where issues can be quickly communicated and addressed. • Short spatial distance between industries allowing to link physically.
HOMEPAGE	www.symbioscentrum.se

Sources: project owners; see also references.

4.8 THE MARINE NATIONAL PARK KOSTER SEA

The *Koster Sea* National Park is Sweden's first marine national park, located in the north-eastern Skagerrak in the archipelago of the municipalities of Strömstad and Tanum. It provides an example for combining conservation and the maintenance of a local blue economy. The area is relatively rural, characterised by high natural, culture and landscape values including cold water corals, an active coastal fisheries industry including trawling for shrimp and crayfish, a high attractiveness for tourism and recreation but increasing human pressure on natural values. A key challenge are a strongly fluctuating population and related income with a summer high and a winter low season. This implies a need to work with sustainable development from a broad perspective: keeping a thriving coastal community and jobs for permanent residents at the same time maintaining the highly valued local ecosystem services providing a base for these activities.

The national park was inaugurated in 2009, in parallel with a sister marine national park, Ytre Hvaler in Norway. A long and broad process has led to its establishment, with a first official proposal as early as 1989 by the Swedish Environmental Protection Agency (Morf et al. 2017). The proposal met strong local resistance against further use restrictions beyond the recently in a top-down manner established nature reserves (Morf et al. 2011). The threat of depopulation and loss of societal services in combination with the dependency on seasonal tourism made both locals and authorities think about rural development in a broader perspective, resulting in collaborations through numerous bottom-up and top-down initiated projects and initiatives. A combination of active local residents and authorities listening to local needs, collaborating and providing resources promoted the building of common knowledge and collaborative experience. In the late 1990s, an escalating conflict between marine protection and local shrimp trawling eventually led to an intensive mutual learning process between fishers, authorities, NGOs and scientists from the local research station. It led to the Koster-Väderö agreement (2000), a multi-part agreement on the regulation of fisheries and seabed impact in the area – making a milestone for establishing a national park. Collaboration on fisheries continued through the co-management initiative North Bohuslän, furthering sharing of knowledge, mutual understanding and trust (Cedergren et al. 2020). Authorities and locals increasingly agreed on the need to protect the marine natural and cultural values and steer the pressure from tourism. Local engagement on Koster for a thriving year-round community and expectations of positive effects through branding and a local visitor centre were important for agreement to a park. Later, also adjacent islands followed. This promoted local acceptance of conservation measures and a willingness to participate in the development of a national park - but on local terms. The fishers accepted a national park but remained sceptical to using environmental law to regulate fisheries. User interviews indicate that the park was well accepted but the lack of expected infrastructure in the form of park entrances was seen as problematic (Morf et al. 2017).

Today, the park is managed collaboratively; national authorities have delegated parts of their authority to the Koster Sea Delegation, a local management body with

representatives of County Administrative Board, municipalities, and key local community and user organisations, including the fishers. The purposes of the park include, besides protecting the unique and rare species and ecosystems in the area, also promoting learning and research, a living maritime cultural heritage in a living community and a sustainable use of natural resources. The park builds on a multiple protected area design with different types of protection (seabed use restrictions based on fisheries law, species protection areas, nature reserves and national park according to environmental legislation) overall managed by a maintenance and management plan and a spatial in-depth spatial comprehensive plan developed in a participatory process (Morf et al. 2017).

Table 4-8 Case characteristics for Marine National Park Koster Sea in terms of key initial conditions, final status, key steps and infrastructure.

THE CASE	MARINE NATIONAL PARK KOSTER SEA
IMPORTANT INITIAL CONDITIONS	• Resources to run the park with a budget, resulting in an agreement between the CAB and the Swedish EPA. • Engaged local population in the area. • The shrimp fishery, important from a sustainable use perspective. • Well visited area with busy summer seasons. • Urgent problems to address: highly valued ecosystem services under increasing pressure, keeping the coastal community and economy alive.
PRESENT STATUS	• Sweden's first and so far only marine national park. • Multiple and partially protected area design - national park combined with other types of conservation arrangement, managed by an overall maintenance and management plan. Locally based management body, responsible for strategic and budget decisions, even if permits remain with the responsible authority (CAB).
KEY STEPS	• 1989 National Park by SEPA proposal meets protests. • 2000 agreement between fishers and authorities on fisheries in the Koster-Väderö trench - enacted 2001 in area and gear specific regulations. • A local organisation raised the issue of a national park in 2003 in connection with a revision of management plans for local nature reserves. • Official start of national park planning in 2005 under the guidance of the County Administrative Board of Västra Götaland. • An in-depth comprehensive plan for the Koster islands captured important development issues, similarly a later plan for the Southern archipelago. • 2008 implementation phase driven by the Swedish EPA • Established national park in 2009 • 2015 revision of regulations after first evaluation
KEY INFRASTRUCTURE (SOCIAL AND PHYSICAL)	• National park visitor centre in Ekenäs and four park entrances in different parts of the park. • Tjärnö Marine Laboratory for knowledge and meetings. • Committed municipalities and local politicians. • Collaboration across levels and sectors and borders developed over time.
HOMEPAGE	http://extra.lansstyrelsen.se/kosterhavet/En/Pages/index.aspx

Sources: project owners; Morf et al. 2017 and 2011; Sandström et al. 2020.

5 RESULTS: KEY CONDITIONS - AN OVERVIEW

Below, we introduce nine thematic clusters of aspects that could be identified to have affected the cases and their outcomes, according to the respondents. We suggest that these themes could point at key enabling and impeding conditions to consider. Based on the material and the authors' experience in process management from marine planning and water management, we make suggestions on how these may be interlinked in a visualisation model developed by ourselves. The following chapters 6, and 7 present the more specific results of the cross-case compilation.

Nine thematic clusters

We identified that the important aspects mentioned by the case owners could be clustered into nine main thematic categories. These include firstly the two main topics of this study:

1. Blue economy and sustainable development
2. Collaboration within countries and across borders

Further emerging themes affecting the cases included:

3. Mandate and ownership
4. Process management and leadership
5. Capacity and resources
6. Knowledge and methods,
7. Social and psychological aspects
8. Place and physical infrastructure related aspects
9. Context and external factors affecting the cases.

The first two make the points of departure and focus of this study and not surprisingly also show up as thematic clusters. The others could be interpreted here as pointing at key conditions identified across the cases that affect the outcomes of the cases working with collaboration on a blue economy.

How the analysis is presented in chapters 6 and 7

In the following chapters *6. Initial Conditions* and chapter *7. Challenges and Enablers* the information from the respondents is sorted according to the nine thematic clusters. These are presented more in detail, including important sub-aspects (in **bold**). For better overview, the themes have been summarised into illustrative four-field graphs divided into strengths (top left) vs. weaknesses (top right) and opportunities (bottom left) vs. threats (bottom right). The frames with text contain the different sub-aspects identified. If an item is placed on an axis between two fields, e.g. between strength and weakness, its presence is a strength while its absence a weakness (unless commented otherwise). Likewise was done for threats and opportunities. Items in the centre can at the same time be of potential character as well - i.e. as opportunities and threats. Lastly, there are linkages by lines and arrows as far as such could be identified in the material. Rayed lines around the

squares (- - -) indicate overlaps with other themes. In chapter 7 similar illustrations provide an overview over the challenges, enablers and basic prerequisites identified for each case.

Extracting strategies to address obstacles

At times, the respondents included how they had addressed weaknesses and threats. These are here called strategies and have been extracted to the conclusions. More strategies can be interpreted, based on strengths and enablers from the cases and by reflecting across these. [8]

Visualisation model: nine themes and their interlinkages

The analysis also indicates connections and overlaps between themes. These are visualised in Fig 5-1 in a number of encompassing and overlapping circles. The overall grey circle stands for *Context and external factors* to the case (i.e. conditions framing the overall setting, which cannot easily be affected) and sets the triggers and boundaries.

The blue circle encompasses the two main themes of the study, overlapping and interlinked, *Blue Economy and Sustainable development* (blue) scaffolded and carried by *Collaboration* (spruce green: actors, network, interaction and learning). The latter is resting on *Place based aspects and physical infrastructure* (black), carrying/scaffolding the rest.

The Collaboration circle contains four further types of conditions, all held together by *Process management and leadership* (turquoise; including process quality and facilitation, leadership and project management):

- *Mandate and ownership* (purple; political will and legitimacy and other types of ownership)
- *Knowledge and methods* (light green: know-how, basic knowledge, sharing and co-production)
- *Social and psychological aspects* (red: e.g. awareness, trust and engagement)
- *Capacity and resources* (yellow: e.g. organisational, skills, financial).

[8] This implies strategies to address weaknesses and threats and move towards the goals: e.g. how weaknesses and threats were addressed when formulating objectives and choosing strategies or how strengths and opportunities were used to address weaknesses and threats.

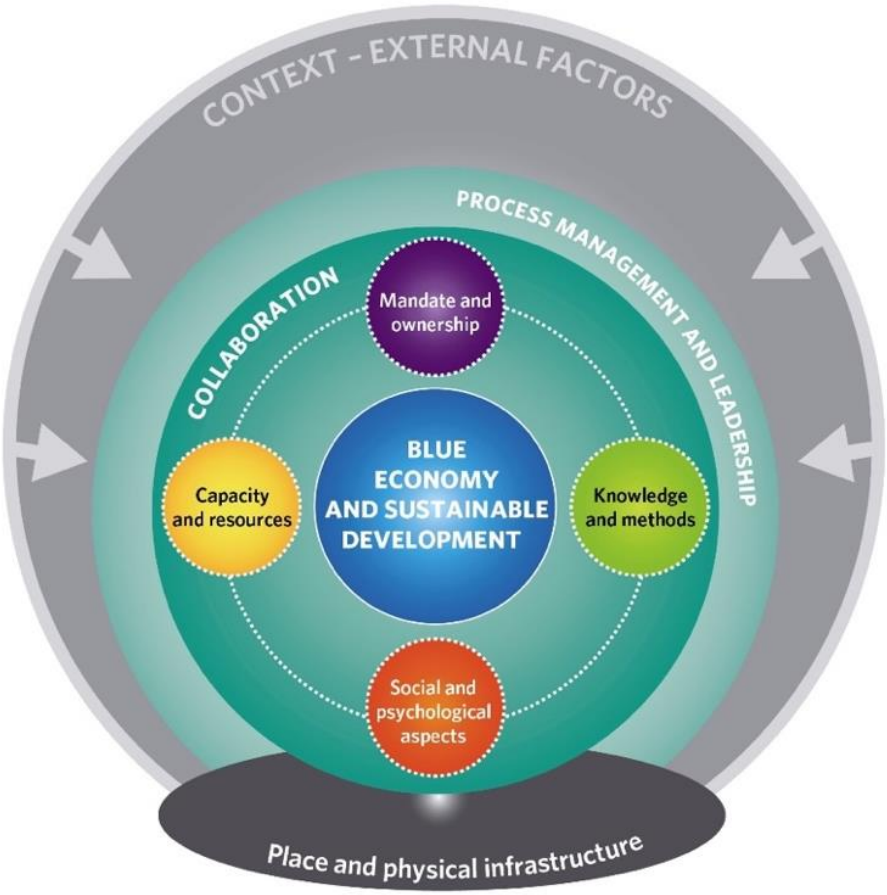


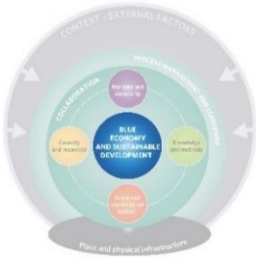
Fig. 5-1: Visualisation model: Overview over the themes and how they may be connected and embedded in each other - for a description see text.
Figure: authors and Maria Bengtsson Lewander (graphics).

Some important aspects are not included in the figure: power and influence and time and timing i.e. for collaboration/project, interaction and in relation to external and internal events and processes. We will come back to this in the synthesis.

6 RESULTS: INITIAL CONDITIONS: STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS

This section provides a cross-case compilation of aspects the case owners have raised as strengths, weaknesses, opportunities and threats at the initial stage of their initiative.

6.1 BLUE ECONOMY (BE) AND SUSTAINABLE DEVELOPMENT (SD)



Overall, for the initial stage of the initiatives, some strengths and a mix of perceived opportunities and threats mention blue economy and sustainable development as themes (Fig. 5-1). Strengths mentioned are mostly based on the availability of resources in one way or another. For the Periscope project, its **capacity and experience to work with blue economy topics** has made an important strength - with linkage to the capacity and knowledge themes below. Opportunities mentioned with blue growth and sustainable development focus revolve not the least around **collaboration** theme (2), **project ideas and innovation**, while threats mentioned relate to **political decisions and policies** (or the lack thereof), obstructing the development of a blue economy, which may lead to a loss of regional businesses and income. This links to the **mandate** theme (3). While "older", forerunner initiatives such as the Maritime Cluster experienced a lack of higher-level political priorities and related funding as a weakness and even threat (see also observations in mandate and resource themes below), the situation has now changed. Presently, with a stronger political interest and recent policy development at all institutional levels and many ongoing blue economy and sustainable development initiatives, this is perceived as both strengthening and providing opportunities - also for collaboration. For example, within smaller municipalities which have similar challenges to solve as in Land-Sea-Act.

Blue economy and sustainable development ideas as well as **legislation, policies and adaptation to these** are seen as **initial drivers** for many initiatives (e.g. Symbiosis Centre, Border Forum). All cases have in some way tried to **identify and create new opportunities**, both in terms of ideas and concrete solutions. At the same time, a **deteriorating economy and environment and the relocation or perishing of businesses** provide serious threats, unless there is a **change towards blue economy and sustainable development in combination**. Further blue growth-related threats mentioned include conflicting political priorities and changes in priorities (Periscope) both within the region, nationally and across borders, e.g. between Sweden and Norway (Border Forum, Land-Sea-Act, Maritime Cluster) as well as the relocation of businesses and activities, if no shift towards blue growth and sustainable development occurs within the region (Symbiosis Centre).

Overall and not surprisingly, there are numerous linkages to other themes (knowledge, capacity, process management, mandate), as these cluster around BE as a focus theme.

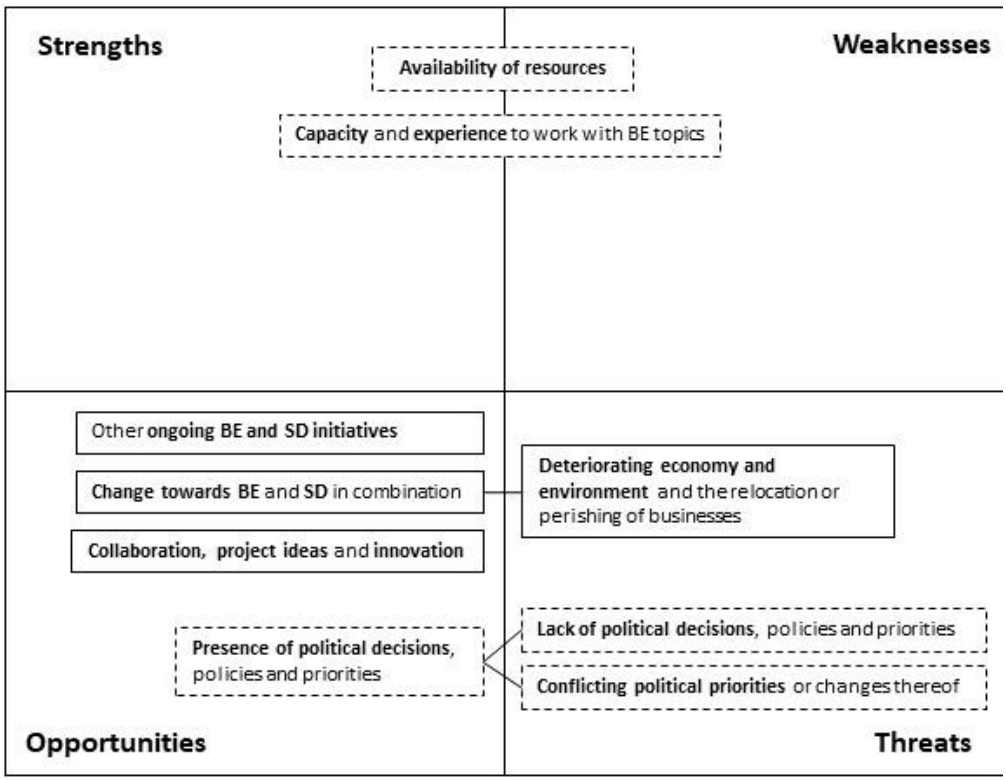
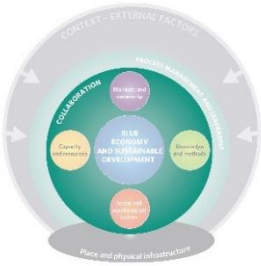


Figure 6-1: Overview of SWOT-analysis theme 1, Blue economy and sustainable development. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.2 COLLABORATION ACROSS SOCIETAL ACTOR GROUPS AND BORDERS



The second key theme, collaboration, encompasses on the one hand the "4 corners of collaboration" in society between both authority actors (political/experts), marine users and enterprise, NGOs and civil society, and knowledge actors, plus, as a special aspect, collaboration across national borders.

Collaboration related themes can be found among most cases' initial strengths and weaknesses, and to some extent in the opportunities and threats. Across all cases, essential to promote collaboration were **political decisions and mandate plus national, international/EU-interest to finance** projects and initiatives (see themes below: mandate, capacity and resources), a strength if it was in place but a weakness if not – for more, see respective themes below. Cross-border collaboration presents extra difficulties.

- Initially, ***experience in collaboration*** can make an important strength - as a foundation for collaboration, (Land-Sea-Act, Blue Plan Blekinge, Symbiosis Centre). Through collaboration itself, it is possible to come to the realisation that **working together provides higher value than working alone** (Symbiosis Centre). **Using and combining existing networks** between participating actors can open opportunities (Periscope) to promote many kinds of interactions and activities.

- The **continuity of participating key actors,** such as politicians and civil servants can threaten an initiative (Border Forum). A strength here are **active stakeholders and their involvement** (Land-Sea-Act, Koster Sea). However, the number of participants needs to be balanced. **Too many actors involved** can render communication complicated and affect the overall focus and relevance if too many views and needs must be included (Periscope/Maritime Cluster). For the role of **meeting places,** see theme 8.
- **Other ongoing initiatives** can act as a strengthening and facilitating already in the initial phase, such as on-going national marine spatial planning did in the Land-Sea-Act and Blue Plan Blekinge cases.
- **Scale matters and needs to match**: e.g. for the Maritime Cluster, its regional character was considered to be a favourable and a strength. In Sweden, the regional political level is responsible for economic development (theme 8).

Related **to cross border collaboration in specific**, differences in **legislation and rules** in different countries make a weakness which can cost a lot of time to straighten out and resolve initially (Border Forum). Similarly, **differences in financing rules** between participating countries and **changes of related rules**, e.g. Interreg between Sweden and Norway (Border Forum), make a weakness and threat which can be difficult to influence (see also theme 8). Moreover, a **lack of cross-border collaboration and communication** can be a weakness or threat in itself. This is illustrated by a comment during the workshop: *"The Nordic collaboration does not go so deep. When you start scratching on the surface, there is not so much beyond."* This lack of communication across borders, sectors and levels – as experienced between Sweden and Norway by the Maritime Border Forum Skagerrak implied ministries at national level and a lack of regional level strategies for cross-border collaboration/communication, enhanced further by the border closures during the pandemic. Moreover, collaboration across borders is not included in the letter of regulation for Swedish county administrative boards. Lastly, even the **ownership** of an initiative can make both a strength and weakness (e.g. differences across borders challenging in Border Forum), linked to the next theme, mandate.

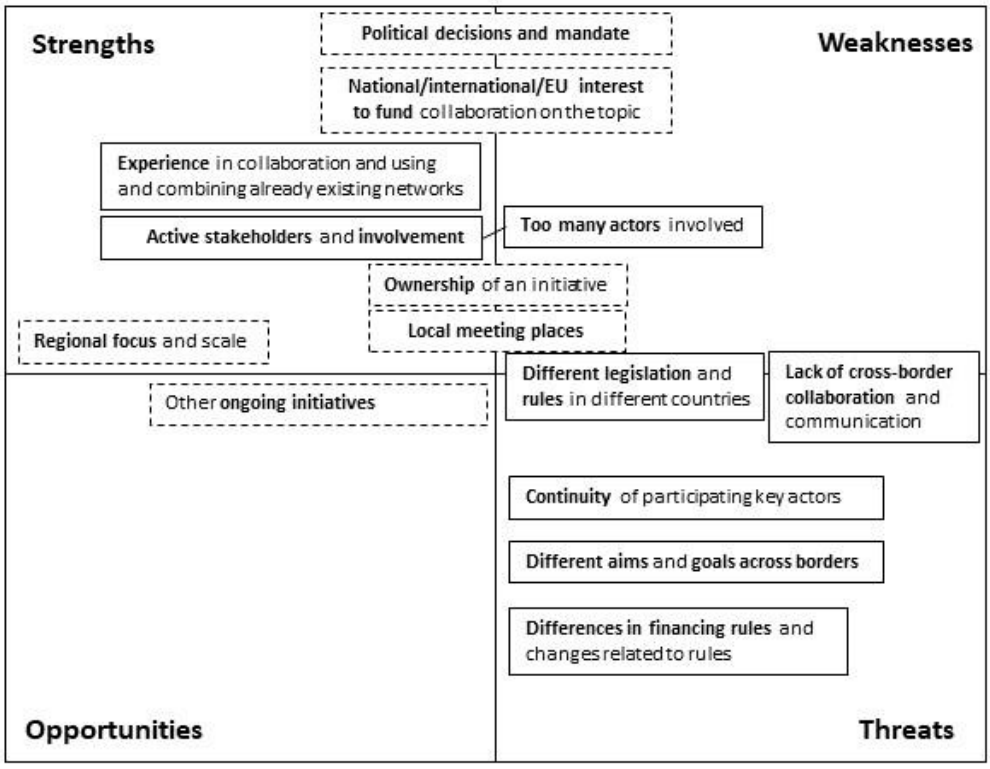
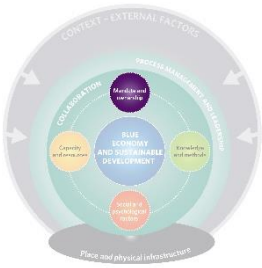


Figure 6-2: Overview of SWOT-analysis theme 2, Collaboration across societal actor groups and borders. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.3 MANDATE AND OWNERSHIP



Overall **political interest and mandate** in the topic on a **relevant level** (national and/or regional – Maritime Cluster) was pointed out as an opportunity for the initiatives (Border Forum, Blue Plan Blekinge, Maritime Cluster). A lack of political interest/mandate and understanding in the initial phase can threaten an initiative (Border Forum, Maritime Cluster, Koster Sea). The initial national lack of political interest in Blue Economy related issues with a resulting lack of funding opportunities threatened the development of the Maritime Cluster (Maritime Cluster; 2013 – see also theme 1). This was overcome by the strong interest at regional and EU level to work with blue economy. Eventually, also the national level caught up with a maritime strategy and funding.

From an **actor perspective**, having **engaged** (see also theme 6) **people** and organisations in the **"right" positions –** including the **mandate to take decisions** (Border Forum, Periscope) – is an important strength. Further enabling is if these key people/organisations are close to each other physically and in communication pathways (Symbiosis Centre). A related weakness or vulnerability is if an initiative is too dependent on few key individuals (Border Forum, Periscope). When it comes to cross-border collaboration it is important **to**

have mandated representatives from both sides of the border (Border Forum). A weakness is if different parties in a project have different mandates - such as in the Maritime Border Forum case where mandates in Norway and Sweden looked different, causing an imbalance in the collaboration - or if a project owner lacks the mandate to make specific decisions (Land-Sea-Act, Maritime Cluster). Also, the **bottom-up perspective** is relevant, i.e. local support and interest from involved stakeholders and actors (Land-Sea-Act, Blue Plan Blekinge, Koster Sea) and the inclusion of local actors (Koster Sea, Symbiosis Centre) - raised as strengths in some cases.

Existing regulation provides both mandates and limitations. The Blue Plan Blekinge case illustrates the need to adapt project delimitations to avoid trouble with municipal planning mandates and private ownership of land and water (Blue Plan Blekinge). If there is no mandate by regulation or higher-level decisions, **agreements and contracts** can take such a role (e.g. Maritime Cluster). However, collaboration agreements should be designed in a manner that does not unnecessarily limit the possibilities to take on new themes and activities (e.g. requiring financing for all that is done; Maritime Cluster). Moreover, there can be phases of uncertainty when agreements end/are ended before new ones are signed (e.g. Koster Sea).

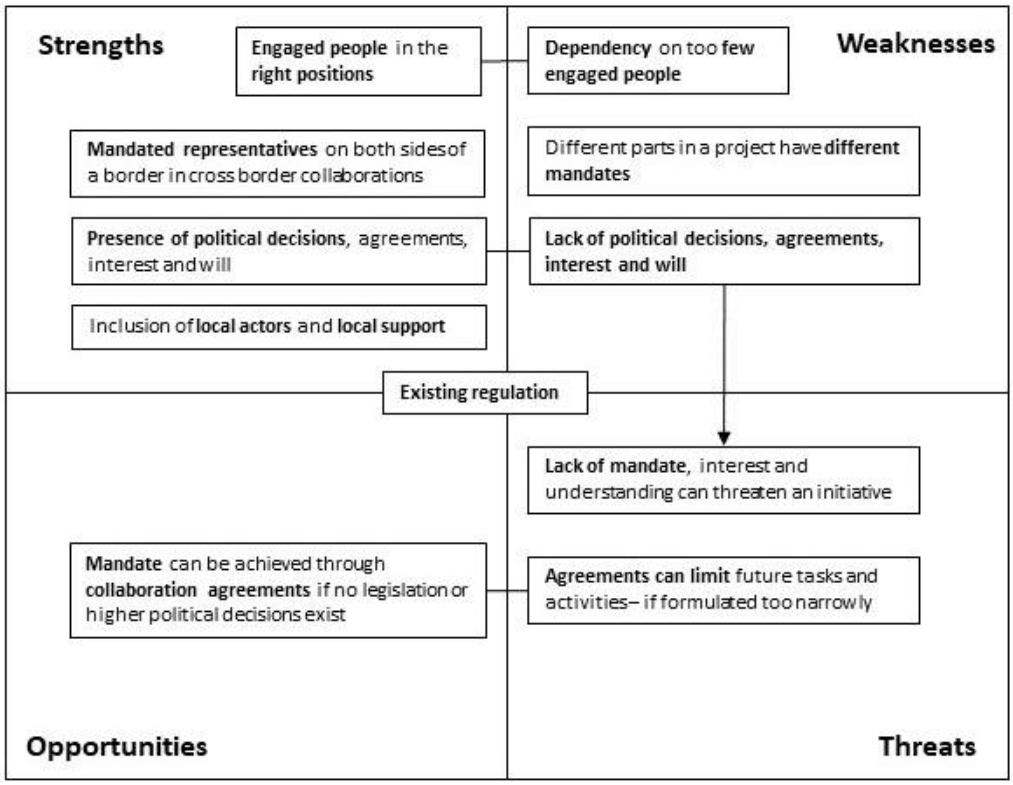
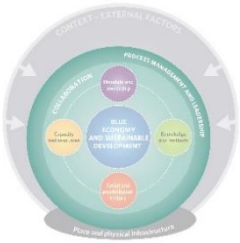


Figure 6-3: Overview of SWOT-analysis theme 3, Mandate and ownership. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.4 PROCESS MANAGEMENT AND LEADERSHIP



Also ***process and project management and leadership*** related themes appear across all cases, indicating that these were important in all cases already at an early stage. There are five sub-themes, many closely connected to collaboration.

- **Time and timing**: the delimitation of a project in relation to the time frame was mentioned as a strength in the Border Forum case. In addition, timing with other initiatives and overall policies can provide opportunities, such as the national MSP process in the Blue Plan Blekinge, Koster Sea cases (see also themes 3. Mandate and 9. Context). It is an important strength to consider long-term perspectives and relations (Koster Sea) and building even transient projects on these.
- **Linking** with other initiatives and projects as a potential strength: collaboration agreements (Maritime Cluster - see mandate). Examples for linkages include linking of the Maritime Border Forum via Västra Götaland county to the Maritime Cluster and via the County Administrative Board (CAB) to Koster Sea National Park. Another is the Periscope project with linkages to the Maritime Cluster through its members and expertise. In addition, the marine planning initiatives Land-Sea-Act and Blue Plan Blekinge have exchange and learning links through collaboration in marine planning through the CABs. **The loss of linkages to history in terms of earlier processes, discussions and decisions** can be problematic and must be managed by a careful documentation and a dialogue building on clear motivations if changes in course are needed (Koster Sea).
- **Content and focus in terms of delimitation, vision, goals, targets and strategies:** if these are present and well formulated this makes a strength (Blue Plan Blekinge; Border Forum; Symbiosis Centre), while the absence thereof is often a weakness, such as for the Periscope project with many work areas in a big and broad project (Periscope). A challenge for both project managers and participants.
- The breadth of **administrative** (and geographical; theme 8) **scope and relevant actors** must be managed appropriate to the purposes. Project size and breadth need to be kept manageable in order not to threaten the progress of initiatives (Border Forum, Periscope).
- "**Knowledge** on how to **promote continuity** and **avoid traps** in combination with **experience and engagement from individuals**" (Border Forum) - making key strengths of good project facilitation.

Except for during the workshop, few case owners directly mentioned **process facilitation and leadership**. Still, it seems to be key for working projects/processes.

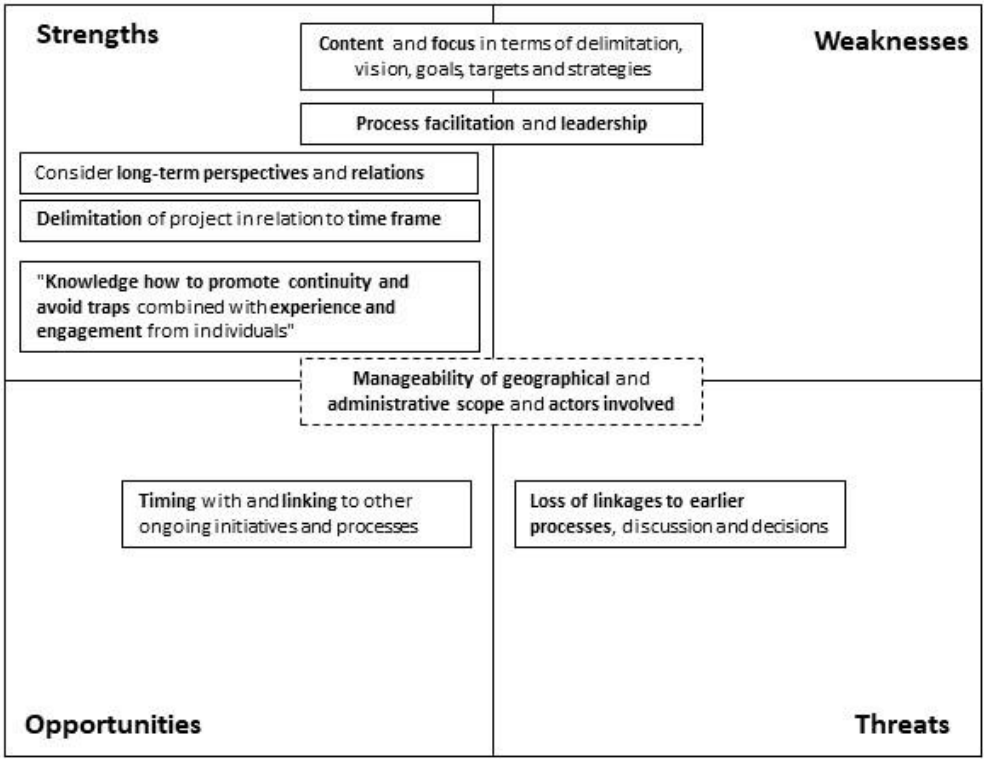
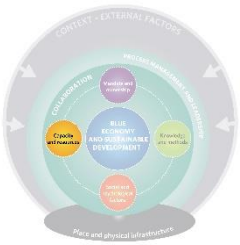


Figure 6-4: Overview of SWOT-analysis theme 4, Process and project management and structure. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.5 CAPACITY AND RESOURCES



References to themes related to capacity and resources are found in each case – especially among the (initial) strengths and weaknesses.

Capacity in terms of actors (individuals, enterprises, organisations) and their capacity to be actively involved was a theme across all cases. The presence and involvement of key actors with relevant focus and financing possibilities makes a strength (Border Forum). This can include knowledgeable and engaged public servants and politicians (e.g. Border Forum) but also entrepreneurs and academia/consultancy (other cases). Project fatigue and lack of time with some actors (e.g. municipalities) was an initial weakness in the Land-Sea-Act, where some actors, such as marine businesses and local authorities need some kind of immediate payback to keep interest up: *"[…] It is hard to demand very much time from businesses […], when it lies so far ahead what they might possibly get back from their time spent"* (Land-Sea-Act). In some cases, some participating actors (e.g. counties, municipalities, enterprises) are rather small and do not have the capacity to participate very actively in many contexts (Blue Plan Blekinge, Symbiosis Centre). Limited resources for everyday work in combination with large workloads also promote a reluctance to accept, test and implement new ideas (Blue Plan Blekinge).

Funding is mentioned as an important aspect in almost all cases and both as strength/weakness (public funding, co-funding) and as opportunity/potential threat (project financing/lack of political interest to provide funding). It can be project-based by EU funds (e.g. Interreg), by national or regional authorities and organisations, but also locally. Co-financing in different forms is relatively common. This has made a strength and opportunity for initiatives where authorities both funded and in some instances also participated/provided work force or expertise - such as Border Forum, Land-Sea-Act, Blue Plan Blekinge, Symbiosis Centre. Lack of funding is listed as a weakness or threat in the Periscope, Maritime Cluster cases, which seem to have had more trouble with continuous financing and where resources make a basic condition to involve enterprises. In the Maritime Border Forum Skagerrak (Border Forum) case, funding opportunities for cross-border collaboration in the initial phase were highlighted as an important opportunity. Transient project financing (Border Forum) provided an opportunity for deeper analysis of some aspects, at the same time as it is important to plan for long-term funding.

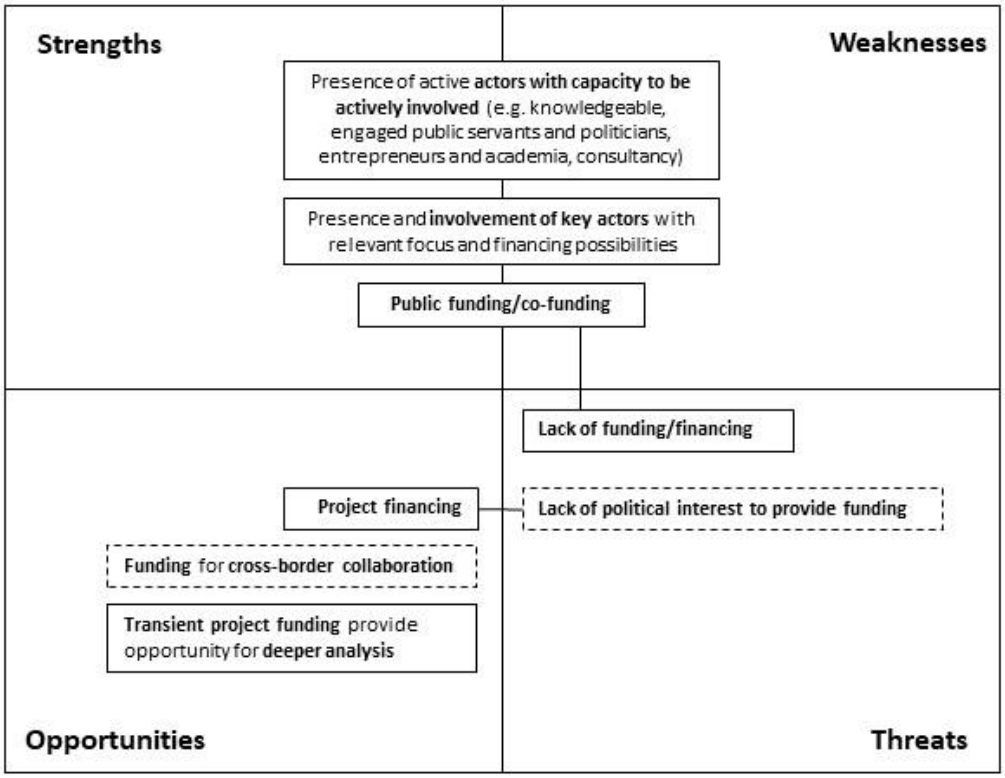
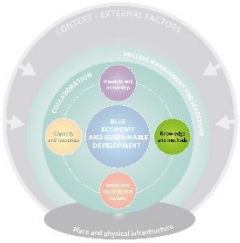


Figure 6-5: Overview of SWOT-analysis theme 5, Capacity and resources. In top left corner, identified strengths in the theme is found. In top right corner, identified weaknesses in the theme is found. In bottom left corner, identified opportunities in the theme is found. In bottom right corner, identified threats in the theme is found.

6.6 KNOWLEDGE AND METHODS



Knowledge related themes can be found in each case among the (initial) strengths and weaknesses, and to some extent as opportunities and threats. This indicates that knowledge may be crucial especially at the outset (also observed in developing cross border MSP and working on land-sea interactions in the Baltic Sea area). The following aspects could be identified:

Relevant knowledge and expertise, if present, make a strength in many cases and if absent a weakness or even a threat (Land-Sea-Act; Periscope). Having expert knowledge and experience in the organisation/initiative is mentioned as important strength/weakness (Periscope, Maritime Cluster, Symbiosis Centre, Koster Sea). Initial lack of knowledge in relation to maritime issues has been a problem, especially where these aspects were not embedded in the organisation e.g. when starting blue spatial planning (Blue Plan Blekinge). This can include knowledge gathered through earlier projects and baseline/scoping-studies (Border Forum, Blue Plan Blekinge), relevant expert knowledge in e.g. BG, spatial planning and related technologies and how to make them work. Moreover, knowledge on collaboration and project management (Land-Sea-Act), but also advice and expertise from different administrative sectors (Periscope, Blue Plan Blekinge, Maritime Cluster, Symbiosis Centre) and concrete and practical knowledge are important - present in these initiatives. A wide range of expertise is an asset too (Blue Plan Blekinge, Maritime Cluster), and especially so in connection with the broad topic of blue economy.

However, especially initially, the right knowledge has not always been available (Blue Plan Blekinge, Maritime Cluster, Periscope) – but needed to be **mobilised, produced and assembled** first - an important activity early in initiatives. In relation to coastal planning and management, there is a need to combine e.g. knowledge relevant for planning on both marine environment with that of marine uses. Development of marine business can include a wide range from environmental aspects, production and processing technology, regulations and marketing. Moreover, local knowledge and knowing the right people is lifted as a strength in at least one case (Koster Sea: local and personal knowledge of the leaders). Here, the increase in knowledge on marine values and species through developing the national park is considered an opportunity (Koster Sea).

Compared to 5-10 years ago and the initial difficulties of the Maritime Cluster, knowledge relevant for developing sustainable uses and relevant planning has improved considerably in Sweden. However, even today, to get things done the “right people” need to be combined, e.g. not just experts and strategists but also "operational" people (Periscope). Moreover, knowledge and experience from one area is not always directly applicable in others but requires adaptation and complementing (e.g. land planning in marine planning; Blue Plan Blekinge). Moreover, explaining and marketing innovative concepts and new approaches can make an initial difficulty (e.g. industrial/economic "symbiosis" in Symbiosis Centre).

As opportunities mentioned are that many different small and big innovation ideas can arise (Periscope) and that it is good to build on earlier studies and initiatives and themes prepared by them (Land-Sea-Act) and that such studies can also have a wider effect and help address lacking awareness and raising political interest (Border Forum).

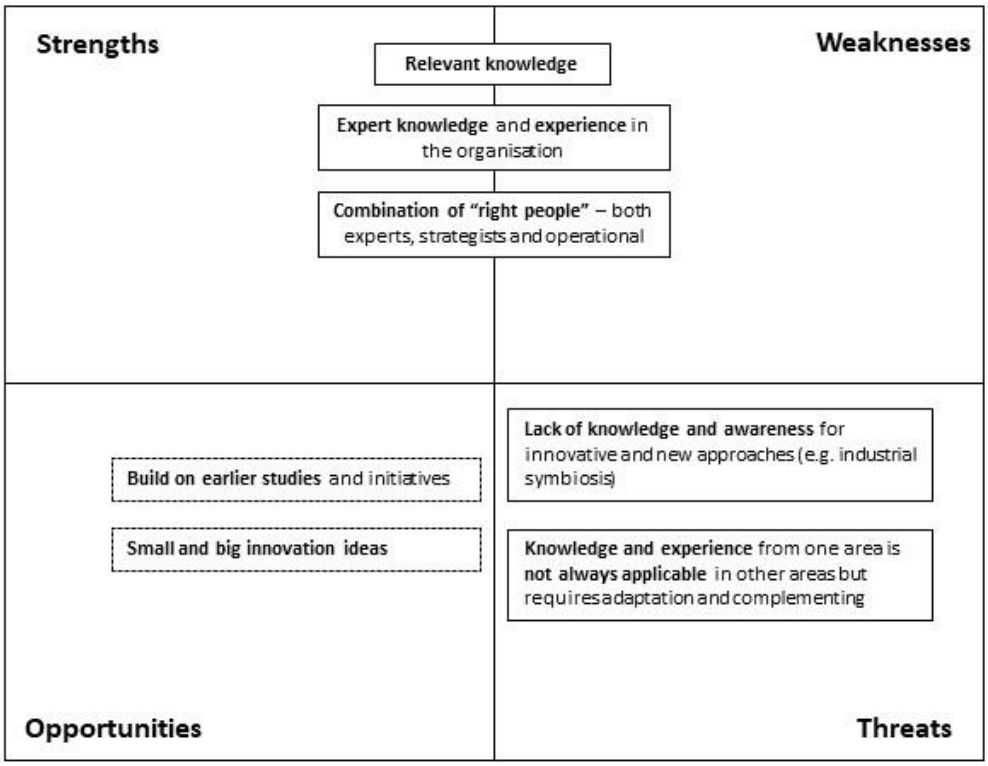
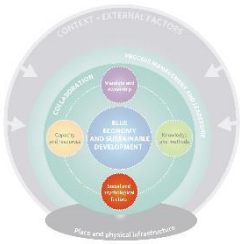


Figure 6-6: Overview of SWOT-analysis theme 6, Knowledge and methods. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.7 SOCIAL AND PSYCHOLOGICAL ASPECTS



Social and psychological aspects make a broad theme that varies strongly across cases in content and in its essence includes the following:

a) **Awareness** and **shared goals** in society at large and within an initiative make a strength (Koster Sea) while a **lack of awareness**, especially at higher levels and with national/international politics can present a weakness or even a threat (see also theme 3. Mandate). For example, the Skagerrak area seems to have been under the national radar in both Norway and Sweden, according to a case owner (Border Forum). Interest of important end users in project activities make an opportunity (Land-Sea-Act).

b) **Engagement/enthusiasm** (also on individual level Symbiosis Centre, both public servants and politicians – in key positions Border Forum) and **strong interest as drivers** (Land-Sea-Act) make a strength and an important driver for initiatives.

At the same time, a lack thereof (especially with key actors; see theme 3 mandate) or too many different interests (see theme 2 collaboration) can make a weakness/threat. For the Maritime Cluster, shared interests among blue stakeholders in the region and the shared ambition to set an example for other regions in Sweden and internationally were important drivers (Maritime Cluster).

c) Moreover, **needing each other**, e.g. in small communities or counties is mentioned (Blue Plan Blekinge) as a strength.

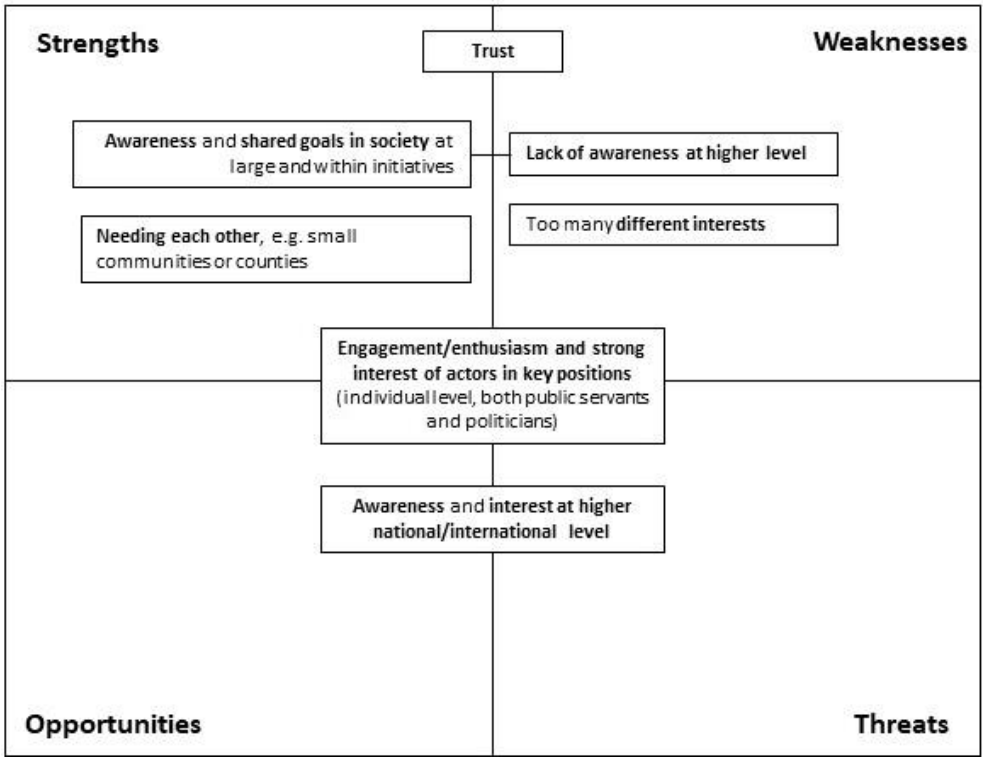
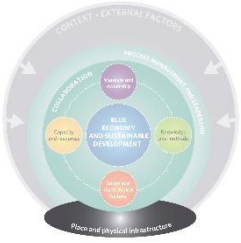


Figure 6-7 Overview of SWOT-analysis theme 7, Social and psychological aspects. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.8 PLACE BASED ASPECTS INCLUDING PHYSICAL INFRASTRUCTURE



In terms of place based- and infrastructure related aspects in the initial phase the following could be said. Related to the collaboration theme, two sub-aspects are raised: **local meeting and sharing places for different participating actors** are important but could initially be hard to find (Blue Plan Blekinge; Land-Sea-Act; KSNP, see Morf et al. 2017) and, as illustrated by the Maritime Cluster, s**cale needs to match the interests, mandates and initiatives taken** (themes 2 and 3). This is, lastly also related to project management (theme 4), where among other aspects of scope also the **geographical scope** must match the purposes (Border Forum, Periscope).

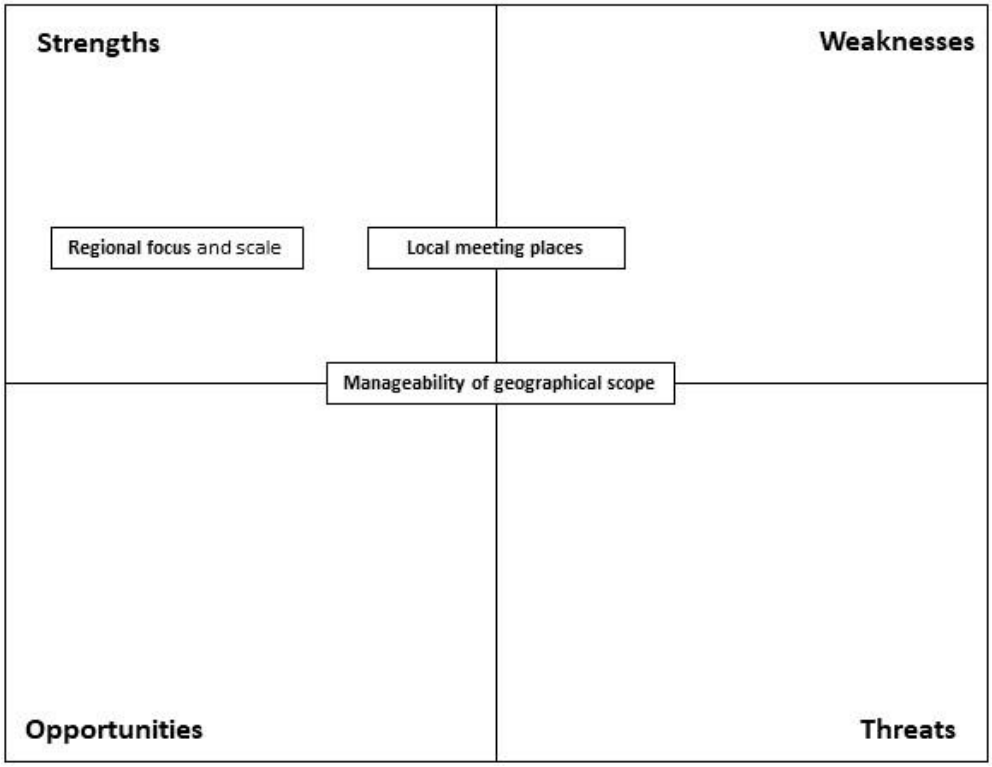
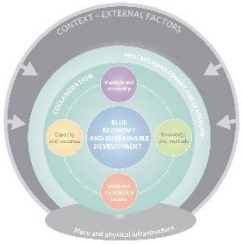


Figure 6-8: Overview of SWOT-analysis theme 8, Place based aspects including physical infrastructure. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

6.9 EXTERNAL FACTORS AND CONTEXT



Case external context is important for many cases - but in different ways. A diversity of external opportunities and threats are mentioned it all cases except Periscope). Quite a few points mentioned as strengths and weaknesses are contextual as well or at least situated at the boundary between the cases and their contexts. Initially important contextual factors identified were of the following types:

a) **The overall policy and organisational landscape and related changes** as such providing opportunities: e.g blue economy policy, marine spatial planning, sustainable development and coastal values, conservation/biodiversity focus or a lack thereof as a threat (Maritime Cluster, Blue Plan Blekinge, Land-Sea-Act, Koster Sea). "*Skagerrak as a forgotten sea in both Norway and Sweden - neither potentials nor threats are seen at a national level"* (Border Forum). **Being part of a wider context** as a project (Border Forum, Land-Sea-Act) is seen as a strength. Moreover, **timing** in relation to the policy context matters (Border Forum, Maritime Cluster, Blue Plan Blekinge, Land-Sea-Act, Koster Sea) - see themes 4. project management and 3. mandate.

b) **Environmental conditions and related changes** in terms of pollution, climate

change and ocean acidification affect the initial settings of initiatives and the outcomes they aim at - as for the marine national park (Koster Sea) situated in an open ecosystem.

c) **Sudden/transient/singular events** are raised as initial threats - here in terms of environmental accidents (Koster Sea) and pandemic (Border forum).

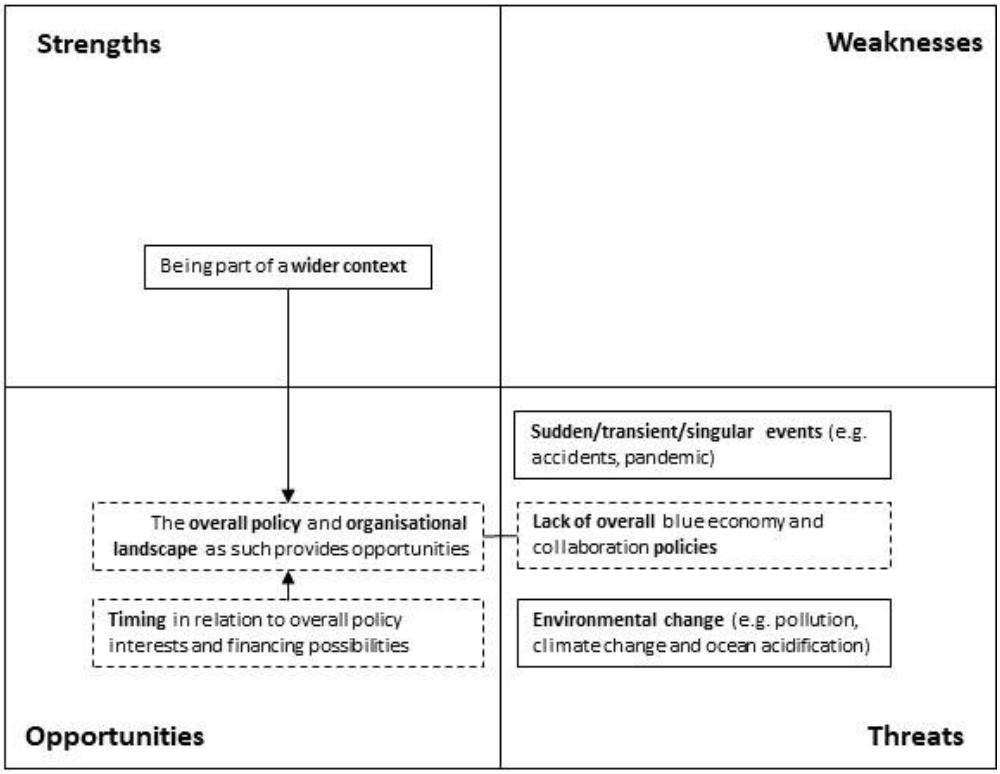
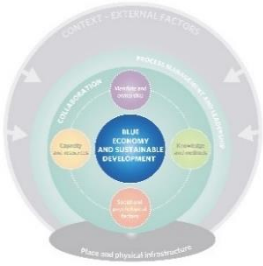


Figure 6-9: Overview of SWOT-analysis theme 9, External factors and context. In top left corner, identified strengths in the theme is found. Top left corner: strengths, top right corner: weaknesses; bottom left corner, opportunities and bottom right corner: threats identified.

7 RESULTS: CHALLENGES, ENABLERS AND PREREQUISITES

This section presents the challenges, enablers and basic prerequisites identified using the same thematic categories as before. Not surprisingly, there are parallels to the SWOT analysis – many aspects reappear at times in a slightly different shape. This part has 3 illustrations summing up this part - clustering some of the themes. Here, the challenges are located top left side by side with conditions that can be both challenges and enablers (depending whether they are present or not). The bottom is made by the basic prerequisites (bottom left) and the enablers (bottom right).

7.1 BLUE ECONOMY AND SUSTAINABLE DEVELOPMENT - CHALLENGES AND ENABLERS

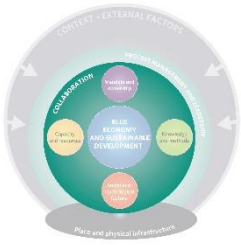


The challenges of blue economy are defining and delimitating the concept itself, as well as obtaining relevant knowledge and the width of maritime economy issues and its relevant actors (Land-Sea-Act).

There is a potential **conflict between basic targets of blue growth with other dimensions** of social and environmental sustainable development, and it is therefore considered important to distinguish between blue growth and saving the seas (Maritime Cluster): *"Blue growth as a concept is about creating jobs derived from the marine sectors […] but that is not by definition better for the ocean"* (interview, 21. June 2021).

While lack of **knowledge** is considered a challenge, knowledge is considered a basic prerequisite to work with blue growth and to integrate it into concrete context by for example municipalities (Land-Sea-Act). Working with blue economy without relevant knowledge is seen as ineffective or even impossible (Land-Sea-Act, Symbiosis Centre, Maritime Cluster). This applies, of course to all topics, and is probably self-evident, but still worth pointing out. At the same time, new ways of thinking, collaboration of relevant actors, knowledge and co-location etc such as, for example, Sotenäs Symbiosis Centre, and the Maritime Cluster, can help closing circles and cycles and shifting needs and interest related conflict into collaboration.

7.2 COLLABORATION ACROSS SOCIETAL ACTOR GROUPS AND BORDERS



We first focus on collaboration between authorities, users, society, and knowledge producers, adding cross-border specific aspects in a special section.

Collaboration in general and within countries

Overall, important challenges and coupled enablers affecting **collaboration within the national sphere** include **inclusiveness** regarding e.g. stakeholders, locals, decision makers etc. (Maritime Cluster, Border Forum, Periscope, Koster Sea), **competition** (e.g. among municipalities; Blue Plan Blekinge) and **contrasting views**

among key actors such as ministries (e.g. some for a project or innovation and others against; Border Forum), and **information and resource availability** (Land-Sea-Act, Periscope; see also themes 5 and 6).

Differences among actors and managing inclusiveness make a key couple of collaboration challenges and related enablers. On the challenging side, key actors might have **different agendas, views or goals - also differing across geographical areas**. This applies both to ministries and authorities at all levels and to locals, businesses, and stakeholders. An example is the political focus on blue economy. It has differed both within Sweden, with the regional level on the West Coast prioritising earlier compared to the national government on the East Coast (Maritime Cluster), and in Norway, where a political shift has occurred only recently towards focus on developing a blue economy also in the Viken and Vestfold area - and not just in the northern part of Norway and Vestlandet (Border Forum). When it comes to industry and business (Periscope, Maritime Cluster), **lacking awareness of potential benefits** for a particular business or industry (theme 7) and **difficulties to generate the resources** enabling collaboration are challenging, which is why early blue economy projects may turn out heavily academic. **BE being a wide field, it can be hard to collaborate if businesses have little in common**, such as aquaculture and shipping (Maritime Cluster). It can be hard to include all views in a broad BE initiative (Periscope), requiring choices and delimitation. Moreover, local actors may be **unsure or distrustful towards higher level decision makers' intentions**, as in the Koster Sea case, where it took decades to develop trust and find common grounds in terms of goals and design of a national park accommodating different actors' needs (Koster Sea; see also Sandström et al. 2020).

In terms of enabling inclusiveness, an early **mapping of expectations and agreements** are highlighted as a basic prerequisite for collaboration (Land-Sea-Act). **Dialogue and communication** are key to inclusiveness and so are working for **transparency and ownership** within a project. These may require special capacity and skills (see theme 5). E.g. the Maritime Cluster hired a communicator to address communication issues between internal and external project partners (Border Forum, Maritime Cluster), and Blekinge hired a third-party manager to enable collaboration between municipalities and provide a neutral leadership and meeting forum (Blue Plan Blekinge). Local collaboration was considered important when dialogue between fishermen and regulatory officials about sustainability acted as an enabler in the creation of the Koster Sea national park.
Working close to and across mandated organisations, not the least municipalities and counties, is considered a prerequisite since these organisations have the authority to enact change (Blue Plan Blekinge, Border Forum). Regional and municipal collaboration is put forward as an important enabler to host long-term collaborations. Such organisations can also act as neutral facilitators and meeting places to connect businesses: *"[...] Even if there are several big and powerful businesses in the networks [...], the municipality has the opportunity to invite everyone as a neutral part, which not even the businesses can do [...]"* (Symbiosis Centre).

It is also important to have **strong linkages across the so-called triple helix** of academia, business and government (Symbiosis Centre/Maritime Cluster) - and also include civil society. Striking an appropriate balance between academia, business and government is seen as both basic prerequisite and an enabler, which is something the Maritime Cluster of West Sweden succeeded by including further business partners in the project to balance the strong academic representation, an enabler to continue the project. The Västra Götaland Region can be seen as an example of creating collaborative organisations for collective learning (Maritime Cluster). Moreover, with cross-over projects and clustered organisations, other initiatives may eventually reach out and request collaboration, thus strengthening the collaboration (Maritime Cluster, Symbiosis Centre). Lastly, good experiences and positive attitudes from earlier collaboration are described as an enabler for collaboration (Land-Sea-Act).

Collaboration on **resources and information** and sharing them can solve problems but can imply challenges too. Similarly, **co-location** i.e. sharing space across sectors can both challenging and enabling (Symbiosis Centre). Some industries seem more willing to do so, such as the tourism industry compared to the transport industry, but there can be further obstacles through regulations and insurance (Land-Sea-Act). There are linkages to themes 5. Capacity and resources, 6. Knowledge, and 8. Place based aspects.

Cross-border collaboration

Collaboration across borders is likely to be even more challenging than within national states, the following areas could be identified:

There can also be **conflicting interests, goals, varying focuses and differing problems** to solve in each country. One nation may focus mainly on fisheries and energy production, while others have more focus on conservation measures or sustainable development and a broader blue economy (Border Forum, Periscope, Koster Sea). There are also **differences in interests regarding marine topics and in the distribution of mandates across administrative levels** such as shipping and fisheries, compared to onshore themes such as forestry and agriculture which are governed nationally (Maritime Cluster). Differences in mandate and regulations across border can be challenging and even lead to problems on a higher level such as the EU-level, requiring workarounds (Border Forum, Land-Sea-Act). All of these can result in challenges to collaboration due to different political priorities and different scales of political and operational organisations and budgets, such as between the Koster Sea national park and its organisationally and budgetary smaller Norwegian equivalent Ytre Hvaler (Koster Sea, Border Forum, Periscope).

Moreover, **cultural aspects and language barriers** that can prove challenging to cross-border collaboration, requiring mutual respect and learning and identifying common aspects and values as a foundation to build a project on (Border Forum).

Lastly, the role of **political structures** are highlighted. Democracy and open borders are often taken for granted in West European countries, when it comes to collaboration within states, but this may not always be applicable when it comes to cross-border collaboration,

as the time with travel restrictions and closed borders in the Nordic has shown due to covid-19 pandemic(Border Forum).

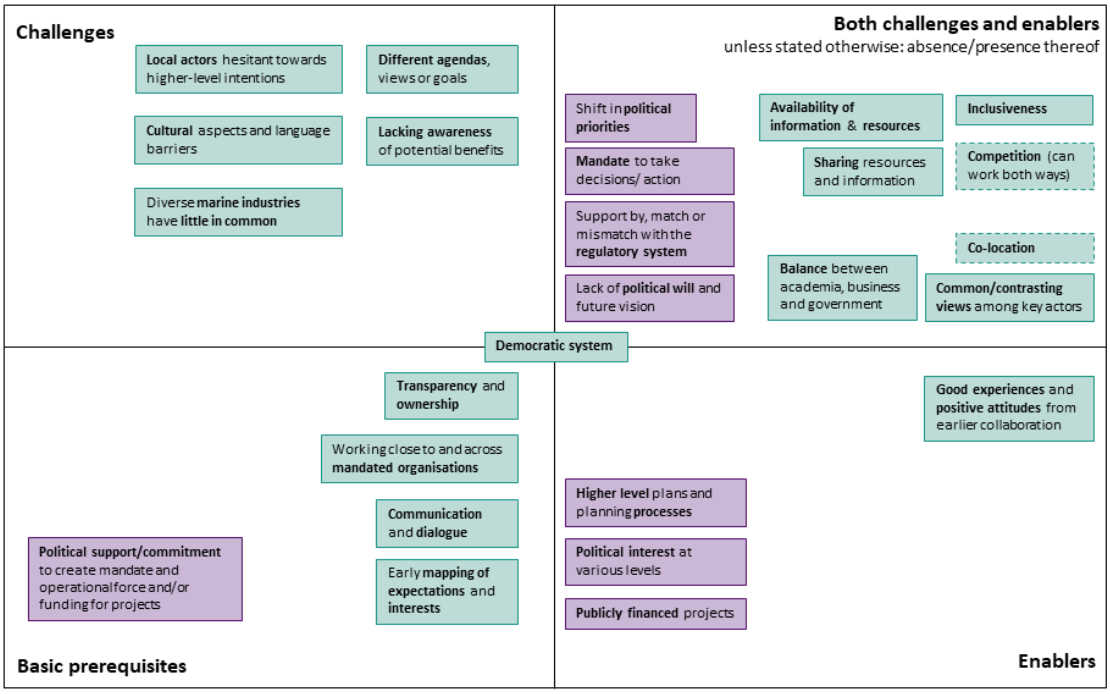
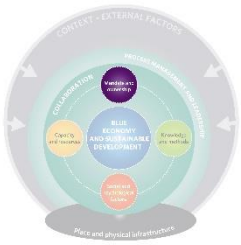


Figure 7-1: Overview of challenges, enablers and basic prerequisites for theme 2, collaboration, and theme 3, mandate and ownership. Top left corner: challenges identified; top right corner, aspects which are both seen as challenging and enabling; bottom left corner, basic prerequisites and bottom right corner: enablers. Theme 2 is colour coded with turquoise while theme 3 is lilac.

7.3 MANDATE AND OWNERSHIP



Mandate is not only an initial issue (see SWOT-analysis) but remains important for the overall initiative - both as challenge and as enabler/basic prerequisite.

One critical type of enabler-challenge-couple, that in some situations even make a basic prerequisite, is the **mandate to take decisions or action**, where the presence of decisions or action makes an enabling condition while the lack thereof is seen as a challenge. The importance of rooting projects with mandate owners is emphasized as well as including the right stakeholders and local collaboration in order to reach adequate representation of mandated participants (Border Forum, Koster Sea). Related to this, the material suggests a basic prerequisite and enabler-chain, consisting of **political support and commitment to create mandate and operational force and/or funding for projects** (Border Forum, Land-Sea-Act, Blue Plan Blekinge, Symbiosis Centre) - also for the implementation phase, since politicians have the mandate to actually bring about change (Border Forum). Lack of political will and future vision was therefore seen as a challenge (Border Forum, Maritime Cluster) as well as shifting political priorities (at

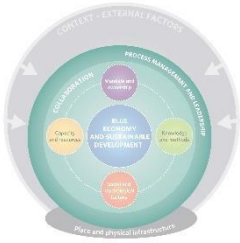
local and higher level) into conflicting points of view. In one case, high municipal interest in a blue economy was brought forward as an enabler for political will (Land-Sea-Act). For example, that Norway has officially begun to focus on BG even in the earlier less prioritised Viken/Vestfold area makes an enabler for further cross-border collaboration and development of BG (Border Forum). There is also a challenge of multiple hats, for someone representing several organisations it can also be hard to keep track of when you are representing which organisation - i.e. the own organisation or the overall cluster collaboration (Maritime Cluster).

A challenge mentioned in some cases was the **support, match or mismatch with the regulatory system**, applying in both Sweden and Norway in the Border Forum case. Outdated legislation can lead to issues with permits, which can inhibit development, as for the Symbiosis Centre where regulations was incompatible with circular economy. It can also force work arounds, as in Land-Sea-Act (Land-Sea-Act) where the focus had to change to more spatial aspects due to a lack of mandate regarding certain aspects. Other examples include a lack of or support by regulation (Blue Plan Blekinge).

Publicly financed projects supporting BG activities and development were mentioned as an enabler (Symbiosis Centre), implying expertise, input and knowledge also from higher level authorities that provide a certain legitimacy and support (but could also figure under capacity). Legitimacy can not the least also be created through a **participatory process** (Koster Sea) with a strong bottom-up component.

Mandate in terms of **higher level plans and planning processes** have worked as point of departure in some cases, enabling and even driving initiatives (Blue Plan Blekinge, Koster Sea, Land-Sea-Act). This type of planning process includes the national MSP as well as blue plans on a more local level, such as the blue plan for Northern Bohuslän.

7.4 PROCESS MANAGEMENT AND LEADERSHIP



Process management as a theme was found in all cases and includes as aspects a) time and timing, b) contacts and network within the initiative and beyond, c) understanding of relevant context and windows of opportunity, d) resource management, and e) process management.

Time was mentioned as a basic prerequisite (Blue Plan Blekinge; Land-Sea-Act) – in terms of allowing for time for the process and mutual learning – *check connection with facilitation theme* – It is important to allow participants, politicians and government officials time to realise the importance of certain decisions and why changes are appropriate. It is not advisable to forcefully overrule others' opinions in cases like this (Border Forum). **Timing** with other processes can work as an important enabler but a related administrative challenge for multi-actor activities (e.g. municipalities in a collaboration project – Land-Sea-Act) with implications on project leadership and capacity.

Communication internally and beyond the initiative was mentioned as important and as a key capacity. There is a need to keep up a **dialogue** between different actors within an initiative and beyond it (e.g. use and conservation; Koster Sea). Another important aim mentioned as basic prerequisite from a communication point of view was **transparency** in the collaboration process.

P**roject leadership** is of importance and requires the ability to enthuse and have patience and create trust (see social and psychological aspects), especially during the pilot phase (Border Forum). This implies also to keep an eye on the wider picture and context, be flexible in relation to what shows up along the way (e.g. Border Forum, Land-Sea-Act, Periscope, Maritime Cluster) and adapt to changes in relation to participants and themes of relevance. Moreover, a balance needs to be struck between taking decisions and driving the process ahead and listening to and waiting for the participants (Border Forum).

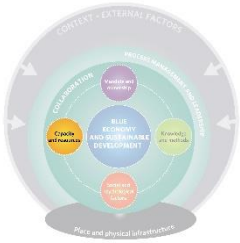
The above also points at **skilled process management including sufficient resources/capacity** (see next theme) as a key enabling condition for all cases; these all require a collaboration and coordination of multiple actors coming with different interests and different types of knowledge and skills. This aspect was not always mentioned explicitly by the case owners but becomes evident from the material. Here, the representation of relevant parts in terms of participants seems to be a basic prerequisite to all initiatives as well, which in turn require a skilled leadership and stakeholder analysis. At the same time, many different actors can make it difficult to identify a suitable focus, especially initially (Maritime Cluster, Periscope) – and especially so with the diverse field of the blue economy topic. Thus, breadth can be both an enabler providing new combinations (see 1. blue economy theme) and a challenge in itself.

The above points at **purpose and focus** as important enablers, in terms of e.g. appropriate **delimitation** of goals, themes and actors in relation to the activities planned. Initiatives have to be relevant and feasible; if they are too broad and diffuse, it can be difficult to get actors engaged (e.g. Maritime Cluster). Moreover, if a change in actors involved occurs, such as in Periscope, this may require a corresponding change in focus and project structure (C/Strat Periscope) to in order not to lose involved actors.

Lastly, clear objectives, possibly with a **management plan** as a tool make an important enabler or even a basic prerequisite – as for e.g. adaptive management a maintenance and management plan with knowledge based targets and measures, using the precautionary principle (Koster Sea).

The following quote from one of the interviews captures several of the aspects discussed above: *"Important factors for success are leadership, communication, collaboration, which make it either work out or not"* (Maritime Cluster).

7.5 CAPACITY AND RESOURCES



The capacity and resource theme appears in all cases, encompassing many aspects. A lack of capacity and resources makes a great challenge; thus the **availability of sufficient capacity and resources may be a basic prerequisite** for initiatives. During initiatives, **capacity** may include personnel, practical training and the ability to perform certain activities. Differences in capacity can affect collaboration and may be challenging, also across borders (e.g. Koster Sea).

Resources are mentioned in all cases as basic prerequisites, with unavailability as a linked challenge. This can be in terms of financial resources (as a universal enabler/challenge) and more context-specific, such as technical, space, infrastructure or relevant natural resources (Land-Sea-Act, Symbiosis Centre, Koster Sea). Designing big projects based on large resources can imply challenges when working for long-term sustainability of a project, if the activities are to be integrated into ordinary procedures (Border Forum). In terms of financial resources, publicly financed projects can work as enablers for gaining knowledge (and other aspects: capacity building, support; Symbiosis Centre). Financial resources are of such an importance that in the Maritime Cluster case, participating actor groups perceived that a continued collaboration would be difficult without funding – and may also be a challenge for building a long-term foundation for collaboration. Moreover, political focus and priorities can affect the availability of resources in a wider context (Maritime Cluster).

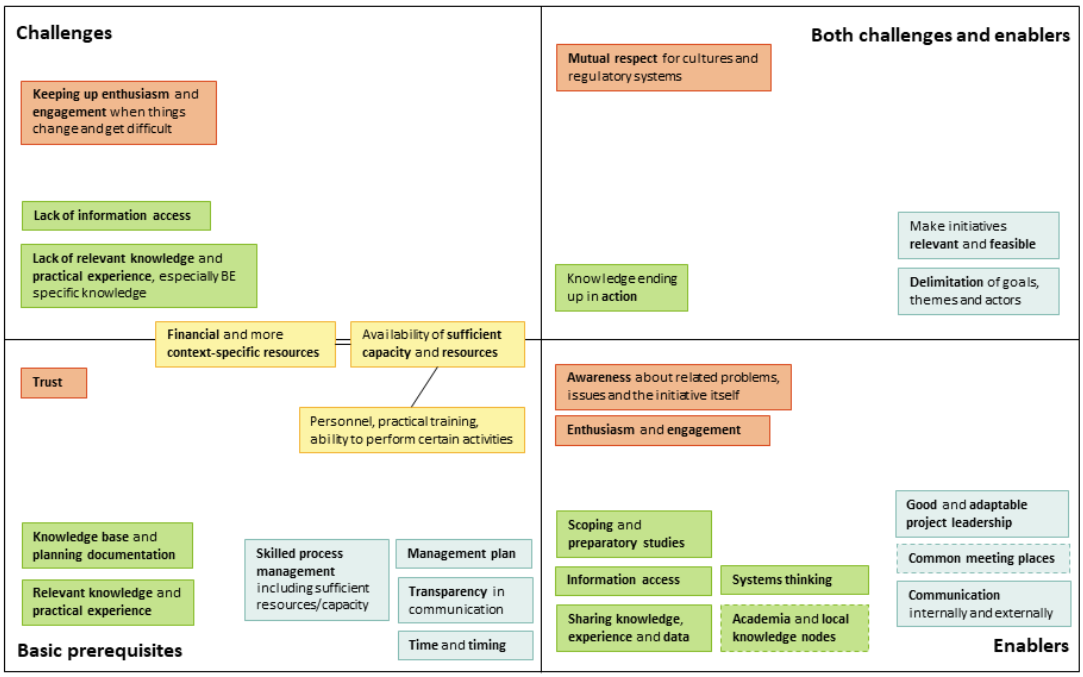
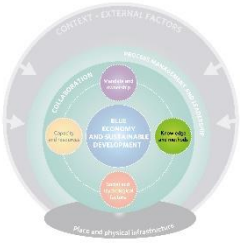


Figure 7-2: Overview over themes 4. process management and leadership, 5. capacity and resources, 6. knowledge and methods and 7. social and psychological aspects. Top left corner: challenges identified; top right, aspects which are both seen as challenging and enabling; bottom left, basic prerequisites and bottom right: enablers. Theme 4 is coloured in light turquoise, theme 5 in yellow, theme 6 in green and theme 7 in red.

7.6 KNOWLEDGE AND METHODS



Just as knowledge makes a strength in the initial phase of an initiative, it also constitutes a basic prerequisite throughout it. In Sweden, relevant indicators, statistics and other data and databases about blue economies are still at the infancy stage - with few laudable exceptions (e.g. in Sotenäs municipality, the Land Sea Act report, Västra Götaland Region). This is both an issue of mandate and coordination (which may lie at several institutional levels and in various administrative sectors) and of research and method development.

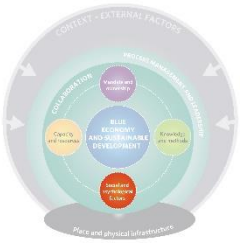
Relevant knowledge including both expertise and **practical experience**, both to design projects, to collaborate and to achieve results appear across all cases as basic prerequisites. This may be many different types of knowledge; from natural sciences about the system to manage, technical-practical to social sciences or management related knowledge (goals/legislation) and includes sharing across borders (Border Forum) and participants (Periscope). A lack thereof, not the least in terms of BG, which may require special knowledge to interpret for planning purposes (Land-Sea-Act), is mentioned among the challenges (Blue Plan Blekinge, Border Forum). At the same time, academy and authorities alone cannot pull the development of a maritime economy (Maritime Cluster) but there is also a need to include politicians and business.

Sharing knowledge, experiences (Border Forum; Land-Sea-Act) and **data** such as innovation ideas (Maritime Cluster) is also important, but the information needs to be presented in a way appropriate for the target groups to take in (Maritime Cluster: more thematically delimitated). Even if an important prerequisite, information access across a broad project can be challenging too, and especially so across administrative borders (Land-Sea-Act). In addition, inappropriate focus made a challenge, e.g. on technicalities or limits instead of general environmental status (Maritime Cluster).

Especially **adaptive management** relies on relevant knowledge as a basic prerequisite (example Koster Sea) to decide on management alternatives and evaluate outcomes. Here, academia and local knowledge nodes (such as Tjärnö Marine Laboratory and the researchers from the University of Gothenburg and the Swedish Agricultural University) have been important enablers for basic knowledge and method development (Koster Sea). According the case owner, ”*knowledge is a red thread in adaptive management*”, because there is a need to know what to protect and why. Also here is a need for knowledge in terms of systems thinking – that things are connected (Koster Sea, Symbiosis Centre) – and circular economy thinking (Symbiosis Centre) which were mentioned as enablers or even basic prerequisites.

Moreover, both a knowledge base and planning evidence/documentation are needed (Land-Sea-Act) and can constitute basic prerequisites. Scoping and preparatory studies can both work as enablers (and strategy) to address gaps, checking out relevant topics, needs and interest for collaboration among those to include (Land-Sea-Act). One important aspect to acknowledge is that knowledge also needs to end up in action, which can be a challenge in itself, otherwise it is worth nothing (Maritime Cluster).

7.7 SOCIAL AND PSYCHOLOGICAL ASPECTS



Social and psychological challenges and enablers identified include the following awareness and attitude related aspects:

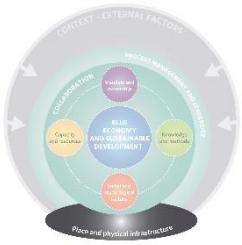
a) **Awareness** about issues, problems and the initiative itself, among key actors both within the administrative and geographical area of the initiative and beyond it (e.g. with higher level decision makers; Maritime Cluster, Border Forum) makes an important enabler not just initially but throughout the initiative; its lack is challenging and especially so if geographical scales and potential stakeholder groups are large (regional, cross border).

b) **Trust** makes a basic prerequisite for collaboration. Building it is crucial and an important task for a facilitator (see earlier themes). Here*, "patience, courage and responsiveness are a good combination when decisions need to be made to move forward in the process (Border Forum).*

c) **Enthusiasm and engagement** make a continuous enabler, not just initially (individuals, politicians, experts). "*You must believe in what you do, especially if you drive a pilot process*" (Border Forum). The challenge is to keep it up when conditions change and collaboration becomes difficult, such as during the lock-down (Land-Sea-Act).

d) **Mutual respect** for each-other's culture and regulatory systems - even if it may be irritating and complicated; Border Forum. *"You do not need to agree on everything, but see common grounds as a base to build on"* (Border Forum).

7.8 PLACE BASED ASPECTS INCLUDING PHYSICAL INFRASTRUCTURE



Even if not raised in many cases, there are several aspects linking to place and physical infrastructure. These stem especially from more local cases, where interaction in space tends to be more relevant:

- **Co-location** and closeness to share infrastructure among enterprises can be enabling, with the Symbiosis Centre as example, even if this may not be interesting for some actors or situations (for more, see theme 2 collaboration). In terms of co-location and closeness, not just enterprises but **knowledge nodes** can be important enablers to have close by, such as a local marine research centre for basic knowledge and method development in the Koster Sea case.
- **Competition** does not only exist among marine users, but also among municipalities (Blue Plan Blekinge) and can be related to availability of space and services and in this sense physical, but also physical combined with social and economic aspects, e.g. in terms of attracting residents and visitors to the own territory (e.g. taxes, economic turnover).

- **Physical meeting and sharing places are important**; this can be linked with the themes of communication (2) and process management (3). As noted in the workshop, nothing can entirely replace a face-to-face meeting, non-regarding the recent boost in digitalisation of distance interaction and collaboration through travel restrictions.
- Lastly, also contextually, place can matter, such as in relation to **environmental status and other strongly regional or local bio-geographical and societal conditions** affecting the potentials and outcomes of an initiative (Koster Sea; Blue Plan Blekinge).

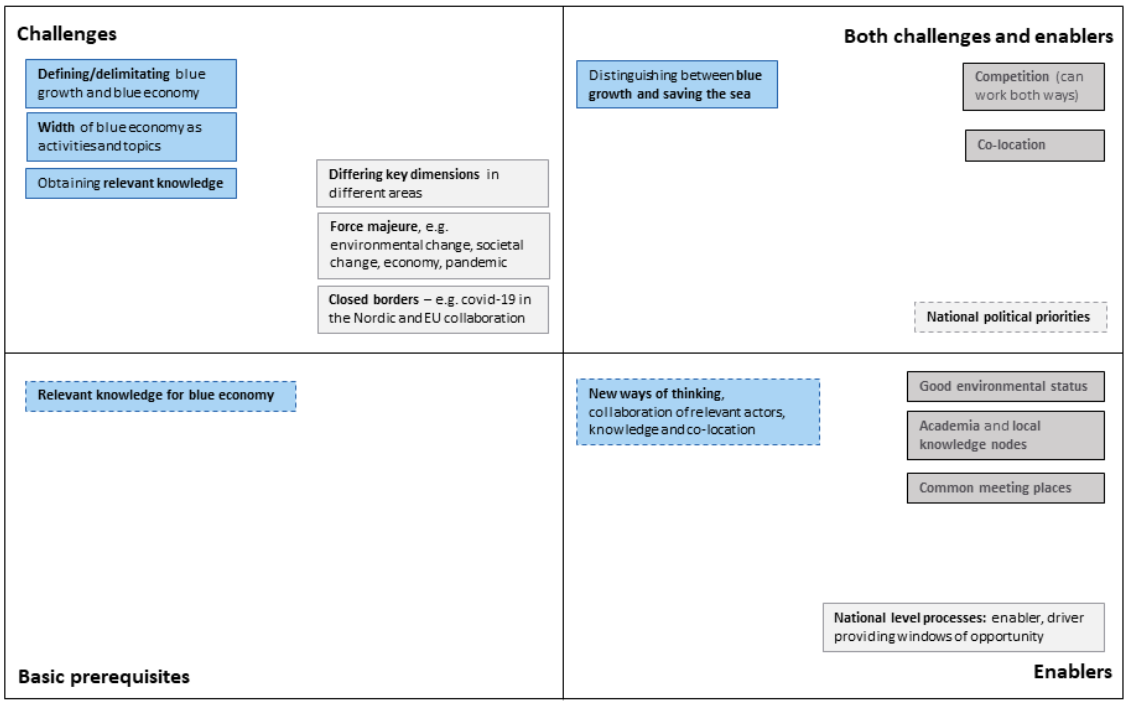
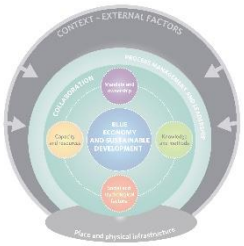


Figure 7-3: Overview of themes 1. blue economy and sustainable development, 8. place-based aspects including physical infrastructure and 9. external factors and context. Top left corner: challenges identified; top right corner, aspects which are both seen as challenging and enabling; bottom left corner, basic prerequisites and bottom right corner: enablers. Theme 1 is colour coded with blue, theme 8 with light grey and theme 9 with dark grey.

7.9 EXTERNAL FACTORS AND CONTEXT



External and contextual factors that may impact initiatives and which was mentioned as either challenges, enablers or basic prerequisites include the following:

a) **Force majeure** in the form of environmental change (e.g. climate for the Koster Sea), societal and economic change (e.g. pandemic). In some cases, external factors that are difficult to affect are perceived as challenges (Border Forum, Land-Sea-Act, Periscope, Blue Plan Blekinge, Koster Sea). The case owners are aware of specific external challenges in terms of environmental change and try to address them. However, not the least the Covid-pandemic has been unforeseen and difficult to tackle (Border Forum) affecting both communication and collaboration.

b) **Good environmental status is important as enabler** e.g. water and sea for some initiatives (Koster Sea; Blue Plan Blekinge) - both external and place-based (theme 8).

c) **Differing key dimensions** (biogeographical, societal) in different areas (theme 8) – especially related to the sea (Blue Plan Blekinge) may be something that should receive special attention.

d) **Closed borders** with the example of covid-19 in the Nordic and EU collaboration (Border Forum) and other types of cross-border impacts of policies – see also cross border collaboration (theme 2).

e) **National level processes** (e.g. planning, politics) have mainly been an enabler/driver (Land-Sea-Act, Blue Plan Blekinge, Maritime Cluster) and a window of opportunity - here to develop capacity and collaboration for coastal spatial planning (Land-Sea-Act, Blue Plan Blekinge), while the lack of political interest has been a challenge (3 mandate; Maritime Cluster).

f) **National political priorities** in line with themes to work with can be both a challenge (if mismatching thematically or geographically e.g. Norway internally or Norway/Sweden Border Forum) or first an obstacle turning into an enabler (example BG: Maritime Cluster – increasing Swedish national focus on BG).

External changes can be both gradual and more sudden/transient/singular events (e.g. accidents, incidents, natural hazards).

8 SYNTHESIS AND CONCLUSIONS

A number of common challenges and basic prerequisites and enablers and related strategies to address or work around challenges could be identified from the shared experiences of informed project leaders Noting that these are not results of a formal evaluation of these initiatives and their wider effects, also the more case specific lessons can provide inspiration for readers to develop their own "workarounds".
This chapter synthesises the key lessons from the cases, first overall (8.1) and then in relation to the nine themes, adding concrete strategies extracted from the material (8.2). Using references, we try to situate them in relevant scientific and practical discussions and the SwAM Ocean initiative. This is followed by recommendations (8.3) in the form of a checklist and conclusions including an outlook (8.4).

8.1 OVERALL SYNTHESIS AND REFLECTIONS - LINKING THE THEMES

Many of the aspects of developing collaboration on a long-term sustainable blue economy are connected to the fact that the sea is crossing borders and activities occur across various boundaries. The very nature of blue economy as a very broad theme with place-based character and the entailing need to rely on natural resources, livelihood patterns, actor constellation and networks and institutional frameworks (Fig. 8-1) is likely to remain challenging. Moreover, the related knowledge base is still under development and blue awareness, i.e. of what is going beneath the surface of the sea, is low in many societal groups, also in Sweden. All of these requires case sensitivity and instead of using general blueprints, rather gaining inspiration from experiences and examples such as the ones just shared here and continued sharing and learning.

Some conclusions on enablers and challenges for collaborative processes are more generic. Not surprisingly, like collaborative processes around other natural resources (e.g. water management) or coastal and marine planning, also developing blue economy initiatives will encounter similar issues related to collaboration. Many of the aspects and their linkages extracted are well known as supporting collaborative work also in other contexts, such as in water governance, participatory planning, adaptive co-management of fisheries, ICZM, and ecosystem-based management of natural resources and conservation areas. Like other collaborative processes requiring integrative and adaptive process design, the development of blue economy initiatives encounters similar issues related to the mobilisation and collaboration of many different actors with varying needs and capacities and has to tackle relevant institutional structures and policy landscapes and link people and places between different institutional levels and a changing overall context.

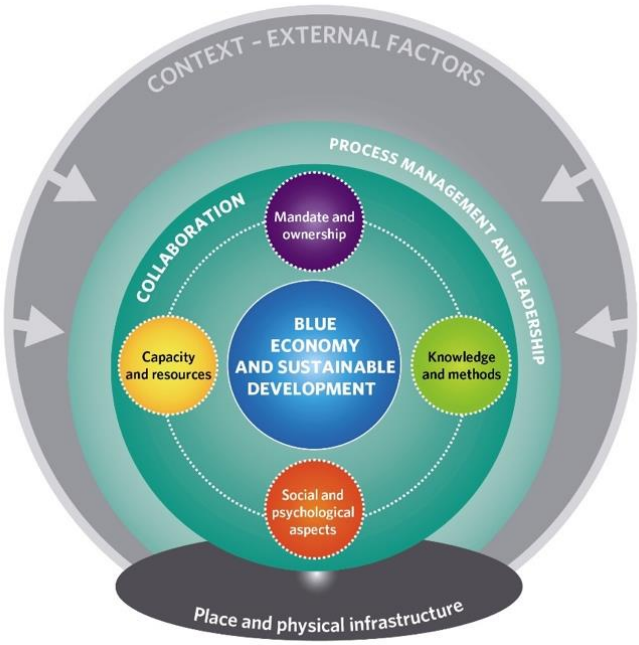


Fig. 8-1: Linking the themes beyond the cases.
Figure source: Maria Bengtsson Lewander and authors.

Key enablers

Some conditions coming forth in the analysis do not class as mere enablers only. They appear so much engrained in the cases that their availability rather makes a basic prerequisite: capacity and resources, knowledge and methods as supporting a platform of collaboration to promote a Blue Economy and Sustainable Development. A further such condition is mandate, which can be of different kinds (both political, administrative or through participatory ownership). Mandate provides both for the actual interests and drivers in content, for the necessary resources and capacity, but also for longevity and implementation. Lack of mandate, awareness, knowledge, capacity, and resources are mentioned in many of the cases as initial challenges, and often remain so, also coupled with a need for continuity and robustness in these aspects. Again, for those working with integrative and collaborative processes it may be self-evident to consider these as basic prerequisites or at least key enablers.

Time as an enabling condition

Importantly, time and timing are conditions to consider. Firstly, it is different to work in the initial phase of an initiative, compared to the working phase or concluding and dissemination and exploitation phase - both for limited projects and for continuous innovation and development. Building up key aspects such as contacts, knowledge base, and a process and structure for collaboration requires higher initial efforts. Project-based and long-term work may need to be balanced. At least in Sweden and Europe in many contexts, there has been a development towards projects and away from continuous funding that can threaten the long-term sustainability of activities. How to step up from single

initiatives to long-term sustainability needs consideration already in the start-up phase and linking to actors with more continuous mandate. At the same time, projects can be seen as an opportunity to initiate new activities and to deepen aspects beyond the present resources of an organisation.

Blue process leadership and social and psychological aspects of processes

In terms of infrastructure, some cases exemplify the importance of local natural resources and physical infrastructure necessary for specific types of marine and coastal uses and of synergies, co-location and competition in space (Sotenäs and Koster). All cases illustrate the importance (as prerequisites and important enablers) of societal and institutional "soft" infrastructures for scaffolding the collaboration. These include existing forums for cross-border collaboration, democratic processes and multi-level governance systems, established forms of working and decision making, practices of data collection and information sharing, and not the least of collaborative experience, respect, trust and enthusiasm among those who are working together. Overall, relevant expertise in combination with engagement, experience in collaboration, financing and relevant networks and good process leadership - appears to be a winning combination. Process leadership and skilled project management (in case of more focused and transitory initiatives) are the motor and structurer of these collaborations. This requires, besides time and resources mentioned above, also relevant expertise and experience.

Interestingly, the workshop discussion across cases, besides agreement on important challenges, also provided a discussion on leadership and a higher diversity of aspects of social and psychological type that are not obvious in the mapping tables of each case (see figs. 8-1 and 8-2 workshop notes). Thus, the interaction between case owners opened for reflection on aspects that are otherwise missed - here especially: process facilitator's and participants' attitudes and ways of thinking that are enabling. This should be kept in mind for future analyses, but also expert training. It also should be noted that trust was not explicitly mentioned by the respondents as a process quality or something developing through the interaction – even if the sharing of experiences as such was open and trustful. Still, it needs to be emphasised as an important enabler. According to literature on participation and the process facilitation, it is important to promote social and psychological aspects that strengthen a collaborative process: awareness, shared goals, engagement and enthusiasm, experience of added value of collaboration. For relevant theory and practical insights, see e.g. Senecah 2004 on trust and how to build it and Wenger, 1998 on communities of practice and handbooks on social learning see e.g. Nolbrant 2020; Cundill et al. 2014; Ridder et al. 2004. For a handbook on collaborative planning, see Wates 2000.

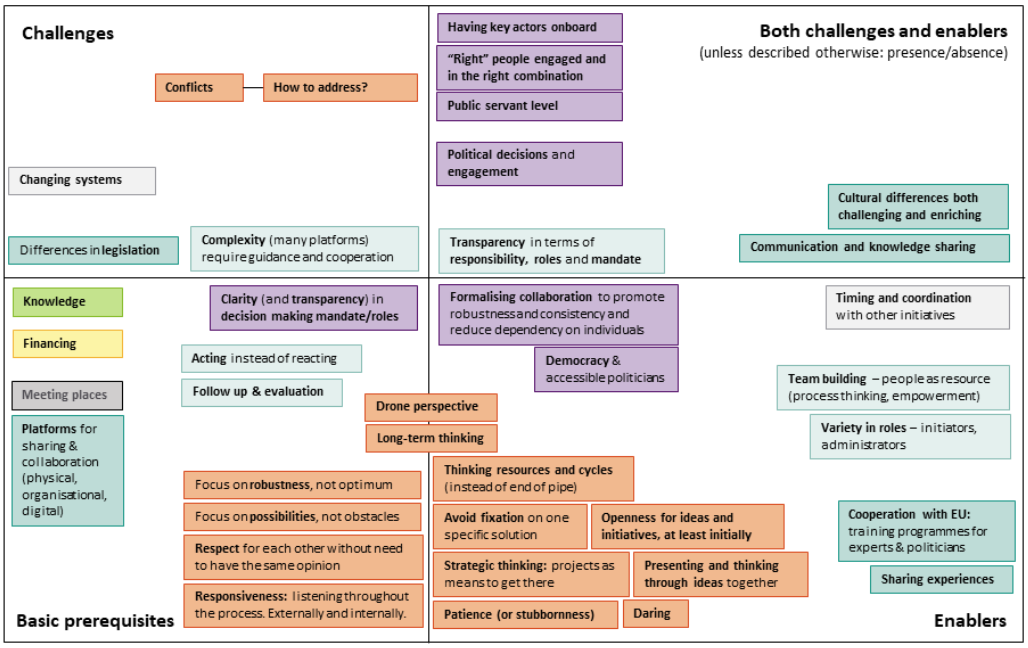


Figure 8-2: Topics raised in the cross-case discussion of challenges, enablers and basic prerequisites in the online workshop including the representatives of 5 out of 7 (11. 6. 2021). Note the basic prerequisites in general (lower left-hand box) and the process facilitation related aspects (turquoise) and especially the diversity of social and psychological aspects (red) - i.e. ways of thinking, attitudes among the basic prerequisites and enablers. These kinds of aspects are often under-valued but came forth in the discussion among the case experts, many of them experienced process leaders.

In the above aspects, international and other types of "new" transboundary collaborations have to tackle an extra package of challenges for interaction and sharing in terms of different languages and jargons, cultures, administrative systems, data (including data quality and methods of data collection), and possibly also different values, targets and goals across the boundary. This requires a careful scoping and sufficient time and resources and process facilitation aware and sensitive to these aspects (for experiences in transboundary marine planning see e.g. Morf et al. 2019 a and b).

Comparability and transferability between cases in Sweden and Africa:

A limitation of this study in relation to the overall focus of the SwAM Ocean initiative, might be that the linkages between poverty eradication and blue economy cannot be covered directly through the examples. Both the degree and types of poverty and how these are managed differs considerably between Sweden and African countries. The link between poverty and blue economy has not been a prominent issue in the Swedish initiatives, except that there is an acknowledged link between sustainable development in coastal communities (in focus in four cases) and blue economy related jobs - the latter in focus in all initiatives; this cannot be studied specifically without extensive socio-economic data collection. When it comes to comparing environmental impacts and climate change, there are differences, but also similarities with declining and changed

circumstances for food resources in coastal areas. This impacts not the least on changes in the competition for coastal space or local services in rural areas.

Overall, a direct application of the examples may not be possible. Therefore, our attempt to rather describe the cases as inspirational examples than as actual recipes and to extract general aspects and link to further relevant fields of research and practice.

8.2 SYNTHESIS BY KEY TOPICS: THEMES AND STRATEGIES

Blue economy and sustainable development - tackling the breadth

In relation to the first focus theme of this study, the following is important to note:

First, according to the experiences, and especially when beginning to work with it, *blue economy is challenging as a topic in itself*. The type of activities can vary broadly, include many relevant actors with highly different aims and capacities, and require different types of relevant knowledge. As mentioned, working with blue economy development implies acting across all nine themes (fig. 8-1). Closely related challenges include awareness, knowledge and legitimacy, i.e. that there has to be an interest among relevant decision makers (see themes 3, 6 & 7).

Second, there is *a lack of unified definition of terminology and aims*, both blue growth and blue economy are often used interchangeably. So, a discussion is needed to establish common grounds on what a blue economy exactly implies in a specific place and for whom, what types of growth are meant (qualitative and/or quantitative) and how the benefits and costs in society and environment are to be shared and what the boundaries and carrying capacity of the system are.

Third, and related to this, there is an *inherent potential for conflict between economic growth and environmental and social sustainability aspects*, not the least in terms of conservation, crowding of marine and coastal space and unintended side effects of different uses and unequal distribution of profits. There is a need to identify both conflicts and potential for synergies and coexistence.

Thus, when aiming to develop a long-term sustainable blue economy while minimising negative impacts on coastal communities and environment, we suggest a threefold path:

- to apply circular and systems thinking in terms of processes and flows both locally and at a higher scale and knowledge,
- to aim at inclusiveness in terms of process (to connect with actors relevant according to this perspective (see themes 2 and 3), and
- use an adaptive, comprehensive, pro-active spatial and systemic planning approach to coordinate between uses and interests and promote synergies and coexistence and address conflict (see also Carneiro et al. 2021).

Concrete strategies to better realise the potentials of an equal and more broadly sustainable blue economy as identified from the cases include the following:

- A holistic perspective on the issue across all nine themes and the entire social-ecological system in a place/region.
- An integrative systems perspective to blue economy and sustainable development, focusing on circular flows of matter and energy instead of linear "end of pipe" ones and working on the producer's side to see how material, energy and information flows can be steered most effectively in a specific place (see Symbiosis Centre).
- Aiming at an integrative collaboration (theme 2 collaboration - next) with a broad array of actors (decision makers, enterprise, knowledge actors and civil society). Be aware of potentially marginalised groups and how to include them (stakeholder analysis, facilitation; see theme 4) to counteract conflicts and inequalities in the distribution of costs and benefits.
- Smaller units can join forces and collaborate on developing a blue economy, based on similar situations and similar problems (e.g. coastal municipalities). Be aware that perspectives can differ across geographical and administrative scales.

Collaboration and crossing boundaries

Collaboration, the second focus theme and point of departure of this study, provides the underlying process component in the development of a blue economy in coastal communities. The rationale is that an evolving blue economy must be integrative in order to enhance, complement or sometimes replace existing societal processes and structures and to be placed in space and time among and linked with existing activities. This requires interaction between people and organisations and a parallel integration of scientific, technical and other types of knowledge to develop new ideas, products, and change flows - and promote policy coherence (see also Carneiro et al. 2021 and theme 6). Key words are: communication, interaction and mutual learning and linking different types of actors and doing things together (Dewey, 1958; Snyder and Wenger, 2010). Some speak about so-called triple helix interaction (academia, industry, government; e.g. Etzkovitz & Leydesdorff 2000). Especially if departing in the needs of coastal communities, the cases raise the need to include *four types* of societal actors (Fig. 8-3; also referred to as quadruple helix; e.g. Carayannis & Rakhmatullin 2014): (1) decision makers in politics and administration need to meet and interact with (2) businesses/users driving the production process and with (3) knowledge producers and (4) *actors from civil society at large and NGOs*. Based on the cases, collaboration is about inclusiveness, balancing and compromise and needs time and patience to develop. For implementation, it is important to include mandated actors who have a long-term perspective and -operability, which makes initiatives less vulnerable (theme 3).

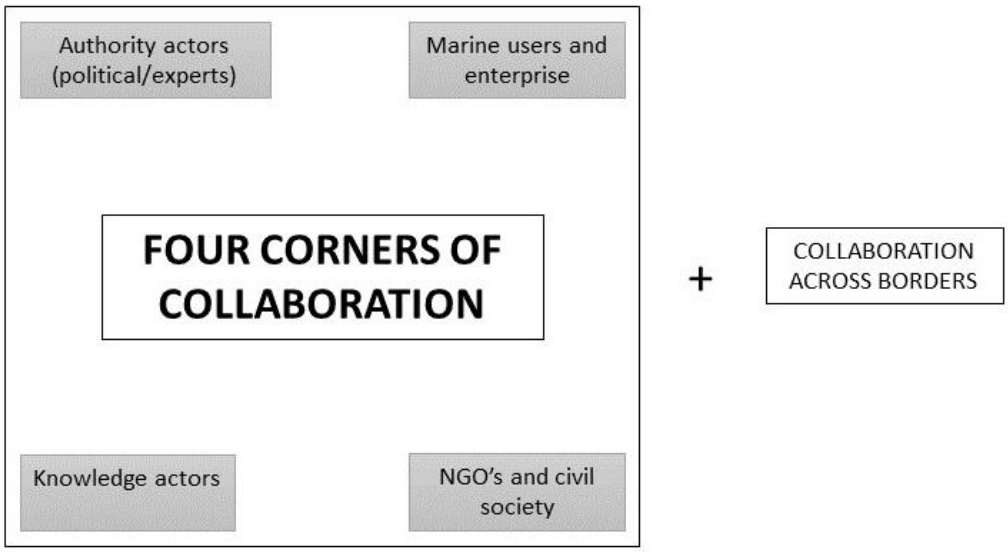


Figure 8-3: Four corner of society to be involved in collaborations - i.e. the quadruple helix including authority actors; marine users and enterprise; knowledge actors; and NGO's and civil society - not to forget linkages across borders. Figure: authors

Marine ecological systems are open, with the seas as a shared space for diverse societies. Thus, there are different types of boundaries to be transgressed and bridged over, both across sectors, scientific disciplines, administrative and national borders and across the land-sea-air boundary. Especially when working across national and administrative borders, there are a number of challenges to establish linkages and collaborate where important differences can exist: language and jargon, culture and values, political priorities and regulatory systems, how knowledge is produced, processed and stored. The historically developed boundaries of knowledge areas and institutional systems may need to be transgressed, which can be challenging as it may meet resistance and lead to misunderstandings. The differences need to be examined and understood. Moreover, both internal resistance and higher levels' unpreparedness for cross-border collaboration can make a major obstacle (Border Forum; workshop), especially initially. When starting transboundary collaboration, this is something to be prepared for.

Moreover, sudden closure of borders and differences in travel restrictions (such as during the Covid-19 pandemic) have made important obstacles for cross border collaboration. According to the workshop discussion, even the digitalisation boost did not entirely compensate for the obstacles, even between Nordic countries, who have both forums for and experience in collaboration. We suggest that because cross-border collaboration is more challenging, the drivers and enablers for it have to be stronger. Coastal and marine areas may be further disadvantaged in cross-border situations, where transboundary systemic thinking and collaboration is required, as the knowledge base (theme 6) is often lacking, fragmented and compartmentalised and often collected in different ways across borders - i.e. both knowledge and the institutional system do not always fit the problems.

Strategies to overcome initial weaknesses and threats to collaboration:

- It is important to be aware of the initial obstacles to collaboration and include this in a careful scoping in terms of regulations, political priorities, administrative systems, etc. It helps to map and harness the strengths and opportunities, such as existing collaborations and networks, financing, infrastructure or natural resources.
- Learning by doing together, including that collaboration can provide added value by doing things together.
- Awareness that strategies and related mandates for local and regional cross-border collaboration for different types of topics need to include the blue economy at different institutional levels. There is a need to be place and actor specific.

Collaboration enabling strategies in general as extracted from the cases:

- Readiness to compromise - with the signum of collaboration – *"I cannot always have my way, that would mean that I have not collaborated"*. (Maritime Cluster)
- *Rings on the water*: building on existing and earlier collaboration and ideas, adding new actors, knowledge and capacities (Symbiosis Centre).
- Dialogue and exchange of experiences make general enablers (Border Forum). It helps to think in terms of cross-collaboration with a broad set of different types of actors (triple helix + civil society) adapted to the specific purpose of an initiative and not too wide in scope. Meeting places (physical and digital) are important, especially at the outset.
- Collaborative work can provide depth and anchoring for outputs (Land-Sea-Act), not the least when using mandated authorities as a working base, as they provide mandate, resources, long-term continuity (all cases). If necessary, add neutral facilitation capacity as needed.
- Especially for cross-border situations, nothing should be taken for granted regarding collaboration and knowledge, but rather developed and tested whether it works across borders (Border Forum)

Mandate and ownership

The third theme, mandate and ownership, is of high importance for initiatives to take off (Borowski et al, 2021). Here, the democratic and administrative system of Sweden provides vital legitimacy, both in terms of political mandate and for initiating projects, as well as a functioning administration and a low level of corruption and nepotism. These foundations for mandate and ownership may rather be taken for granted in Sweden and came only up in the discussions across cases.

Initial political awareness and interest for initiatives is important. Political decision makers are key actors, as they provide both resources and legitimacy to initiatives. Having support, decisions and right funding in place for initiatives to take off and survive - is evidenced by almost all cases: Maritime Cluster, Border Forum, Koster Sea, Symbiosis Centre, Land-Sea-Act, Blue Plan Blekinge. Without political support and funding it is hard to initiate actions, at least in initiatives studied here. It is important to promote work with formal and informal mandate at all levels (see also theme 8 and close connection to theme 4). If interest is lacking on one level, it might be found on another one. Besides top-down, promoting legitimacy for an initiative can also work through bottom-up processes, with an engaged local community as a driving force.

Regulations and policies worked both a driver for change (e.g. Symbiosis Centre) as well as a challenge to other initiatives (e.g. Maritime Cluster, Border Forum). Here, mandate reaches beyond the political sphere and into the regulatory system. Regulations and policies were raised both in the initial SWOT-analysis and among overall challenges and enablers, indicating their role throughout initiatives. Observations include a lack of blue economy policies and perspectives at higher level, also resulting in a lack of financing, lack of legitimacy and problems with mismatching regulations when trying to establish new uses. This applies especially when a topic is new and has not been explored and tested (e.g. aquaculture and renewables in relation to maritime policies and environmental regulation). Anchoring of initiatives in higher level strategies and plans and decisions provides a stronger ground. This requires time and continuous "upward" awareness raising.

Strategies to enable and create opportunities and address mandate and ownership related challenges include:

- Promoting work with formal and informal mandate at all levels and promoting political awareness with close connections to collaboration (themes 2 and 7). Examples are political representation in initiatives and their decision-making bodies (Border Forum, Land-Sea-Act, Maritime Cluster, Koster Sea) or political awareness raising and collaboration agreements (Maritime Cluster).
- Marine and coastal planning and strategies for blue economy and sustainable development make key enabling conditions - best if they are in place first (many cases).
- Working around conditions that cannot be changed - e.g. outdated legislation if it takes too long time to adapt it (Symbiosis Centre).
- Promote legitimacy through the process (see also facilitation/project management).
- Readiness to identify and act upon windows of opportunity in higher level policy to support local and regional initiatives (Blue Plan Blekinge, Land-Sea-Act, Periscope, Symbiosis Centre).

Process management and leadership

Process management and related skills and experience have made key enabling conditions for the initiatives, as especially the cross-case discussion showed. This includes skilled project leadership able to keep one eye on the initiative and the other eye on the wider picture, common goals beyond the initiative without losing focus, and flexibility if things change; this is a matter of balancing what is in the project plan with what comes up along the way. Another balance to strike is between the available resources and the ambitions and energy in the initiative. The inherent thematic breadth of blue economy initiatives and the varying geographical scope and changing actors in an initiative can be challenging to cooperate and keep a clear focus. Here project leadership implies to delimit the initiatives in terms of relevant and feasible objectives, goals and visons matching planned activities with realistic time frames.

Linking to the collaboration theme, the leadership and facilitation of a collaborative process, providing a structure and common meeting and sharing places make important enabling conditions for initiatives. Here, inclusiveness and transparency of the process are key to promote trust and legitimacy - both for the overall process and among participants. Last but not least, according to observations, the case owners themselves making a key enabler and leadership resource – even if they did not expressly raise their own role and capacities as process leaders.

Strategies regarding process management and leadership that can be extracted include:

- An agreed work plan with realistic goals and concrete targets as a basic tool.
- Ensure good leadership with relevant skills and train prospective leaders. The leader has to be ready to adapt focus as necessary (Land-Sea-Act) and should be able to keep a wider perspective beyond the initiative. This includes balancing the content of the project plan with developments along the way, and awareness of the bigger picture including wider common targets (Maritime Border Forum Skagerrak).
- There is a need for patience to let things happen (Maritime Border Forum).
- Communication is important to keep up, both within and beyond initiatives (e.g. through reference groups in each of the participating municipalities; Blue Plan in Blekinge). Where internal communication and facilitation capacity is lacking, hiring in external expertise can be a solution (Maritime Cluster; see also next).

Capacity and resources

Both capacity and resources make a basic prerequisite for all cases. These experiences are shared with other settings (e.g. Carneiro et al. 2021, for cross-border collaboration marine planning: Cedergren et al. 2019, for stakeholder involvement in marine planning Morf et al. 2019a). Here, both time (to attend meetings, work between meetings, react to proposals) and capacity in terms of facilitation, leadership to provide neutral meeting places for sharing and learning and resources in terms of the necessary funding have been essential - an insight shared with water co-governance processes (e.g. Prutzer et al. 2021).

Without the capacity of process leaders and participants' ability to get engaged and participate it is difficult for initiatives to develop and achieve their aims. Capacity also implies knowledgeable, experienced and engaged actors. Inability to be a part in a process and continuously share knowledge may affect the feeling of membership in a group negatively (Lave & Wenger 1991; Fine 1998). Capacity differences in terms of personnel, practical training, and ability to attend meetings across organisational and country borders can be an obstacle also for collaboration (theme 2). Timely planning and practical training to strengthen capacities work as enablers.

Resources include financial possibilities but also more context-specific ones, such as technical, spatial, infrastructural, and natural resources. Funding for initiatives can come both from various sources, public or co-funding, on a national, regional, or even local level. Therefore, it is important to have a network with actors with financing possibilities or other types of resources to contribute with (theme 3 mandate). Long-term collaborative work is vulnerable without continuous financing.

Strategies to promote the availability of capacity and resources:

- Having onboard key policy actors with relevant goals and financing possibilities (e.g. the County Council of Västra Götaland with its maritime strategy), engaged public servants and a mix of adequate expertise and engagement (Border Forum).
- Awareness of possibilities for follow-up financing (e.g. Land-Sea-Act).
- Availability of resources to hire external capacity (neutral process leader, consultancy) or complement internal personnel (e.g. Blue Plan Blekinge).

Knowledge and methods - and sharing thereof

As it was raised in all cases, the availability of relevant knowledge seems to be a basic prerequisite. At the same time, and as stated initially, both with marine knowledge in general, new uses and on-going global change, important knowledge may not be available and relevant gaps may not yet be identified. This will require a strong initial focus on identifying and mobilising that knowledge. To establish what kinds of knowledge are needed, scoping studies and identifying and collaborating with actors with relevant knowledge are important enablers. Here, also the necessary resources and capacity (see 5) need to be mobilised.

Moreover, and as previously stated, blue economy covers a wide array of relevant scientific disciplines and fields of practice, which requires inter- and transdisciplinarity, sharing and integration of knowledge, and appropriate data management. While the use of best available scientific knowledge, tools and methods needs to be emphasised as a trusted base, a relevant knowledge base will also need to accommodate traditional, practical and place-based knowledge of various types. According to Prutzer et al. (2021), knowledge in collaborative work can be of various types, including evidence about basic conditions, measures, process, organisations and on the learning process, which require awareness and management of this diversity. There is a need to strike a relevant balance

between different types of knowledge and across subject areas. Availability of relevant education, training and sharing of knowledge is supported by further studies in the project (WSP 2020, Carneiro et al. 2021).

A shared and trusted common knowledge base is key to initiatives of collaboration, especially in complex situations (Blackmore 2010). Sharing knowledge is important, and for this, appropriate forums and digital or physical platforms and methods need to be available (see also theme 8 regarding physical infrastructure). Collaborative approaches imply mutual learning and a lot of communication and reflecting (Collins and Ison, 2009), and require time for this. Learning from each other implies sharing of knowledge and may require explaining, translating, illustrating to make it accessible for all participants in the initiative. This type of learning based on social interaction and activities occurs at the junction of activities, communication, collaboration and reflexivity (Illeris 2007).

Lastly, an adaptive approach may need to be taken, as different types of uncertainties in the form of knowledge gaps and varying resolution and quality of knowledge, complexities and change are rather the rule than the exception coastal and marine management. This implies setting up targets and related measures and continuous evaluation and adaption to new insights - see e.g. literature on resilience and integrated coastal management literature (Holling 1978, Cicin Sain and Knecht 1998).

Strategies to address knowledge related issues - especially initially include:

- Scoping and preparatory studies to identify gaps and check out topics, needs and interest for collaboration among relevant actors including establishing a governance base line so far (Blue Plan Blekinge; Land-Sea-Act; Border Forum). Such base line studies can also have a wider effect and help address lacking awareness and raising political interest (Border Forum).
- Readiness to harness arising smaller and greater innovation ideas (Periscope) and build on earlier initiatives and themes prepared by these (Land-Sea-Act).

Social and psychological aspects

Even if not necessarily in focus when developing blue economy initiatives, attention to social and psychological aspects is still needed, to avoid surprises of interpersonal conflicts and dysfunctional processes and to harness social dynamics, emotions and values as drivers and enablers for collaboration. The most prominent social and psychological aspects identified both initially and overall include awareness (about the initiative, important contextual aspects and more), engagement and enthusiasm for what is being done, common goals and positive experiences and last but not least trust and mutual respect. On the positive side, these can function as important enablers and drivers of initiatives, both initially and over time. A lack thereof implies swimming against the current. Thus, it is an important task of process leadership and facilitators (4) to be aware of social and psychological aspects and make participants aware of them, promote shared goals and positive experiences and build up trust and mutual respect and keep them alive over time.

Strategies to include social and psychological aspects during initiatives:

- Working with awareness is important - in the wider context and with relevant key actors and decision makers (Maritime Cluster, Border Forum) - see also next theme. It is also important to get the politicians engaged and have visions about relevant themes (see workshops).
- Earlier mentioned process leadership should therefore also facilitate a process, where the emotional and social finds attention, promoting trust, engagement and mutual respect. This includes also avoiding the pitfalls of lock-in situations.

Place-based aspects including physical infrastructure

Even if according to the other studies, place based aspects and physical infrastructure may make the base for blue economy initiatives (e.g. GroundTruth 2021) the theme was not as present in the cases analysed. As long as it works, physical infrastructure for e.g. transport of goods and people, energy and information transmission may rather be taken for granted in Swedish society - possibly with the exception of islands and rural areas. Physical infrastructure – unless related to spatial planning, building and physical co-location, mostly in the very local cases (Koster Sea, Symbiosis Centre) – has been less obvious as a theme. Even if physical infrastructure in terms of fiber optics and energy provision have played a role for recent social interaction, rather, the social and process aspects were raised as important and in need of development to facilitate new ways of interaction for a blue economy. A few important place-related and spatial aspects can be extracted from the material, however:
a) the importance of local meeting places,
b) the need for an appropriate match of geographical scope of initiatives in relation to institutional scale, themes and actors;
c) the advantages of closeness and co-location but also competition for space as a challenge in the attractive coastal areas, and
d) the overall place based context in terms of biogeographical and societal conditions to take into account in each initiative (natural resources, conservation values etc.).

In terms of strategies, the following can be said:

- Local direct meeting places, physical closeness and related infrastructure are important and can boost collaboration (Koster, Symbiosis Centre), as digital communication not always suffices. This applies even more, if material flows need to be connected (Symbiosis Centre) or if the initiative is in area is based on local resources and natural and cultural values (Koster Sea).
- Process management and project planning needs to consider available infrastructure and spatial aspects early on. Here, a careful context analysis and continuous awareness of change (both environmental and societal) is important (see next).

External or contextual factors

Processes and factors of contextual character, i.e. that cannot easily be affected by the initiative itself, need to be considered and addressed as well; they can both make major enablers and provide windows of opportunity (e.g. political attention to a certain topic or an on-going planning process at a higher level) or cause serious disturbance - such as the Covid-19 pandemic or environmental change. Such changes and factors can be both sudden (as a closure of borders or an accident) or more gradual like economic development or environmental change or changes in societal values. Here, risk analysis, continuous awareness and timing are key enablers. Linkages can be found to the themes of 3. mandate, 4. project management, 5. capacity and resources and 6. knowledge.

Political awareness and interest and suitable regulations seem important for an overall enabling context. Beyond this, contextual aspects differ considerably and are case and situation specific. There appears to be an awareness among respondents that one needs to work with these aspects or work around them. Still, the cases seemed to be less prepared to deal with unforeseen challenges (e.g. pandemic). Risk management in relation to projects and initiatives may need more attention in terms of risk awareness and vulnerability and redundancy or buffer thinking. We do not deduct specific strategies, but rather state some general strategies related to context/external factors.

Strategies to deal with initial contextual factors and change:

- An overall contextual awareness is important, both through initial mapping of opportunities and threats and what can be affected or not and continuous reassessment and risk management but also perceiving windows of opportunities and acting upon them.

General strategies to address context and other external factors:

- Joining a supportive context as part of a wider collaboration supportive of cross-border interaction and learning, such as Interreg projects (Land-Sea-Act).
- Context awareness and analysis, possibly recurring during the initiative. Contextual analysis is especially important for cross-border collaboration. It is necessary to be aware of different regulations, rules and norms and, political priorities (all cross-border cases).
- Working towards the institutional context: Awareness raising with key actors and creating enabling political conditions before starting initiatives. Working towards important environments such as higher political and administrative levels throughout an initiative.

8.3 CONDUCTING COLLABORATIVE INITIATIVES WITH BLUE ECONOMY FOCUS: AN INSIGHTS-BASED CHECKLIST

For those aiming to work practically with a collaborative approach to develop blue economy on local terms, Table 8-1 contains key hints and strategies compiled across themes in the form of a checklist.

Table 8-1: Checklist with practical recommendations based on the cases

TIMING	CONTENT
Initially	• Establish the themes and aims of your initiative. • Blue economy as a theme can be both broad and very place specific and may require focusing. • Be pragmatic and rather start with smaller, feasible steps and develop when the initiative is showing impetus and results. • Have a realistic time perspective and be ready to adapt under way. • Analyse and mobilise relevant actors. Make sure these also have mandate to take decisions relevant for your initiative. Be ready that these may change throughout the process, if it is an open one. • Analyse the context and how it could affect your initiative - both positively and negatively. Make sure to establish links to key actors. • See to it to have the basic prerequisites in place at an early stage: financing, personnel, skills and relevant knowledge and methods. • Assess what physical and other place-based infrastructure might be needed and how it could be provided. • Explore the linkages between the land and sea and what these might imply both in terms of present and future needs and relevant actors. • Ensure there is relevant knowledge or mobilise the resources to establish a knowledge base. • Make a risk analysis (both internal and external risks) and an action plan in relation to these. • If the situation is not ideal in terms of mandate, resources or other important aspects, try to work within the limitations or around them.
Throughout the initiative	• Cross-border and cross-sector collaboration require a phase of mutual learning and attuning to each other and a lot of communication throughout the project. Differences may remain, but awareness helps to avoid them becoming obstacles • Knowledge and skills are important: both for those within the initiative to promote their capacity. But also, through buying relevant knowledge as needs arise through consultancy and research. In terms of knowledge types consider both natural and technical sciences but also social sciences and humanities (basic knowledge, process facilitation and evaluation). • Collaborative and dialogue oriented working mode seems most appropriate for the kind of process necessary when developing a blue economy. Aiming at circular processes and co-location, a perspective towards common interests and synergies seems fruitful. Trust and open communication are mutually enforcing enablers. • Communication is key, both internally and outward. Have the relevant time, capacity and resources available. Make strategic communication plan based on an actor analysis, use it and keep it updated. Budget to include communication expertise for support from the beginning to the end. • Plan for an evaluation of your initiative, best continuously. To not waste resources on pointless activities, consider an adaptive, learning design - allow for re-evaluation and learning and possibly re-design of the initiative already during the process. • Aim at high transparency in terms of documentation and accessibility of information and key documents, responsibilities and roles, decision making processes. Be clear about when influence is possible and how. Document how decisions are taken and why. This promotes trust in the initiative.
After finalisation	• Keep the eyes open for new developments, especially in sectors under fast development. • Keep in contact with your key actors. • Formalise the responsibilities to implement the results. • Embed the outcomes in everyday activities. • Find new ways, themes and resources to collaborate again and keep going.

Sources: key informants, authors' own research and experiences with complex initiatives.

Finally, an advice from one of the case owners, adding to the checklist above: *"..it is important, when you compile an actor list for a new project, to include all expertise and capacity and then budget accordingly - to get sufficient drive. And where one part with a high level of expertise and resources can lead and teach the others .... In an ideal world one would like to a strategist/expert and an administrator/operational person from each participating part to get an even collaboration. There is a risk that the expert will not have sufficient time, because they are experts and in high demand." (case owner).*

8.4 CONCLUSIONS AND OUTLOOK

Blue economy and collaboration in Sweden and beyond - open questions

With this study exploring the baselines around collaboration for blue economy in Swedish coastal areas, many interesting questions remain open. Many projects are financed by the European Union - a key actor pushing different agendas, both Blue Growth, rural development and sustainability - partially through different financing channels and policy areas. A related question is: is the balancing between different sustainability dimensions successful, can it be measured and how? What do we know about the blue economy as such? The Land-Sea-Act project has mapped economic aspects in terms of spatial needs of businesses and economic statistics. This is just a beginning for the West Coast, there is still no such analysis covering more of Sweden.

Another general question is how to identify and evaluate success, as success is very much in the eyes of the beholder and may also be seen differently by different project participants (which could be deepened through comparative social scientific research). The initiatives described here exemplify how development of a blue economy can and should work in terms of linking and collaboration, as perceived by committed and self-reflective project leaders. We observe in this study that knowledge actors, marine enterprise and authorities from different levels are collaborating and achieving results.

A last bunch of questions is: are the authorities responsible for environmental quality able to prevent further degradation and manage and avoid negative cumulative effects? Similarly, those responsible for social aspects of sustainability? How then are the benefits and costs distributed throughout the coastal societies? So far, beyond single project evaluations using specific indicators and partially pre-defined sources, there are few systematic overall evaluations of plans and strategies and societal monitoring and research projects or systematically collected public data establishing how the development of such initiatives concretely affects the livelihood and employment and social sustainability in coastal communities. Moreover, the negative environmental impacts of marine uses such as aquaculture and fisheries have to be considered and cumulative impacts from many uses. Also here, Sweden is still data poor, especially so, with data at the local level or does not use data that is actually delivered to the EU for its own purposes.

Also, Sweden needs to work further with institutional integration and promoting cross-border collaboration e.g. by providing formal mandates to authorities at lower levels and linking the blue development theme across the stove pipes of ministries, policy areas and

authority responsibilities, including a component of domestic rural development.

Outlook

Based on this study, some ideas can be raised on the themes that need addressing in Sweden in relation to collaboration and development of a blue economy for living coastal communities. Also here, more traditional uses, such as coastal fisheries, are declining and the more rural areas threatened by depopulation or strong seasonal fluctuations of population and skewed economies. A broader array of marine and coastal uses could provide more resilience and reduce economic vulnerability. Do we know enough to go ahead?

In terms of deepening the relevant focus this report has identified, and to actually map and evaluate blue economy initiatives more broadly in Sweden and beyond, various aspects need to be covered further: broader geographical scope, choice and representativeness and comparability of cases, including both case participants and recipients of results, evaluating different cases in for example terms of increased/decreased economy, more/less activities started up, increased/decreased awareness of sustainable development of activities and key values developed/undeveloped. This to ensure that effective measures and efforts are in place to encourage and develop a blue economy in the future.

This report with inspirational and exploratory aims and based on sharing of experiences and cross-case compilation is no evaluation of these initiatives and their wider effects. Still, evaluation is interesting and would have to be done e.g. based on statistics, surveys and interview study. This study can make a base line and point of departure to further develop a number of avenues of collaboration and learning on blue economy and coastal development. Among others, the following tracks would be interesting to continue on, depending on time, resources and actor constellations:

- Promoting and creating a forum for exchange and learning between similar cases between the South and the North and within Sweden.
- Development of evaluation system and indicators for national regional and local authorities working with blue economy
- Development of relevant data and compiling methods at different geographical scales. The Land-Sea-Act project has made a good start.
- Deeper evaluation of the same cases using quantitative, qualitative and geographical data.
- Mapping and comparing further cases in Sweden and beyond.
- Deeper and broader comparative research exploring blue economy and sustainable coastal management and development related topics - using a variety of possible theoretical perspectives.

We welcome a continued discussion on the topic and the above tracks, both with practitioners and researchers around the Swedish marine basins and in the Global South.

APPENDIX

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ORAL SOURCES REFERRED TO

Interview with case owner, 21. June 2021

Interview with case owner, 22. June 2021

Workshop with case owners, 11. June 2021

INSTRUMENTS AND METHODS USED

Analytical framework

An analytical framework guided data collection from the cases. It was developed by the researchers and validated in the working team and with the experts from SwAM. To extract relevant information on the cases from the respondents the following three aspects were covered:

1) A descriptive part consisting of the focus topics blue growth, flourishing communities and collaboration, and institutional development and collaboration. It also included the important general conditions (such as resources, financing, infrastructure, people, economy and institutional systems), the aims and the initial status of initiative, final status and achievements, and the key-steps to get there. The case owners were also asked to complement information on important physical and social infrastructure and other relevant information on their case.

2) A hindsight mapping of the initial status of the project through a Strengths - Weaknesses - Opportunities - Threats (so-called SWOT analysis) aiming to extract initial situation in relation to strengths and weaknesses as well as the perceived opportunities and threats at the outset of the initiative

3) A hindsight mapping of the encountered challenges, enablers and basic prerequisites (CEBP-mapping) when trying to achieve the goals - aiming to extract key issues to resolve (= challenges) and basic prerequisites as well as further promoting conditions (= enablers) and possible strategies that could be used in future or other contexts.

Data tables - instruments for data collection and analysis

Based on the analytical framework a data collection table was compiled, making the main instrument to collect and structure data. It was used as follows:
a) to collect data before the workshop from each case;
b) structure observations during the workshop from participating cases;
c) as interview-guideline for the complementary interviews (filling in together online);
d) to collect complementary data from some case owners if necessary.

Analytical table and overall analytical framework

General description of case
Focus topics: 1) Blue Growth **(BG)** 2) Flourishing communities and collaboration **(FC)** 3) Institutional development and collaboration **(ID)**
Important general conditions (IGC) such as: resources and financing, infrastructure, people, economy, institutional system
Aims (A) and initial status of initiative (IS)
Final status and achievements (FS)
Key steps to get there (KS)
SWOT-analysis of initial status to resolve
Strengths (S)
Weaknesses (W)
Opportunities (O)
Threats (T)
Challenges and enablers to achieve results aimed at
Challenges to achieve aims (C)
Basic prerequisites (BP)
Additional enablers (E)
Complementary conditions mapped deeper during verification phase
Key physical and social infrastructure (I)

Data collection table (italic: instructions and examples for respondents)

General mapping of case	**Description** (text, OK with bullet points)/ *Classify your case in the 3 categories below by using/reformulating or deleting numbers and text. Shortly motivate which aspects are important for your case.*
Focus topics / Fokusteman**:** 1) Blue Growth 2) Flourishing communities & collaboration 3) Institutional development & collaboration	1) Blue growth/balancing blue growth with conservation with focus on ... e.g. *aquaculture of algae, small scale artisanal fisheries, renewable energy, biotechnology...* 2) Actor collaboration and organisational development: *stakeholders aa, bb, cc (with/without authorities) meet through new platform dd and knowledge portal ee* 3) Institutional development and collaboration*: e.g. new collaboration and development of database...*
Important general conditions* such as: resources and financing, infrastructure, people, economy, institutional system	*Shortly describe in text*
Aims and initial status of initiative	*List*
Final status and achievements	*List*
Key steps to get there	*Steps in sequence or in parallel*
SWOT-analysis of initial status to resolve	*Make lists, motivate as necessary*
Strengths	
Weaknesses	
Opportunities	
Threats	
Challenges & enablers* to achieve results aimed at	*Make lists, motivate as necessary*
Challenges to achieve aims	
Basic prerequisites	
Additional enablers	
Further information	*Free text*
Anything else of relevance	
Data/sources to refer to	

Workshop

Prior to the workshop, case owners were asked to fill in and send a data table on their cases. Each case owner held a 10-minute presentation of their case, presenting it from their point of view. Then, after the presentations, a general discussion allowed for reflection across cases. These presentations, and subsequent discussions, enabled case owners to reflect deeper over their own cases and blue growth in general. During the entire workshop, notes were taken, and the meeting was recorded for documentation. Case owners had the opportunity to provide a revised version of their table after the workshop.

Interviews

Some case owners were unable to attend the workshop or did not have time to fill in the table. Instead, online interviews were held using the table as interview guideline for a semi structured interview and filled in jointly. The case owners could speak freely about their case with the table used to keep the interview in line with the analytical framework. The meeting was recorded too as a backup.

Overview sources

Table overview of sources. X = main source, x = complementary source.

	WORKSHOP	INTERVIEW	NUMBER OF RESONDENTS
Maritime Border Forum Skagerrak	X	x	1
Land-Sea-Act	X	-	1
Periscope	-	X	1
Maritime Cluster of West Sweden	-	X	1
Blue Plan Blekinge	X	-	2
Symbiosis Centre Sotenäs	X	-	2
Marine National Park Koster Sea	x	X	1

Data processing, analysis and synthesis

The data collected through the SWOT- and the challenges and enablers analysis were analysed and synthesised in several steps. The tables were first compiled and sorted per case and then compiled across cases, comparing specific aspects, extracting the cases into two special cross-case comparative tables for the key dimensions of SWOT and challenges and enablers.

After the data had been gathered for each case, the text was transcribed and translated into English and sorted further in the analytical framework. Questions to the case owners over meaning, structure and placement within the analytical framework were added as well as notes taken during the workshop and interviews. A first coding (see data collection table) was made to sort input further in accordance with the framework. Aspects matching several codes were assigned to one main code, but the other codes kept. These complemented reports were sent to the case owners for verification, and after response, integrated into the final versions of the case owner reports.

Verification

The verification included the following:

- Checking case selection of cases, the analytical framework and overall methodology and an early version of the report with SwAM.
- Checking the basic data collected and the first coding with case owners.
- Checking of synthesis and conclusions with case owners through the draft report. Some further information was collected on key infrastructure and weblinks.
- Checking of draft report with researchers.
- Triangulation of sources and checking with literature on experiences elsewhere.

Limitations and how they were addressed:

- A limited selection of cases, it was done based on the topics deemed relevant for the SwAM Ocean initiative and the aims, scope and resources of the study.
- The respondents are mainly leaders of the initiatives, selected for their long-term and deep knowledge of the initiatives. Even if other actors' perspectives could have added even further aspects and values to the cases, this was not possible within the frame of a limited study of experiences. Instead, the binary mapping of strengths/weaknesses and challenges/enablers was chosen to encourage the respondents to be self-critical and broad in their reflection. Moreover, we observed that the respondents were both self-critical and open, which should reduce potential bias towards over-selling of positive aspects of the initiatives.
- Using at first English as language for data collection showed to be awkward for some respondents. This was corrected by switching to Swedish, making it easier for respondents to discuss and reflect.
- Recall for the cases which reach farther back in time. This may have made it more difficult to keep SWOT and challenges and enablers analysis apart, as some initiatives have run for years and memories become less accurate with time. This was addressed through several steps of verification.

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