

# 1 Implementation of the 2015 recommendations

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This chapter finds that the Netherlands has taken actions that fully or partially address about 80% of the recommendations made in 2015. The innovation system remains a world leader and effectively translates R&D resources into results on the farm. The system is stronger than it was eight years ago thanks to action to improve funding sources, research infrastructure and institutional arrangements. It benefits from a defined vision for the future and associated long term goals. The connection between actors in the agricultural knowledge system has been improved by better integration of research, education and extension. A key challenge is ensuring that the innovation system is as effective as possible in targeting issues of public importance such as environmental sustainability.

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## Key messages

- Overall, the Netherlands has taken actions that fully or partially address about 80% of the 2015 policy recommendations, displaying a solid engagement with the recommendations and a willingness to transform and future-proof their agricultural production system.
- The Dutch agricultural innovation system remains world-class and is stronger in many ways than it was in 2015. The situation observed in the 2015 review regarding insecure funding and a declining research infrastructure has improved.
- Noteworthy progress has been made in the following areas:
  - A comprehensive bundle of programmes has been put in place to define a vision for agriculture, establish long-term goals and increase policy stability for the involved stakeholders. These include the 2018 circular agriculture vision, the 2018 Dutch Research agenda, the 2019-2030 LNV knowledge and innovation agenda and the mission-driven innovation policy for the *Topsectors* introduced in 2019.
  - Implementation of the CAP for 2023-27 continues to reduce coupled payments and provides increased support for investments in innovation and sustainability.
  - The *Groenpact* initiative has improved integration between education, business and government and helps to address future labour demand. Green education has been integrated into general education and the government continues to provide sufficient funding for institutions and research projects.
  - The Innovation on the Farmyard programme introduced in 2019 encourages individual farmers' adoption of agricultural methods that contribute to biodiversity, sustainability, and mitigation of climate change. More than 10 000 farmers have been supported with knowledge and advice due to this program. The SABE system of training vouchers finances impartial advice on these subjects from an independent registered advisor.
- There is still potential for improvement in some areas, including:
  - The 2015 review pointed to the need for the Top Sector system to pay more attention to public goods. The new “mission driven” approach gives more emphasis on social challenges, but more can be done to ensure that the system is as effective as possible in targeting issues of public importance such as environmental sustainability.
  - The long-term vision for the sector has not sufficiently shaped the decision making of relevant stakeholders in a way that puts the sector on a sustainable path for the future.

### 1.1. Stocktaking of progress since 2015

The OECD 2015 Report “Innovation, Agricultural Productivity and Sustainability in the Netherlands” (the Innovation Review) examined the conditions in which food and agriculture businesses use innovation to become more productive and environmentally sustainable and provided several recommendations (OECD, 2015<sup>[1]</sup>) (Box 1.1). This chapter recalls these recommendations and looks at the related actions undertaken in the Netherlands. Overall, it finds that substantial progress has been made with respect to the recommendations of the Innovation Review. The situation faced by the sector has changed since 2015 and further adjustment of the agricultural knowledge and innovation system will be required if it is to be as effective as possible. For example, the Paris Climate Agreement, the ammonia situation, the new CAP reform, the COVID crises and the Russian aggression in Ukraine all occurred subsequent to the 2015 report.

### Box 1.1. The 2015 Recommendations for the Netherlands

Four key areas for improvement were identified with respect to the capacity, orientation and approach of the AKIS system:

**Improve incentives for private investment** including by minimising the transaction costs of compliance to regulations, for registering new products, and improving the architecture of investment support programmes, in particular by revisiting tax incentives and investment support programmes.

**Improve capacities and services for innovation** including by better anticipating future demand for skills, facilitating labour mobility and on-the-job training, strengthening linkages and breaking institutional boundaries between "green" and general education funding to ensure equal access.

**Strengthen agricultural policy incentives to innovation for sustainability and longer-term challenges**, by developing a longer-term vision reconciling productivity growth and sustainability; continuing to provide information on current and future opportunities and challenges, increasing further the targeting of CAP rural development programmes towards support for the adoption of innovative practices; improving the capacity of farmers to participate in the agricultural innovation system (farm advisory, producer groups, agri-environmental incentives); and revisit the existing mix of regulation, financial incentives, and innovative market-based mechanisms to improve the preservation of natural resources and foster eco-innovation, i.e. innovation that is less environmentally harmful than relevant alternatives.

**Strengthen the long-term performance of the food and agricultural innovation system**, by reinforcing the role of the government in shaping the research agenda to improve the consideration of longer-term and public good issues; by including longer-term impacts in policy evaluation; by introducing mechanisms to better reflect societal demand and foster investment in public goods and long terms challenges such as climate change; by identifying new, more stable sources of funding for longer-term challenges; by improving long-term stability in funding, by dedicating some public investment for knowledge infrastructure and institutions, and long-term challenges; by continuing to monitor and evaluate innovation adoption, by including environmentally-friendly practices; and by strengthening the links between agriculture-specific innovation systems and related areas (health, environment).

Source: OECD (2015<sup>[1]</sup>).

This stocktaking of progress since 2015 sets the stage for the present country review as it allows to consider recent policy actions. At the same time, the 2015 Innovation Review followed a different method than is currently used in PSR country studies. The modern approach is standardised around a broader set of subjects and tools covering productivity, sustainability and resilience. In contrast, the 2015 report, as the name suggests, was focussed on innovation even though it also covered related topics.

Dutch policy makers were asked to respond to a comprehensive survey on the implementation of the 2015 recommendations. This response was complemented with follow-on discussions to establish a clear picture of policy actions taken after 2015. A broader questionnaire covering the full set of issues covered in this current review also provided evidence regarding the implementation of the 2015 recommendations (Box 1.1).

Senior officials from the Ministry of Agriculture, Food and Nature (*Ministerie van Landbouw, Natuur en Voedselkwaliteit* – LNV) have indicated that the findings of the Innovation Review were seriously considered and mostly implemented. While competency for implementing the majority of the 2015 recommendations lies mainly with LNV, some of the recommendations involve other ministries, agencies and the private sector.

Some actions taken since the 2015 Innovation Review that speak to its recommendations are worth highlighting. With respect to the four focus areas of the 2015 review, these are as follows.

### **1.1.1. Improve incentives for private investment**

- Financing gaps have been identified and investment support programmes have been revised. New programmes have been established providing targeted support to young farmers and those farmers looking to transition to sustainable business practices.
- Recent reforms of product market regulations (*Integral Afwegingskader*, IAK) have lowered administrative burden by removing burdensome regulations. The process for the design of new regulations has been adjusted and stakeholders such as SMEs are now consulted at an earlier stage.
- The 2018 SME Action plan (*MKB-actieplan*) provides better support to SMEs and facilitates research and development (R&D) as well as market uptake of innovations.
- The new strategic Evaluation Agenda increases policy stability and predictability. It evaluates the effectiveness and efficiency of policies pursued to achieve policy goals set out by the strategic agenda in a 4–7-year cycle.

### **1.1.2. Improve capacities and services for innovation**

- The *Groenpact* initiative brings education and businesses together to provide training of in-demand skills for the labour market. Green education is now more tightly integrated with the general education system.
- The *Subsidy Module agricultural business advice and education* (SABE) helps producers to access independent farm advisory services on a range of topics including nitrogen management and precision agriculture.
- In 2017, the distinction between general and green education was eliminated, ensuring equal access to funding.

### **1.1.3. Strengthen agricultural policy incentives to innovation for sustainability and longer-term challenges**

- Steps were taken to develop a long-term vision reconciling productivity growth and sustainability and reduce policy uncertainty in 2018, with the launch of the long-term vision for the Netherlands as a world leader in circular agriculture.
- The design of the new CAP 2023-27 improves over past implementations in several ways.
  - Reduced use of coupled payments and direct income payments.
  - Broader consideration of environmental and social objectives and better integration with EU directives.
  - Support for producer and branch organisations, as well as support for the participation of farmers or farmers' organisations in knowledge networks.
  - Focus on young farmers and generational renewal.

### **1.1.4. Strengthen the long-term performance of the food and agricultural innovation system**

- The new strategic evaluation agenda (SEA) lengthens policy cycles and improves evaluations of policies on effectiveness and efficiency with respect to long-term objectives.

- The circular vision for agriculture set out in 2018 helps establish directions for policy that is compatible with environmental and social goals, though more is needed to refine this.
- The 2019-30 LNV Agricultural Knowledge and Innovation Agenda (KIA) translates the circular agriculture vision and guides stakeholder engagement along outlined societal challenges.
- The new Dutch Research Agenda (NWA) introduced in 2018 outlines the research focus areas and objectives. It displays stronger goal setting by the government and includes targeted programmes for long-term challenges such as sustainable production of safe and healthy food.
- In 2019 the government introduced mission-driven innovation policy for the *Topsectors*. To increase the predictability of the policy mix, there is an increasing effort to switch from means and action-oriented to goal-oriented policies.
- Since 2020 the Subsidy Module Agricultural Business Advice and Education (SABE) enables farmers to learn about sustainable agriculture through independent advice.
- With the introduction of the National Growth Fund, the Dutch government has dedicated EUR 20 billion between 2021 and 2025 for knowledge development, R&D and innovation across all sectors.
- Co-financing by the government enabled Dutch researchers to participate successfully in EU-funded programmes such as Horizon 2020.

Overall, the Netherlands has taken actions that fully or partially address about 80% of the 2015 policy recommendations, displaying a solid engagement with the recommendations and a willingness to transform and future-proof their agricultural production system. Improvements are noticeable across all four policy areas.

Some of the challenges identified in 2015 still require sustained effort to achieve lasting improvements:

- Administrative burden on start-ups, especially licenses and permits, is an area where the regulatory system still can improve.
- R&D support remains skewed towards tax incentives. While targeted programmes have increased in use that benefit SMEs, tax incentives are still the main support vehicle for R&D.
- The agricultural vision has not motivated the involved stakeholders to deliver on long-term goals. Farmer's protests against plans to reduce ammonia emissions demonstrate that acceptance of the current policy path remains low both in the private sector and within the farming community.
- While substantial success has been achieved through the *Groenpact* initiative, some skill gaps persist. Migrant and seasonal workers remain under-skilled and would benefit from additional training. Moreover, the willingness of farmers to participate in lifelong learning is below the EU average, which can slow progress towards the circular agriculture vision.
- There are still insufficient mechanisms to ensure that private companies' contributions to the system are at the same level as the benefits they draw from it.

## 1.2. A changing situation between 2015 and 2023 brings new challenges

A lot has happened since the 2015 Innovation Review and not all the 2015 recommendations will sit at the top of the government's priority list. The 2019 court ruling has major implications for ammonia emissions from agriculture. The situation in the Netherlands is highly dynamic as policy responses are developed and refined. The food chain disruptions due to the COVID pandemic, Russia's war on Ukraine and the ensuing shortages of staff, fertilisers, commodities and energy have revealed the food system's vulnerability to external shocks. The mainstreaming of sustainability, climate mitigation and resilience in every policy area, in concert with public demand, private company interest and in conjunction with a broader shift of policy objectives at the EU level, has drawn increased attention to the responsibility of the agricultural sector to

deliver on their share of these objectives. A common thread running through the new reality for the sector is that agriculture policy must better integrate with national priorities and the sector must thrive within its environmental limits.

Multiple programmes were established in 2022 and their design is yet to be finalised. This includes the Agreement on agriculture (*Landbouwakkoord*) based on recommendations by a report of mediator Johan Remkes. The result will later feed into the National Rural Area Programme (NPLG – *Nationaal Programma Landelijk Gebied*). It aims to translate country wide policy objectives down to the local level. The central government and the provinces expect to produce the NPLG which by July 2023. The LBV+ scheme (*LBV plus-regeling*) is a modification of the LBV programme that targets peak loaders for early action. Details of the process and eligibility of farmers for LBV+ is forthcoming as of this writing.

The evidence shows that the Dutch government has taken substantial action to address past shortcomings and build upon the strengths of the innovation system that were identified in the 2015 Innovation Review. At the same time, many of the concerns raised in the 2015 assessment have come to pass and will require more action to address. Most prominent among these are the risk that the *Topsector* approach would pay insufficient attention to public goods issues and the need to establish a long-term plan for the sector that puts it on a sustainable path for the future while increasing policy certainty. For these and other matters, this current PSR Review of the Netherlands makes new recommendations for actions to help put the sector on a productive and resilient transition to a sustainable future.

### 1.3. Actions taken to implement selected recommendations from the 2015 OECD Innovation, Agricultural Productivity and Sustainability in the Netherlands

Each of the four major themes are organised into sub-themes and specific recommendations (Table 1.1). Policy changes act systemically and although specific recommendations fall mostly into one of the outlined key policy areas, they are often relevant for others. While recognising these spill-over effects, to avoid redundancy the recommendations are primarily discussed solely within the context of the most fitting policy area.

**Table 1.1. Recommendations made in Innovation, Agricultural Productivity and Sustainability in the Netherlands 2015 and related actions taken**

Major theme	Sub-theme	#	2015 Recommendation and actions taken
Improve Further incentives for private investment	Investment in RDI	11	<p><b>Recommendation:</b> Rebalance the policy mix by complementing the current focus on R&amp;D tax credits with competitive, well-designed direct support instruments, e.g. for joint R&amp;D projects with knowledge institutes, and instruments used in the top sectors approach, such as the SME Innovation Stimulation Top sectors (MIT).</p> <p><b>Actions taken:</b> Direct support programmes including the SME Innovation Stimulation Top sectors (MIT) continue to exist and other promising programmes such as the Knowledge and Innovation Covenant (KIC) have been adapted to better suit the needs of SMEs. The National Science Fund makes several specific calls per year in the field of the Research Agenda on Agriculture, Water and Food (KIA LWV). The SME action plan and other programmes that encourage cooperation between research institutions have been put in place. The overall ratio of tax incentives to direct business R&amp;D support has remained stable.</p> <p><b>Result:</b> Important progress but more remains to be done to help SMEs and organisations with less resources to participate in the AKIS ●</p>
	Entrepreneurship and investment incentives	22	<p><b>Recommendation:</b> Efforts to minimise administrative costs of compliance and reduce the costs of registering products, and reduce length and simplify procedures, need to continue. Regulators need to keep up pace with innovation (food safety, novel food) and when possible, avoid regulation on processes that hinder future innovation. Focus on the reduction of administrative burdens for corporations and barriers in services and network sectors, and the lowering of legal barriers to entry to strengthen competition.</p>

Major theme	Sub-theme	#	2015 Recommendation and actions taken
			<p><b>Actions taken:</b> Through the government wide action programme for better regulation and service delivery, the LNV aims to lower the administrative burden. The LNV has improved the process of drafting new rules by involving stakeholders such as agricultural entrepreneurs and branch organisation at an earlier point. Through similar cooperation, bottlenecks in existing regulations have been identified and resolved. Farmers and entrepreneurs can report unnecessary regulatory burdens to the Agroloket.</p> <p><b>Result:</b> Overall, the 2021 OECD Regulatory Policy Outlook finds that in recent years the Netherlands has made some progress on its regulatory environment, in particular with regard to reducing regulatory burdens. ●</p>
		23	<p><b>Recommendation:</b> Foster stability and minimise the burden imposed on businesses by frequent changes in the policy mix. Predictability could be improved by linking major policy changes to system evaluation cycles agreed upon in advance (e.g. over five-year periods)."</p> <p><b>Actions taken:</b> The Strategic agenda outlining the long-term vision of the LNV has increased policy stability. The introduction of the strategic evaluation agenda is a notable improvement to increasing policy predictability. However, increasing pressure to introduce stark measures against environmental degradation may be currently putting the predictability of the policy environment under pressure. Goalpost shifting in the past has led to a decrease in trust by important stakeholders.</p> <p><b>Result:</b> The frequency of major revisions of regulations and policies has likely accelerated after the 2019 Court of Auditors ruling with respect to the <i>Programma Aanpak Stikstof</i> (PAS) system of nitrogen allocation. This has led to a dynamic policy situation where establishment of new policies, reforms of existing policies, and elimination of policies have taken place in short timeframes. The regulatory framework is frequently revised (Fertiliser and Nitrogen Act, Environment and Planning Act) and a number of new programmes have been put in place since 2018 to reduce livestock numbers and improve environmental performance. ●</p>
	Finance	24	<p><b>Recommendation:</b> Identify market failures in credit and land markets to design better targeted policies to facilitate investment and farm transfer. Focus public support to investment in areas where financial markets fail to provide funds. Continue efforts to help the banking sector regain its former strength. Simplify the architecture of credit support programmes to improve access and targeting.</p> <p><b>Actions taken:</b> The former financing instrument was replaced in 2017 by the Guarantee Credit for Agriculture Fund (<i>Borgstellingskrediet voor de Landbouw</i> - BL) which increased the maximum loan amount and added additional funding options. Since 2020 young farmers can apply for start-up support through the <i>Vermogensversterkend Krediet</i> program. The CAP 2023-27 replaces the current top-up of basic support and with a one-time startup payment support of EUR 25 000. The payment is conditional on farmers having established a sustainability plan. The Environmental Investment Deduction (<i>milieu-investeringsaftrek</i> - MIA) and Arbitrary Depreciation of Environmental Investments (<i>Willekeurige afschrijving voor milieu-investeringen</i> - Vamil) schemes provide additional opportunities to bridge financing constraints and increase liquidity. A new LNV pilot investment fund for sustainable agriculture that enables farmers to transition to sustainable agriculture: <a href="#">Investeringsfonds Duurzame Landbouw - Nationaal Groenfonds</a>. The new CAP 2023-27 is also in line with the recommendation to provide targeted investment support where the financial market fails to provide funds. It will phase out top-up programmes employed in previous CAPs, instead dedicating the funds to a newly introduced young farmer establishment support grant. In total, EUR 120 million will be available to young farmers.</p> <p><b>Result:</b> Notable progress has been made, but ongoing efforts are necessary ●</p>
Improve capacities and services for innovation	Education and skills	19	<p><b>Recommendation:</b> Ensure public funding for education and knowledge institutions to enable them to continue to offer relevant education and training, and participate actively in the agricultural innovation system. In particular, whatever the ministry in charge, public resources for education should be equally distributed on the basis of the number of students in order to enable students to move to areas with attractive employment prospects such as agri-food education.</p> <p><b>Actions taken:</b> In 2017 the government transferred responsibility for green education from to the Ministry of Economic Affairs to the ministry of Education, Culture and Science. Funding for green education is now provided through the general education budget, stabilising funding, and increasing interlinkages with adjacent sectors. The introduction of the <i>Groenpact</i> initiative complements the approach with closer ties between public and private stakeholders.</p> <p><b>Result:</b> Actions taken are fully in line with recommendation. ●</p>
		20	<p><b>Recommendation:</b> Facilitate discussion between education and knowledge institutions and the industry to identify current and future skills for the development of the sector and the improvement of productivity and sustainability performance. Find innovative ways to improve systems' reactivity to new demand by facilitating further life-long learning and upgrading of skills in the labour force.</p> <p><b>Actions taken:</b> With the introduction of the <i>Groenpact</i> initiative the Netherlands has significantly improved the connection between education and industry.</p>

Major theme	Sub-theme	#	2015 Recommendation and actions taken
Strengthen agricultural policy incentives to innovation for sustainability and longer-term challenges			<b>Result:</b> Notable progress has been made, but ongoing efforts are necessary. to prepare farmers for new digital opportunities. Specific areas might need additional support, including trainings for under-skilled migrant workers and the below average willingness to engage in lifelong learning. However, solutions are currently under development. ●
		21	<p><b>Recommendation:</b> Continue to develop business management programmes, including for future researchers and farmers, to facilitate the valorisation and adoption of knowledge. Learning how to deal with uncertainty and cope with problems will become an ever more important asset.</p> <p><b>Actions taken:</b> LNV stimulates operational groups in which farmers learn and work together on specific topics and also provides a subsidy to operational groups for a three-year period. The innovation system makes good use out of “operational groups”, with more than 300 Operational Groups supported under the RDP EIP-AGRI. The National Centre for Innovative Craftmanship (<i>CIV Groen</i>) aids co-operation between entrepreneurs, green MBO educational institutions and the government in the field of practical innovation, the labor market and educational innovation.</p> <p><b>Result:</b> Notable progress has been made, but ongoing efforts are necessary ●</p>
	Labour	25	<p><b>Recommendation:</b> Increase the flexibility of employment and migration policy to facilitate labour force moving into areas with strong demand, such as agri-food and nature management.</p> <p><b>Actions taken:</b> Since 2022 the Civic Integration Act aids participation of migrants in Dutch society and the labour market. The responsibility for the integration of newcomers has been shifted to the municipalities to increase language learning and the uptake of work. Work placement and increased languages skills offer opportunities for continued education in the agri-food sector and better skills matching.</p> <p><b>Result:</b> The share of both temporary and direct-employed migrant workers has increased consistently after 2015. Skills imbalances continue to be a problem. ●</p>
	Broad domestic	1	<p><b>Recommendation:</b> Continue to limit the provision of coupled payments to very targeted and temporary measures to improve traceability and sustainability, through innovative investments and tools.</p> <p><b>Actions taken:</b> The Dutch CAP 2023-27 CAP Strategic Plan (CSP), makes maximum use of the opportunities provided in the CAP to tailor spending to country-specific needs. Coupled payments have been eliminated, and direct income payments will reduce in importance over time. CAP spending on AKIS continues to represent a robust share of total spending.</p> <p><b>Result:</b> Actions taken are fully in line with recommendation. ●</p>
	Measures encouraging adoption of environmental practices	2	<p><b>Recommendation:</b> Strengthen the ability of agricultural policy to improve the environmental performance of agriculture, by focusing agri-environmental measures to objectives and outcomes rather than on process and meet EU regulation constraints; revisit the balance between regulation and economic incentives in view of fostering environmentally-friendly innovation, building on the analysis of the pros and cons of the Dutch experience in this area, such as the Mineral Accounting System (MINAS).</p> <p><b>Actions taken:</b> In 2021 the Netherlands introduced an “internal project on goal-oriented policy making”, that confirmed the focus on action-oriented processes for most policies. The project identified several bottlenecks to adopting more goal-oriented policies including a lack of appropriate measurements to monitor the results and a stated concern that goal oriented policies might not align with EC standards. The ANLb approach is being expanded from biodiversity to also cover climate and water issues in the CAP 2023-27</p> <p><b>Result:</b> Most policy continues to be action-oriented, but the Netherlands is in advance of many EU countries. Spending on environmental objectives on farmland is high relative to natural areas and increasing, yet outcomes have been better in natural areas. This indicates that the balance between regulation and economic incentives on farmland has not yet been found. ●</p>
	Long-term strategy	4	<p><b>Recommendation:</b> Develop a long-term vision reconciling productivity growth and sustainability and reduce policy uncertainty.</p> <p><b>Actions taken:</b> In 2018 the Circular Agriculture vision was introduced which tries to reconcile growth and sustainability through wide-spread adoption of circular agriculture and innovative farming approaches. It plans to position the Netherlands as a global leader in circular agriculture by 2030. A transition fund allocates EUR 24.3 billion until 2030 to achieve government objectives.</p> <p><b>Result:</b> While the vision outlines a desirable long-term future for the sector, more needs to be done for the vision to play a strong role on policy making. Specific goals for farmers and regions are expected in 2023. More needs to be done to set policies to be well within environmental limits to avoid frequent adjustments. ●</p>
	Knowledge flows	10	<b>Recommendation:</b> Identify and fund areas not covered by public-private partnerships, with specific attention to food safety, sanitary and phyto-sanitary issues, economic analysis, societal issues of no direct interest to the private sector, longer term and more risky issues.



Major theme	Sub-theme	#	2015 Recommendation and actions taken	
			<p><b>Actions taken:</b> Societal issues of no direct interest to the private sector such as welfare of pets, nature conservation, rural area policies, economic analysis and international food security are identified and funded in special national and EU public programmes. Food safety, sanitary and phyto-sanitary issues are part of the Knowledge and Innovation Agenda. For these subjects the contribution of private companies is only 30% instead of the usual 50% co-financing, thus reflecting the major public interest in these issues. The Dutch Research Agenda (NWA) and the National Growth Fund dedicate substantial funding to societal challenges.</p> <p><b>Result:</b> The output of public goods innovations likely needs to accelerate further to meet the challenges facing the agricultural system. ●</p>	
		14	<p><b>Recommendation:</b> Make use of the opportunity given by the CAP to recognise Producer and Branch Organisations and support the participation of farmers or farmers' organisations in knowledge networks.</p> <p><b>Actions taken:</b> The current CAP includes support both for producer and branch organisations as well as farmer organisations in knowledge networks. In 2019, the Innovation on the Farm initiative was introduced to facilitate adoption of innovative agricultural methods through multiple tools.</p> <p><b>Result:</b> Actions taken are fully in line with recommendation. ●</p>	
	Information and communication technology	17	<p><b>Recommendation:</b> Maintain a good information base and analytical capacity to monitor progress, evaluate policies and guide farmers' decisions, with specific attention to innovation adoption and environmental practices.</p> <p><b>Actions taken:</b> Additional instruments have been added to an already good system to improve guidance for farmers. The SABE voucher system helps guide decision making by providing farmers with tailored information on environmental practices. Subsidy programmes such as MIA and VAMIL create financial incentives and support for investment in and adoption of innovative, sustainable farming practices.</p> <p><b>Result:</b> The information base has been maintained and new instruments improve the guidance of farmers' decisions for innovation and environmental practices. ●</p>	
	Strengthen the long-term performance of the food and agricultural innovation system	Institutions	3	<p><b>Recommendation:</b> Improve policy co-ordination amongst agricultural, industrial, innovation, education, and regional policies, and policy stability.</p> <p><b>Actions taken:</b> The transfer of responsibility for green education from the Ministry of Economic Affairs to the MINISTRY of Education, Culture and Science helps improve coordination of education policy across sectors. The implementation of the mission driven knowledge and innovation agenda in 2019 has led to a better policy co-ordination and harmonisation between agricultural, industrial, innovation, education and regional policies. The clear outline and long-term perspective of these long-term issues helps increase policy stability. To avoid overlap the selection process for new projects includes referencing a database to check whether similar projects are being put forward in other departments.</p> <p><b>Result:</b> The increased integration and focus on societal challenges has streamlined policies and improved co-ordination between stakeholders and the government on a national and regional level. ●</p>
		Long-term strategy	5	<p><b>Recommendation:</b> Strengthen the role of the government in defining long-term objectives for R&amp;D and innovation, taking into account long-term challenges and societal demand.</p> <p><b>Actions taken:</b> The main mechanisms are the Missions for the top sectors and innovation policy, the agricultural knowledge and innovation agenda, and the Dutch Research Agenda (NWA). In 2019 the government introduced a Mission-driven Innovation Policy for the Topsectors (<i>Missies voor het topsectoren- en innovatiebeleid</i>) to the KIA. It sets 25 fundamental societal challenges across all Topsectors, Within the LNV, the <i>agricultural knowledge and innovation agenda LNV 2019-2030</i> (KIA-<i>Kennis- en innovatieagenda</i>) reaffirms the Dutch commitment to circular agriculture as the leading principle described in the agricultural vision. It specifically tackles three challenges: climate-friendly agriculture, careful use of raw materials, resources and the natural environment and a stronger relationship between agriculture and nature.</p> <p><b>Result:</b> With the implementation of the Missions for the top sectors and innovation policy, the agricultural knowledge and innovation agenda, and the new Dutch Research Agenda the Netherlands has made strong progress in defining the long-term objectives for R&amp;D and innovation. ●</p>
		6	<p><b>Recommendation:</b> Explore ways to generate new (breakthrough) ideas to overcome current constraints, for example, through demand-driven mechanisms, including to develop technologies and systems allowing for a better management of natural resources and improved resilience to risks.</p> <p><b>Actions taken:</b> KIA and NWA both include pathways to generate breakthrough innovations which overcome current constraints. They particularly target nonlinear breakthroughs in the areas of future-proofing the agricultural system, strengthening the economic and social position of farmers and finding innovative approaches to the bottlenecks in the way to becoming a circular agricultural system.</p>	

Major theme	Sub-theme	#	2015 Recommendation and actions taken
			<p><b>Result:</b> While the Netherlands has made substantial progress in most policy areas, more remains to be done with regard to environmental and sustainability challenges, especially for water quality and biodiversity. The government's agricultural vision has not been fully internalised by stakeholders such as farmers, businesses and research institutions. Private investment in public good research remains insufficient. ●</p>
	Investment in RDI	7	<p><b>Recommendation:</b> Strengthen the stability of R&amp;D funding, by dedicating some public investment for the maintenance of knowledge infrastructure and for issues with a longer term horizon.</p> <p><b>Actions taken:</b> In addition to the clearer vision and research agenda for long-term public good challenges mentioned above, the government has also improved access to funding for these objectives. Substantial funding has been earmarked for public investments into issues with a longer-term horizon. Between 2021 and 2025 the National Growth Fund (Nationaal Groeifonds - NGF) dedicates EUR 20 billion to projects deemed to have the highest potential for structural and durable economic growth. The fund supports knowledge development, and research, development and innovation across all sectors.</p> <p><b>Result:</b> Actions taken are fully in line with recommendation. ●</p>
		8	<p><b>Recommendation:</b> Facilitate access to other sources of funding: How could revenues from intellectual property rights (IPRs) be increased? Explore ways to increase IPR revenue or generate additional funding from royalties or levies.</p> <p><b>Actions taken:</b> Each public-private partnership under the umbrella of the KIA is facilitated with a standard consortium agreement, arranging IPR. The Knowledge Transfer Offices of the universities play an important role in increasing IPRs revenues from the knowledge generated. A recent evaluation has been undertaken to come up with recommendations to improve revenue generation from IPR through knowledge transfers offices at universities</p> <p><b>Result:</b> The situation is largely stable, though first steps have been taken for additional action. ●</p>
		9	<p><b>Recommendation:</b> Ensure the contribution that business makes to public-private partnerships is commensurate with the benefits they get.</p> <p><b>Actions taken:</b> The Dutch triple helix approach to innovation involving government, private sector and research institutions hinges significantly on the role of the private sector. The approach aims to use public-private partnerships where it can and rely on public financing where it must.</p> <p><b>Result:</b> The growing orientation towards societal challenges has not led to a decrease in private investments in public private partnerships. The private sector benefits from both government co-financing in the Top Sector system as well as R&amp;D tax credits that lower their costs. The effective government share of R&amp;D financing including this tax expenditure is not as transparent as it could be and obscures the level of public support relative to the level of attention paid to public good interests in the research agenda. ●</p>
	Performance of the innovation system	12	<p><b>Recommendation:</b> Develop indicators and tools to evaluate the performance of the agricultural innovation systems in general, and innovation policy regularly, taking longer term effects into account, possibly in collaboration with other countries and organisations.</p> <p><b>Actions taken:</b> The Netherlands plans to conduct a review of the effectiveness and efficiency of its innovation policies in the agricultural sector in 2023</p> <p><b>Result:</b> The Netherlands has a strong information system and research capacities to carry out this work, but it remains in early stages. ●</p>
	Knowledge flows	15	<p><b>Recommendation:</b> Facilitate the organisation of producers and the industry to enable them to contribute more effectively and efficiently to the agricultural innovation system, including through participation in networks or formulation of demand.</p> <p><b>Actions taken:</b> New developments to improve the position of farmers organisation within the AKIS include the right to access independent farm advisory services on nitrogen management or precision agriculture through the <i>Subsidy Module agricultural business advice and education</i> (SABE), meeting points for interpersonal exchange and the interactive digital knowledge sharing platform <i>Groen Kennisnet</i>. The Multi-year Mission-driven Innovation Programs (MMIP's) foster collaboration across a wide range of stakeholders, including industry and producers.</p> <p><b>Results:</b> Notable progress has been made, but ongoing efforts are necessary. Organisations that cannot provide co-financing are less able to participate in Top Sector process. ●</p>
		16	<p><b>Recommendation:</b> Ensure public co-financing is available for participation in EU programmes and international collaborative efforts.</p> <p><b>Actions taken:</b> Multiple co-financing programmes have been established to participate in EU programmes, including dedicated partnerships between the LNV and WUR, as well as the Encouraging European Regulation (EER) regulation. Support is also dedicated to international co-operation programmes e.g. through CIGAR and the Merian programmes.</p> <p><b>Result:</b> Actions taken are fully in line with recommendation. the Dutch application success rate has been above average for EU programmes like Horizon 2020. ●</p>

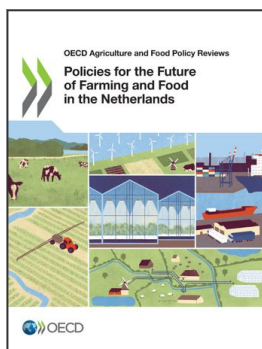
Major theme	Sub-theme	#	2015 Recommendation and actions taken
	Information and communication technology	18	<p><b>Recommendation:</b> Continue developing information systems, including market intelligence (big data) and research results, as innovation and policy evaluation become more complex and require a wealth of information. In particular, continue to monitor innovation adoption and environmental performance in surveys, in addition to economic performance, to better understand determinants and policy impact. Continue to use and share innovative methods to reduce collection costs and improve farm and firm participation.</p> <p><b>Actions taken:</b> The LNV continues to provide information on innovation adoption for instance through the Innovation adoption monitor of WUR. Reports by WUR and CBS provide detailed information about innovation adoption and environmental performance on the farm level. An abundance of digital data platforms for farmers prevents more efficient and comprehensive data collection. KPIs are being developed for improved assessment of progress in many areas.</p> <p><b>Result:</b> Notable progress has been made, but ongoing efforts are necessary ●</p>

Notes: ● Actions fully or mostly align with recommendation and results substantially address the basis of the recommendation.  
 ● Actions mostly align with recommendation and results substantially or somewhat address the basis of the recommendation.  
 ● More actions are needed or results do not yet address the basis of the recommendation.

Source: OECD (2015<sup>[1]</sup>).

## Reference

- OECD (2015), *Innovation, Agricultural Productivity and Sustainability in the Netherlands*, OECD Food and Agricultural Reviews, OECD Publishing, Paris, [1]  
<https://doi.org/10.1787/9789264238473-en>.



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