



Climate change and how it is impacting food safety in Europe

- Foodborne pathogens
- Food security
- Food allergy
- Mycotoxins in food



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2001



**AESAN Headquarters
(Madrid)**



2026



**National Centre for Food
Laboratory
(Majadahonda)**



**EU Reference Laboratory for
Monitoring of Marine Biotoxines
(Vigo)**



RISK ASSESSMENT

AESAN Scientific Committee



Independent body composed of twenty persons of recognised scientific competence in areas related to food safety and nutrition.



Selected according four criteria: Excellence, Adequacy, Independence, and Availability.

Coming from Spanish universities and research institutions.

**FOOD SAFETY AND
NUTRITION**



20 Members





Reports by the Scientific Committee of the Spanish Agency for Food Safety and Nutrition on the effects of climate change on food safety

Foodborne pathogens & climate change

Food Security & climate change

Effects of climate change on food allergy

Micotoxins & climate change



Foodborne pathogens & climate change



Report of the Scientific Committee of the Spanish Agency for Food Safety and Nutrition (AESAN) on the effects of climate change on the risk of transmission of foodborne pathogens

Reference number: AESAN-2025-002

Report approved by the Scientific Committee in its plenary session on 3 June 2025

Working group

Antonio Valero Díaz (Coordinator), Rosa María Capita González, Baltasar Mayo Pérez, Azucena del Carmen Mora Gutiérrez, María Dolores Rodrigo Aliaga, Gloria Sánchez Moragas and Paula Arrabal Durán (AESAN)



Conclusions of the Scientific Committee Report

Foodborne pathogens & climate change

- Climate change promotes the **spread** of pathogens, increasing the **risk of foodborne diseases**.
- Changes in environmental conditions may contribute to the global rise of **antimicrobial resistance**.
- **Globalization** has intensified the impact of climate change on the emergence and distribution of **foodborne pathogens**.
- To mitigate these risks, it is crucial to strengthen **epidemiological surveillance** systems through **advanced technologies**, adapt regulations and protocols, and promote **research** on the relationship between climate and pathogens.



Food Security & climate change



Report of the Scientific Committee of the Spanish Agency for Food Safety and Nutrition (AESAN) on the relationship between climate change and food security, and its impact on the nutritional status of the population

Reference number: AESAN-2024-004

Report approved by the Scientific Committee in its plenary session on 26 September 2024

Working group

Araceli Díaz Perales (Coordinator), Isabel Hernando Hernando, Gema Nieto Martínez, Ana María Rivas Velasco and María Roser Vila Casanovas



Conclusions of the Scientific Committee Report

Food Security & climate change

- Climate change can pose a **risk to the nutritional status** of the population due to the **reduction in food availability**, access, utilization, and the stability of the food system.
- It is essential to **design adaptation strategies** to reduce the net impact on food sufficiency and nutrition, thereby increasing resilience to climate change.
- A paradigm shift toward **more resilient**, productive, and sustainable agriculture and food systems is necessary to ensure global food sufficiency in the face of climate change.



Effects of climate change on food allergy



Report of the Scientific Committee of the Spanish Agency for Food Safety and Nutrition (AESAN) on the effects of climate change on food allergy

Reference number: AESAN-2023-006

Report approved by the Scientific Committee in its plenary session on 14 December 2023

Working group

Araceli Díaz Perales (Coordinator), Concepción María Aguilera García, Irene Bretón Lesmes, Ángel Gil Izquierdo, Gema Nieto Martínez, Ana María Rivas Velasco and María de Cortes Sánchez Mata



Conclusions of the Scientific Committee Report

Effects of climate change on food allergy

- Rising temperatures - increased pollination - **cross-reactivity of allergens.**
- Greenhouse gases - worsening of **allergic disorders.**
- Reduced biodiversity in the environment and microbiota - **alteration of the immune system.**
- Population growth - additives and plastics - gut microbiome dysbiosis - **food allergies.**



Micotoxins & climate change



MINISTERIO
DE CONSUMO



agencia
española de
seguridad
alimentaria y
nutrición

Report of the Scientific Committee of the Spanish Agency for Food Safety and Nutrition (AESAN) in relation to the effects of climate change on the presence of mycotoxins in food

Reference number: AESAN-2021-001

Report approved by the Scientific Committee in its plenary session on 17 february 2021

Working group

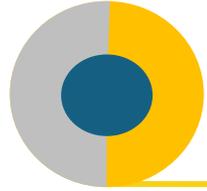
Sonia Marín Sillué (Coordinator), Álvaro Daschner, Francisco José Morales Navas, Carmen Rubio Armendáriz, María José Ruiz Leal and Pedro Burdaspal Pérez (AESAN)



Conclusions of the Scientific Committee Report

Micotoxins & climate change

- There are several **strategies to mitigate** the growing problem of mycotoxin contamination:
 - ✓ Preventive agricultural practices in the field, including the development of crop varieties resistant to mycotoxins.
 - ✓ Good practices during harvest and storage of cereals, including moisture control and the use of fungistatic agents.
 - ✓ Sampling, analysis, and disposal of cereal batches contaminated with mycotoxins.
- Efforts should be combined to **promote and implement** specific projects and programs aimed at preventing and mitigating the presence of mycotoxins in animal feed and food products.



Conference on Food Safety and Climate Change

AESAN Scientific Committee reports

- Foodborne pathogens
- Food sufficiency
- Food allergy
- Mycotoxins in food

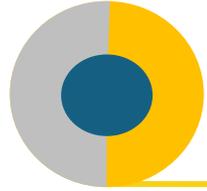


July 2, 2025

External Presentations

Ministry of Health
Ministry of Agriculture
Ministry for the Ecological Transition and
the Demographic Challenge
Ministry of Agriculture,
Fisheries and Food

Round table discussion

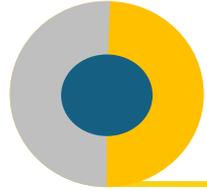


Conference on Food Safety and Climate Change

External Presentations

- **Environmental Impact of Food.**
- **Climate Change and Health.**
- **Transition Towards Sustainable Food Systems.**
- **Climate Change Mitigation measures in Food Production.**





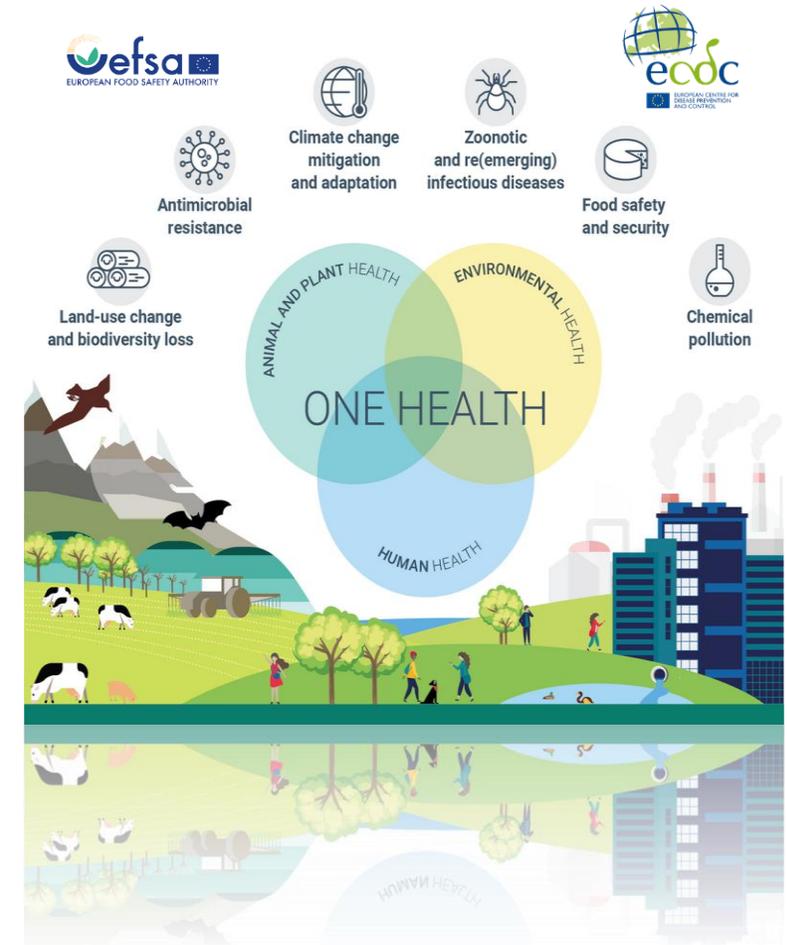
Conference on Food Safety and Climate Change

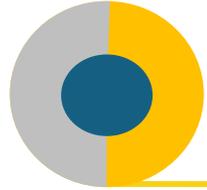
Public health - climate change

Transition towards:

- Clean energy
- Sustainable food
- Healthy cities

One Health Strategy





Conference on Food Safety and Climate Change

General conclusions

- **Climate change is already a reality.**
- **It poses significant challenges to food safety and food security worldwide.**
- **Scientific knowledge is essential to foresee its consequences and to develop effective mitigation and adaptation strategies.**
- **We have the ability and the responsibility to act on climate change and its consequences.**



AESAN 25th Anniversary



Spanish Agency for Food Safety and Nutrition

20th anniversary
AESAN



14 october 2021

20th anniversary
Scientific Committee



7 June 2023

50th anniversary
NRL for food safety

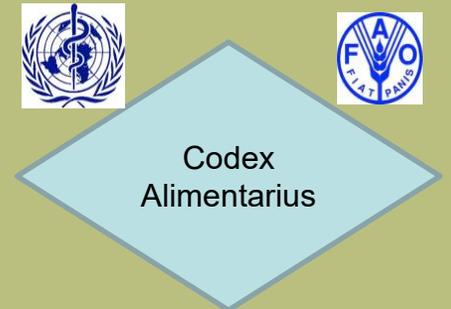


10 June 2024

Conferences & Seminars

- AESAN Scientific Committee Seminar on Food Safety and Social Aspects
- Conference on Updates in Food Official Controls
- Webinar on the use of reclaimed water
- Beyond the human eye: AI in Meat Inspection Conference
- Conference on the Codex Alimentarius and its global role
- **International Conference on Models for producing Risk Assessments for use in Risk Management: Europe and Latin America (21-22 May)**
- **AESAN 25th Anniversary Commemorative Conference (4 June)**

International Conference on “Models for producing Risk Assessments for use in Risk Management: Europe and Latin America”, 21-22 May 2026





AESAN 25th Anniversary Commemorative Conference , 4 June 2026 (High level conference)



**NDA Panel meeting
in Madrid - 27-28 May 2026**

**EREN Network and StaDG ER
meeting in Granada - 9-12 June
2026**

**Biohaz Panel
meeting in Gijón
16-17 september 2026**



Nanotechnology Network meeting in Madrid - 25-26 November 2026



Thank you!
Gracias

