



Systems view of future of wicked problems to be addressed by the Common Agricultural Policy



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ABSTRACT

Public policies address societal problems. The problems chased by the Common Agricultural Policy (CAP) of the European Union (EU) have been persistent. The institutional and political economy reasons for this setting have been discussed widely, but the role of the problems lack robust analysis. This study contributes to an explicit understanding of the CAP problems as a system of wicked problems. Wicked problems escape simple and final solutions and form an interconnected 'jam', where each resolution generates a cascade of new problems and collateral damages.

The CAP problematics are analysed with the systems dynamics methodology, causal loop diagrams. A system of CAP problems was reconstructed based on the content analysis of survey data for 52 Finnish experts, representing various dimensions of the CAP in a balanced manner. Abstraction and categorisation of the 303 listed problems to be addressed by the CAP in the future resulted in 22 key problems under five domains (socio-environmental, spatial, policy, market, farming). The problems formed three agglomerations with reinforcing causal loops: the subsystems of competitiveness, sustainability, and heterogeneity. The full system of CAP problems comprised 114 causal links across all five domains. The problems also had varying positions in the network regarding connectivity and causation. For example, multidimensional sustainable development qualified as the most networked problem, free trade with divergent farming regulations was the most extensively wired driver problem, and competitiveness and incomes in agriculture was the most extensively connected dependent problem. Extending the time horizon from 2020 to 2040 indicates that the negative impact of climate change on food production capacity and food security would accentuate; otherwise, the CAP policy makers would be stuck with, more or less, path-dependent problematics.

The results confirm that CAP problems exhibit all ten properties of wicked problems and constitute a tightly wired and evolving complex adaptive system. Solutions to these types of problems should not be chased with a domain-specific approach, as spatial, farming, market, or environmental problems, but rather as networked, driver, dependent, and punctuated problems observing systems dynamics. This problem network status strongly affects the possibilities and feasible means to find better trade-offs between the problems; notably, complete solutions should not be expected due to the systemic and wicked properties of the CAP problems.

1. Introduction

Public policies chase societal problems (May and Jochim, 2013). The burning problems at the inception of the Common Agricultural Policy (CAP) of the European Union (EU) were striking: have a sufficient amount of food for the population at affordable prices and promote productivity growth, modernisation, and structural adjustment of the large agricultural sector (Tracy, 1989; Treaty of Rome, 1957). Over time, new concerns have emerged: how to cope with market imbalance and volatility, national exchange rates, environmental concerns, uneven territorial development, and cohesion of the enlarged EU (Feindt, 2010; Gorton et al., 2009; Josling, 2008a; Oskam et al., 2011; Swain,

2013; Tangermann and von Cramon-Taubadel, 2013). This enrichment of problems has contributed to the accumulation of the complexity of the CAP. Addressing these additional problems requires more measures and more internal heterogeneity to be considered, that then requires far more differentiation of the measures. The portfolio of problems underpinning the CAP has not been observed to decrease over time to make room for simplification and leaning of the policy (Burrell, 2009; Josling, 2008b). One possible reason for this situation is that the problems the CAP aims to resolve are wicked problems.

Wicked policy problems are different from tame problems because they have no final, definitive, and explicit solution (Rittel and Webber, 1973). Wicked problems are open to divergent and conflicting

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arguments for resolutions and have causal relationships with other problems (ibid.). Various stakeholders generally disagree on both the nature of the problem and the best solution (Conklin, 2006; Roberts, 2000). A specifically important aspect of the wicked problems is their endogenous resolution space: a tentative resolution depends on the direction of approach for finding the resolution, creating new connected problems to be managed (Rittel and Webber, 1973). These characteristics are typical for CAP problems. For example, resolving the agricultural pollution and biodiversity problems through extensification would lead to new problems in agricultural productivity, trade balance, agricultural incomes, and subsidy budgets. Resolving those four problems through straightforward intensification would increase the severity of the environmental problems. Combining the aspects of extensification and intensification into ‘sustainable intensification’ (Godfray and Garnett, 2014) would add complexity and regulative burden to indicate sustainability. Omitting this sustainability regulation would leave the definition of the bargaining process to be created between the stakeholders of the food system, leading to perpetuating and escalating circles of argumentation between conflicting frames (Candel et al., 2014). This simple illustration suggests that many CAP problems cannot be definitively solved without conflict or collateral damage.

The faculty of explanation of the CAP problems and their persistence is rich. From the political economy perspective, for example, the dominant state-supported agriculture regime in developed economies is considered to occur because of constrained structural adjustment and declining comparative advantage of the farming sector (Anderson et al., 2013; De Gorter and Swinnen, 2002; Honma and Hayami, 1986). A rich array of social and environmental perspectives have suggested that long-term government intervention is required to manage market imperfections, externalities, and public goods (Blandford and Fulponi, 1999; Dibden et al., 2009; Hall et al., 2004; Pretty et al., 2001). In addition to these types of substantive domains, various institutional explanations have suggested that the complex political and decision-making configurations of the EU—in general—tend to breed incremental, reactive, and path-dependent policy changes (Garzon, 2006; Harvey, 2004; Kay, 2003; Lynggaard, 2007; Peterson and Bomberg, 1999; Thomas et al., 2008).

Path dependence is maintained by various self-reinforcing mechanisms that selectively afford and constrain future choices (Denzau and North, 1994; Mahoney, 2000; North, 1990). Concomitantly, the state-assisted agriculture regime of the CAP (Coleman et al., 1997; Daugbjerg and Swinbank, 2016), once opted for, is difficult to give up, and the policy interventions are partial reasons for the existence of the problems. Furthermore, what is considered a problem worthy of being addressed by the CAP is heavily dependent on the agendas and discretion of the key institutions joining the policy design process: the European Commission, the Council, the European Parliament, and the various stakeholder organisations surrounding them (Daugbjerg, 2009). The CAP problems are institutionally embedded social constructs, and this characteristic adds to their persistence.

All these valuable contributions provide insights on the institutionalisation and path dependence of the CAP support regime; however, they hardly expose the qualities and implications of the underlying system of interrelated problems. To say something about the future of any societal policy, one should be able to say something about the evolution of the problems the policy is expected to address. *This research makes a contribution to the explicit understanding of the CAP problems as a system of wicked problems.*

Although the evolution of the CAP targets, measures, and institutions have been extensively examined (e.g. Burrell, 2009; Grant, 2010; Oskam et al., 2011; Moyer and Josling, 2002), the systemic nature of problems underlying them has received less attention. Problem-setting, problem-framing, and problem-solving may have been configured and explained in many ways, but the complex system of problems to be addressed by the CAP continues to effectuate it and grant it with legitimacy.

Attribution of causes and consequences within the system is complicated and crucial. Complicated, because ‘in a complex system the cause of a difficulty may lie far back in time from the symptoms, or in a completely different and remote part of the system ... causes are usually found not in the prior events, but in the structure and policies of the system’ (Forrester, 1969, p. 9). Important, because ‘basing an intervention on a wrongly assumed cause and effect relationship is likely to produce an outcome very different from what we intended’ (Neville and Dalmau, 2010, p. 29). The following is a primitive hypothesis scrutinised in this study: *the qualitative and systemic properties of the problems possibly represent one crucial reason for the lack of agenda-clearing solutions and for the path dependence of the CAP.*

To address these problematics, a brief review of the evolution of the CAP problems is first provided in Section 2 as an introduction to the substance. The properties of wicked problems are discussed in Section 3 to illustrate their general-level implications for policy evolution. The wickedness of the problems encountered by the CAP in the future is analysed based on systems dynamics methodology and views from Finnish experts, and these methods and materials are explained in Section 4. The results are reported in Section 5 and discussed in Section 6.

2. Short history of the CAP problems

In the early years, during the 1950s and 1960s, the main challenges to be addressed by the CAP were the stable provision of food at affordable consumer prices and modernisation of the backward and large agricultural sectors in the six original Member States (Tracy, 1989). CAP was also a welfare and income redistribution policy from the outset, making major reforms painful because of social and political repercussions (Spoerer, 2015). The early CAP facilitated food security and economic development, specifically. In this context, establishment of the common market was the ultimate goal in the 1960s (Fig. 1). Structural and regional problems were observed (e.g. Commission, 1968) but received minimal resources in the common policy starting in the 1970s. Targeted assistance to the less-favoured areas (LFA) was initiated in 1975. Protected internal markets and steady increases in agricultural productivity inevitably led to structural market imbalance and mounting surpluses towards the end of the 1970s and in the early 1980s (Commission, 1985). Mediterranean enlargements in the 1980s were the impetus for an upheaval of cohesion orientation in response to significant socioeconomic inequalities. During the first decades, the CAP institutionalised and acquired considerable autonomy as the first deeply integrated policy field in the EU.

The problematic consequences of these developments and enlargement of the EU was the impetus for decreased autonomy and increased integration of the CAP to a wider societal policy framework (Fig. 1). The escalating costs of market management and structural surpluses led to production restraint from the mid-1980s and later on—together with accumulating pressures in the multilateral trade negotiations (GATT/WTO)—to the first significant policy redirection: the MacSharry reform in 1992 (Commission, 1991).

The MacSharry reform initiated a lineage of policy reforms in which market balance was attempted by cutting internal prices and paying farmers direct payments in compensation: Agenda 2000, Fischler reform 2003, Health Check 2008, and CAP post-2013 (Commission, 1997, 2002, 2007, 2010). Environmental concerns were manifested in the CAP: first, as voluntary measures in 1987 and second, as obligatory agri-environmental schemes in 1992 (Feindt, 2010). Since the Agenda 2000 reform in 1999, addressing rural and environmental problems has become an integral and significant part of all incremental policy reforms. Eastern enlargements in the 2000s increased the internal diversity of the EU (Swain, 2013). The response to these enlargements has been increased flexibility in the delivery of the socio-structural measures and rebalanced payments between the Member States (Terluin et al., 2017). Effective market management has been replaced by risk

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