

# **Agriculture and Food Security in the Modern World: Livestock**

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**Ankara**

- **Overview of Topics**
  - **Importance of Livestock Systems**
  - **Status in OIC Countries**
  - **Challenges**
  - **FAO Activities**

# Importance of Livestock Systems

## **Economic Impact**

- Contributes ~40% of global agricultural GDP
- 50% in high-income countries
- 25% in low and middle-income countries (LMICs)

## **Food Security**

- Provides 14.5% - 18% of global calorie intake
- Supplies 25% - 33% of global protein intake

## **Health and Nutrition**

- Rich source of essential nutrients: amino acids, vitamins, minerals
- Important for vulnerable populations (children, pregnant women, elderly)

## **Employment and Livelihoods**

- Employs over 1.3 billion people worldwide
- Supports livelihoods of 600 million smallholder farmers in LMICs
- Crucial for 70% of the world's rural poor

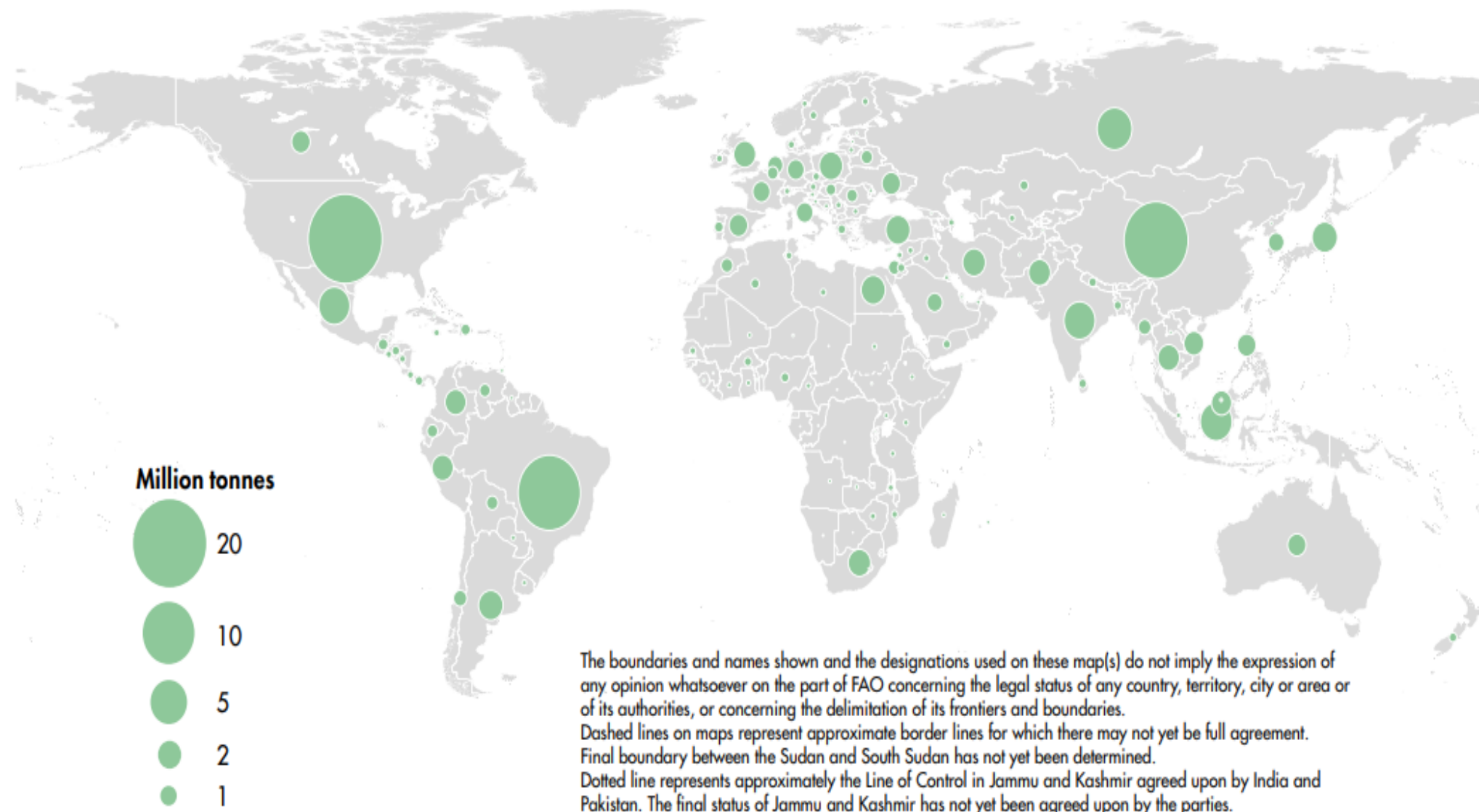
## **Environmental Impact**

- Accounts for ~14.5% of all anthropogenic greenhouse gas emissions
- Efforts are ongoing to reduce emissions and improve sustainability



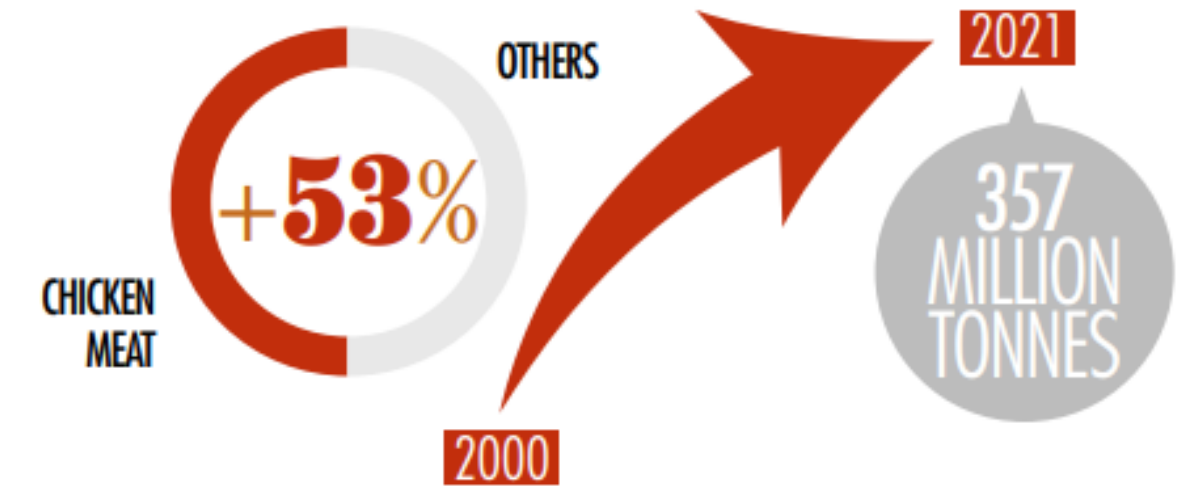
# Importance of Livestock Systems

MAP 16.  
PRODUCTION OF CHICKEN MEAT (2021)



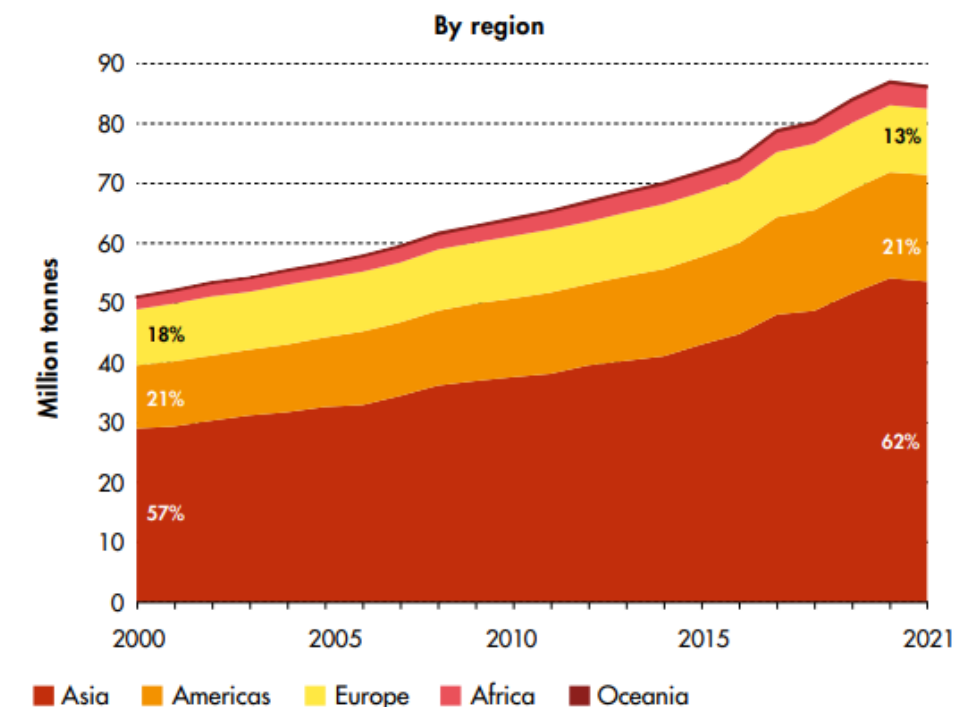
Source: FAO. 2022. Production: Crops and livestock products. In: FAOSTAT. Rome. [Cited October 2023]. <https://www.fao.org/faostat/en/#data/QCL> based on UN Geospatial. 2020. Map geodata [shapefiles]. New York, USA, UN. Download: <https://doi.org/10.4060/cc8166en-map16>

## MEAT PRODUCTION



357 million tonnes of meat were produced in 2021, 53% more than in 2000, with chicken meat representing more than half the increase.

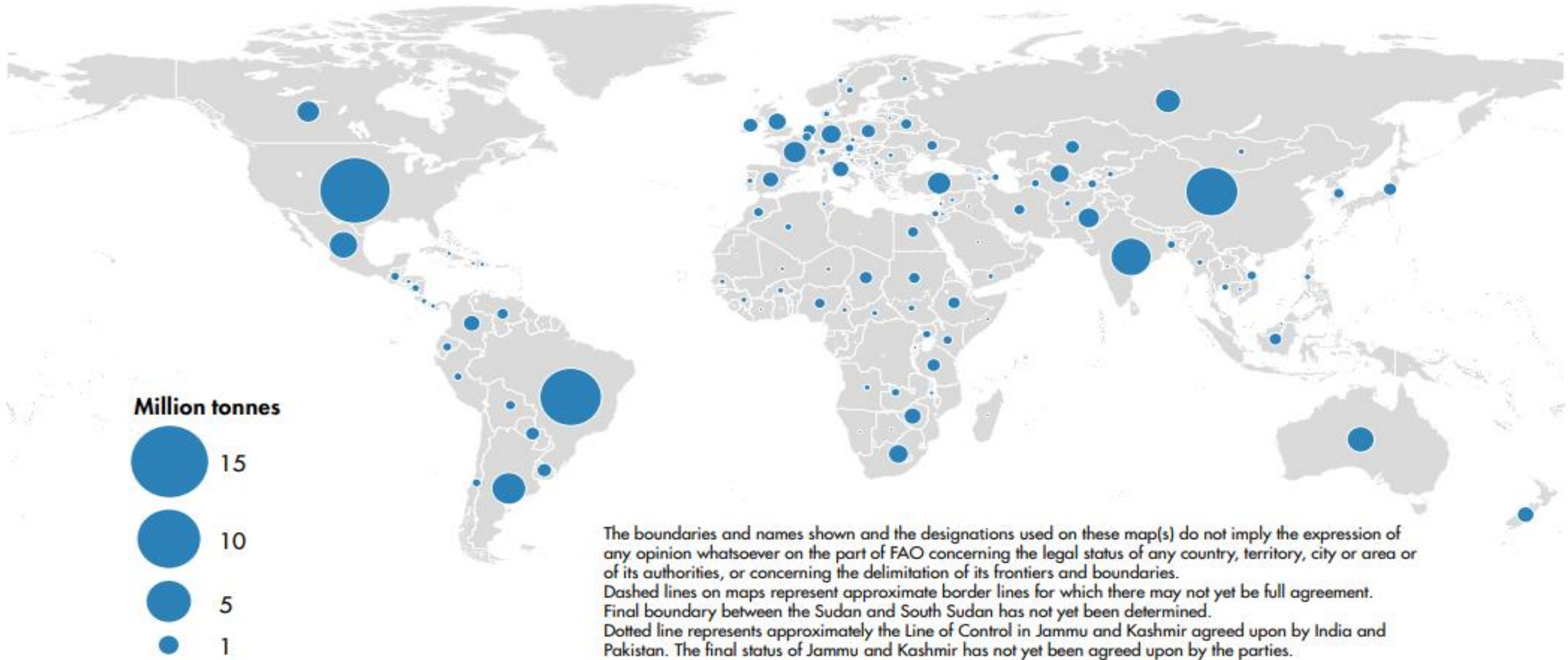
FIGURE 29.  
WORLD PRODUCTION OF HEN EGGS





# Importance of Livestock Systems

MAP 18.  
PRODUCTION OF CATTLE MEAT (2021)



Source:FAO. 2022. Production: Crops and livestock products. In: *FAOSTAT*. Rome. [Cited October 2023]. <https://www.fao.org/faostat/en/#data/QCL> based on UN Geospatial. 2020.  
Map geodata [shapefiles]. New York, USA, UN.  
Download: <https://doi.org/10.4060/cc8166en-map18>

# Importance of Livestock Systems

MAP 19.  
PRODUCTION OF BOVINE MILK (2021)

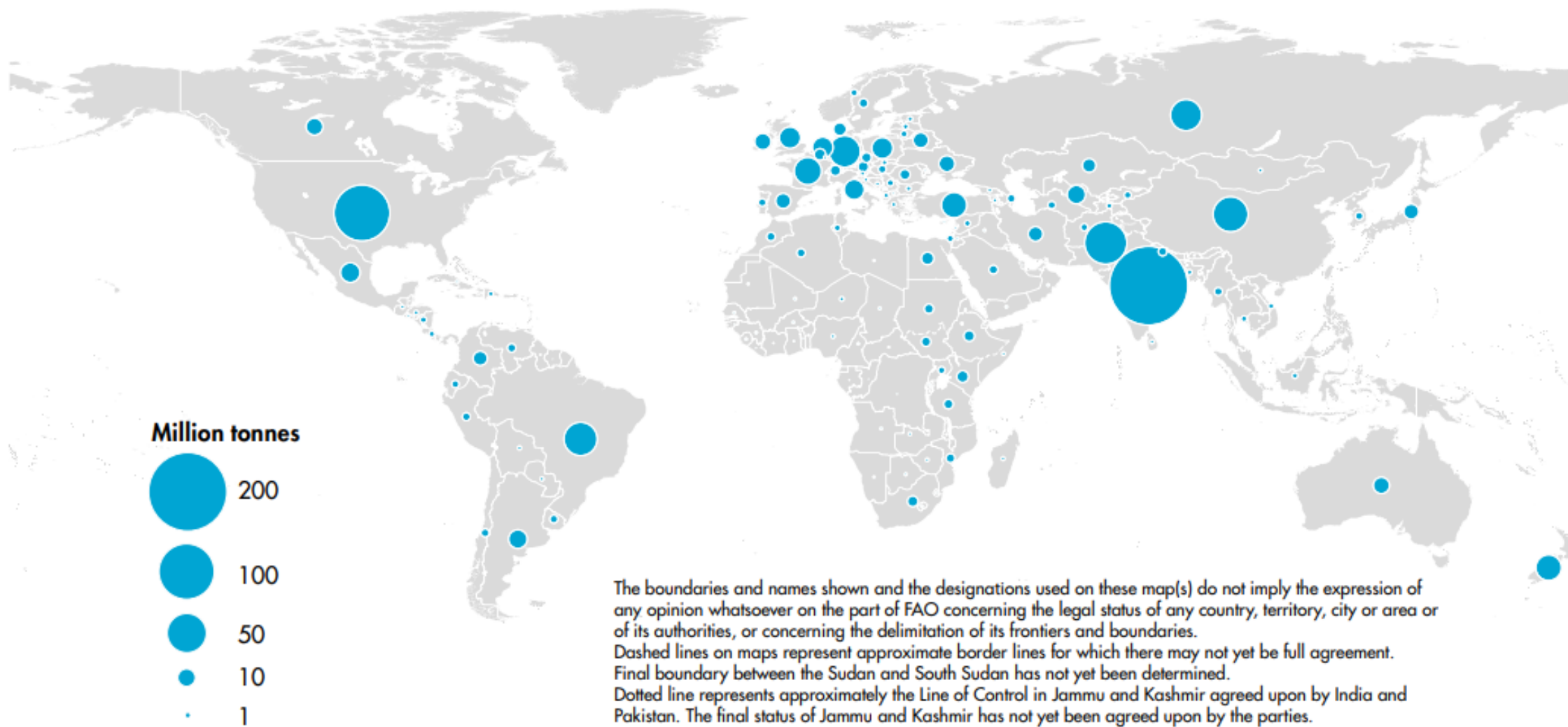
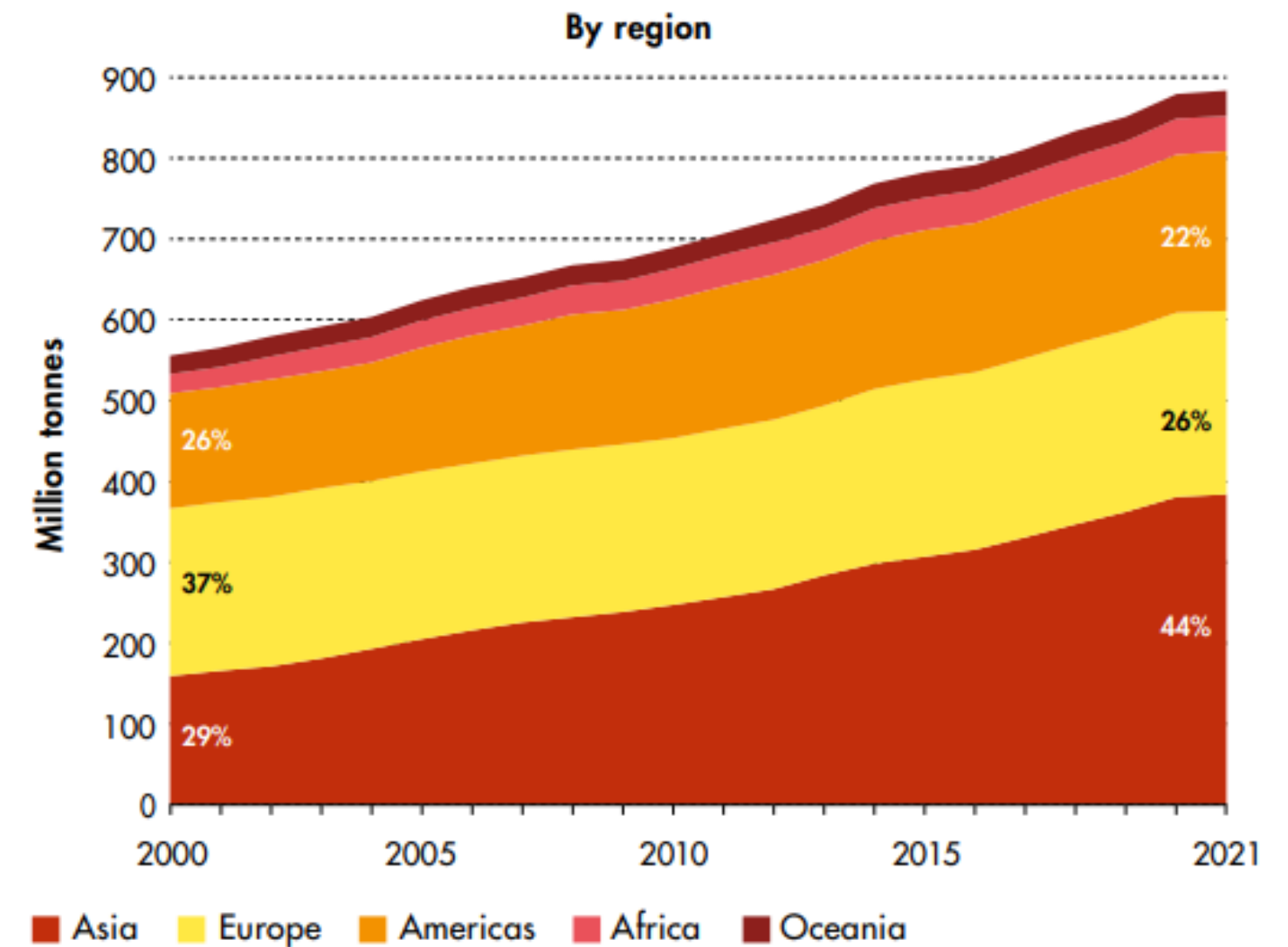


FIGURE 28.  
WORLD PRODUCTION OF BOVINE MILK



Note: Bovine milk comprises cattle and buffalo milk.  
 Source: FAO. 2022. Production: Crops and livestock products. In: FAOSTAT. Rome. [Cited October 2023]. <https://www.fao.org/faostat/en/#data/QCL> based on UN Geospatial. 2020.  
 Map geodata [shapefiles]. New York, USA, UN.  
 Download: <https://doi.org/10.4060/cc8166en-map19>

# Status in OIC Countries

## Opportunities for OIC countries:

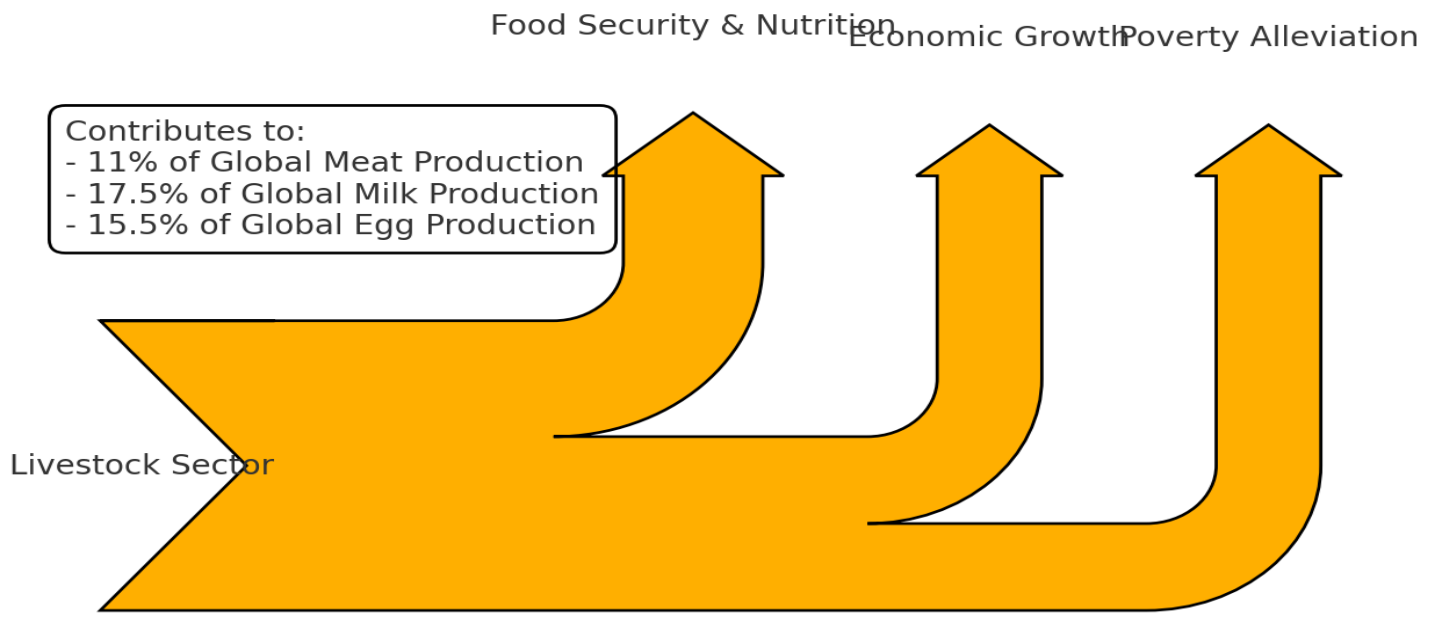
- High Growth Rates in Certain Regions
  - High demand for animal product
  - Economic growth
- Labor supply
  - Workforce
  - More innovation and development

## Threats for OIC countries:

- Resource Strain
  - Land and Water Competition
  - Feed Shortages
- Environmental Impact
  - Overgrazing and Land Degradation
  - Pollution
- Health and Disease Management Challenges
  - Increased Disease Risk
  - Public Health



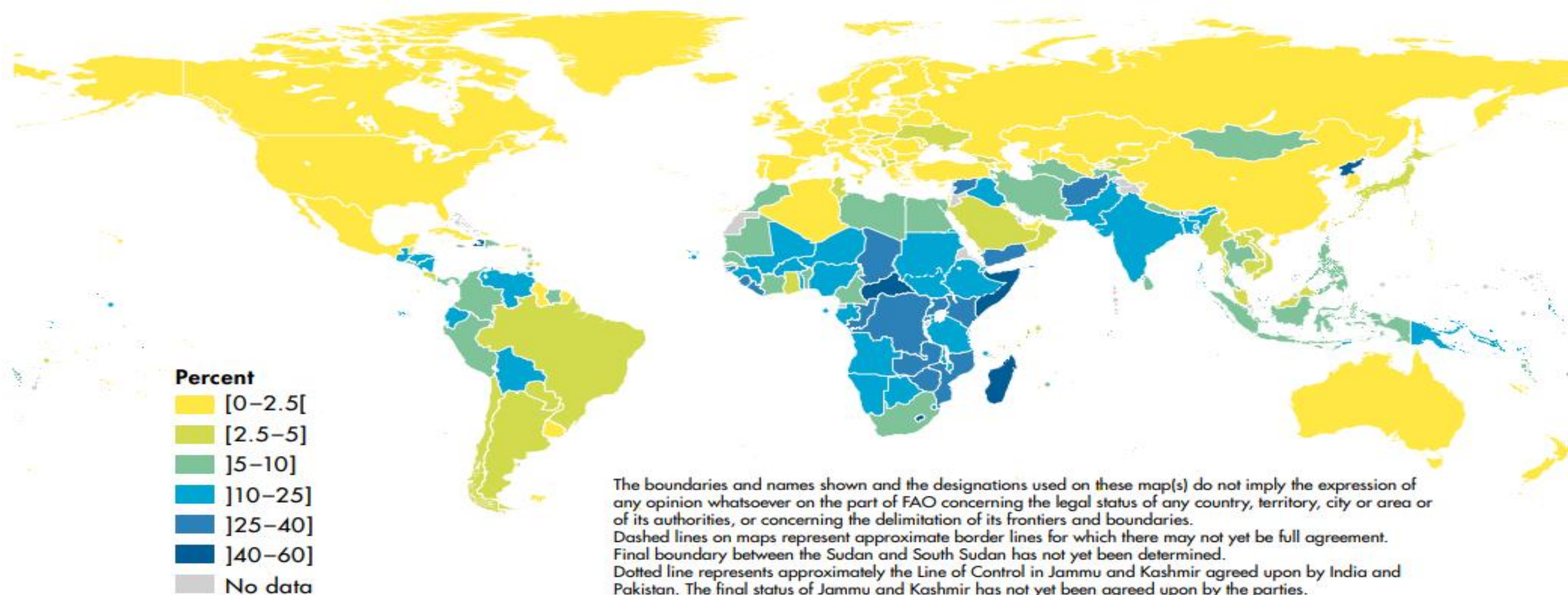
## Role of Livestock in Sustainable Development in OIC Countries





## Status in OIC Countries

MAP 25.  
PREVALENCE OF UNDERNOURISHMENT (2020–2022 AVERAGE)



Note: The values for 2020 to 2022 are projections based on the projected midranges.

Source: FAO. 2023. Suite of Food Security Indicators. In: *FAOSTAT*. Rome. [Cited October 2023]. <https://www.fao.org/faostat/en/#data/FS> based on UN Geospatial. 2020.

Map geodata [shapefiles]. New York, USA, UN.

Download: <https://doi.org/10.4060/cc8166en-map25>



# Challenges

## 1. Climate Change and Environmental Impact

- Rising temperatures,
- Changing precipitation patterns, and extreme weather
- Water stress

## 2. Disease and Health Management

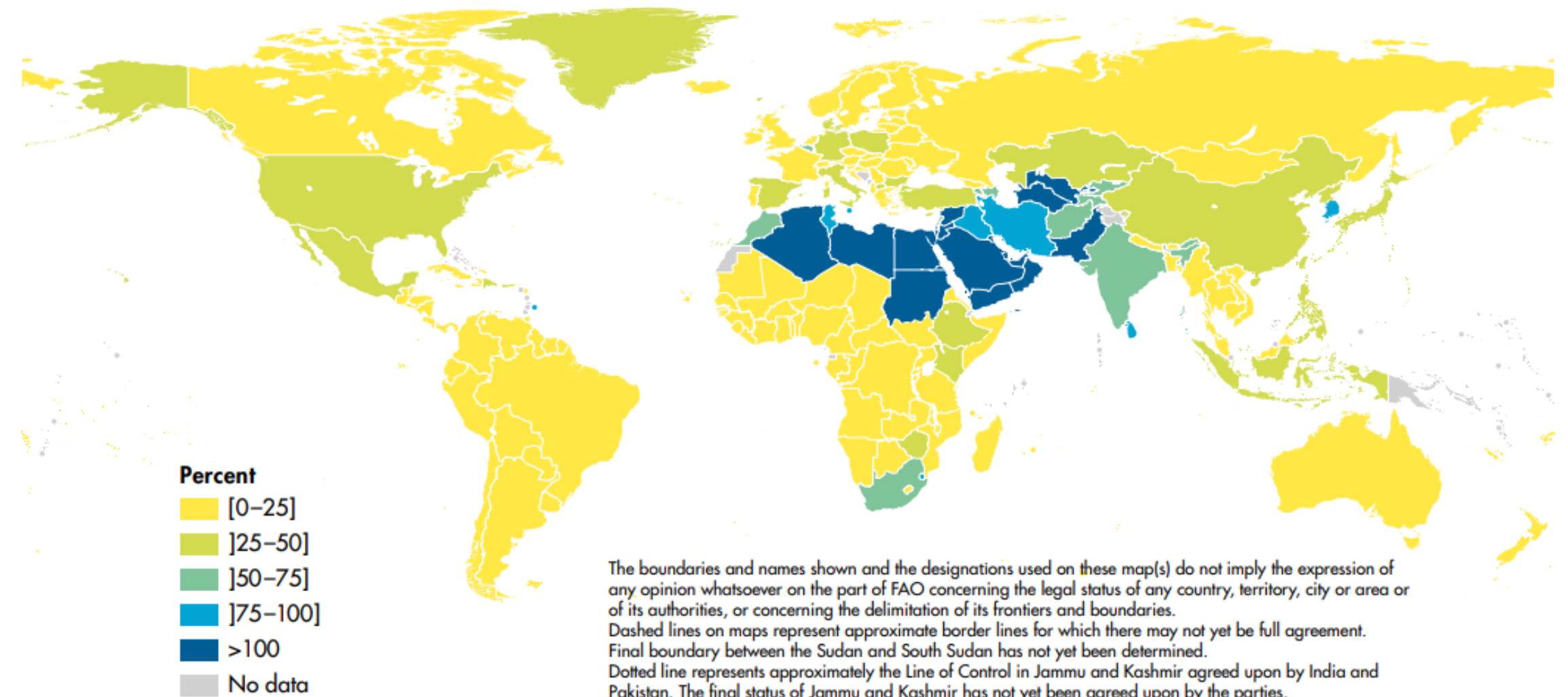
- Poor veterinary services,
- limited access to vaccines,
- inadequate disease surveillance control measures

## 3. Innovation and technology

- High Initial Investment Costs
- Limited Access to Technology
- Resistance to Change

## 4. Rural to urban migration

MAP 31.  
WATER STRESS (2020)



FAO. 2023. AQUASTAT Dissemination System. In: AQUASTAT. Rome. [Cited October 2023]. <https://data.apps.fao.org/aquastat/?lang=en> based on UN Geospatial. 2020.  
Map geodata [shapefiles]. New York, USA, UN.  
Download: <https://doi.org/10.4060/cc8166en-map31>

## FAO projects

- **Support for Determination of Agricultural Business Typology Engaged in Livestock Activities**, which aims to better understand and support diverse livestock farming operations.
- **Urgent Rehabilitation of the Critical Local Supply Chains Essential to Strengthen the Sustainability of Agricultural Production and Rural Livelihood for Smallholder Farmers in the Earthquake-Affected Region in Türkiye**, focusing on restoring and sustaining agricultural production in disaster-affected areas.
- **Strengthening Goose Meat Production Through Rural Tourism and Gastronomy**, which leverages local gastronomy traditions to boost rural economies and promote sustainable farming practices.
- **Improving Efficiency of Small Ruminants Production for Reduction of the GHG Emission Intensity**, aimed at enhancing productivity while reducing the environmental footprint of livestock farming



## Support for Determination of Agricultural Business Typology engaged in Livestock Activities in Türkiye (TCP/TUR/39)”

### Aim:

Developed the planning and programming capacities of the Ministry on livestock activities in terms of

- Taking measures to accelerate climate action,
- Promote responsible production and consumption,
- Improve the management of risks and threats to people
- Ensure the sustainable management of the environment and natural resources in urban and ecosystem hinterlands.





## Contribution to government priorities/SDGs:

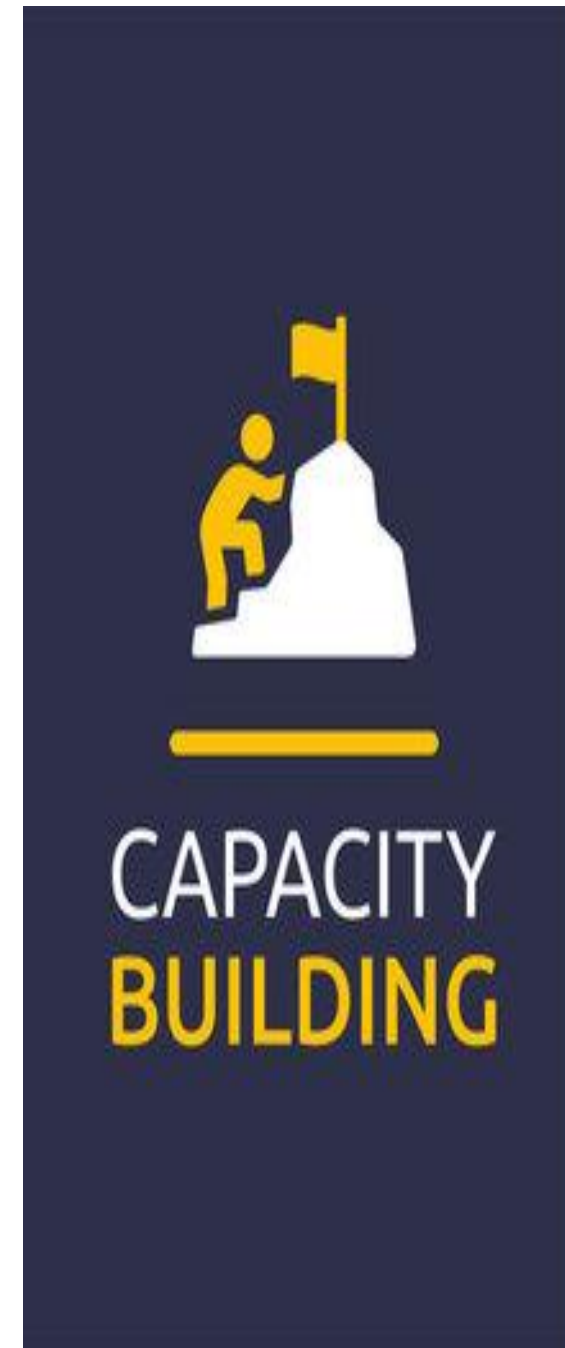
- 11th Development Plan also aims that “Livestock farming will be developed”;
- Competitive production, productivity, and decent work for all
- Climate change, sustainable environment, and livable cities
- Regional Initiative: Empowering Smallholders and Family Farms
  - Increased participation of farmers and rural communities in national development;
  - Enhanced sustainable and inclusive growth of rural economies



# Capacity Building

## Outcomes:

- **Farm Typology for livestock keepers will be identified and the capacities of the MoAF on identifying the farm typology will be improved;**
- Outcome 1: Sustainable Farm Typology Action Plan submitted to MoAF
- Outcome 2: Ad Hoc Livestock Data Collection Plan and ToT implemented



# Capacity Building

## Activity 1:

- Activity 1.1. Inception workshop
- Activity 1.2. Review the existing system and existing official regulatory documents
- Activity 1.3. Analyze the available international good practices for the adoption.
- Activity 1.4 Drafting Sustainable Farm Typology Action Plan
- Activity 1.5 Validation workshop
- Activity 1.6 Finalize the report based on the outcome.

## Activity 2:

- Activity 2.1. Identification of the pilot farms in Balıkesir.
- Activity 2.2. Prepare a field study plan based on the improved methodology in the action plan
- Activity 2.3 Training of Trainers on the action plan implementation conducted
- Activity 2.4 Pilot Data Collection
- Activity 2.5 Drafting a pilot scale field study report
- Activity 2.6 Closure event





Food and Agriculture  
Organization of the  
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Thanks for your attention...