Reforming Agricultural Policies for Climate Change Mitigation

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Climate change as a uniquely complex challenge for agriculture (and for agricultural policies)

- Vulnerability to climate change effects
- USD 817 bn per year transferred to agriculture
- Major source of direct and indirect GHG emissions
- Opportunities to reduce emissions and to sequester carbon
Past reforms have often focused on economic effects – Recent developments focus on sustainability more broadly

► Support data reveal the stalling of reforms in OECD countries for the past decade
► Recent policy responses to short- to medium-term crises
  – COVID-19, African Swine Fever…
  – Russian aggression against Ukraine adds to the threats
► Current policies need to address multiple challenges
  – Climate change, market distortions, food systems triple challenge
► Encouraging examples for policy change
  – Countries moving in the right direction
  – Fast and determined enough?
► More ambition needed for agricultural GHG mitigation
► Call for a six-point policy agenda

Current support and impact on production and climate 2019-2021

Structure of support in All 54 Countries

USD billion per year (2019-21)

-150 -100 -50 0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850

Positive MPS USD 611 bn
Market price support (MPS) USD 317 bn
Payments to producers USD 294 bn
Other payments (public goods) USD 216 bn
Other production factors USD 2 bn
Variable input use USD 60 bn
Output-based USD 15 bn
General Services USD 106 bn
Consumer Support USD 100 bn

Total support: USD 817 bn p.a.
Producer support: USD 611 bn p.a.

Most distortive forms of producer support
► Encourages local expansion of production and intensification
► USD 74 billion public expenditures highly distortive and potentially environmentally harmful (excludes input support with constraints)

Less distortive
► Generally, less coupled to production and GHG emissions
► May be linked to environmental requirements (“cross compliance”)

Non-distortive
► Not tied to specific agricultural production
► E.g. environmental public goods such as ecosystem services

Source: OECD, Agricultural Policy Monitoring and Evaluation 2022
Reforms in OECD countries have reduced and restructured support – until the early 2010s

► While OECD reforms have stalled, support in major emerging economies increased

► Across OECD, producer support declined from 28% of GFR in 2000-02 to 18% in 2010-12 and stayed there since
► Re-instrumentalisation made least distorting measures more prominent
► Support in key emerging economies has risen while negative MPS peaked around 2010
► Continued dominance of most distorting measures

Part of the COVID-19 responses quantified within the database, adding more than 10% of budgetary support

► Substantial increase notably in aid for low-income consumers
AFOLU accounts for 22% of global GHG emissions, but the sector has significant abatement potential

AFOLU GHG emissions

Supply side

Demand side

Technical potential

AFOLU accounts for 22% of global anthropogenic GHG emissions

Economic potential (< 100 USD per tCO2eq)

Food waste and losses

Lower-emission food choices

Demand side measures

Other land use and agricultural soils

Soil organic carbon

Deforestation

Livestock

Crop cultivation

LULUCF (CO2)

Agriculture (mostly CH4 and N2O)

Only 16 countries out of 54 with targets specific to agriculture

There is significant scope to intensify and accelerate emissions reduction in the sector...

Commitments under Paris Agreement

Net zero target or equivalent by 2050

Long term strategy to 2050

Agriculture sector target

Global methane pledge

Number of countries

Commitments under Paris Agreement

Net zero target or equivalent by 2050

Long term strategy to 2050

Agriculture sector target

Global methane pledge

Other

OECD
Multiple approaches have been taken by countries to tackle climate change impact of agriculture

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<th>Specific instrument</th>
<th>Examples</th>
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<td>Emissions taxes</td>
<td>Norway (only fossil fuels in agriculture)</td>
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<td>New Zealand (NZ ETS); United States (several state-level ETS)</td>
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<td>Abatement subsidies / auctions</td>
<td>Australia (Emissions Reduction Fund); Japan (J-Credit scheme)</td>
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<td>Agricultural support</td>
<td>EU (CAP); Canada; China; India</td>
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<td>Grants</td>
<td>United States (biogas); China; Australia</td>
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<td>Dedicated credit line</td>
<td>Brazil (ABC programme); United States</td>
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<td><strong>Environmental regulations</strong></td>
<td>Pollution regulations</td>
<td>Canada (clean fuel standard); EU (Nitrates directive and pollution control); Korea; Switzerland (water quality plan)</td>
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<td>R&amp;D</td>
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Innovation, biosecurity and infrastructure can boost sustainable productivity growth needed to combat CC

General Services Support Estimate, 2019-21 (% of agricultural value of production)
A few examples:
Swiss package on water quality

Tightening of regulation in 2022 on agriculture impact on water in Switzerland should support further reduction of \(N_2O\) emissions

- Switzerland faces an important nitrogen cycle challenge
  - Current nitrogen surplus = 59 kg/ha (twice the OECD level), mostly due manure management and disposal on soils
  - Agricultural soil emissions decreased by 17% between 1990 and 2020 but remain relatively high
- New measures agreed for water quality should help reducing further \(N_2O\) emissions
  - Minimum reduction target of 20% for nitrogen and phosphorus losses by 2030
  - Tolerance margin of 10% excess of crop fertiliser requirement will no longer apply
  - Obligation from 2024 to spread liquid farmyard manure ensuring a low emission rate (integrated to cross-compliance)

- Additional measures enacted on pesticide risk reduction and biodiversity protection
  - Including a 3.5% set-aside obligation for crop land
- A broader reform is currently in discussion with a larger set of objectives

Background: Swiss agricultural policies have undergone a series of reforms since 1993

- Significant reductions of import protection, price guarantees and other market regulations
- Direct payments and voluntary ecological payments; cross-compliance requirements
- AP22+ process suspended, to be in place not before 2025
A few examples:
The EU’s Farm-to-Fork Strategy

Part of the European Green Deal, the F2F Strategy aims to make the European food systems “fair, healthy and environmentally-friendly”

- Covers various substantive areas:
  - Sustainable food production
  - Food security
  - Sustainable food processing and distribution
  - Sustainable food consumption
  - Food loss and waste prevention
  - Food fraud

- Specific targets for 2030 include:
  - 50% reduction of pesticide risks and the use of more hazardous pesticides
  - 25% of agricultural land under organic farming
  - 50% reduction of antimicrobials sales
  - 50% reduction of nutrient losses
  - 20% reduction of fertilisers
  - 50% reduction of food waste*

* The specific target follows from the EU’s adherence to the UN SDGs

A few examples:
The EU’s CAP Post-2020 – A New CAP Delivery Model

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<th>Future CAP</th>
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<td>EU Specific objectives on supporting farm income and Common indicators (e.g. on redistribution to smaller farms)</td>
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<td>Mandatory and voluntary schemes (e.g. Basic payment and optional redistributive payment)</td>
<td>Broad types of interventions with EU basic requirements: Basic income support for sustainability (ring-fenced) and complementary redistributive income support for sustainability</td>
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<td>Detailed EU eligibility criteria and requirements (with exemptions and implementation options)</td>
<td>Definition of targets at MS level (approved by the EU)</td>
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<td>Detailed EU rules on controls</td>
<td>Determine details on the measures and specific control rules (approved by the EU)</td>
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<td>Choices from MS based on various options</td>
<td>Implementation / control</td>
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<td>Implementation / control</td>
<td>Monitoring progress towards targets</td>
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A few examples:
The EU’s National CAP Strategic Plans

- Single CAP plan for interventions from both pillars
- Strategic approach based on needs assessment
- Structured dialogue with Member States
- CAP Plan will be approved by the Commission
- Draft plans currently been reviewed by the Commission


A few examples:
The EU’s CAP and Farm-to-Fork Strategy

Background:
F2F follows a series of major reforms between 1992 and early 2000s
- Strong reduction in producer support, notably MPS
- Progressive “decoupling“ of producer support, increased relevance of environmental constraints
A few examples: Israel’s “Decision No. 213”

Resolution to facilitate agricultural policy reforms

- Ambition to reduce import customs for fresh produce, to ease import procedures (recognition of European standards) and to cut prices
- Shift to greater investments in innovation, direct support to farmers
- First focus on fruits and vegetables only, but intended to include other products such as eggs
- Programme would follow OECD recommendations

After the change in governments, passage of the legislation is pending

Background: After important changes to foreign exchange, dairy and F&V policies in the early 2000s, some (partial) sectoral reforms, without major implications for support levels or structures

- Reforming water policies significantly reduced water price support in the early 2000s
- Changes in support mainly driven by market price support

Agricultural producer support relative to gross farm receipts: Israel

- Market price support
- Other more distorting support
- Less distorting support
- Non-distorting public goods
- Producer support estimate
A few examples: New Zealand’s efforts on pricing emissions

Half of NZ’s emissions come from agriculture, more one third are methane from ruminants

► Climate Change Response (Zero Carbon) Amendment Act (2019):
  ► Reduce bionic methane emissions by 10% by 2030, by 24%-47% by 2050
  ► Reduce all other emissions to net zero by 2050

► New Zealand Emissions Trading Scheme:
  ► Currently companies within the agricultural supply chain need to report emissions, but are excluded from pricing
  ► Forestry emissions and sequestration, including on ag land, to be included in the Scheme from 2023
  ► Agricultural emissions to be priced as from 2025

► Proposal by the He Waka Eke Noa – Primary Sector Climate Action Partnership: three options for pricing agricultural emissions:
  ► Farm-level levy
  ► Processor-level levy
  ► Full inclusion in the New Zealand Emissions Trading Scheme

A few examples: New Zealand’s efforts on pricing emissions

Background:
New Zealand has been providing very low levels of support since market reforms in the 1980s

► Producer support consistently below 2% of GFR since 1990
► 37% and 32% of budget transfers go to innovation and biosecurity, respectively
A few examples: Japan’s revised “Basic Plan”

The Basic Plan for Food, Agriculture and Rural Areas is updated every five years since it was first formulated in 2000

- The previous 2015 Basic Plan
  - Prioritized agricultural sector reforms in order to make the sector competitive and withstanding to the expected new trade environment (e.g. implementations of largescale EPAs)

- New revision in March 2020 set Japan’s agricultural policy direction for 2030
  - To continue necessary agricultural policy reforms to improve the sector competitiveness
  - But also to put an increased emphasis on rural communities, smart agriculture and digitalisation, and risk management (e.g. with respect to natural disasters)
  - The Basic Plan also aims to ensure a stable food supply and improved food self-sufficiency

A few examples: Japan’s Strategy for Sustainable Food Systems (MeaDRI)

In May 2021, MAFF released the MeaDRI (Measures for Achievement of Decarbonisation and Resilience with Innovation) strategy

- The strategy aims to transform Japan’s food systems and increase sustainability and productivity by
  - Enhancing engagement of stakeholders at each stage of food supply chains
  - Promoting innovation to reduce environmental load

- The strategy includes 14 Key Performance Indicators for 2050. The agriculture-related KPIs include:
  - Zero CO2 emission from fossil fuel combustion in agriculture, forestry and fisheries
  - 50% reduction risk-weighted use of chemical pesticides by dissemination of e.g. IPM
  - 30% reduction in chemical fertiliser use
  - Increase of land under organic farming to 1 Mha (equivalent to 25% of farmland)
A few examples:
Japan’s Basic Plan and MeaDRI

Background: Despite some progress in reforming agricultural policies since the early 2000s, farm support in Japan remains more than twice the OECD average and dominated by MPS

► Successive policy changes, such as ending the administrative allocation of rice production quotas and the reform of public stockholding program for rice, have contributed to MPS reductions
► Partial compensation through area payments, including for crop diversion away from rice.

Agricultural policy reform agenda for climate, food security, livelihoods and sustainability

Reforming current agricultural support
► Phase out market price support and other potentially environmentally harmful and distortive transfers
► Reorient budgetary support to public goods and key general services to improve sector performance
► Target income support to those most in need

Developing strong climate policy packages for agriculture
► Implement effective pricing systems for agricultural emissions to transition to low-emission agriculture
► Where agriculture is not included in broad carbon pricing or equivalent schemes, or complementing those, develop a package of approaches to ensure significant emissions reductions in agriculture

Adaptation and resilience
► Enhance resilience against diverse risks, increasing extreme weather events and natural disasters
Read the **OECD Agricultural Policy Monitoring and Evaluation 2022** report on our website

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