



The rural development trilemma

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ABSTRACT

Rural public policies are important and contested in many countries. Politicians and administrations often have high ambitions for both spatial policies (e.g. maintaining demography, local work, businesses etc.) technological development (modernisation, increased productivity etc.), while production tend to be limited by markets (as in the case of agricultural productions) or resources (as in e.g. fisheries and forestry). In this paper we demonstrate that rural policies may be hampered by a specific type of wicked policy problem: inbuilt contradictions between policy measures in the form of what may be described as a rural development trilemma. A trilemma is a situation where there are three goals but the fulfilment of (any) two goals contradicts the third.

We present and discuss the concept of a rural development trilemma. Empirically we analyse and compare the developments of the agricultural policy and the fishery policy of Norway over the last 50 years. The sectors are very different, but both sectors are important in terms of rural development and the two policy fields run into a similar trilemma. This comparative study constitutes a plausibility probe of the notion – and usefulness – of a rural development trilemma in the field of rural public policy.

1. Introduction

Rural public policies are important and contested in many countries. This is illustrated by e.g. the many farmers demonstration and protests all over Europe as well as in several developing countries the last years. A growing research literature has addressed rural riots and a growing unease across sectors and borders (see e.g. Strjker and Terulin, 2015; Cramer, 2016; Guilluy, 2019; Goodhart, 2017; Hochschild, 2018; Vik et al., 2022). There is also a substantial literature on rural development and decline (e.g. Marsden et al., 2000; Murdoch, 2000; Goodman, 2004; Long et al., 2016). A key point in much of this is that the transformation of traditional rural industries is key to understand rural decline (e.g. Vik, Fuglestad et al., 2024). In an extensive literature review Li et al. (2019) explore the reasons for rural decline worldwide and suggest that new activities or markets are critical for sustainable rural development. Thus, we may state that rural development and policies toward rural regions in general¹ are important, but also that the problems are tricky and hard to solve. In this paper we ask why these policies are so tricky?

Policies toward rural and coastal sectors such as agriculture and fishery are often used as tools to achieve positive rural development. The

underlying assumption is that well-tailored rural policies lead to positive rural development. However, this causality is not straightforward; Rural development issues tend to be wicked in nature. What Rittel and Webber (1973) termed “wicked problems” are issues characterized by complexity, nestedness, and without technical solutions, where policies directed to solve them create new problems equally wicked. Thus, policies directed to solve wicked problems will often be characterized by conflicting policy objectives and contradictory regulatory instruments.

However, identifying and describing the complexity and wickedness of rural policies alone is neither particularly politically useful nor academically fruitful. We need to understand more specifically what makes the policy wicked. In this paper we demonstrate that policies designed to achieve positive rural development goals may be hampered by a specific type of wicked policy problem (Rittel and Webber, 1973): inbuilt contradictions between policy measures in the form of what we described as a rural development trilemma. A policy trilemma is a situation where there are three goals, and the fulfilment of (any) two goals contradicts the third (Vik, 2020).

The rural development trilemma we look into consist of a situation where there are three policy goals which all are reasonable and

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¹ There are various literatures dealing with these issues and thereby also different traditions in the use of terms with related contents, as e.g. rural, coastal, regional, peripheral. Mostly, we try to stick with the terms rural policy and rural development in this article.

politically legitimate: First, there is a goal to achieve increased productivity of the sectors through the use of more and more advanced technology in order to modernise, to help achieve improved workplace safety, increased income etc.; second, there is a goal to achieve a regulated and fixed production due to either limited markets – as in the case of agricultural productions – or resources – as in e.g. fisheries and forestry, and; third, there are structural spatial goals to achieve or maintain stable demography, geographically distributed industries, local businesses etc. As we will seek to demonstrate, this is a trilemma since success in (any) two of these goals, tend to imply jeopardising the third.

In many countries, rural development is closely tied to the agricultural and/or fishery sectors due to these sectors economic and/or cultural importance nationally or regionally. In this article we empirically analyse and compare the developments of the agricultural policy and the fishery policy of Norway over the last decades. Norway is well-suited for this study for two reasons. First, it is a country with large rural regions based on natural resources such as agriculture, fisheries, forestry and more, but at the same time a rich country willing to use substantial resources on its rural sectors. Thus, if it fails, it shouldn't be due to (primarily) financial reasons. Second, the two cases are, in the Norwegian context, fundamentally different; Agricultural land is very scarce (approximately 3 percent of land area), the sector is highly subsidised, and the policy is oriented towards protectionism and domestic consumption (Forbord and Vik, 2017). Fisheries, on the other hand, is based on a very rich resource base, and the sector is highly export oriented and marked by liberal trade policy. Yet, both sectors are important in terms of rural development (Sønvisen et al., 2011; Vik et al., 2022), and the two policy fields run into the same type of trilemma.

We build our analysis on official reports, white papers etc., who describe both policy goals and structural developments.

Our contribution to the literatures on rural development and rural policy is that we, through this comparative study, perform a reasonable plausibility probe of the notion – and usefulness – of a rural development trilemma in the field of rural public policy. By showing the fruitfulness of the concept, in fisheries as well as agriculture, we demonstrate that the concept of a policy trilemma in rural development may be a useful analytical tool in helping make sense of the choices and decisions in a policy landscape marked by complexity and seemingly wicked problems.

The remaining parts of this paper is organized as such: First, we present the theoretical starting point, relevant literature on issues related to the complexity of public policy and planning, in particular wicked problems, governability and trilemmas. Thereafter, we present methods and data, before we move on to the empirical parts where we go through the developments of the trilemma in agriculture and fisheries respectively. This is followed by a discussion of findings, scope and limitations, before we conclude.

2. From wicked problems to governability and trilemmas

Several concepts have been developed to deal with difficulties in planning and policy making. The most widely used is probably the term 'wicked problems' introduced by Rittel and Webber (1973). Their article 'Dilemmas in a general theory of planning' (1973), was the start of a wave of research across social sciences and empirical sectors (Lönngren and Van Poeck, 2020; Head, 2019), including agricultural and fisheries policies (Kuhmonen, 2018; Morath, 2015; Jentoft and Chuenpagdee, 2009). Wicked problems are complex, cannot be formulated unambiguously, and solutions can never be defined as right or wrong, only more or less good. Furthermore, wicked problems are unique and most often symptoms of other problems. Not least, the understanding of the nature of wicked problems is largely driven by solutions envisioned.

The concept has had substantial impact but has also been criticized. In a literature review Lönngren & van Poeck (2020) summarizes some of the problems in this way: "(...) the concept is not always consistently

applied as a theoretical concept; that authors ascribe many different meanings to the concept; that authors use diverse epistemological assumptions that are not always made explicit; and that the concept performs a wide range of rhetorical functions." (p.1). Peters (2017) address another problem with the way the term has been used when he states that the term is subject to 'conceptual stretching'; when authors use the concept on challenges that may be problematic, but not meet the actual criteria described by Rittel and Webber. Also addressing the use of the concept, Termeer et al. (2019) hold that the concept may lead to either paralysis or excessive belief in solutions to the wicked problems at hand. Going more into the conceptual basis of the term 'wicked problems', Turnbull and Hoppe (2019) criticize the dichotomy it builds upon as false: the distinction between tame/wicked problems. They go on to argue that political sciences both have had, and need, better – and more precise – conceptualisations of public problems than 'wicked problems'.

Several more recent literatures have moved on from the description of wicked problems. One such literature is focusing on governability (see e.g. Song et al., 2018; Johnsen, 2017; Jentoft and Johnsen, 2015; Jentoft and Chuenpagdee, 2009). In fisheries management research for instance, Jentoft and Chuenpagdee (2009) hold that "[f]or wicked problems, a governance approach is needed" (p. 554). Their suggested governability framework, addressing the task of managing fisheries resources, is also complex. It consists of the combination and interactions of i) a social (and political) governing system, and ii) a natural or ecological "system to be governed". These interconnected systems share some characteristics, as they are diverse, complex, dynamic, and vulnerable (Jentoft, van Son et al., 2007), which make them difficult to manage and regulate by technical means only. Instead, continuous negotiation and trade-off between conflicting goals and outcomes are necessary and there is no ultimate solution. This approach has also been criticized on various grounds (e.g. Song et al., 2018; Johnsen, 2017). A drawback with the fisheries governability approach in our context is its specificity to fishery policy. Although a detailed and specific theoretical model may come close to the realities it tries to describe, it makes generalization across sectors less viable.

A third approach to complex policy problems is the concept of policy trilemmas and conflicting goals. A trilemma occurs when only two out of three equally reasonable priorities can be achieved. The most classic policy trilemma in the literature is the monetary trilemma (Mundell, 1963), or the so-called un-holy trinity (Cohen, 2000). It states that one cannot have 1) a fixed exchange rate, 2) capital mobility and 3) national (independent) monetary policy at the same time. Another, related, example is the financial trilemma (Schoenmaker, 2011), in which achieving financial stability, financial integration and national financial policies simultaneously is impossible. Several studies have addressed the 'food, energy and environment trilemma' (Tilman et al., 2009; Harvey and Pilgrim, 2011; Steinbuks and Hertel, 2016), in which increased use of cultivated land for both food and energy purposes is likely to increase the agricultural carbon footprint; you cannot have more food, more bioenergy from agricultural land and reduced carbon footprints. Energy policy is also a field where a trilemma has been used in several policy analyses. This trilemma consists of energy security, energy equity and energy sustainability (World Energy Council, 2021). Finally, Vik (2020) analyzed the development of what he called the agricultural policy trilemma. This consist of an inbuilt contradiction between a goal of increased productivity, stable production to avoid over-production, and stable farm structure. Fulfilling any two of these contradicts the third. However, the formulation of Vik's (2020) trilemma is specific to agricultural policy problems.

Our argument here is that the principal challenges and public policy goals for rural development can be formulated as a more general rural development trilemma. In general terms, the rural development trilemma "consists of three types of goals.

- i. Productivity goals, through the use of more and more advanced technology to achieve modernisation, improved workplace safety, increased income etc.
- ii. Production stability goals due to market limitations (as in the case of agricultural productions) or resources (as in fisheries).
- iii. Structural spatial goals, as e.g. maintaining demographic and/or industrial structure, local employment, local businesses etc.

The trilemma is that working towards any two of the goals contradict the third. The following combinations can be pictured: First, if there is a goal to achieve modernisation and increased productivity through the use of new technology AND there are structural spatial goals, as e.g. maintaining the existing production structure in the communities, this implies increased total production, and thereby contradicts the goal to limit production due to market- or resource constraints; Second, if the wish to increase productivity through e.g. technological innovations etc. AND the production limitations due to market- or resource limitations is the prioritization, this puts pressure on the structural spatial goals as there will be decreasing need for labour in the sector; Third, if production limitations due to market or resource limits AND the structural spatial goals as e.g. a fixed size of the workforce are prioritized, there will be necessary to limit the productivity growth that comes with e.g. new technological innovations.

It is important to note that a policy field cannot always be described and analyzed as a trilemma. First, they are results of a specific type of goal structure, and second, trilemmas are analytical tools, not empirical realities. Consequently, we can't treat policy trilemmas as given. The benefit of the trilemma concept is that it makes trade-offs explicit. It makes the decisions (and the consequences) clearer. It explicates why you can't have your cake and eat it too.

3. Materials and methods

Methodically, this article is a parallel comparative case study (Skocpol and Somers, 1980). Structurally it is related to Mills method of agreement – or what has been known as the Most Dissimilar System Design (MDSD), where the cases are very different but has some crucial similarities. However, our purpose here is not causal explanations as in Mills experimental logic. Our study is most of all an interpretative study (Lijphart, 1971), where we illustrate the usefulness of the concept of 'the rural development trilemma'. We have picked cases that presumably fit the model since we aim at exploring a certain logic – the relation between policy goals – rather than making causal generalisations. Thus, we present our study as a 'plausibility probe' (Eckstein, 1975; Moses and Knutsen, 2019).

The data used in the analyses are core public documents and historic data from the period between the 1930s (for fisheries) and mid-1970s (for agriculture) through to the end of 2020. Data are texts of two types. First, public documents such as Norwegian Official Reports, Parliamentary Reports (white papers), and Parliamentary Propositions. Second, we use data from secondary sources, mainly scholarly work from others who have studied or described the history and development of policy in the two fields. The public primary sources used in the analyses are presented in Tables 1 and 2.

4. The trilemmas in agriculture- and fisheries policy

4.1. The rural development trilemma in fisheries

The near-shore seasonal abundance of large amounts of fish along the Norwegian coast has been the basis for rich fisheries as well as a 1000-year history of international fish trade. In earlier days, despite rich resources, profitability in the fisheries was generally low, the fisheries dependent communities were poor, and the value-chain was controlled by wealthy merchants. Throughout the early 19th century, the harsh conditions led to various initiatives to organize fisheries. The authorities

were also concerned and took several measures to support the fishermen's initiatives and to regulate fish sales to improve the situation. A key to improve the situation were new technologies in the fisheries. Engines and better boats increased mobility, capacity and catches in the fisheries (Finstad et al., 2014)

In the interwar period the whole fishery sector went through an institutional reform. A profitability committee (Profitability committee, 1937) proposed that fisheries should organize themselves as a rural industry, with cooperative organisation among self-owning fishers and their crew as the organisational principle. In 1938 the Raw Fish Act (the forerunner to the Fish Sales Law) passed the Parliament. This gave fisher-controlled, cooperatively organised mandated sales organisations (MSOs), control with the first-hand sales and the mandate to set minimum prices to make sure that the fishers got a fair share of the value. The MSOs set minimum prices, organised the sale, licenced buyers and gave credit to the buyers on one side, and guaranteed pay for the sellers. The mandated sales organisations have survived, and are still today protected by law and is an important institutional element in the Norwegian fisheries policy (Holm, 1995; Johnsen, 2020; FSA, 2015). However, despite its contribution to more equal distribution of revenues by the power to set prices, the Raw Fish Act did not solve the profitability problem.

After WWII, modernisation of the traditional rural and coastal industries were at the forefront in Norwegian policies. Regional planning programs addressed the specific challenges in northern Norway and coastal communities (Teigen, 2019; Røed, 2024). Fisheries policies aimed both at reducing fleet employment and increase profit (Parliamentary Report No. 10, 1957; Johnsen, 2004; Sønvisen, 2013). New technology made this possibility. A subsidised transition from coastal to a more far-reaching offshore fleet was a part of the plans (Teigen, 2020). In addition, at the end of the 1950s subsidies were introduced to the fisheries, and in 1964 a main agreement between the state and the Norwegian Fishermen's Association were introduced. A system for negotiation of subsidies was formalized (Parliamentary Report (1963-64), Holm 1995). The goals were modernisation and productivity growth, as well as increased livelihoods for the coastal population.

Then, from the early 1970s and onward several environmental challenges surfaced. First, due to overharvesting and natural fluctuations, the spring spawning herring stock collapsed in 1972. With the establishment of the 200 nautical mile Exclusive Economic Zone (EEZ) Norway and other coastal nations got sovereign rights to manage national and shared fish resources.² With the establishment of the Salt-water Fisheries Act in 1983 resource concerns gradually took over as the main goal in Norwegian fisheries – what Holm (2001) calls the "Invisible revolution". Politically, Parliamentary reports nr. 18. (1977-78) and Parliamentary Report nr. 93. (1982-83), emphasised the social function of the fisheries on one side and the need for reduction of capture capacity on the other side. The economic challenge was still prominent, but the Main agreement from 1964 was still a central element, and the dilemma by finding a balance between ecology and the need for sustaining employment and rural activity along the coast was solved by increase in subsidies. Even if considerable amount of money was used for capacity reduction and the number of vessels declined, older vessels were replaced by more modern and effective vessels. In addition, although the offshore trawler and purse seiner fleet had been regulated both by permits to fish and by quotas, the majority of the vessels were still coastal shore vessels under 28 m that were fishing with passive fishing gear and under a regime of open access and free fishing. Due to the local community importance of this fleet segment, it had been politically difficult to introduce regulations.

The final breakthrough for resource management came with the

² 80–90% of Norway's fish resources are managed through bi- and multi-lateral agreements with other coast state interests, under the framework of the UN Law of the Sea (UNCLOS).

Table 1
Agricultural policy documents analyzed (chronologically).

Agricultural policy documents
Norwegian Official Report NOU 1974 : 26. Støtteordninger i landbruket. [Support schemes in agriculture.]
Parliamentary Report St. meld. nr. 14., 1976 . Om landbrukspolitikken [On the agricultural policy.]
Norwegian Official Report. NOU 1984a,b : 21. (1984). Statlig næringsstøtte i distriktene [Governmental industry support in rural regions.]
Norwegian Official Report. NOU 1984a,b : 21B. (1984). Vedlegg til utredning om statlig næringsstøtte i distriktene [Attachment to Governmental industry support in rural regions.]
Norwegian Official Report. NOU 1991 : 2B. (1991). Norsk landbrukspolitikk: utfordringer, mål og virkemidler: B: Hovedinnstilling. [Norwegian agricultural policy: challenges, goals and measures: B: Main proposition.]
Parliamentary Proposition. St.prp. nr 8. (1992–1993) . Landbruk i utvikling. Om retningslinjer for landbrukspolitikken og opplegget for jordbruksoppkjørene m.v. [Developing agriculture. On directives for agricultural policy and the facilitation of annual negotiations.]
Parliamentary Report. St. meld. nr 19 (1999–2000) . Om norsk landbruk og matproduksjon [On Norwegian agriculture and food production.]
White paper. (Landbruks- og matdepartementet (2005)). Landbruk – mer enn landbruk. Landbruks- og matdepartementets strategi for næringsutvikling. Landbruks- og matdepartementet. [Agriculture - more than agriculture. The Ministry of food and agriculture's strategy for business development.]
(Landbruks- og matdepartementet (2007)). Ta landet i bruk!: Landbruks- og matdepartementets strategi for næringsutvikling 2007-2009. [Make use of the land! The Ministry of food and agriculture's strategy for business development]
Parliamentary Report. Meld. St. 9 (2011–2012) . Landbruks- og matpolitikken: velkommen til bords [Policy of agriculture and food: Welcome to the table.]
Parliamentary Report. Meld. St. 11, 2016 . Endring og utvikling — En fremtidsrettet jordbruksproduksjon [Change and development – a future-oriented agricultural production.]

Table 2
Fisheries policy documents analyzed (chronologically).

Fisheries policy documents
Report. Lønnsomhetskomiteén 1937. Innstilling om Fiskerienes Lønnsomhet. Innstilling VIII (Hovedinnstilling) fra Komiteén til behandling av forskjellige spørsmål vedrørende fiskeribedriften [Proposition from the Profitability committee]
Parliamentary report. St. meld. nr. 71., 1959 Innstillingen fra torskefiskutvalget 1957. [Proposition from the Codfish committee 1957.]
Parliamentary Proposition. St.prp. nr. 143. (1963-64) . Forhøyelse av bevilgningen på statsbudsjettet for 1964 under kap. 1531. osv. Om støtte til fiskerinæringa. [Increasing fishery subsidies on the 1964 national budget ...]
Parliamentary Report. St.meld. nr. 18. ((1977-78)) . Om langtidsplan for fiskerinæringen. [On a long-term plan for the fishery industry.]
Parliamentary Report. St.meld. nr. 93. ((1982-83)) . Om retningslinjer for fiskeripolitikken. [On directions for the fishery policy.]
Parliamentary Report. St.meld. nr. 58. ((1991-92)) . Om struktur- og reguleringspolitikk overfor fiskeflåten. [On structure- and regulations of the fishery fleet.]
Parliamentary Report. St.meld. nr. 51. ((1997-98)) . Perspektiver på utvikling av norsk fiskerinæring. [Perspectives on the development of the Norwegian fishery sector.]
Parliamentary Report. St.meld. nr. 19. ((2004–2005)) . Marin næringsutvikling. Den blå åker. [Marine industry development. The blue field.]
Parliamentary Report. St.meld. nr. 21. ((2006–2007)) . Strukturpolitikk for fiskeriflåten. [A structure policy for the fishing fleet.]
Parliamentary Proposition Ot.prp. nr. 67. ((1997-98)) . Om lov om retten til å delta i fiske og fangst (deltakerloven). [Fisheries Participation Act]
Parliamentary Proposition Ot.prp. nr. 20 (2007–2008) Om lov om forvaltning av viltlevande marine ressurser (havressurslova) [Marine Resources Act, 2008]
Parliamentary Proposition Prop.93 L (2012–2013) Lov om førstehandsomsetning av viltlevande marine ressurser (fiskesalslova). [The Fish Sale Law]
Parliamentary Report. Meld. St. 22 (2012–2013) - Verdens fremste sjømatnasjon [the worlds leading seafood nation]
Parliamentary Report. Meld. St. 10 (2015–2016) En konkurransekraftig sjømatindustri [a competitive seafood industry]
Parliamentary Report. Meld. St. 32 (2018–2019) Et kvotesystem for økt verdiskaping — En fremtidsrettet fiskerinæring [A Quota system for increased value cration – a futureoriented fishery industry]
Auditor General (2020) Undersøkelse av kvotesystemet i kyst- og havfisket. [An investigation of the quota system in coastal and off-shore fisheries.]

collapse of the coastal cod fisheries in 1989, when it was accepted that a “dead cod is a dead cod, regardless of how and by whom it is fished” (Statement by Fisheries Director Viggo Jan Olsen in 1989). Subsequently, the modern resource management regime was introduced. This closed the fisheries and introduced a quota regime that gradually was developed from ad hoc measures in 1989 to a more permanent system during the following years (Parliamentary Report nr 58 (1991-92)). Now, the concern for the resources (i.e. production regulation) became an institutionalized part of the fisheries (Holm, 2001; Johnsen, 2014; Johnsen and Jentoft, 2018).

The introduction of the new management regime paralleled Norway's participation in negotiation about a new EFTA agreement, where Norway committed herself to ban subsidies to the fisheries. With the EFTA agreement from 1992 and the new resource management regime, neither profitability, nor employment could be sustained by subsidising the fishing sector. Thereby the three corners of the trilemma were in place: There were policy goals that limited production, while the structural spatial concerns for rural livelihood along the coast prevailed, and increased profits and income had to come from productivity growth by means of new technology. Profit had to be made by cutting cost and getting better prices. The authorities kept the responsibility for the resource management, and set quotas based on scientific advice from the International Council for Exploration of the Sea (ICES), while the distribution of the quotas to a large extent were based on history and input from stakeholder organisations, in particular the Norwegian Fisher Association (NFA).

The following years can be seen as a continued balancing of the three

goals. Harvest overcapacity remained by the turn of the millennium (Johnsen 2004; Parliamentary Report No. 51 (1997–1998)). Since Norway had committed herself to abandon subsidies to the fisheries, further reduction of capacity and increased profit, required even more restructuring of the fleet. For this purpose, The Structure Quota System (SQS) was introduced in 2003 (Innsl.S.nr. 271 2002–2003). The SQS allowed fishers to merge quotas from two vessels, if one of the vessels were taken out of active fishing (Parliamentary report (2006)). The replacement of old vessels with newer, more technologically advanced and productive ones continued. The resulting development in terms of number of fishermen is presented in [Fig. 1](#).

As opposed to the *structural* development, an interesting aspect of Norwegian fisheries *politics*, is the relative stability. As can be seen in Parliamentary Report. Nr. 22 (2012–2013) from the centre-left coalition government and Parliamentary Report. 10 (2015–2016) from the conservative coalition government, the main institutional set-up is maintained. The core legislation has had broad political support.

It was not before 2020 that some political controversies came to the surface, in relation to a long-announced plan for changes in the quota system, based on a NOU from 2016 (Parliamentary report 2018–2019). However, while the Parliament were able to agree upon simplification of the quota system, it wasn't possible to form any majority around issues related to changes in allocation of regional quotas. Furthermore, some weeks after the discussion in the Parliament, The Auditor General (which is a control institution under the Norwegian Parliament) submitted an independent report about the quota system that concluded that the quota policy in the period 2004 to 2018 and the SQS in

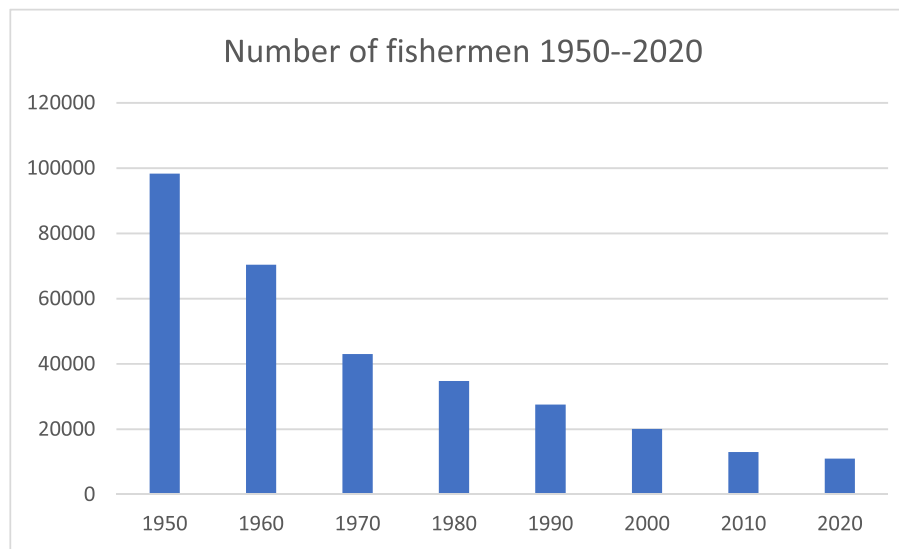


Fig. 1. Development of number of fishermen 1950–2020 (Statistics Norway, 2020; Directorate of fisheries, n.d.).

combination, had led fishery policy to drift away from its rural development objectives (Auditor General, 2020): While the resource management goals and the profitability goals had been reached, the policy has had unexpected negative consequences for employment and activity in many rural communities along the coast. Thus, the structural spatial policy goals lost in the balancing attempts, while production limitations in the form of resource management, and continued productivity growth by means of technology prevailed.

The paradox though is that Norwegian fisheries policies on the one side may be described as a success story; Norwegian resource management is seen as a success, and the fishers' income and work conditions have improved substantially. Norwegian fisheries have advanced technologically and are making good profits. On the other hand, the policy has failed: In the fervor to reduce fleet capacity, a large number of vessel and fishermen have left the fisheries; quotas are increasingly concentrated on fewer and larger hands; The restructuring has also affected the processing industry. The fish catches are processed on fewer and fewer locations. Furthermore, the failure of rural development goals related to rural livelihood along the coast is not accidently; it can be seen as a direct consequence of the success of Norwegian fisheries policy to fulfil its goals of production control in the shape of the resource management regime in combination with the goals of increased productivity through technological modernisation.

4.2. The rural development trilemma in agriculture

Since WWII (Almås, 2002, pp. 97–146), productivity growth has also been high on the agricultural policy agenda, as this was seen as a prerequisite for industrialisation and modernisation of the Norwegian society. As with fisheries, the relatively low productive agricultural sector had to provide labour to the growing export oriented industrial sectors (Teigen, 2020). Since the 1970s, it also became an explicit goal to increase the income of farm families (Grue, 2014a, p. 79). Increased productivity through the means of technological innovations were one of the key approaches to income development.

In agriculture, the problem of overproduction has been on and off the agenda since the 1930s. In the 1930s, local overproduction and uneven distribution of production, pushed farmers to organize as producer cooperatives. However, overproduction re-emerged in the 1950s (NOU, 1974: 26) but were at the time checked by the so-called "canalization policy" – the regional division of labour in Norwegian agriculture (Melås et al., 2024). Still, by the early 1980s it became apparent that the ever-increasing productivity again had led to overproduction (Grue,

2014a). Since there were neither tradition, nor economy, for an export-oriented Norwegian agriculture, limiting production was necessary. Quotas, production-independent and graded subsidy rates, and market regulation controlled by the large farmer cooperatives were set to regulate and keep production stable.

However, after the establishment of the WTO agreement, agricultural imports have increased substantially. From 2000 to 2018 imports increased from NOK 16.6 bill. to NOK 66.5 bill. (approx. USD 1.9 to 7.6 bill), while exports increased from NOK 3.4 bill to NOK 11.2 bill (approx. USD 0.4 to 1.3 bill) (Stortinget, 2019). Thus, relatively speaking, the room for domestic production has been shrinking.

The structural goals of agricultural policy have changed gradually. Shortly after WWII, agricultural restructuring was a desired policy objective – fewer and larger farms were necessary to modernise Norwegian society (Almås, 2002; Grue, 2014a; Røed, 2024). Although concerns about this development were raised from time to time, most explicitly in a key Norwegian Official Report⁵⁶ (NOU, 1974: 26, p. 275), this was seen as conditional. Despite concerns that the restructuring speed was too high in some areas (Milde, 2019), increasing productivity was seen as essential to improve farm income. The issue arose again in an official report in 1984 (NOU, 1984a,b: 21, p. 44), which said that:

Even though (...) agriculture had a sharp decline in employment during the decade 1970–1980, there was room for production growth. That is to say that production could increase in one part of the country, or on a farm, without a corresponding reduction in others. This situation is now dramatically changed. (...) With an annual production growth of 3–4 percent per agriculture employee, one must reduce the number of farms by 3,000–4,000 annually to avoid overproduction (NOU: 1984: 21B, p. 196a,b) (own translation).

As one issue was solved or improved, another worsened. The rural development trilemma in agricultural policy was in place.

The mid-1980s marked a policy shift, as structural rationalization had gone from being a goal to become the principal challenge in the annual negotiations between the Government and the farmers' organisations (Grue, 2014b) – an issue raised in all the key agricultural policy documents thereafter. Parliamentary Proposal (St.prp. nr 8., 1992–1993) stated that to achieve general agricultural policy objectives, farmers had to be guaranteed income and living conditions on par with the general population, which would require increased productivity. Priority of productivity growth over stable structure was also supported by the OECD, as the organization criticized Norwegian agricultural

policy for ‘lacking structural adjustment’. The emphasis remained on developing productive and rational farm units. Of the three trilemma goals, the goal of stable farm structure – that is maintaining the basic employment structure in agriculture – had to give way (St.prp. nr 8., 1992, p. 30) to increased productivity through means of technological development, and the need to keep overall production stable.

After the signing of WTO in 1996, a new Parliamentary Report was published, focusing on policy adaptations (St. meld. nr. 19., 1999-2000). The report focused on production and market balance, and emphasised “securing the basis for farms with active agricultural production”; hence, the conditions of the most efficiently driven farms were the main concern (St. Meld. nr.19 (1999–2000), p. 111). In the Norwegian context, this was a signal to prioritise farmers with agriculture as the mainstay. Moreover, a distinction was made between the small-scale farms and the farms ‘suitable for professional farming’. The white paper stated that “The Government will give priority to these [latter] types of farms in the design of the economic instruments.” (St. Meld. nr. 19 (1999–2000), p. 112). Again, the goal of stable production was unquestionable, while there was a clear prioritising of productivity growth over the goal of a stable farm structure.

Around the millennium shift, rural development strategies related to new rural businesses became increasingly emphasised. This was apparent in the White paper “Agriculture – more than agriculture. The Ministry of Agriculture and Food’s strategy for business development” by the centre-right government (Ministry of agriculture and food, 2005). This was also the case after the 2005 elections, were the agricultural minister of the new centre-left government stated that “We have no more farms to lose”.³ Clearly though, the continued structural changes had become a key concern for the new government. The centre-left governments own strategy for rural development “Take the land into use” (Ministry of Agriculture and Food, 2007) stated that the Government’s main objective was “an agriculture and food policy that contributes to active agriculture across the country. The policy should provide the basis for increased value creation and quality of life based on sustainable management of agriculture and rural resources” (Ministry of Agriculture and Food, 2007, p. 7). Thus, the policy of the centre-left government marked a different approach to the trilemma. In writings, their emphasise were less on increasing productivity and more on attention to the negative structural developments. The focus on new rural businesses related to agriculture was an attempt to circumvent the trilemma by opening a way for agriculture to increase production outside traditional agricultural productions: rural development through new products and markets.

However, the international food price crisis in 2007/2008 opened for yet another change in the agricultural policy landscape. Many things contributed to the price crisis (Clapp and Helleiner, 2012; Conceição and Mendoza, 2009; Headey, 2011; Robertson and Pinstrup-Andersen, 2010; Schneider et al., 2011). Yet, a unison consequence the coming years were an urge to raise production. A FAO report suggested a need to increase food production by as much as 70 percent by 2050, to keep pace with population growth (FAO - High-Level Expert Forum, 2009; Tomlinson, 2013).

This marked a shift, sometimes labelled a neo-productivist shift (e.g. Bjørkhaug et al., 2012), and entered Norwegian agricultural policy with the centre-left government’s Parliamentary Report from 2011, ‘Welcome to the table’, (Meld. St. 9, 2011)). Here, one of the stated ambitions were to increase Norwegian agricultural food production with 20 percent over 20 years. Thus, in the terms of the trilemma, a new window of opportunity had opened. Because the world needed more food, it was seen as possible to increase production, keep on increasing productivity through new technology (see e.g. Fuglestad et al., 2021; Vik et al., 2019) without jeopardising spatial goals related to a stable farm structure. The conservative/right wing government who won the

elections in 2013 followed up the former government’s goals and increased the maximum production quotas for milk, chicken and eggs. In addition, the production subsidies were changed in favour of larger farms with the highest production levels (Vik et al., 2019). The summarised structural development in number of farms is presented in Fig. 2.

The neo-productivist approach backlashed though. Overproduction remained a problem (Pouch and Trouvé, 2018). Norwegian population growth stagnated (Tønnesen, 2018), imports increased and the attempts to escape the trilemma failed. Agricultural policy still had to choose between two of the three: Technologically driven productivity growth, stable production, or spatial policy goals. Again, the structural goals emphasising demographic and sector stability were sacrificed. Thus, number of farms continues to fall, production and processing industries are increasingly centralized. Spatial rural development goals lost ground.

5. Conclusion

These brief histories of agricultural and fishery policies illustrates both the wicked and the subtle nature of policy making. It is always a balancing act. We asked why the policy areas have proven so wicked and tricky. Our contribution to the answering of this question lays in the concept of a rural development trilemma where the wickedness of the problem is the inbuilt contradiction of goals. In these situations, the fulfilment of (any) two goals contradicts the third. Thus, sometimes, the more you succeed with one set of objectives, the more you fail on another. Although the concept of the trilemma is a simplification, sometimes complexity call for simplicity. Our argument though, is that we can observe a rural development trilemma: The problem with rural development policies is that goals to maintain local employment and rural settlements are undermined by goals of increased productivity through technological developments in situations where the production is limited by markets or resources.

As the empirical description makes clear, the trilemma hasn’t always been there. In the first decades after World War II, the situation was different. The first years, the government explicitly aimed at moving labour from the relative unproductive primary industries to the emerging new export-oriented industries. This was part of the social democratic plan to modernise and rebuild the country after the war. As the de-population in the more remote areas went on, concerns grew that the development had gone too far. It became a policy goal to uphold the population and the local industries in rural and coastal regions. With that, the trilemma was in place in agriculture. Fisheries were an export-oriented industry, so the limits to production were less clear-cut. The production limitations became institutionalized with the closure of the fisheries and the quota systems in the late 1980s. From then, there were three set of policy goals at place also here: continued productivity growth through technological development; Fixed production levels; and maintaining demographic structure and rural businesses.

It is a part of the theoretical logic of the rural development trilemma that it can be solved differently. One can imagine a situation where policy prioritise rural settlements and employment even in case of fixed production levels – but then the productivity growth must be kept in check. Or we may picture a situation where we emphasise both rural development goals as local settlement, local industries etc, and allow for steadily increased productivity – but then we must be able to find new activities and markets. Any combination of two is possible, but then the third is jeopardized. Li, Westlund et al.’s (2019) focus on the need to develop new markets or new economic activities to obtain sustainable rural development therefore resonate with the rural development trilemma since – if continued productivity growth is a chosen policy goal, the trilemma implies a choice between reduced workforce of the rural industries at stake or breaking the production roof – due to limited markets or resources.

The rural development trilemma is a conditional concept created by

³ Personal communication with Reidar Almås.

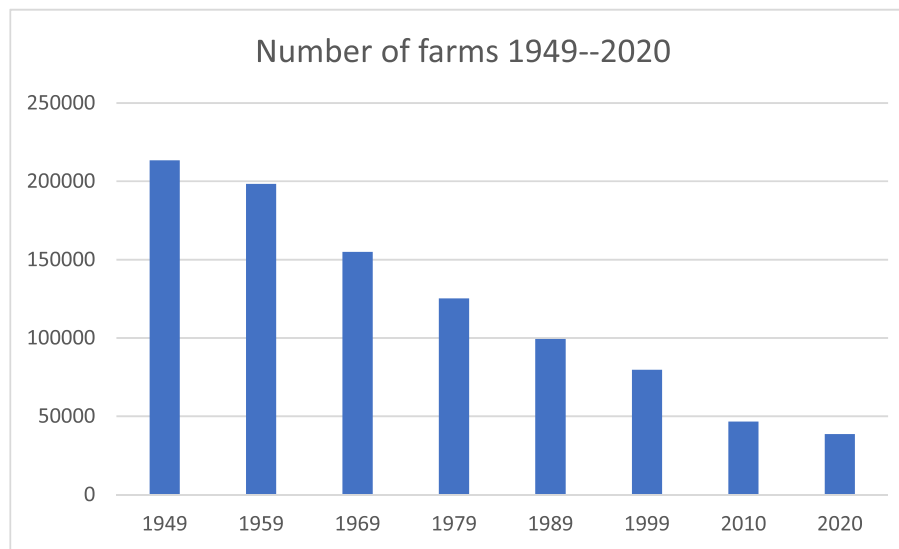


Fig. 2. development of number of farms 1949–2020 (Rognstad and Steinset, 2012; Statistics Norway, 2024).

political and institutional responses to societal developments. It is not nature given. As we have shown, the trilemma is a result of the combination of policy goals. However, the logical consequence is that as long as the policy goal structure is in the form of a trilemma, the wickedness of the policy area at stake will remain. The concept of the rural development trilemma helps pinpointing the nature of the policy problems wickedness, and as such it may be useful both for policy making, for rural development initiatives and for making sense of rural policies.

Potentially, the concept of a rural development trilemma may be a useful frame for studying and discussing public policy across sectors and countries. However, it remains to be demonstrated empirically whether the presented trilemma approach is a theoretical concept that also have relevance in other industries and in other countries. In terms of industries, e.g. forestry, fish farming, and rural tourism may be fruitful cases, while, in terms of additional countries, it is most reasonable to expect the concept to be relevant in developed countries with explicit rural development ambitions.

CRedit authorship contribution statement

Jostein Vik: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Jahn Petter Johnsen:** Writing – review & editing, Writing – original draft, Investigation, Data curation, Conceptualization. **Signe Annie Sønvisen:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

All data used is publicly available and are referred to in the article.

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