

Policy tool



#9

**Sanitary and
phytosanitary
measures**

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Protect economies from the spread of disease and pests exacerbated by climate change by strengthening sanitary and phytosanitary systems.¹⁵



#9 Sanitary and phytosanitary measures

What are sanitary and phytosanitary (SPS) measures?

Sanitary and phytosanitary (SPS) measures are rules and procedures that governments use to ensure that food and beverages are safe to consume and to protect animals and plants from pests and diseases. These measures must be anchored in science, based on a risk assessment and, where possible, follow the international standards, guidelines and recommendations developed by Codex Alimentarius, the World Organization for Animal Health, and the International Plant Protection Convention.

How can strengthening SPS systems help protect people, the environment and livelihoods in a world affected by climate change?

Climate change is increasingly affecting ecosystems and agricultural production across the world. Extreme weather events, droughts and rising temperatures also affect the global prevalence of pests and diseases and contribute to increased food safety risks. Plant pests are estimated to be responsible for the loss of up to 40 per cent of crop production, costing the global economy more than USD 220 billion annually (FAO, 2021). Invasive insects alone cost economies at least USD 70 billion per year and global warming may already be facilitating the establishment of pests in new areas.¹⁶ Crop losses not only have devastating economic and food security impacts, but can also lead to significant increases in the carbon emission intensity of agricultural production (Heeb *et al.*, 2019).

The impact of climate change on animal health is predicted to be considerable, including through the spread of vector-borne diseases, such as bovine fever, increased susceptibility of animals to infections, and greater difficulty in controlling outbreaks of diseases (Rockov and Dubrow, 2020; Paz, 2021).¹⁷ Climate change therefore has consequences for the production of and trade in livestock and livestock products as well as for the livelihoods of farming communities and

economic growth. Livestock diseases can lead to higher emission intensities of related products by increasing mortality, and negatively affecting the wellbeing, productivity and fertility of livestock (Ezenwa *et al.*, 2020; Kipling *et al.*, 2021).

Finally, long-term shifts in temperature, humidity, rainfall and overall weather patterns affect the persistence and occurrence of bacteria, viruses, parasites, harmful algae, fungi and corresponding foodborne diseases while increasing the risk of toxic contamination (WHO, 2018).¹⁸

As climate change deeply affects agricultural yields, trade will increasingly play a key role in global food security by helping food flow predictably and smoothly to areas in need of supply (FAO, 2018). At the same time, trade can also act as a transmitter of pests, diseases and food safety risks to areas where they were previously unknown. Economies normally protect themselves against such risks by establishing SPS systems to regulate the importing of agricultural goods. Given the effects of climate change increasing these challenges, it is likely that the ongoing growth in SPS measures adopted in recent years (see box) will not abate.

Trends in the notification of SPS measures by WTO members

Since 1995, WTO members have notified more than **33,000 SPS measures** to the SPS Committee. While in 1995 less than 200 measures were notified, in 2022 that number had grown to 2,172 measures in one year. These measures have been proposed and/or adopted by members from all regions and levels of development. Most measures (48 per cent) were adopted to protect food safety, followed by animal health and plant protection (16 per cent each), protect humans from animal and/or plant pests or diseases (14 per cent) or to protect the territory from other damage from pests (6 per cent).

To protect people from new pest and disease risks linked to climate change, it will be equally important to adopt strategies and policies that strengthen SPS systems and to direct investments towards such systems, not only to protect their own populations and agriculture sectors, but to ensure agriculture exports can continue to reach markets where they are needed. This is particularly relevant for vulnerable economies experiencing severe consequences of climate change and extreme weather events.

What could be done to strengthen SPS systems and align them with wider climate action policy plans?

WTO members recently recognized in the MC12 [SPS Declaration](#) that climate change will bring about new challenges for the design and application of SPS measures. The capacity to face these challenges will differ across economies and food systems. Many developing economies are particularly affected by the impacts of climate change because they are located in areas where climate change is likely to have the most severe consequences. Farmers, producers and governments in Africa, Asia and the Pacific, and Latin America and the Caribbean are the most affected as they often lack the skills and resources needed to adapt quickly.

There is a pressing need, therefore, to prioritize efficient food safety, animal and plant health systems as an integral part of climate adaptation plans as well as for the benefit of people across the world. A better understanding of the ecology of pests, diseases and their hosts, and their improved surveillance, combined with improved modelling of climate change and its impact, is necessary to analyse and prioritize risks and improve the reliability of predictions. Access to enhanced climate modelling and improvements to risk assessment capacities are required to enable governments to prepare for the consequences of climate change and to act accordingly. Early warning systems and other rapid response mechanisms, such as contingency planning and readily available disease and pest eradication methods, will be equally important tools in preparing for emerging issues, especially in a world dealing with the effects of climate change.

Adherence to the WTO's SPS Agreement can also be an effective response by ensuring that new SPS measures introduced in the context of climate change remain anchored in science, based on risk assessments and, where possible, harmonized with other measures, following international standards, guidelines and recommendations and avoiding unnecessary fragmentation.

Discussions are ongoing at the WTO, not least at the SPS Committee, on how science, research and innovation could help sustainably increase production to feed a growing world population, while securing the livelihood of farmers and addressing emerging challenges like climate change.

The work of the [Standards and Trade Development Facility](#) (STDF) aims to support SPS capacity building in developing economies. Hosted by the WTO, the STDF is a global partnership that facilitates safe trade by driving SPS improvements in developing economies. The STDF brings together stakeholders from across agriculture, health, trade and development. It operates as a funding mechanism ([in 2022](#), donors contributed over USD 6 million in funding), providing support for the development and implementation of SPS projects. It also acts as a knowledge platform, piloting projects and learning from innovative, collaborative and cross-cutting approaches in SPS capacity development.

As early as 2009, the STDF drew attention to the implications of climate change for emerging SPS risks and global trade flows, including through targeted [events, publications and briefing notes](#). The WTO Secretariat's technical assistance activities can equally support reflections on how to strengthen regulatory frameworks in the face of growing challenges.