Improving the Resilience-enabling Capacity of the Common Agricultural Policy: Policy Recommendations for More Resilient EU Farming Systems

Améliorer la capacité de la politique agricole commune à faciliter la résilience : recommandations d'action pour des systèmes agricoles européens plus résilients

Verbesserung der Gemeinsamen Agrarpolitik im Hinblick auf die Stärkung der Resilienz: Politikempfehlungen für widerstandsfähigere Landwirtschaftssysteme in der EU

Yannick Buitenhuis, Jeroen Candel, Peter H. Feindt, Katrien Termeer, Erik Mathijs, Isabel Bardají, Jasmine Black, Anna Martikainen, Mertijn Moeyersons and Alessandro Sorrentino

At the time of writing, discussions about the post-2020 Common Agricultural Policy (CAP) are in full swing. In June 2018, the European Commission communicated its post-2020 CAP proposals, which have been debated since then. The Commission states that the CAP should contribute to *'ensuring a more resilient agricultural sector in Europe'* (EC, 2018). Improving resilience will support farming systems, i.e. regional networks of comparable farm types and other non-farm actors within an agroecological context, to manage and respond to various challenges, while maintaining their essential functions, like producing food, providing employment and income, and preserving rural environments (Meuwissen *et al.*, 2019).

Public policies, as part of a broader social context, affect the resilience of farming systems to maintain their desired functions in the face of challenges by enabling or constraining three distinctive resilience capacities: robustness, adaptability and transformability (Meuwissen *et al.*, this issue). Robustness is the capacity of a system to resist shocks and stresses, and to maintain previous levels of functionality, without major changes (Urruty *et al.*, 2016). Adaptability is the capacity of a system to adjust in response to changing external circumstances, while maintaining important functionalities (Folke *et al.*, 2010). Transformability is the capacity of a system to change fundamentally in response to shocks or stresses that make the existing system unable to maintain its essential functions (Walker *et al.*, 2004).

> « Il est essentiel que l'Union européenne élabore une vision plus claire des vulnérabilités de ses systèmes agricoles ainsi que des stratégies innovantes pour accroître la résilience grâce à l'adaptabilité et à la transformabilité. »

The CAP, potentially, has considerable effects on the robustness, adaptability and transformability of Europe's farming systems. Previous Horizon2020 SURE-Farm research has shown that the CAP and its national implementations support the robustness of different farming systems to varying degrees, provide less support for adaptability, and often even constrain transformability by incentivising the *status quo* (Feindt *et al.*, 2019). Also, the CAP's resilience-enabling and -constraining measures are experienced in practice by different farming system actors as complex (Buitenhuis *et al.*, 2019). We followed up on these SURE-farm findings by organising co-design workshops in six EU countries with stakeholders to reflect extensively on previous results and to collaboratively develop policy recommendations (Box 1).

Against this background, this paper presents a comparative analysis of the co-design workshops. For each workshop, the perceived resilience challenges and proposed policy recommendations with the highest degree of convergence between participants were extracted through content analysis of the workshop transcripts and protocols. This analysis led to a synthesis of the recommendations per workshop. These recommendations are compared and presented in Table 1.

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Table 1: Overview of farming system cases, their main challenges, and the co-designed policy recommendations

Farming System Cases	Belgium	Italy	The Netherlands	Poland	Spain	The United Kingdom
	Intensive dairy farming, Flanders	*Small-scale farming of perennial crops (hazelnuts), Viterbo*	*Intensive arable farming, De Veenkoloniën region*	*Private family fruit and vegetable farming, Mazovian region*	*Extensive beef and sheep farming, the Guadarrama mountain range and Aragón*	*Large-scale arable farming, East England*
	Participants: 17	*Participants: 8*	*Participants: 7*	*Participants: 11*	*Participants: 9*	*Participants: 5*
Main challenges						
	• Increasing administrative burdens & inconsistent audits • Limited land access for new and innovative farmers • Increasing land prices • Leakage of agricultural subsidies to non-farmers • Limited RDP funding for small innovations on farms	• Increasing international competition • Decline in prices • High downstream market power • Burdensome administrative process for RDP funding applications	• Increasing land prices • Red tape in RDP funding schemes, blocking bottom-up innovations • Inconsistent and unpredictable legislation and policies	• Unattractive national agricultural insurance schemes • Low horizontal and vertical collaboration due to distrust between actors	• Limited per-hectare basic income support • Limited land access • Lack of appreciation for extensive grazing farming • Limited new entrants • Limited economic activity & employment possibilities in the rural area	• Uncertainty due to Brexit • Loss of CAP subsidies • Increasing competition from imported products (with lower food and production standards) • Lack of seasonal labour
Policy recommendations co-design workshops						
Robustness	• Set long-term, overarching requirements for audits • Make Belgian tenancy law more flexible to encourage long-term leases • Dismantle incentives that drive up land prices, e.g. hectare-based payments • Restrict CAP subsidies to active, and especially young, farmers	• Coaching and advisory services on CMO measures targeted at non-participating producers • Revise co-financing system for measures in Operational Programs of producer organisations	• None	• Revise national insurance scheme	• Introduce coupled support, based on conditionalities, for extensive grazing farming systems	• Increase domestic (financial) support • Targeted support for small farms that deliver ecosystem services • Create seasonal labour schemes • Reverting plant protection product assessments to being risk-based & providing solutions or alternatives ahead of withdrawing product

(continues)

Table 1. (continued)

Farming System Cases						
	Belgium	Italy	The Netherlands	Poland	Spain	The United Kingdom
	Intensive dairy farming, Flanders	*Small-scale farming of perennial crops (hazelnuts), Viterbo*	*Intensive arable farming, De Veenkoloniën region*	*Private family fruit and vegetable farming, Mazovian region*	*Extensive beef and sheep farming, the Guadarrama mountain range and Aragón*	*Large-scale arable farming, East England*
	Participants: 17	*Participants: 8*	*Participants: 7*	*Participants: 11*	*Participants: 9*	*Participants: 5*
Adaptability	• Create separate RDP budget system for small innovations with lower administrative demands • Make Flemish spatial planning guidelines more flexible	• Simplify the administrative process for RDP funding	• Incrementally convert hectare-based payments into outcome-based payments • Reduce red tape in RDP funding schemes	• Strengthen advisory and brokering services • Encourage lifelong learning, focused on adjusting and innovating businesses • Increase investments in AKIS	• Invest in new satellite data-driven monitoring technologies • Use proposed eco-schemes to reward extensive farms that provide ecosystems • Support new entrants through training programmes on farming practices and developing business plans • Adapt young farmers scheme to make part-time farming eligible • Increase investments in public-private collaboration and rural development	• Increase information about past successes with stewardship schemes • Support (new) farmers through independent advisory services, agricultural education and land access • Educate consumers about food production and farmers' countryside stewardship
Transformability	• Provide long-term vision on future agriculture with clear long-term objectives (e.g. EU framework on agricultural data use)	• None	• Provide long-term vision on the future of agriculture that ensures legislative & policy consistency	• Provide long-term vision on future of agriculture that ensures consistency (e.g. focused on healthy food environment)	• None	• None

A final EU-level workshop was organised in Brussels with 14 experts from different backgrounds, to discuss and validate the national workshop findings and share reflections on the comparison. The paper ends by discussing three key lessons about the CAP's influence on resilience and policy recommendations for improving resilience in the post-2020 CAP.

The co-design workshops: key policy recommendations

We now present the key policy recommendations that followed from round 2 of the national co-design workshops.

Dairy farming in Flanders – Belgium. The workshop resulted in recommendations for improving the robustness and adaptability of dairy farming in Flanders. First, dairy farmers experienced unnecessary administrative burdens caused by inconsistency between audits. It was recommended to reduce inconsistency and overlap between audits by setting long-term, overarching requirements. Second, land prices were driven up by incentives, such as hectare-based payments, which should, therefore, be reconsidered. Moreover, CAP subsidies should be limited more strictly to active, and especially young, farmers to reduce the leakage of agricultural subsidies to non-farming landowners. Third, land access for new and established farmers should be improved by making the Belgian tenancy law more flexible, encouraging landowners to offer long-term leases to farmers. In addition, Flemish dairy farmers would benefit from more flexible spatial planning guidelines that would make it easier for them to adapt and innovate as current guidelines favour conventional agricultural land use. Fourth, a new programme for small innovations with lower administrative demands should be introduced in the Rural Development Programme (RDP), increasing possibilities for small innovations on farms. Last, adaptive and transformative practices would benefit from: (1) increasing support for knowledge exchange networks and agricultural education; and (2) a CAP that communicates a long-term vision with clear long-term objectives, supported by an EU framework on data use and digitalisation in the agricultural sector.

Hazelnut production in Viterbo – Italy. The workshop on the hazelnut system in Viterbo focused on the system's robustness and adaptability. First, the Common Market Organisation (CMO) supports robustness by helping producer organisations to mobilise resources and by encouraging regional collective action. However, coaching and advisory services should attract more producers to participate in CMO measures. In addition, the co-financing system for measures in the Operational Programs of producer organisations should base the co-financing percentage on the public value of the investments or activities. Both suggestions would potentially strengthen the producers' market position and possibilities for collaboration. Second, the administrative process for RDP funding was experienced as burdensome; thus, simplifications were suggested to encourage applications. Last, the European Innovation Partnership (EIP) operational groups and LEADER Local Action groups, which were regarded as useful for pursuing collectively region-specific objectives, should be promoted.

Arable farming in De Veenkoloniën – the Netherlands. The Dutch workshop led to the formulation of recommendations for how the CAP and adjacent policies could shift from emphasising robustness towards supporting the adaptability and transformability of the arable farming system. First, the direct payments should move from hectare-based towards outcome-based payments for innovations and providing public goods. This change could create incentives for farmers to gradually adapt their business. Second, funding opportunities for innovative bottom-up initiatives should be improved by reducing the 'red tape' in existing RDP schemes. Third, the CAP and its national implementation should incorporate a clear long-term vision on the future of agriculture that ensures legislative and policy consistency and predictability in the long run. Such a vision could allow farmers to better anticipate change, plan their business activities and foster innovation. Last, it was proposed to expand safety nets and risk management tools to support farmers in case of sudden shocks; however, it was unclear whether the government or the private sector would be responsible for these measures.

Private family and vegetable farming in the Mazovian Region – Poland. The Polish workshop focused on policy improvements at the national level. First, the farming system's robustness could be improved by making the national insurance scheme more attractive for farmers to sign up. Second, CAP support for horizontal and vertical collaboration was hardly used due to low levels of trust between farming system actors. By strengthening advisory and brokering services, partly through salary increases for public advisors, collaboration and adaptability could be enhanced. Third, participants missed a clear long-term vision in the CAP, focused on a healthy food environment, that would provide more consistent policies. Finally, policies should encourage lifelong learning in agricultural sectors focused on adjusting and innovating businesses, and should invest in the Agricultural Knowledge and Innovation System (AKIS) to boost innovative solutions in agriculture.

Extensive beef and sheep farming in the Guadarrama mountain range and Aragón – Spain. The Spanish workshop proposed interventions to support the robustness and adaptability of the extensive grazing system. First, the decoupling of the direct payments had disincentivised extensive grazing; therefore, coupled support should be reintroduced, with conditionalities based on, for example, demographic, production or quality criteria, for supporting robustness. Second, extensive farmers that provide ecosystem services should be supported more. It was recommended to use the proposed eco-schemes of the post-2020 CAP to reward these

extensive farmers, who also should be supported by developing quality labels for extensive farming products and investing in regional market chains. Third, the resilience of the extensive grazing system was constrained by limited access to land. This issue could partly be resolved by alleviating access to state-owned pastures, but also by investing in new technologies that use satellite data for monitoring access to and improving management of pastures. Fourth, new entrants to extensive farming should be supported through training programmes on farming practices and developing business plans, and by making part-time farming eligible under the young farmers scheme. Finally, the Spanish farming system's resilience would benefit from increased investments in public-private collaboration and rural development, especially to increase economic activity and employment possibilities.

Large-scale arable farming in East England – United Kingdom. This workshop discussed how agricultural policy should look after Brexit in three different scenarios (Box 1). It was expected that all scenarios would reduce the resilience of the UK's farming system, especially due to an expected loss of subsidies. In addition, the no-deal and extreme free-trade scenarios would cause complications regarding EU trading tariffs and increased competition from cheaper imports. It was, therefore, recommended to increase domestic (financial) support, substituting CAP support, and to protect British farmers against lower food and production standards outside the UK. Furthermore, in case of a no-deal scenario, targeted support should protect smaller farms that perform relatively well in delivering ecosystem services. In addition, environmental work could be further encouraged by informing farmers about past successes with stewardship schemes, such as the Catchment Sensitive Farming scheme. Finally, concrete recommendations for improving resilience were: (1) support (new) farmers through independent advisory services, agricultural education and land access; (2) revert plant protection product assessments to being risk-based and providing solutions or alternatives ahead of withdrawing plant protection products; (3) create seasonal labour schemes; and (4) educate consumers about food production and farmers' countryside stewardship.

Comparison of the workshops

The co-design workshops revealed overlaps and variation in participants' ideas of how to improve the resilience capacities of their farming systems (Table 1). First, robustness-focused policy recommendations were proposed in almost all workshops (except in the Dutch workshop). Whereas income support measures or coupled support were regarded as an option for increasing robustness in some workshops, it was argued in other workshops that income support measures, specifically the hectare-based payments, negatively affected adaptability and transformability. These findings were validated in the Brussels workshop and triggered discussion about coupled payments, which some experts regarded as an option for supporting extensive farming systems, while others argued that payments for ecosystem services would more clearly address the desired functions.

Box 1: Co-design workshops

The policy recommendations are the result of six co-design workshops conducted as part of the Horizon2020 SURE-Farm project. The aim of co-design is to develop policy recommendations in collaboration with national and regional agricultural policymakers and different stakeholders (farmers and farmers' representatives, agricultural advisors, representatives of environmental NGOs and researchers).

Participants were invited as experts and 'critical friends', not as representatives of specific interests, to reflect on previous findings from the SURE-Farm project and to share insights about and experiences with the CAP, its national implementations and policy recommendations in an open deliberation. Each workshop took one farming system as starting point and followed the same guideline, involving the following steps*:

1. **Preparation**: Literature reviews to explore good national policy practices for enabling resilience in agricultural sectors and beyond; providing insights into existing policy schemes and stimulating broader reflections on future agricultural policies.
2. **Introduction:** Presentation and discussion of previous research on resilience-enabling and -constraining effects of the CAP (Feindt *et al.,* 2019), and how these effects are experienced by farming system actors (Buitenhuis *et al.*, 2019).
3. **Round 1**: Formulation of *ideal-type* policy interventions for strengthening the farming system's robustness, adaptability or transformability, without considering the existing CAP framework. Interventions were always discussed in relation to identified challenges (Table 1).
4. **Round 2**: Formulation of *concrete* CAP policy recommendations by relating insights of round 1 to the existing policy framework. Adjacent policies were considered if relevant for the functioning of the CAP.
5. **Closure:** Final round of suggestions and feedback.

*Due to Brexit, the UK workshop focused on future UK agricultural policies under three scenarios: (i) no deal; (ii) extreme free trade; and (iii) business as usual (see Vigani *et al.*, 2020).

Second, all six co-design workshops developed policy recommendations for supporting adaptability. These recommendations focused mainly on increasing flexibility within supportive policy schemes, e.g. the RDP funding schemes, which would encourage farming system actors to apply for funding for innovative ideas more often. In addition, the policy recommendations aimed to encourage social processes that allow farming system actors to develop and exchange knowledge and promote collaborations (e.g. advisory services, training and education programmes, public-private collaborations).

Third, policy recommendations for supporting transformability were co-designed only in the Flemish, Dutch and Polish workshops. In all three workshops, the recommendation was that the CAP and its national implementation should provide a clear long-term vision of the future of agriculture with the aim to realise consistency between legislation and policies. The need for a coordinated long-term vision was confirmed during the workshop in Brussels. Such a vision could be initiated by joining up other policies to the CAP (e.g. nutrition and health policies, and climate and environmental policies), moving towards an integrated food and agriculture policy with a strong vertical dimension, i.e. co-ordination across different levels of government.

Key lessons learned from the workshops

Having compared the workshop results, we now reflect on three key lessons about the CAP's influence on resilience.

First, the ways in which the CAP and its national implementation schemes enable or constrain resilience strongly differ across different types of farming systems, depending on each system's characteristics, the regional context, the specific challenges and the national policy framework, including CAP implementation choices. As a result, the desirability of the three resilience capacities also differed across the case studies. Where farming systems have already experienced major transformations, or faced enormous uncertainties or stresses, participants focused on enhancing robustness and enabling adaptability. However, where farming systems have become partially dysfunctional in the eyes of participants, recommendations emphasised transformability. For instance, the Spanish extensive grazing system, generally believed to have favourable social and ecological functions, had been stabilised through coupled direct payments. However, coupled support was considered undesirable in other contexts, where it distorts markets or preserves farming systems that have lost competitiveness or cause large environmental damage (see Brady *et al.,* 2017; ECA, 2020).

Flags of the European Union in front of the Berlaymont, headquarters of the European Commission, Brussels (Belgium)© CC/Thijs ter Haar

Second, while resilience capacities can be complementary, there are trade-offs between the capacities at the level of policies and due to competition for budgets (see Ashkenazy *et al.,* 2017). Whereas supporting robustness is relevant for protecting existing functions, robustness-focused policies may create a false sense of stability, disincentivise adaptation and lead to undesirable lock-ins, or even the unlearning of adaptability and transformability. Thence, there is a real possibility that the CAP and its national implementations, which focus largely on fostering robustness via income support measures, currently constrain the potential of certain farming systems to adapt or transform. CAP policymakers should thus carefully consider rebalancing support for different resilience capacities.

> "Es ist von entscheidender Bedeutung, dass die EU eine klarere Vorstellung für die Anfälligkeit ihrer Landwirtschaftssysteme entwickelt und innovative Strategien ausarbeitet, um die Resilienz durch Anpassungs- und Wandlungsfähigkeit zu erhöhen."

Third, the CAP has always had an important function in communicating developmental directions. The desire for directions is reflected partly by recommendations for the post-2020 CAP to convey a long-term vision for agriculture. However, CAP reform debates are dominated by bargaining over net payer positions and national policy space. Even a visionary

Farming systems are local networks of comparable types of farms and other actors that interact and are responsible for private and public goods in a specific regional context. © Eddy Teenstra/WUR Brand Portal Imagebank.

Commissioner must secure qualified majorities in the Parliament and the Council. This makes it unlikely that a CAP reform will create a coordinated long-term vision unless the negotiations focus more on realising a shared understanding of challenges and the CAP's effects on farming systems' resilience. It is essential that the EU develops a clearer sense of the vulnerabilities of its farming systems along with innovative strategies to increase resilience through adaptability and transformability. This is much preferable to trying to maintain a *status quo* co-produced by historical policies that in major ways reinforce robustness.

Policy recommendations for improving resilience

This article started with the question of how the CAP could improve EU farming systems' resilience. We conclude by offering recommendations for the ongoing CAP reform round.

To enhance robustness, policies should support farming systems' capabilities to respond to shocks and stresses. However, focusing exclusively on robustness results in rather conservative policies with constraining effects on other resilience capacities. The proposed post-2020 CAP continues to prioritise income support via hectare-based payments. Income support might enhance robustness but cannot be justified on this ground beyond the minimum level required for robustness, as these payments can also have negative consequences on the resilience of some farming systems, e.g. increasing land prices, or creating inequality in received support. Support for robustness should be limited to a guaranteed maintenance of a basic floor for farming systems to fall back on during crises, for uninsurable systemic risks and for perturbations that cannot be absorbed by the farming system alone. This requires policies with a greater focus on anticipation, guided by foresight assessments and exercises to find concrete actions for how to respond to undesirable scenarios.

To enhance adaptability, policies should prioritise outcomes rather than means or the process for reaching adaptive objectives in the CAP. This would increase flexibility for farming system actors to decide how to reach the CAP's desired outcomes, while tailoring them to context-specific challenges and desirability. Whereas the current proposals suggest that the post-2020 CAP will remain means-oriented, it does offer considerable flexibility for Member States which will define their national priorities and implementation choices via the National Strategic Plans. Furthermore, the newly introduced eco-schemes increase possibilities for Member States to develop more performance-based schemes to support farmers undertaking climate and agri-environmental activities. However, to really support adaptability, the flexibility in supportive policy schemes and the monitoring and control schemes should be increased, using flexible regulations and integrated inspections while safeguarding desired outcomes. Moreover, the CAP should encourage adaptive and innovative practices by including funding for projects rather than predefined measures; and multiple tiers of payment levels, for instance, aligned with private certification schemes of corresponding levels of ambition.

> "It is essential that the EU develops a clearer sense of the vulnerabilities of its farming systems along with innovative strategies to increase resilience through adaptability and transformability."

To enhance transformability, the CAP should be based on a coordinated vision for the future of Europe's agriculture. This vision should communicate norms and priorities that give directions for the desired future, supported by clear coherent policy objectives and instruments that reinforce rather than undermine each other. The recent adoption of the Farm-to-Fork Strategy, in which the European Commission introduces its plans for the transition towards a sustainable EU food system, can be considered a promising first step for offering such a longer-term perspective. However, it remains to be seen

whether and how the Farm-to-Fork Strategy will be aligned with the development of the National Strategic Plans and the overall CAP reform process. Furthermore, the CAP should stimulate deep learning and critical self-examination through specific instruments that enable dialogue and co-design; as well as encouraging out-of-the-box-thinking, for instance, by communicating about unconventional innovations and uncommon but successful farming practices. Programmes for rural cooperation in Pillar 2 (e.g. EIP-Agri and LEADER plus) play a key role in this regard and should therefore encourage integrated approaches across sectors and policy areas to enhance collaboration.

By developing policies that effectively reflect these lessons and recommendations, policymakers may succeed in developing a post-2020 CAP that will improve the resilience of Europe's farming systems.

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Further Reading

■ Ashkenazy, A., Chebach, T.C., Knickel, K. *et al.* (2017). Operationalising resilience in farms and rural regions. Findings from fourteen case studies. *Journal of Rural Studies*, **59**: 211–221. Available online at: https://doi.org/10.1016/j.jrurstud.2017.07.008.

■ Brady, M., Hristov, J., Höjgård, S., Jansson, T., Johansson, H., Larsson, C., Nordin, I. and Rabinowicz, E. (2017). *Report 2017:2 Impacts of Direct Payments – Lessons for CAP post-2020 from a quantitative analysis.* Lund: AgriFood Economics Centre. Available online at: http://urn.kb.se/resolve?urn=urn:nbn:se:slu:epsilon-p-99888

■ Buitenhuis, Y., Candel, J., Termeer, K., Feindt, P.H., Coopmans, I., Lievens, E., Mathijs, E., Wauters, E., Urquhart, J., Black, J., Berry, R., Maye, D., Courtney, P., Vigani, M., Bertolozzi, D., Soriano, B., Bardají, I., Martikainen, A. and Gradziuk, P. (2019). *Bottom-up analysis: How do stakeholders experience the influence of policies on the resilience of farming systems?* Case study results. SURE-Farm.

■ ECA: European Court of Auditors (2020). *Special Report No 13/2020. Biodiversity on farmland: CAP contribution has not halted the decline.* Luxembourg: European Court of Auditors. Available online at: https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=53892

■ European Commission (2018). EU Budget: The Common Agricultural Policy beyond 2020. [Press release]. 1 June. Available online at: https://ec.europa.eu/commission/presscorner/detail/en/IP_18_3985. (Accessed: 11 March 2020).

■ Folke, C., Carpenter, S., Walker, B., Scheffer, M., Chapin, T., Rockström and J. (2010). Resilience thinking: Integrating resilience, adaptability and transformability. *Ecology and Society*, 15(4): 20.

■ Feindt, P.H., Termeer, K., Candel, J. *et al.* (2018). *D4.2: Assessing how policies enable or constrain the resilience of farming systems in the European Union: Case study results.* SURE-Farm. Available online at: https://surefarmproject.eu/wordpress/wp-content/uploads/2019/05/SURE-Farm-D-4.2-Resilience-Assessment-Case-Studies-RP1.pdf.

■ Meuwissen, M.P.M., Feindt, P.H., Spiegel, A. *et al.* (2019). A framework to assess the resilience of farming systems. *Agricultural Systems*, **176**: 102656.

■ Urruty, N., Tailliez-Lefebvre, D. and Huyghe, C. (2016). Stability, robustness, vulnerability and resilience of agricultural systems. A review. *Agronomy for Sustainable Development*, **36**: 15. Available online at: https://doi.org/10.1007/s13593-015-0347-5.

■ Vigani, M., Urquhart, J., Black, J.E. *et al.* (2020). Post-Brexit policies for a resilient arable farming sector in England. *EuroChoices* [online]. Available online at: https://doi.org/10.1111/1746-692x.12255.

■ Walker, B., Holling, C.S., Carpenter, S. *et al.* (2004). Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society*, 9(2): 5. Available online at: http://www.ecologyandsociety.org/vol9/iss2/art5/.

Yannick Buitenhuis, Public Administration and Policy Group, Wageningen University, Wageningen, The Netherlands. ***Email: yannick.buitenhuis@wur.nl***

Jeroen Candel, Public Administration and Policy Group, Wageningen University, Wageningen, The Netherlands. ***Email: jeroen.candel@wur.nl***

Peter H. Feindt, Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences, Humboldt-University at Berlin, Berlin, Germany. ***Email: peter.feindt@hu-berlin.de***

Katrien Termeer, Public Administration and Policy Group, Wageningen University, Wageningen, The Netherlands. ***Email: katrien.termeer@wur.nl***

Erik Mathijs, Division of Bioeconomics, KU Leuven, Leuven, Belgium. ***Email: erik.mathijs@kuleuven.be***

Isabel Bardají, Research Centre for the Management of Agricultural and Environmental Risks (CEIGRAM), Universidad Politecnica de Madrid, Madrid, Spain. ***Email: isabel.bardaji@upm.es***

Jasmine Black, Countryside and Community Research Institute, University of Gloucestershire, Gloucestershire, United Kingdom. ***Email: jblack2@glos.ac.uk***

Anna Martikainen, Institute of Rural and Agricultural Development, Polish Academy of Sciences (IRWiR PAN), Warsaw, Poland. ***Email: anna.ciechomska@irwirpan.waw.pl***

Mertijn Moeyersons, Division of Bioeconomics, KU Leuven, Leuven, Belgium. ***Email: mertijn.moeyersons@kuleuven.be***

Alessandro Sorrentino, Department of Agricultural and Forestry Sciences, UniversitàdegliStudidellaTuscia (UNITUS), Viterbo, Italy. ***Email: sorrenti@unitus.i***

Summary

Improving the Resilience-enabling Capacity of the Common Agricultural Policy: Policy Recommendations for More Resilient EU Farming Systems

One of the aims of the post-2020 Common Agricultural Policy (CAP) is to improve the resilience of Europe's farming systems. The CAP of the budget period 2014–2020, however, has insufficiently supported the resilience of farming systems. The ongoing CAP reform process offers an appropriate opportunity to integrate a broader perspective on resilience in the CAP. We therefore propose a set of policy recommendations on how to improve the capability of the CAP to support more fully the resilience (i.e. robustness, adaptability and transformability) of farming systems in the EU. The policy recommendations are based on a comparative analysis of six national co-design workshops with stakeholders and a final EU-level workshop with Brussels-based experts. We concluded three key lessons about the CAP's influence on resilience: (1) resilience challenges, needs and policy effects are context-specific; (2) resilience capacities are complementary, but trade-offs between robustness, adaptability and transformability occur at the level of policies and due to budget competition; (3) there is a need for a coordinated long-term vision for Europe's agriculture, which is difficult to achieve through the bargaining processes associated with a CAP reform. We propose specific policy recommendations that could contribute to a better balance between policies that support robustness, adaptability and transformability of Europe's farming systems.

Améliorer la capacité de la politique agricole commune à faciliter la résilience : recommandations d'action pour des systèmes agricoles européens plus résilients

L'un des objectifs de la politique agricole commune (PAC) après 2020 est d'améliorer la résilience des systèmes agricoles européens. La PAC de la période budgétaire 2014–2020 n'a cependant pas suffisamment soutenu la résilience des systèmes agricoles. Le processus de réforme de la PAC en cours offre une opportunité bienvenue d'intégrer une perspective plus large sur la résilience dans la PAC. Nous proposons donc un ensemble de recommandations sur la manière d'améliorer la capacité de la PAC à soutenir plus pleinement la résilience (c'est-à-dire la robustesse, l'adaptabilité et la transformabilité) des systèmes agricoles dans l'Union européenne. Les recommandations s'appuient sur une analyse comparative de six ateliers nationaux de co-conception avec les parties prenantes et d'un atelier final au niveau de l'Union avec des experts basés à Bruxelles. Nous avons conclu trois leçons clés concernant l'influence de la PAC sur la résilience: (1) les défis, les besoins et les effets de la politique en matière de résilience sont spécifiques au contexte; (2) les capacités de résilience sont complémentaires, mais des compromis entre robustesse, adaptabilité et transformabilité se produisent au niveau des politiques et en raison de la concurrence budgétaire; (3) une vision coordonnée à long terme de l'agriculture européenne est nécessaire, ce qui est difficile à réaliser dans le cadre des processus de négociation associés à une réforme de la PAC. Nous proposons des recommandations d'action publique spécifiques qui pourraient contribuer à un meilleur équilibre entre les politiques qui soutiennent la robustesse, l'adaptabilité et la transformabilité des systèmes agricoles européens.

Verbesserung der Gemeinsamen Agrarpolitik im Hinblick auf die Stärkung der Resilienz: Politikempfehlungen für widerstandsfähigere Landwirtschaftssysteme in der EU

Eines der Ziele der Gemeinsamen Agrarpolitik (GAP) nach 2020 besteht in der Verbesserung der Resilienz der europäischen Landwirtschaftssysteme. Die GAP hat die Resilienz der Landwirtschaftssysteme in der Haushaltsperiode 2014–2020 jedoch nur unzureichend unterstützt. Der laufende GAP-Reformprozess bietet eine gute Gelegenheit, die Resilienz in der GAP in einen breiteren Kontext zu stellen. Wir schlagen daher eine Reihe von Politikempfehlungen vor, um die Fähigkeit der GAP zu verbessern, die Resilienz (d.h. Stabilität, Anpassungsfähigkeit und Wandlungsfähigkeit) der Landwirtschaftssysteme in der EU umfassender zu unterstützen. Die Politikempfehlungen basieren auf einer vergleichenden Analyse von sechs nationalen Co-Design-Workshops mit Stakeholderinnen und Stakeholdern und einem abschließenden Workshop auf EU-Ebene mit in Brüssel ansässigen Sachverständigen. Wir haben drei wichtige Lehren über den Einfluss der GAP auf die Resilienz gezogen: (1) die Herausforderungen, Bedürfnisse und politischen Auswirkungen der Resilienz sind kontextspezifisch; (2) die Resilienz-Kapazitäten sind komplementär, es gibt allerdings Zielkonflikte zwischen Stabilität, Anpassungs- und Wandlungsfähigkeit auf der Politikebene und aufgrund von budgetären Konkurrenzsituationen; (3) es besteht die Notwendigkeit, eine koordinierte langfristige Vision für die europäische Landwirtschaft zu entwickeln, die durch die mit der GAP-Reform verbundenen Verhandlungsprozesse nur schwer zu erreichen ist. Aus diesem Grund schlagen wir besondere Politikempfehlungen vor, die zu einem besseren Gleichgewicht zwischen jenen Maßnahmen beitragen könnten, die die Stabilität, die Anpassungs- und die Wandlungsfähigkeit der europäischen Landwirtschaftssysteme unterstützen.