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Beneath the Surface: Can the Oslofjord Plan Create Transformative Change Through Institutional Layering?

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Abstract

The Oslofjord ecosystem experiences significant degradation due to cumulative anthropogenic pressures, including nutrient-induced eutrophication, overfishing, and habitat destruction. Existing institutional arrangements for coastal management in Norway have proven insufficient in addressing these complex challenges. In response, the Norwegian government launched an action plan specifically for the Oslofjord in 2021, aiming to restore a clean and healthy fjord that is accessible to all. This unique policy initiative can be studied through the lens of institutional layering. Rather than directly replacing existing institutions, layering describes the addition of new elements. Over time, the new layer may gradually shift the trajectory and influence of established institutions on societal behaviour and lead to transformative changes in policy outcomes. The design of the Oslofjord Plan, intended to "complement, coordinate, and reinforce" existing arrangements, can be understood as a deliberate attempt at layering, through the addition of instruments, actors, and changed perceptions. However, despite the Plan's ongoing implementation, the ecological status of the fjord remains degraded. Our analysis offers two key explanations. First, several measures introduced by the Plan need time after being put into action before they start to work, underscoring the need to consider the temporal dimension when evaluating the Plan's capacity to meet its objectives. Second, although the measures are beginning to shift institutional trajectories and societal behaviours, we argue that they remain insufficient to create transformative change. This is primarily due to institutional barriers embedded within existing institutional arrangements, which the Plan does not adequately address. These create lock-ins, constraining the Plan's transformative potential.

Keywords

coastal governance; evolutionary governance theory; fjord; institutional layering; land-sea interactions; Norway

1. Introduction

The Oslofjord is in an ecological crisis, which has gradually become a public concern over the past 15 years. Following centuries of intensive use, significant improvements were achieved in the early 2000s through efforts to reduce industrial and sewage discharges (Thaulow & Grande, 2015). However, monitoring and user reactions showed that earlier efforts were insufficient, with unresolved issues and new problems emerging. Reports of declining cod and other demersal fish stocks raised concerns about overfishing, and high contaminant levels made fish from the inner fjord unsafe to consume. Algae blooms and oxygen-depleted dead zones were observed, both symptoms of eutrophication. The main causes were linked to discharges of nitrogen and particles from agriculture and wastewater across the catchment rather than transboundary pollution from ocean currents, as previously contended. Moreover, shoreline development has reduced public access and degraded valuable habitats (Norwegian Environment Agency [NEA], 2019).

Recognising problems does not necessarily lead to efforts to solve them (Cohen et al., 1972; Kingdon, 1984). Sustained efforts by politicians, scientists, public authorities, and NGOs were required before the environmental challenges in the Oslofjord were defined and recognised as being a national concern, thereby prompting governmental intervention. In 2021, the government presented a comprehensive action plan for the Oslofjord (hereafter "the Oslofjord Plan"; Ministry of Climate and Environment [MCE], 2021a).

The Plan is a high-level strategic plan aiming to achieve a clean and healthy fjord that is easily accessible for outdoor recreation. It outlines what actions need to be taken, including acquiring new knowledge, and specifies the responsible public authorities for each action. The Plan does not replace any existing legal and administrative structures. Instead, it aims to "supplement, coordinate, and reinforce" all ongoing positive efforts (MCE, 2021a, p. 5). We argue that the Oslofjord Plan can be seen as an additional "layer" added to the existing institutional arrangements that govern the Oslofjord.

In institutional research, layering is described as a type of policy intervention where "something new" is added to existing institutions (Capano, 2019). The concept is associated with gradual change, in contrast to theories that emphasise abrupt shocks, typically caused by external factors. Still, it has been argued that gradual and incremental changes over time can lead to transformative change (Streeck & Thelen, 2005). However, due to various interpretations of layering, the analytical capacity of the concept to explain institutional change has been debated (van der Heijden, 2011). This mainly concerns the definitions of institutional change and what type of change can be attributed to layering. Another aspect concerns whether layering inevitably leads to change or if it might preserve stability (Capano, 2019; van der Heijden, 2011). Our article contributes to reflections on the theory of layering and its linkages with various modes of change by applying it to the Oslofjord as a case study. We raise two research questions:

RQ1: Which approaches to layering can be identified in the institutional design of the Oslofjord Plan?

RQ2: Do we observe transformative changes due to the Oslofjord Plan's layered approach?

The article begins with a review of theories that discuss layering and how it relates to various modes of change. After describing our methodology, we present the empirical findings on the Oslofjord Plan. This includes a description of the motivation behind the policy intervention, an overview of the planning process, a description

of the Plan's structure, and the outcomes observed during implementation. These empirical findings are then discussed in light of the two research questions.

2. Theory

2.1. The Concept of Layering

Institutions have been termed the "building blocks of social order" by establishing rules, norms, and procedures that govern societal behaviour (Streeck & Thelen, 2005, p. 9; see also Mahoney & Thelen, 2009). A broad definition of institutions, as suggested by Streeck and Thelen (2005), encompasses the roles of organisations and actors, such as public policy authorities, as well as the policies themselves. Traditional theories of institutional analysis regarded institutions as stable entities, and change was largely explained through exogenous shocks, causing abrupt and radical change. The importance of gradual and incremental change driven by endogenous processes, however, did increasingly receive scholarly attention (Mahoney & Thelen, 2009; Pierson, 2004; Streeck & Thelen, 2005; van der Heijden, 2011). While these two theoretical approaches—attributing change to either external shocks or gradual processes—are often viewed as conflicting, it has been proposed that they provide complementary approaches in the study of institutional change (van der Heijden, 2011). Within the realm of incremental institutional change theories, Streeck and Thelen (2005) and Mahoney and Thelen (2009) have established a typology of institutional change patterns. These include processes of change whereby institutions are redirected, experience drift, or are gradually displaced. Another mode of change is referred to as institutional layering, which will provide the theoretical framework for this article.

Institutional layering has been applied to analyse various contexts, and there is no universally applicable definition (van der Heijden, 2011). In essence, layering describes the addition of new elements to existing institutional arrangements. In a review of layering theories, van der Heijden (2011) grouped layering into two approaches: the creation of a new arena of actors ("thickening") or the addition of new instruments onto existing institutional arrangements ("regulatory ratchet"). Capano (2019) discussed a third approach, whereby an "ideational layer" is introduced. This layer redefines the conceptualisation of policy problems and solutions, such as by incorporating new policy goals into the existing institutional arrangement.

2.2. From Layering to Changes in Outcomes?

Capano (2019) noted that layering has often been conflated and equated with any type of institutional change in an underspecified way. This concerns whether layering is merely used to describe changes in institutional structures or whether it actively drives changes in institutional dynamics and behaviour, altering policy outcomes. This has led to inconsistent interpretations of the concept in academic literature, an observation also found in van der Heijden (2011). Therefore, Capano (2019) argued for a minimalistic and refined definition of layering as a mode of institutional design, describing how "something new" is added to an existing institutional arrangement. By doing so, he excludes the potential effects that layering may have on policy outcomes from the definition of layering. He suggests a two-tiered analytical approach to layering: (a) consider the effects of the new layer on the existing institutional arrangement, and (b) then assess the effects in terms of changes in policy outcomes. He advocates for this differentiation because, while layering as a mode of design may lead to a change in existing structures and, eventually, policy outcomes, it may also

maintain the stability of the existing institutional arrangement. Kelly et al. (2018, 2019) expressed similar views, arguing that path dependencies may prevent the layered arrangement from addressing the existing institutional barriers. In this article, we will use Capano's (2019) definition of layering as a mode of institutional design and follow his two-tiered analytical approach.

Streeck and Thelen (2005) emphasised that institutions are not static but continuously interpreted and enacted by various actors. They refer to this as the "logic of action," being the shared expectations and patterns through which institutions shape societal behaviour. This logic influences which policies are acceptable and how they are implemented, determining whether their intended outcomes are realised. Achieving far-reaching changes in policy outcomes—those that significantly deviate from the status quo—therefore require a transformative change in the prevailing logic of action. This perspective aligns with Hall's (1993) work on systemic change, where a paradigm shift involves a fundamental reconfiguration of dominant ideas and problem framings. Streeck and Thelen (2005) argue that transformative change can emerge through layering. Rather than directly confronting the existing institutional arrangements ("the core"), the layered elements ("the fringe") interact with the core structures and, over time, may gradually reshape institutional trajectories. This mechanism, termed differential growth, can cause actors to adopt a new logic of action.

In sum, layering offers analytical lenses to study the addition of institutional layers to existing arrangements. While most research on layering has focused on how institutions are changed (van der Heijden & Kuhlmann, 2017), Capano (2019) highlights a gap in linking layering as a design mode to its effects on changing policy outcomes.

3. Method

This article forms part of the BlueGreen Governance project. It draws on a combination of document studies, research interviews, consultations with a reference group, and participatory observations at various events on the Oslofjord.

To understand the development of the Oslofjord Plan, we conducted a comprehensive document analysis, including not only the Plan itself but also notes from parliamentary discussions, political statements, governmental white papers, consultation documents, status reports, and media coverage. However, these provided limited insight into the internal processes in the government apparatus that led to the adoption of the Plan. Between March 2023 and October 2024, to address this, we conducted eight semi-structured interviews with politicians and civil servants involved in the planning and implementation of the Plan (see Table 1). The interviews, each lasting between one and two hours, were conducted either in person or online. The interviewees were asked about the planning process and how they viewed the effect of the Plan's implementation. Interviewee selection was discussed with a stakeholder reference group, which also provided feedback on the research process. Moreover, we participated in several conferences, meetings, and workshops related to the Oslofjord, which contributed supplementary empirical material. In particular, we were granted access to meetings of the Oslofjord Council. These venues offered valuable opportunities to observe and engage in informal discussions with a wide range of stakeholders, including mayors, municipal and regional authorities from various sectors, environmental NGOs, representatives from agricultural and fisheries interest organisations, as well as the Secretariat of the Oslofjord Plan.

This article also draws on insights from two parallel research projects (MAREA and CrossGov), which focus on governance challenges in the Oslofjord. Although these projects address slightly different aspects of governance, the empirical data collected through them have significantly informed our understanding of the environmental and institutional dynamics in the Oslofjord.

Table 1. Overview of formal interviews conducted, specifically focusing on the Oslofjord Plan.

Identification	Interviewees
Interview 1	Former minister of the Ministry of Climate and Environment
Interview 2	Former state secretary for the Minister of Climate and Environment (a kind of deputy minister with a key role in coordination with other ministries)
Interview 3	Civil servants at the MCE, responsible for freshwater and marine planning (group interview)
Interview 4	Project leaders for the Oslofjord Plan at the NEA (group interview)
Interview 5	Civil servant at the NEA, participating in the Forum for Integrated Ocean Management (responsible for scientific assessments of the ocean)
Interview 6	Employee at the County Governor (representing the government at the regional level)
Interview 7	Civil servant responsible for water management in a coastal municipality
Interview 8	River basin management authority

4. Results

4.1. The Creation of the Plan

The Oslofjord Plan was developed at a time when the deteriorating condition of the fjord was widely acknowledged (Interview 4), and the need for more coordinated policy action beyond established institutional arrangements was recognised.

4.1.1. A Shared Understanding of Problems

In the autumn of 2017, three members of the Liberal Party (Venstre) submitted a Private Member's Bill to the parliament (Stortinget), proposing the development of a management plan for the Oslofjord that should address the cumulative pressures (Elvestuen et al., 2017; Figure 1). The Private Members' Bill highlighted the significance of the fjord and its surroundings for two million people engaged in various outdoor activities. It expressed particular concern about declining cod stocks, as well as the condition of seabirds and other wildlife in an ecosystem that they argued required restoration. Pollution from land-based sources was identified as a major issue, and the need to preserve and ensure public access to the area's cultural heritage was emphasised. These concerns were broadly supported by the Standing Committee on Energy and the Environment and in the subsequent parliamentary plenary discussion (Standing Committee on Energy and the Environment, 2018). Other approaches to address these challenges were considered as well, including drafting a separate law for the fjord and tightening restrictions on construction near the shoreline. In 2018, a consensus was reached, and a parliamentary resolution was unanimously passed in Parliament: "The Parliament requests the government to present a comprehensive plan for the Oslofjord—with the goal of achieving good environmental status, restoring important natural values, promoting active outdoor recreation, and preserving the biological diversity of the fjord" (Stortinget, 2018).

4.1.2. The Planning Process

The government assigned the MCE the responsibility of coordinating the planning process. A key challenge was to ensure support from all relevant ministries, including those responsible for economic sectors such as industry, fisheries, and agriculture, as well as regional and municipal planning. Such internal mechanisms in the government include a combination of meetings between ministries and cabinet meetings that issue mandates, address disagreements, and finally, approve the result (Sander, 2018). According to the state secretary, who managed the inter-ministerial processes, this was one of Norway's largest and most complex plans, considering the involvement of 118 municipalities, four counties, and many different interests. However, the process encountered relatively few conflicts:

> There was full political agreement in the parliament. This was noted by the ministers, so everybody understood that there was a need to do something….Thus, the starting point was better. It wasn't like the tough uphill battles I faced in a couple of other cases, to put it that way. (Interview 2)

During the initial stages of the planning process, including at a consultation conference with 260 participants, there were differing views about what type of plan should be developed. Two issues concerning the relationship to existing plans and policies help explain why a layered design was chosen for the Oslofjord Plan.

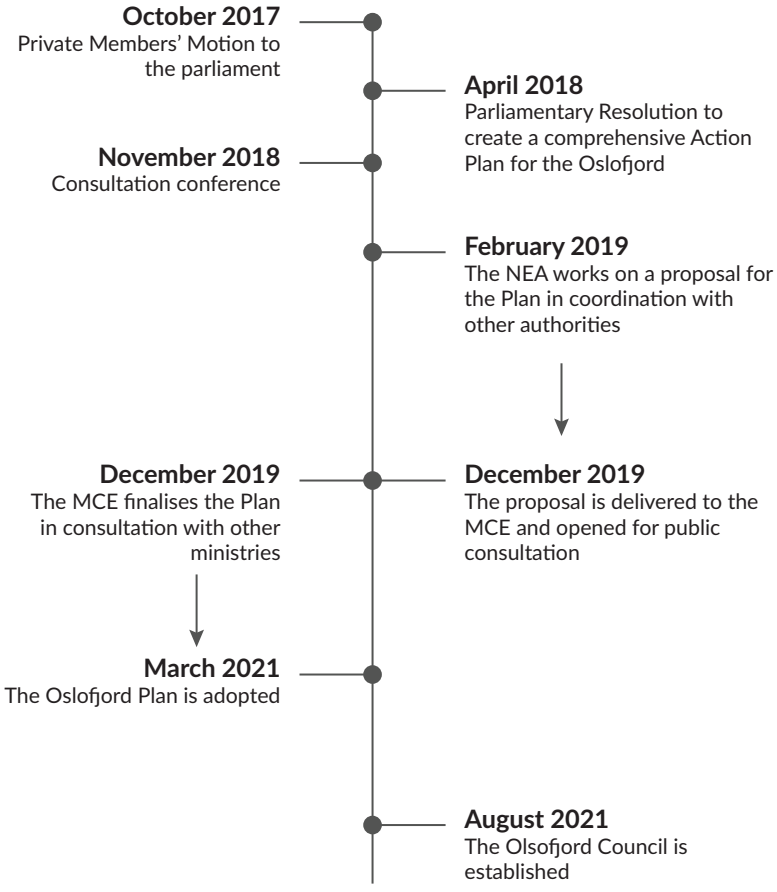

Figure 1. Timeline of the planning process for the Oslofjord Plan.

The first issue was the relationship to the River Basin Management Plans (RBMPs). These are prepared following the EU's Water Framework Directive, aiming to achieve good chemical and ecological status of waters through holistic management of catchments. The focus in the Water Framework Directive is on freshwater, but the geographical scope also includes coastal waters extending out to one nautical mile from the baseline. Given Norway's unique coastal geography, this delineates a large coastal zone, including the Oslofjord (Sander, 2023). The Oslofjord and its large catchment are covered by two RBMPs (Figure 2). However, large parts of the marine ecosystems, such as fish, seabirds, and marine mammals, are excluded when assessing the ecological status in coastal waters in the RBMPs (Sander, 2023). Since the status assessment is the baseline for identifying policy measures, this narrow focus inhibits broad policy action against all pressures. The importance of the RBMPs had already been emphasised in the Private Members' Motion (Elvestuen et al., 2017). In a letter to parliament, the minister of Climate and Environment initially opposed a separate Oslofjord plan, arguing that existing RBMPs already covered key elements and that efforts should focus on better implementation and coordination (Standing Committee on Energy and the Environment, 2018). However, following parliamentary and stakeholder discussions, along with a change in minister, this position was altered. When the Ministry commissioned NEA to develop a proposal for an Oslofjord Plan in 2019, it stated that the RBMPs should constitute an important element in the planning (MCE, 2019). The Ministry also defined the geographical scope to the inner and outer Oslofjord, supplemented by the catchment area, as in the RBMPs, to cover pollution from land. The then minister of Climate and Environment, who had previously initiated the Private Members' Bill, argued that the RBMPs "lack force and are too technical" and emphasised the need for mobilisation across levels (Interview 1). Similarly, his former state secretary explained:

> Sector-specific plans alone typically don't solve holistic problems. They only address a few specific challenges….The problems [of the Oslofjord] involve physical constructions and sewage, fisheries, agriculture, and spatial planning on land. There are many issues here, and therefore, a holistic plan was needed, as RBMPs alone wouldn't solve them all. (Interview 2)

The second issue concerned how to engage the various interests, particularly the counties and municipalities, considering whether the plan should be prepared by the government, adopted regionally by the counties, or a combination of both. The MCE instructed NEA to prepare the proposal with governmental agencies from different sectors and involve other interests. It was further specified that the Plan was to be over-arching, cross-sectoral, and strategic, aiming to "coordinate, supplement, and reinforce ongoing positive efforts" (MCE, 2019, p.1).

Throughout 2019, NEA collaborated with eight directorates, county governors, and four counties, supported by additional consultation meetings. The entire planning process was delegated to the directorates, including the assessment of the ecological status and pressures, as well as the proposal of policy measures. According to the project leader at NEA, they engaged in multiple rounds of dialogue with certain directorates to encourage them to "dig deeper into their toolboxes" when considering policy measures. The informant expressed positive surprise at the progress achieved and noted that consensus among the directorates would facilitate subsequent processes within the ministries (Interview 4). In December 2019, the NEA submitted its proposal to the MCE, which opened it for public consultations (NEA, 2019). For over a year, the proposal was discussed between the ministries, led by the MCE, before the cabinet approved it in 2021.

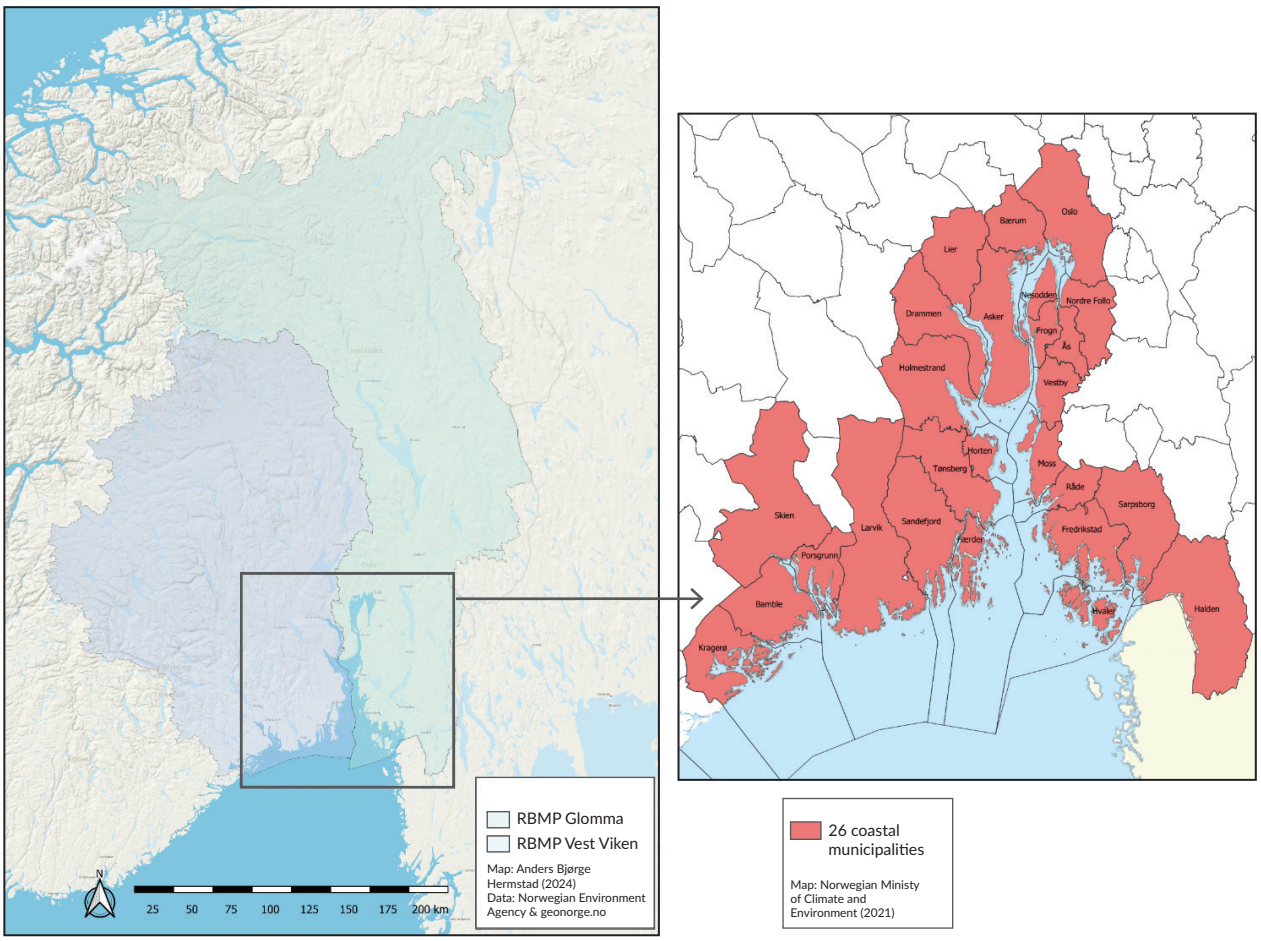

Figure 2. Oslofjord Plan's geographical coverage. Notes: The supplementing area for land-based pollution aligns with the two RBMPs covering the catchment area (left); the focus area covers the coastal zone (right). Sources: Sander et al. (2025); MCE (2021a).

4.1.3. The Adopted Plan

The adopted Plan became a clear-cut action plan with 63 measures aimed at achieving the objectives set by parliament, referring to all background information in NEA's proposal. The extent to which the Plan's 63 measures would meet the objectives set by the parliament was not specified; rather, a course was set with an unprioritised list of actions. The measures are organised into seven action areas, three of which build directly on the RBMPs: (1) reducing discharges from wastewater; (2) reducing agricultural run-off; and (3) reducing pollution from chemicals, litter, and microplastics. Objectives related to biodiversity beyond what was covered by the RBMPs and cultural heritage are grouped under action areas: (4) protective measures, primarily addressing fisheries and introduced alien species; and (5) restoration. Action area (6) focuses on measures specifically aimed at promoting outdoor recreation. Cross-cutting issues are covered in action area (7), including spatial planning and mechanisms for following up the Plan by establishing an Oslofjord Council. For each measure, the Plan identifies the responsible public authority (MCE, 2021a).

The nature of the 63 measures is diverse. Since the Plan is meant to "supplement, coordinate, and reinforce," 50 measures are continuations of ongoing initiatives, seeking to strengthen efforts through existing

instruments; only 13 are new. The Plan also includes 19 measures to generate new knowledge on environmental conditions, the impacts of activities, and the effectiveness of measures. Interesting in the context of layering is the group of approximately 15 measures that explicitly aim to change the instrumentation within existing sectoral structures or call for the preparation of additional plans. Examples include finalising regulations for the use of agricultural fertilisers, further restricting rules for access to protected bird habitats, and assessing the potential for stricter regulation of trawling. The latter went beyond merely referring to the detailing of measures in later planning; it concealed a political disagreement. Both informants from NEA and MCE commented that fisheries were the sector where the Plan remained the least concrete. "This is how far we got at that time," they reasoned (interviews 1 and 4). Both considered it most important to adopt a Plan with universal support, trusting that the continued process would lead to further improvements.

4.2. The Implementation Phase

Our analysis focuses on the Plan's environmental objectives, particularly in action areas targeting water quality and marine ecosystems (action areas 1, 2, 4, and 7), with selected measures addressing key pressures (Figure 3). Following Capano's first-tier approach, we present how the Oslofjord Plan has contributed to changes in the existing arrangements and policy implementation.

4.2.1. The Oslofjord Council

The measure to establish an Oslofjord Council was added by the MCE during the final phase of the planning. The Plan sets out that the Council should ensure regional and local support and support implementation through coordination, status reporting, and sharing of experience (MCE, 2021a). The Council is chaired by the minister of Climate and Environment and has convened twice a year since its inception. The Council's participant base has expanded over time. The members include the respective county mayors, county governors, and political representatives from a selection of coastal municipalities, including a few from the inland part of the catchment. Additionally, some NGOs and interest organisations representing environmental, recreational, fishing, and farming organisations were included. Moreover, an Oslofjord Secretariat—comprising representatives from NEA and county governors—was created to follow up with those responsible for implementing the measures and provide annual status reports on the progress.

4.2.2. The Effects on the Existing Institutional Arrangements

The Oslofjord Plan is a strategic plan, with the measures being implemented through existing institutional arrangements. The interactions of the Oslofjord Plan as a new layer with the existing institutional arrangements are depicted in Figure 3.

Several informants emphasised increased political and societal awareness as the most important result of the Oslofjord Plan and Council. The elaboration of the Plan by the national government, as well as the ministerial lead and engagement of mayors in the Oslofjord Council, demonstrates a clear political mobilisation. This has also gradually encouraged greater engagement from sectoral, regional, and local authorities. A key mechanism for establishing support and commitment has been the annual requirement for authorities to report on the progress of implementing the measures for which they are responsible (NEA, 2025). These

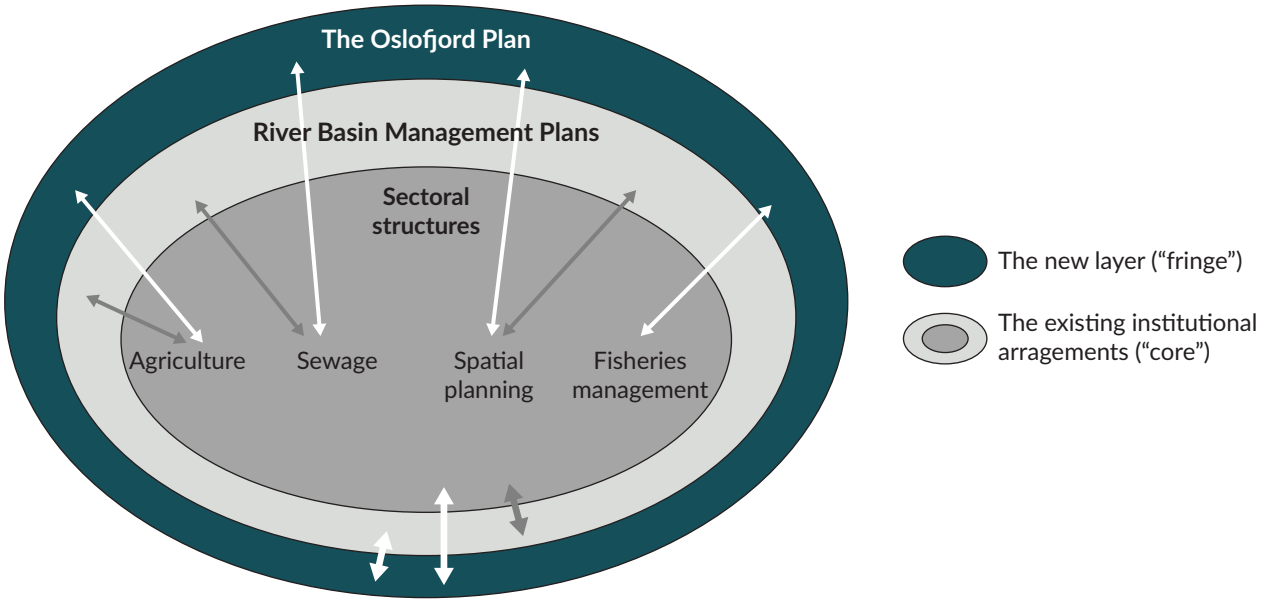

Figure 3. A conceptual illustration of the layered Oslofjord Plan and interactions with existing institutional arrangements. Notes: This includes sectoral structures and RBMPs, which also constitute strategic plans directed partly towards the same sectors; only those sectors this article focuses on are depicted here.

reporting obligations have been combined with dedicated meetings at political and administrative levels, influencing planning and decision-making processes at lower governance levels. Some counties and municipalities have formally incorporated the Plan's objectives and measures into their strategic documents, and the MCE has encouraged others to follow their example (MCE, 2023). A municipal informant noted that:

> The Oslofjord Plan has increased the focus on the Oslofjord across the municipal organisation…It's an important document we are working towards, across all relevant units….And we also received a clear instruction from our municipal council to further increase the focus on the fjord. (Interview 7)

The RBMPs, on which the Oslofjord Plan builds, are strategic plans that coordinate various authorities' efforts towards achieving good water quality. However, they lack additional legal force, and the designation and implementation of policy measures depend on the will and the financial and legal capacity of sectoral authorities and municipalities (Hanssen et al., 2017; Sander, 2023). Considering that both the Oslofjord Plan and the RBMPs are strategic plans addressing many of the same authorities with similar soft power (Figure 3), it is interesting that several informants note that "the Oslofjord Plan has been a support to the RBMPs, making them more relevant" (Interview 6) and thus facilitated their implementation (Interview 3 and 8). The RBMPs are coordinated by river basin authorities, a role assigned to the counties. However, counties lack a dedicated environmental mandate and hold a relatively weak position in Norwegian planning. Combined with limited and irregular reporting requirements, this hampers their ability to oversee and follow up with sectoral authorities. In contrast, the Oslofjord Plan assigns coordination to national environmental authorities. Alongside stronger political attention and stricter reporting obligations, this has enhanced their coordinative and proactive role towards sectoral authorities. Another challenge with the RBMPs is their limited capacity to address upstream-downstream issues in large catchments due to their focus on individual waterbodies as the primary unit of management. The Oslofjord Plan is increasingly shifting attention towards the Oslofjord as the final recipient and object to be managed, requiring policy action in the entire

catchment. This has gradually mobilised inland municipalities, with environmental consequences on the fjord now more often cited to justify objections in spatial planning.

In addition, we observe changes in the sectoral structures of the existing arrangements. This includes new or modified rules, additional grants or budgets, and new guidance and information (NEA, 2025). There are, however, notable differences among the action areas:

- Action area 1 (municipal wastewater): Key measures of the Plan in this area include improving municipal wastewater nitrogen treatment by constructing modern treatment plants and upgrading pipeline infrastructure to prevent sewage leaks and inflow of rainwater. Under the 1987 North Sea Declaration, Norway committed to reducing nutrient discharges by 50%. However, initiatives for nitrogen removal faced severe protests from municipalities responsible for wastewater treatment, given the high costs, immature technology for the Norwegian climate, and their contention that the main sources of pollution originated abroad. Consequently, the government withdrew the requirement. Today, only six plants remove nitrogen, three of which are in the Inner Oslofjord (Thaulow & Grande, 2015). This policy has changed. Municipalities renewing discharge permits must now remove nitrogen, and the NEA has instructed all catchment municipalities to prepare for the nitrogen removal requirement (MCE, 2023). The latest status report highlights an increase in both human and economic resources for the wastewater sector, leading to new guidance documents, allocation of funds to support planning, and stricter enforcement measures. Four municipalities have started constructing new nitrogen-removing plants (NEA, 2025). Coordination between municipalities is necessary to build effective treatment plants that meet new requirements and to share costs. Several feasibility studies have been undertaken, but discussions among municipalities and reaching final decisions take time.
- Action area 2 (agriculture): The second action area focuses on reducing nutrient and particle runoff from agricultural surfaces. Agricultural policy builds on a combination of binding regulations and voluntary schemes. Under the influence of the Plan, subsidies earmarked for measures that will reduce discharges into the Oslofjord catchment area have been set aside during the annual agricultural negotiations between the government and the farmers' associations (NEA, 2025). This has resulted in a substantial expansion of the area covered by measures for improving water quality (NEA, 2025). The Oslofjord Plan indicated that voluntary measures alone are insufficient and called for the implementation of additional regulations in accordance with agricultural legislation (MCE, 2021a). Regional environmental regulations, including restrictions on ploughing fields in the autumn, had already been adopted in some counties before the Plan was approved. During its implementation, such regulations have been expanded to other counties (County Governor of Oslo and Viken, 2024). Additionally, a regulation that restricts the application and storage of fertilisers was finally concluded and entered into force in 2025 (Ministry of Agriculture and Food & Ministry of Trade, Industry and Fisheries, 2025).
- Action area 4 (fisheries): During the drafting of the Plan, discussions concerned the ecological impacts of trawling and the cascading effects of depleted fish stocks. Decades of overfishing had led to the collapse of cod and other benthic fish populations, disrupting marine food webs and promoting the growth of opportunistic algae. Prior to the adoption of the Oslofjord Plan, the Ministry of Trade, Industry and Fisheries had adopted a set of regulations that restricted cod fishing in the Oslofjord (Ministry of Trade, Industry and Fisheries, 2019). The Oslofjord Plan required an assessment of which additional measures would be needed. In 2025, the Ministry of Trade, Industry and Fisheries presented a regulatory proposal

at the Oslofjord Council meeting, based on the recommendations of two directorates. The proposal introduced comprehensive and stringent regulations, including the creation of large no-take zones, and is currently being assessed based on comments from public hearings (Ministry of Trade, Industry and Fisheries & Ministry of Climate and Environment, 2025).

- Action area 7 (spatial planning): In Norway, construction within "the 100-metre belt" along the shoreline has been prohibited for decades, unless authorised through a spatial plan. A major problem is that many municipalities grant dispensations, gradually degrading habitats and denying public access to the shoreline. Several measures in the Plan aim to ensure stricter practices regarding dispensations and better coordination in municipal spatial planning. Another measure suggested was to assess the potential for a regional spatial plan for the Oslofjord area. However, this has been rejected by the four counties involved. The latest status report indicates that spatial management issues remain among the areas where the least progress has been made. There is, however, a slight decrease in new dispensations granted, and several municipalities have reviewed and updated their spatial plans (NEA, 2025).

5. Discussion

5.1. Approaches to Layering in the Institutional Design of the Oslofjord Plan

The Oslofjord Plan provides an interesting empirical case to study layering. As argued in Section 2.2, we follow Capano's definition of layering as a mode of institutional design (Capano, 2019). To better understand what "adding something new" to an institutional arrangement implies, he suggests focusing on the substantive content of these additions. He differentiates between three distinct approaches that policymakers can use: adding instruments, adding actors, and changing perceptions. We argue that the institutional design of the Oslofjord Plan contains all three approaches.

The adoption of the Oslofjord Plan as a strategic action plan can be seen as adding a new instrument as an extra layer ("regulatory ratchet"; Capano, 2019; van der Heijden, 2011; see also Vedung, 2017). The Plan has sharpened existing measures and introduced new ones. Among scholars, there are differing views on whether layering is a deliberate and conscious decision by policymakers or an unintended by-product of their decisions (Capano, 2019; Carey et al., 2019). In the case of the Oslofjord Plan, policymakers deliberately chose layering as the institutional design approach, defining the role of the new instrument as one that "supplements, coordinates, and reinforces" existing arrangements, which were considered insufficient in scope and strength to address the complex challenges. This approach closely aligns with Streeck and Thelen's (2005) view that layering does not seek confrontation with existing structures but rather offers an alternative path by introducing an additional layer.

The establishment of the Oslofjord Council represents a "thickening" of actors (Capano, 2019; van der Heijden, 2011) by adding a new arena to the institutional arrangements. Several of these actors collaborate in existing arenas, such as the river basin districts, which address specific policy issues or limited geographical areas. The Oslofjord Council is novel in gathering relevant actors in the entire catchment. Van Assche et al. (2020) argued that a common challenge in coastal governance is the limited recognition of the coast as an area and object of governance in its own right, with fragmented governance structures failing to integrate land–sea interactions. They advocate for the establishment of governance arenas specifically

recognising and addressing coastal challenges, and we argue that the Oslofjord Council represents such an attempt. However, there are differing views on its role and success. The meetings were recognised by the interviewees as facilitating peer learning through the exchange of implementation experiences (Interview 1 and 8). However, the Council has not operated as an arena for substantive political debate or decision-making. This absence of overarching steering is viewed by some informants as a weakness. Conversely, it has been argued that the Council was never intended to serve as a decision-making body, but rather as a coordination mechanism (Interview 1). In this context, several informants have called for stronger political leadership from the entire government, and one informant noted the need to complement this with more bottom-up coordination initiatives, for instance, initiated by the large sewage treatment operators (Interview 1).

The introduction of shared policy goals related to the entire Oslofjord aligns with what Capano (2019) refers to as the "ideational layer." The Oslofjord Plan and Council, through its political leadership and mobilisation, have provided a new framing of the problem and a sense of urgency. Additionally, the Plan's preparation and implementation have been supported by scientific assessments and various reports, offering a better understanding of the complex challenges. The Oslofjord Plan is a government initiative targeting public authorities, as reflected in its assigned responsibilities and the composition of the Oslofjord Council. Nevertheless, it has indirectly spurred mobilisation among NGOs and industries, resulting in parallel initiatives and collaborative networks. Simultaneously, media attention has raised broader societal awareness.

5.2. Do We Observe Transformative Change Due to the Oslofjord Plan's Layered Design?

The ecological crisis in the Oslofjord has not been sufficiently addressed by existing institutional arrangements. The Oslofjord Plan establishes an ambitious objective of a clean, healthy, and accessible fjord. Achieving this requires a radical transformation from current trajectories. The critical question is whether the layered structure created by the Plan will be capable of initiating the necessary dynamics.

As discussed in Section 2.2, Capano (2019) emphasised that there is no guarantee that layering, as a mode of institutional design, will lead to changes in policy outcomes. This depends on the interactions between the new layer ("the fringe") and the existing institutional arrangements ("the core"). Differential growth refers to the mechanism by which the fringe gradually reconfigures the institutional dynamics and trajectory of the core, thereby fostering the emergence of a new logic of action. In the absence of differential growth—for instance, when institutional lock-ins prevent reshaping the core—layering does not result in changed policy outcomes and thus fails to initiate transformative change.

In 2025, a new status report on the ecological state of the Oslofjord was presented (Frigstad et al., 2025). With some exceptions, the report depicts a concerning picture of the Oslofjord, with the ecological condition mostly continuing to deteriorate or showing no improvement. The report indicates that the Plan is unlikely to achieve its objectives in the near term, certainly not by 2026, which is its time horizon. Consequently, the minister of the MCE and the secretariat have signalled the need to extend the initiative. The absence of visible progress on policy outcomes raises the question of whether the Oslofjord Plan failed to initiate a mechanism of differential growth or whether the layering theory offers other explanations. We propose two explanations (E1 and E2).

E1: Transformative change is not observed because the Oslofjord Plan does not address the existing institutional barriers, which create lock-ins and hinder differential growth. As a result, the institutional trajectory remains unchanged.

E2: Transformative change takes time because differential growth is a gradual process. This explains why changes in policy outcomes have not yet been observed.

5.2.1. Transformative Change Is Not Observed Due to Institutional Lock-ins (E1)

Kelly et al. (2018, 2019) note that a common barrier to achieving transformative outcomes is that "persistent problems" and the institutional complexity of the existing arrangements are not addressed by the new governance system. They attribute this to path dependencies, where policymakers' interventions are influenced and restricted by past decisions. Other contributing factors may include power imbalances among stakeholders seeking to preserve the status quo or conflicts between new policy objectives and those of the existing arrangements (Trubbach et al., 2024). Consequently, the status quo is not challenged, and lock-ins of the incumbent institutional arrangements are reproduced (Kelly et al., 2018, 2019). In the case of the Oslofjord Plan, it is thus relevant to ask whether institutional barriers from the existing institutional arrangements can be observed and whether these create institutional lock-ins that undermine differential growth.

The principle of local self-government is deeply embedded in Norwegian governance, leading to resistance towards overriding the municipalities' decision-making powers. The latest status report identified spatial management as one of the action areas with the least progress (NEA, 2025). We argue that the principle of local self-government often acts as a barrier, as each municipality is responsible for spatial planning within its own boundary. An informant at the County Governor's Office, involved in providing input to municipal spatial plans, noted that their role in ensuring holistic planning across the entire Oslofjord remains limited and suggested that national environmental authorities may be needed to improve coordination across municipal borders (Interview 6). While the Oslofjord Plan encouraged counties to consider establishing an interregional plan for the Oslofjord, the counties chose not to pursue this initiative (NEA, 2025). This resonates with previous literature highlighting challenges in achieving holistic spatial planning in Norway due to the delegation of planning responsibilities to the municipalities and the constrained role and limited legal status of regional planning (Hersoug et al., 2012; Stokke, 2021). Local self-government also creates challenges regarding municipal wastewater management. This is also largely delegated to the municipalities, raising questions about who is responsible for coordinating beyond municipal borders. While the Oslofjord Plan and sectoral policy on wastewater advocate greater cooperation, an informant at the County Governor's Office explained that "we can encourage and recommend, but we cannot impose it on them—the government does not have that tool at its disposal" (Interview 6). A municipal agent from a coastal municipality noted, "Cooperation is a necessity in order to meet the requirements, but there are other municipalities that don't think along the same lines." (Interview 7). Regarding how coordination across all municipalities could be achieved, the agent reflected that "regional sewage plans, as a form of overarching steering, could have high potential" (Interview 7).

The government's strict application of the polluter pays principle is a recurring issue in discussions on municipal wastewater management. Around 2000, the government stopped subsidising wastewater

infrastructure, making the municipalities fully responsible for funding the operation, maintenance, and upgrading of the infrastructure, including wastewater plants. In line with the polluter pays principle, municipalities finance these costs through a sewage fee imposed on homeowners and industries (the polluters), earmarked for the purpose. Two paradoxes, however, challenge this principle and have slowed down municipal efforts. The first concerns the perceived uneven distribution of costs and benefits between coastal and inland municipalities; while all municipalities bear costs, inland municipalities see fewer benefits of an improved fjord. The second concerns the intergenerational distribution of costs since the fjord's deteriorated state is the result of decades of insufficient municipal investments in sewage infrastructure. In 2021, Oslofjord mayors petitioned the government to assist in covering the costs, finding it unreasonable that inhabitants alone should bear the costs of saving the fjord through large increases in the fees, e.g., a 50% increase over four years (Mayors for the Oslofjord, 2022). The mayors were also concerned that the rising fees could become politically sensitive, potentially affecting local elections and complicating efforts to implement nationally decided measures. The government has upheld the polluter pays principle but offered limited funds to support the planning of new infrastructure in response (NEA, 2025).

The principle of sectoral responsibility for the environment creates challenges towards integrated environmental management in Norway. To achieve environmental objectives, sectoral authorities must themselves implement policy measures within their respective regulatory and financial frameworks, while environmental authorities play a coordinative and facilitative role (MCE, 1997; Persson, 2004). However, this creates tensions around which measures sectors are willing to implement, especially when environmental objectives do not align with their core sectoral mandates. The Oslofjord Plan layers reinforced environmental objectives without contravening the principle of sectoral responsibility, which may even intensify tensions between misaligned policy objectives. For instance, during an Oslofjord Council meeting, representatives from the agricultural sector pointed to the trade-off between the goal of increasing Norway's self-sufficiency in agricultural products from 40% to 50% and several measures for improving water quality that may reduce harvest yields. These discrepancies in the Plan's holistic policy ambitions, layered onto a sectoral structure in the existing institutional arrangement, align with similar findings in the literature (Indset et al., 2010; Vince, 2015).

5.2.2. It Takes Time to Set Differential Growth in Motion (E2)

The Oslofjord Plan was introduced four years ago. We argue that the temporal dimension is one important factor that can explain why we do not yet observe changes in policy outcomes towards a "clean and healthy" fjord. Several policy measures in the Oslofjord Plan were designed to be developed and specified over time, explaining the temporal delay. When the Plan was created, there was uncertainty regarding the efficiency and effectiveness of several measures, as well as unclear scientific recommendations. To avoid further delays, the Plan was adopted even though measures for some issues had not yet been specified. Instead, knowledge-building and assessment-oriented measures were included, with the aim that these would later be developed into concrete policy measures. For example, one measure of the Plan was to assess the possibility of regulating fisheries rather than setting regulations. As more information has become available and political processes have advanced, a proposal with extensive fishing restrictions has recently been presented. Similar examples include restrictions on the discharge of boat sewage and agricultural regulations related to fertilisers.

Another point to support this explanation is that the majority of the measures are a continuation of existing initiatives, with the Plan seeking to reinforce their implementation. As demonstrated in Section 4.2.2, we observe several reinforcements within the existing institutional arrangements. Examples include increased and earmarked financial aid for environmental agricultural measures and the adoption of regulations on agricultural practices. In the area of wastewater management, this includes dedicated planning funds, increased human resources, and enhanced guidance (NEA, 2025). The Oslofjord Plan's positive effects on the implementation of policy measures in the RBMPs, driven by its political mobilisation and more rigorous reporting regime, serve as another illustration. This demonstrates how the Oslofjord Plan is reinforcing the implementation of policy measures in the existing arrangements, which contribute positively to the intended outcomes. However, these changes occur gradually.

Another explanation for some measures pertains to the temporal delay between measures and positive effects on the fjord. First, it takes time to plan and implement a measure. This is especially visible in the municipal wastewater sector, with long and complicated planning of nitrogen-removing plants, followed by a construction phase and fine-tuning of the processes. Even though the first new nitrogen-removing plants may start operating in 2026, many others will not start before 2030 or later (NEA, 2025). Second, it takes time before the reductions in discharges of nitrogen and particles lead to the recovery of the marine ecosystem. Delayed ecological responses to measures are also evident in fish stocks, which have not yet shown signs of recovery despite initial restrictions on commercial fishing (Knutsen et al., 2022).

5.2.3. Reflections on Research Design

One important limitation of our analysis is the challenge of establishing causation, which is an inherent difficulty in policy research (Falleti & Lynch, 2009). While empirical findings from interviews and document analysis suggest that observed changes can be attributed to the Oslofjord Plan, it is essential to recognise that the Plan does not operate in isolation, as other policy and societal developments occur simultaneously. For example, while fisheries regulations are clearly linked to the Oslofjord Plan, another explanatory factor is the parallel initiatives on pilot areas for marine conservation in the Oslofjord-Skagerrak area (MCE, 2021b; Interview 3). Similarly, new policies in the wastewater sector are influenced not only by the Oslofjord Plan but also by the ongoing revision of the EU's Urban Wastewater Directive.

6. Conclusion

The Oslofjord has undergone serious ecological degradation due to long-term human pressures, including nutrient pollution, overfishing, and habitat loss. Research on coastal governance highlights that traditional institutional arrangements are often inadequate for addressing the complex dynamics between land and sea, which is also evident in the Oslofjord. The Oslofjord Plan, introduced by the government to restore the fjord, exemplifies a case of institutional layering. The Plan aims to "supplement, coordinate, and reinforce" existing arrangements through the addition of instruments, actors, and changed perceptions. We analysed how this new layer interacts with established institutional arrangements. This involves understanding whether the Plan (the fringe) gradually reshapes the trajectory and predominant logic of action created by existing institutional arrangements (the core), or whether institutional lock-ins obstruct such differential growth. Analysing these institutional dynamics is crucial to determining whether the Plan can create transformative change. Current reports suggest the Plan has not yet achieved its intended policy outcome, as the ecological status of the fjord

has not improved. We proposed two complementary explanations: (a) the Oslofjord Plan does not address existing institutional barriers, resulting in lock-ins that hinder differential growth and prevent transformative change; and (b) the absence of observable changes in policy outcomes reflects the gradual nature of differential growth and the time required for transformative change to unfold.

We argue that several governance principles deeply embedded in the Norwegian system pose barriers to the Plan's implementation. Its holistic ambitions—particularly in spatial and wastewater management—are challenged by the principle of local self-government, which resists coordinated steering from above. The Plan relies on soft power and political mobilisation, which has increased efforts and awareness across municipalities, but this only partially mitigates the challenges posed by local self-government. Similarly, we find that despite the Plan having increased the societal acceptance of costly measures to upgrade sewage infrastructure, the polluter-pays principle—where inhabitants bear the costs of investments in new sewage treatment plants—remains a key barrier. As a result, we conclude that in the policy areas of wastewater and spatial planning, the Oslofjord Plan is currently insufficient to achieve its objectives due to persistent institutional barriers that create lock-ins. Because of the sectoral responsibility principle, achieving environmental policy objectives becomes difficult when these objectives and the necessary measures conflict with a sector's primary objectives, limiting sectoral authorities' ability or willingness to implement environmental measures. However, we do observe greater environmental integration within sectoral structures, particularly in policy areas where the Oslofjord Plan reinforces the RBMPs. This may be attributed to heightened political attention and a more stringent reporting regime, as well as the fact that the coordination role towards sectoral authorities under the Oslofjord Plan is assumed by national environmental authorities, unlike the RBMPs, where counties without a specific environmental mandate and more limited authority are responsible. We therefore conclude that, while challenges from conflicting objectives under sectoral responsibility persist, the Plan offers stronger steering toward environmental objectives than existing institutional arrangements. However, the changes within sectoral structures occur gradually, and due to the Plan's design, where many measures are intended to be specified and will be implemented over time, it takes time before these lead to visible improvements in the fjord's health and accessibility.

Achieving the Oslofjord Plan's ambitious objectives requires a fundamental reconfiguration of the logic of action across all sectors and actors. While the Plan has gradually initiated differential growth, persistent institutional lock-ins lead us to conclude that it is insufficient in generating transformative change and achieving its ambitious objectives. The Plan was adopted in 2021 despite scientific uncertainty, as initiating action was prioritised over further delay. The Plan outlines a general direction but lacks prior assessment of the expected results of the measures and prioritisation among the actions. The Plan's first phase runs until 2026, and the initiative will likely continue beyond. Our analysis offers several recommendations for a potential revision of the Plan. First, we argue that greater attention must be paid to the institutional barriers embedded in existing arrangements, as these can obstruct change. Second, a clearer understanding of the effectiveness and efficiency of proposed measures is needed. Arguably, the increased knowledge and political as well as societal mobilisation achieved during the first phase of the Plan would likely facilitate a revision of measures.

Although this article focuses on the Oslofjord Plan, it informs broader discussions on institutional layering. We support Capano's (2019) view that it is important to distinguish between layering as a mode of design

and its effects in terms of policy outcomes. Choosing layering as a design mode of the Oslofjord Plan was based on the recognition that existing arrangements should remain the key to change, but that they needed to be supplemented, coordinated, and reinforced. Likely due to existing societal and political awareness of the fjord's condition, this approach faced minimal resistance. However, implementation depends on dynamic interactions between the new layer and existing arrangements and has proven more complex. This highlights the importance of paying greater attention to implementation processes to understand how layering can lead to transformative change.

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Conflict of Interests

The authors declare no conflict of interests.

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