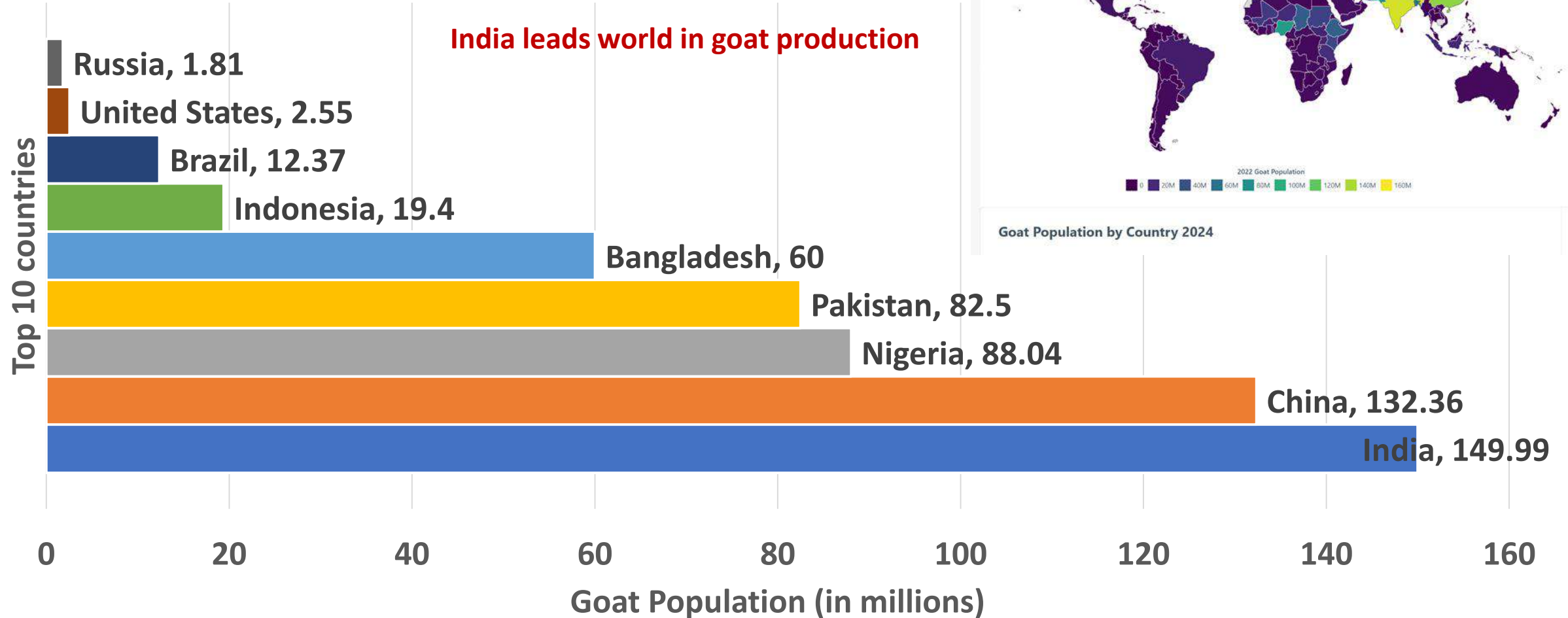




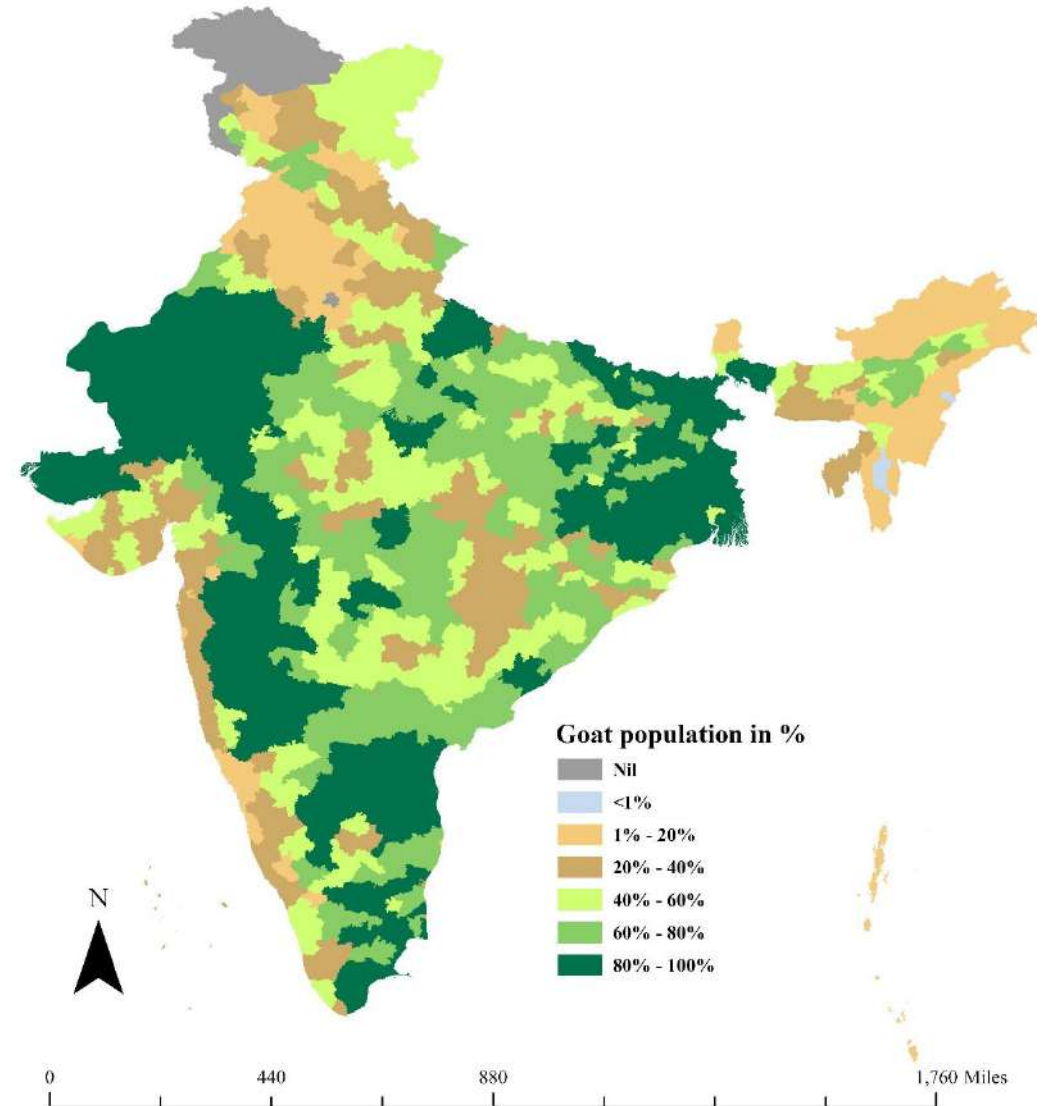
Health Interventions to Augment Goat Productivity in Amrit Kaal

Divakar Hemadri
Asst. Director General (Animal Health),
Indian Council of Agricultural Research,
Krishi Bhavan, New Delhi-110001

Goat population (2022)

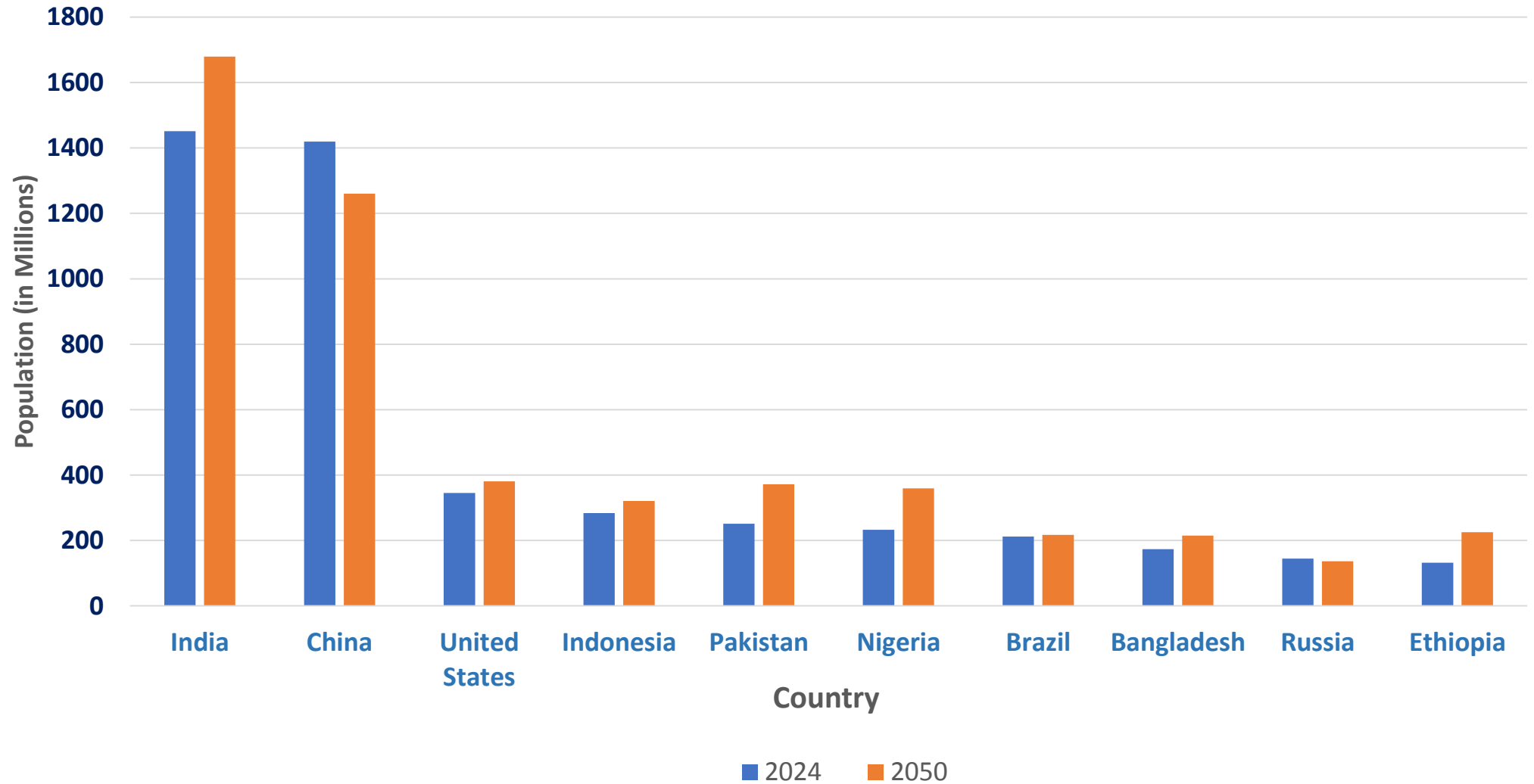


Goats are distributed all over India



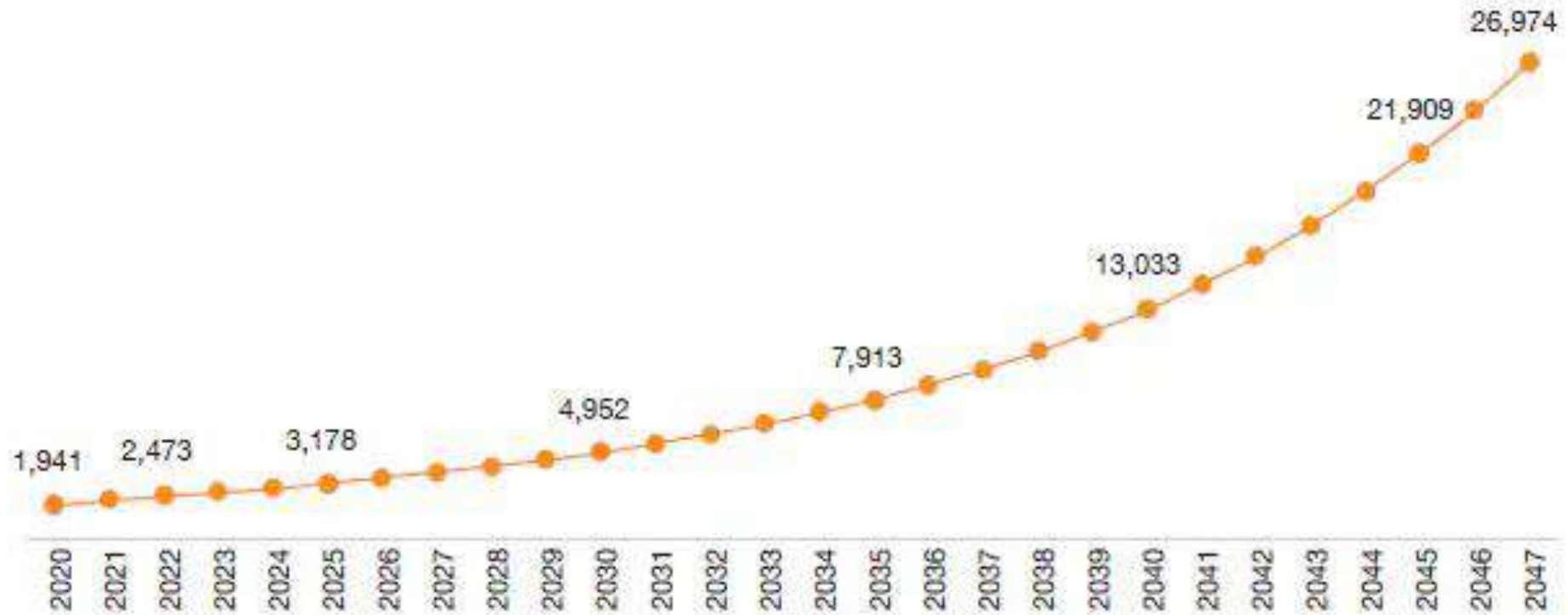
Likely scenario in Amrit Kaal

Human population



Projected per capita income during Amrit Kaal

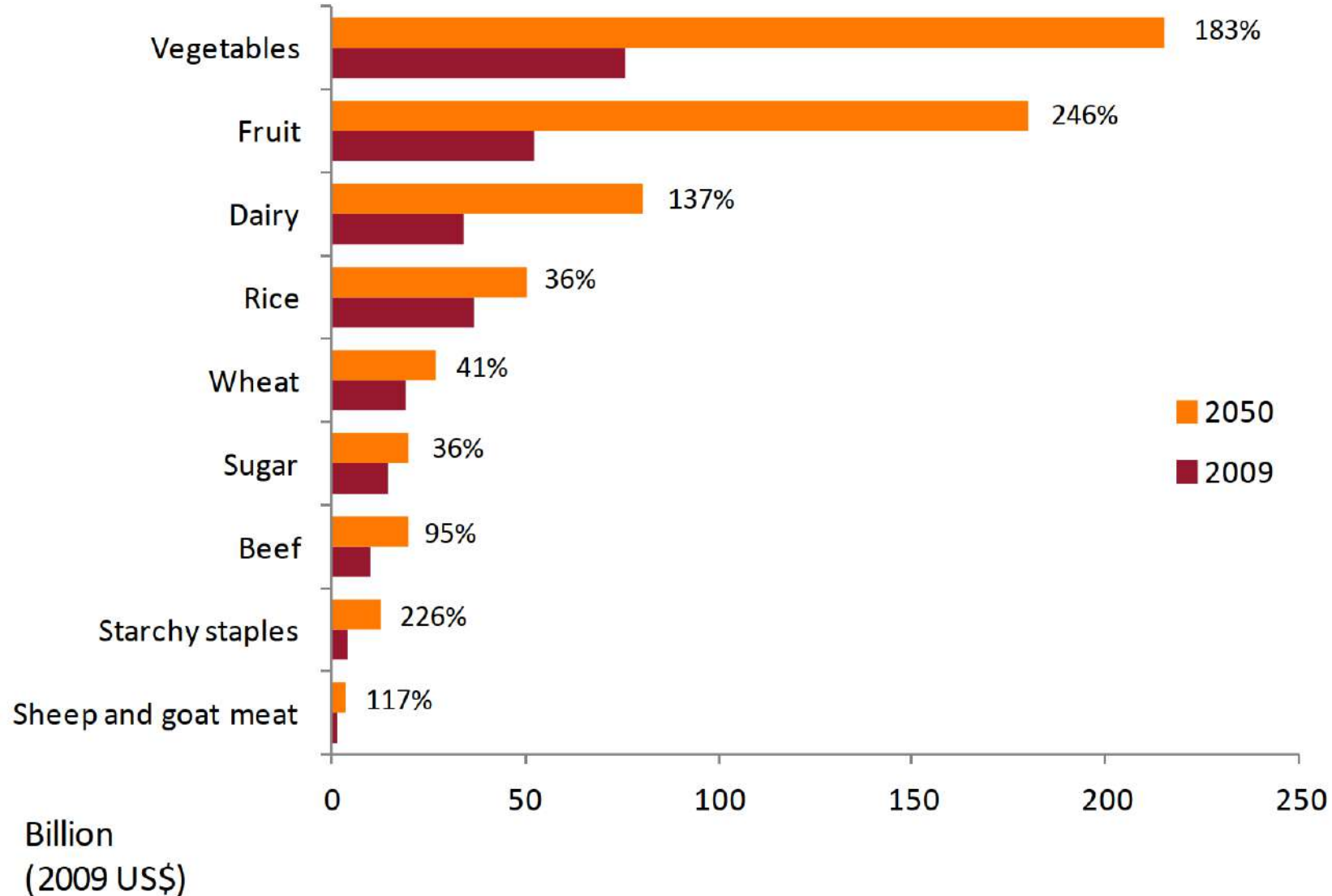
Per capita GDP (USD)



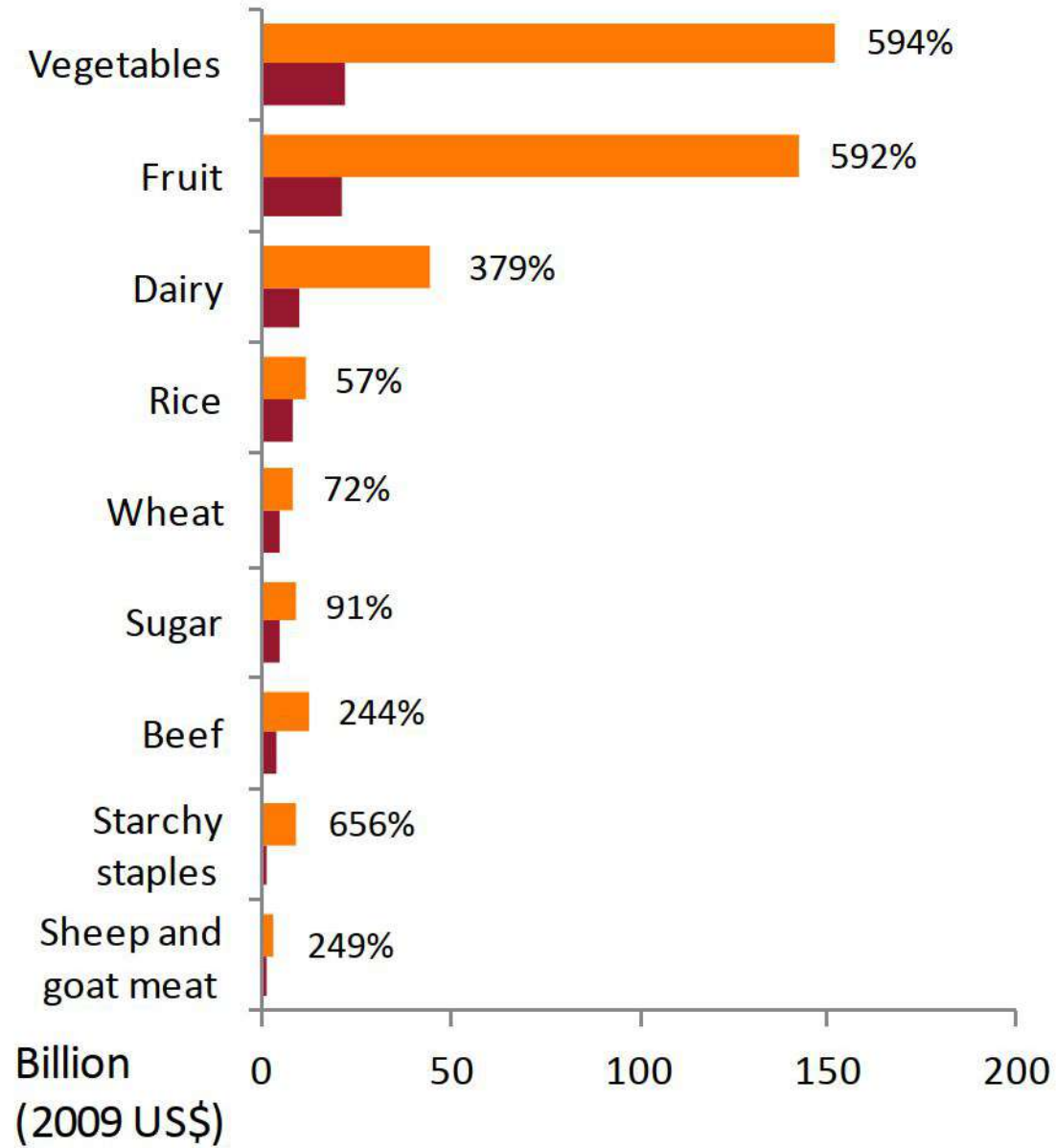
India's per capita income, which stood at ₹ 2.12 lakh in 2023-24, is projected to reach ₹ 14.9 lakh by 2047

Projected Food consumption during Amrit Kaal (2022-2047)

Agri food consumption by 2050 (business as usual model)



Urban Trends



Source: ABARES model

Goats and their Health

Generally goats are resistant to many diseases.

However when we rear more number of animals in one place and insufficiency of pasture facilities, intensive system of rearing leads to spread of many diseases.

This causes reduced production potential and more mortality which in turn causes economic losses to the farmers.

Hence identification of diseases in goat and its prevention is most important.

Metabolic and nutritional diseases of goats

- ❖ Periparturient hypocalcemia (milk fever)
- ❖ Pregnancy toxemia/ketosis
- ❖ Lactic acidosis
- ❖ White Muscle Disease in Goats

Common infectious diseases and parasitic infestations in goats

Viral

PPR

Goatpox, Orf

FMD

Bacterial

Enterotoxaemia (*Clostridium perfringens* type D and sometimes type C)

Foot rot

Pneumonia (mostly Mycoplasma)

Anthrax

Haemorrhagic septicaemia

Brucellosis

Johne's disease

Parasitic infestations

Coccidiosis

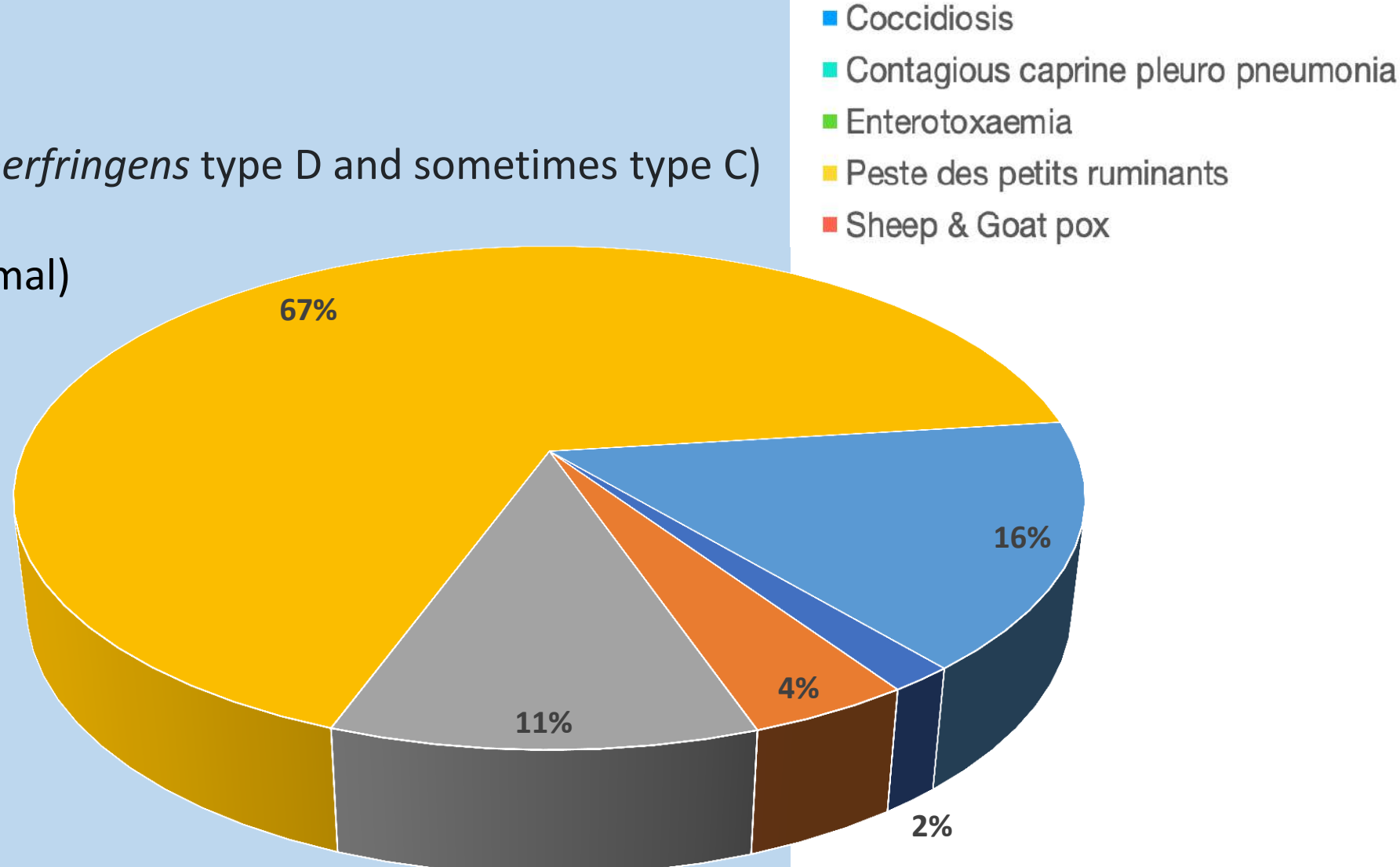
Liver Fluke

Round worms

Tape worms

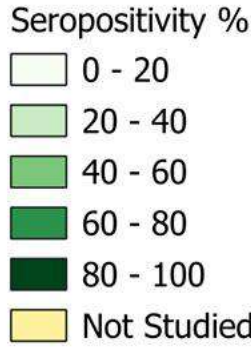
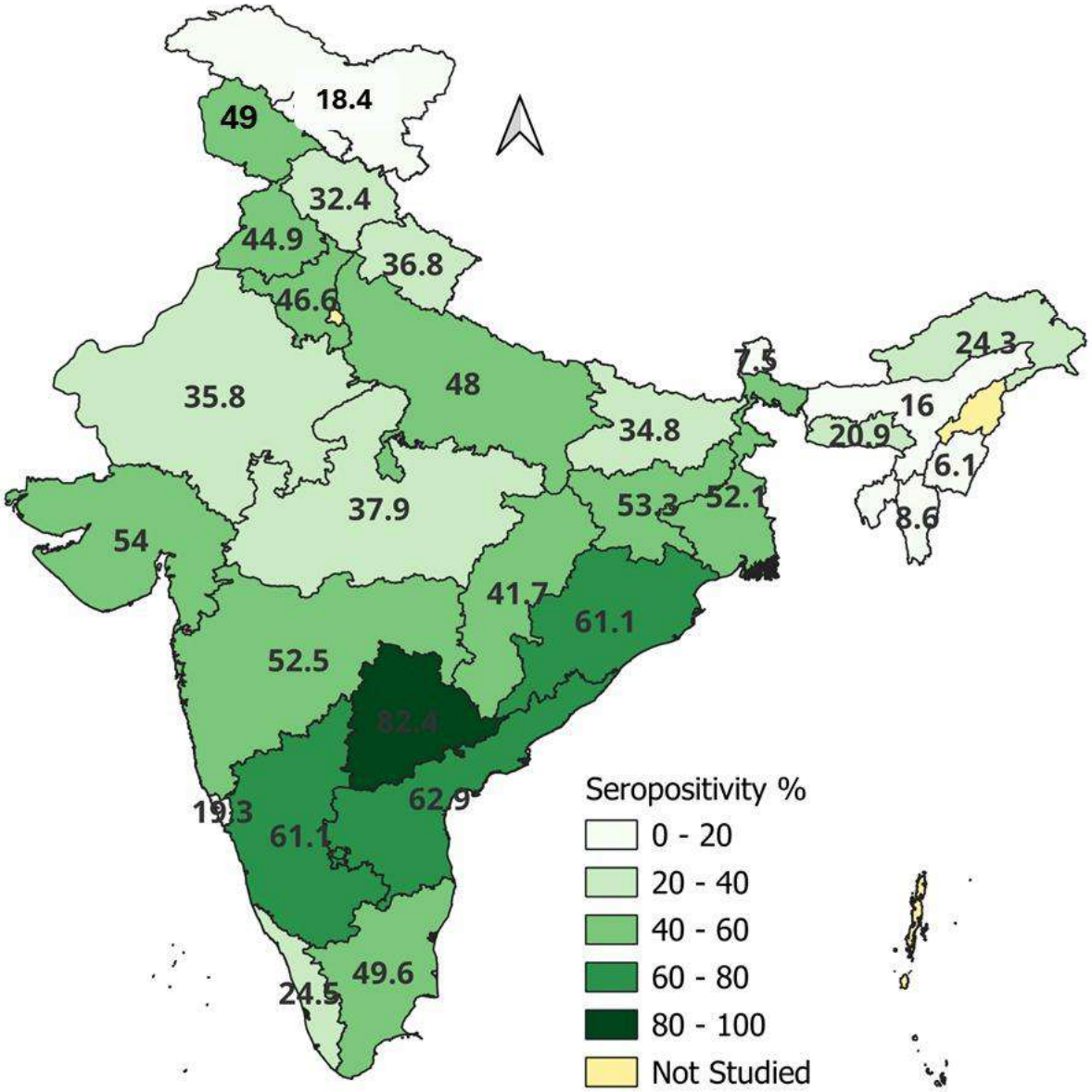
Ectoparasites

Major goat diseases (infectious) during 2019-2024

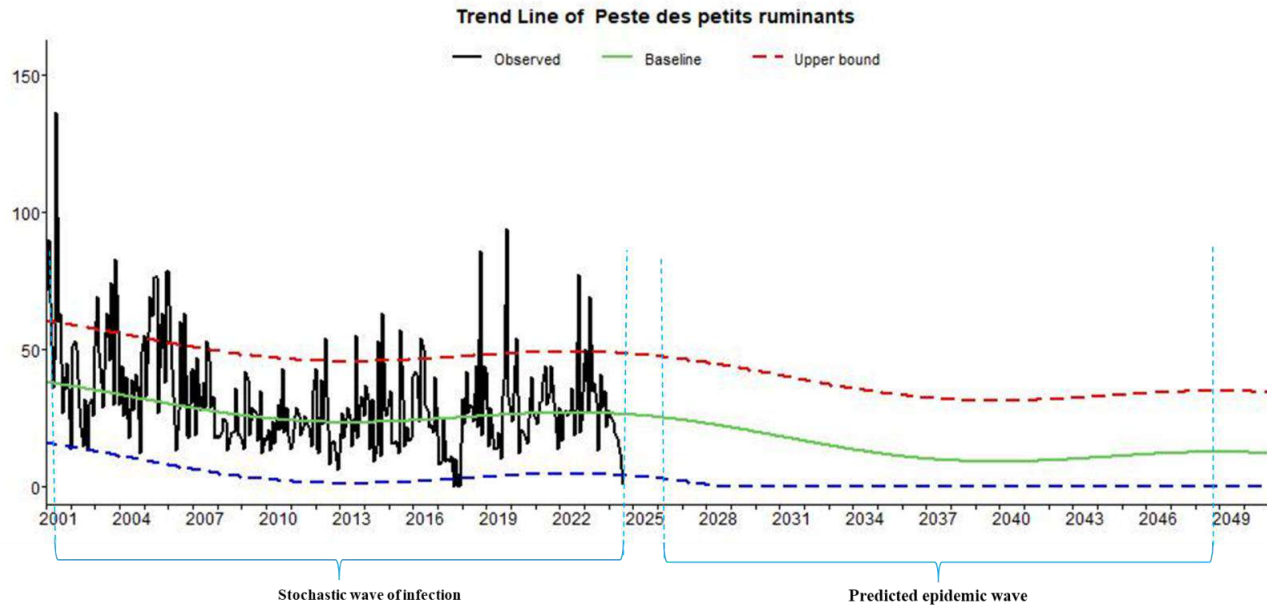


PPR (antibody prevalence)

What is the projection?
(Business as usual model)



Source: PPR surveillance, ICAR-NIVEDI



Can we eradicate PPR by 2030?

If the same trend continues, then answer will be **No**

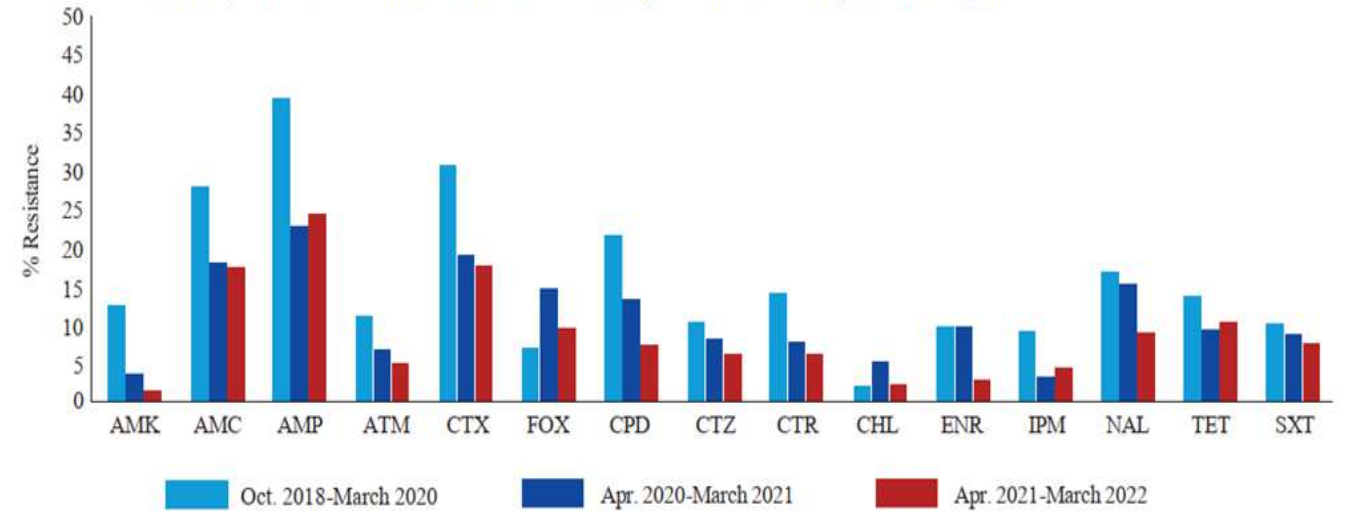
What we need to do?

- ❖ Regular vaccination
- ❖ Sentinel surveillance
- ❖ Syndromic surveillance
- ❖ Disease reporting
- ❖ Zoning
- ❖ Early warning & emergency preparedness

Antibiotics Use & Anti Microbial Resistance



Three year trends of Antimicrobial resistance among *E. Coli* isolates of aquaculture origin between 20019-2022

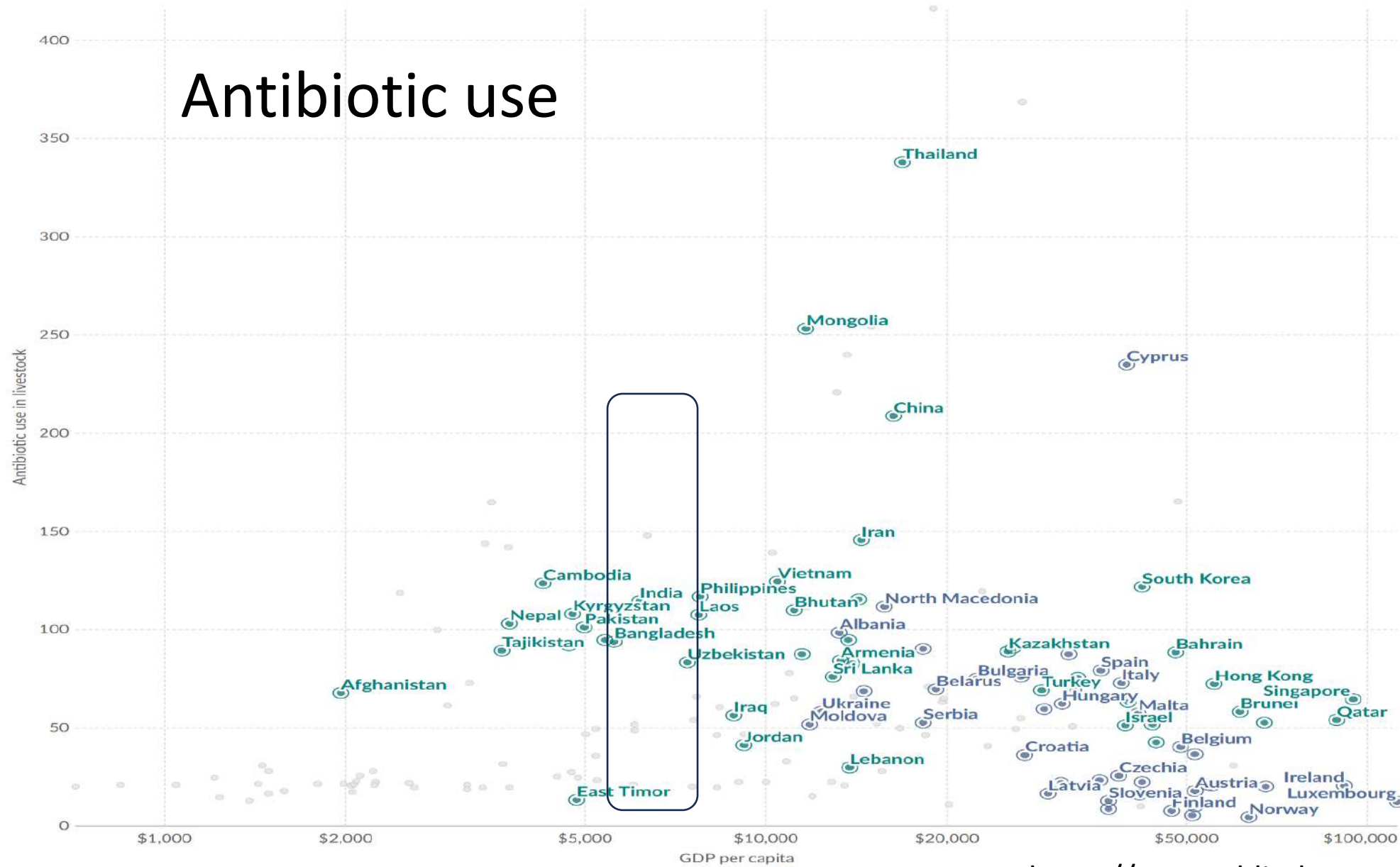


Antibiotic use in livestock vs. GDP per capita, 2020

Antibiotic use in livestock is measured as the milligrams used per kilogram of meat production. This is measured against gross domestic product (GDP) per capita.

Table Chart

Settings



Point of care diagnostics & DIVA vaccines and companion tests

One health approaches for zoonotic diseases

Good Farm Biosecurity Practices

Use of technologies (AI, ML, IoT)

General measures for good health of Goats

- ❖ Regular deworming
- ❖ Proper drainage, sprinkling of copper sulphate near water bodies will help to control fluke infection
- ❖ Keep the shed clean and provide clean quality drinking water
- ❖ Separate infected animal from healthy one
- ❖ Provide proper quarantine measures while purchasing new animals
- ❖ Proper disposal of dead animals
- ❖ Rotational grazing to control infection

Conclusions

- ❖ Continuous scientific and technological development is crucial to sustain a viable goat sector as a force to alleviate food insecurity, malnutrition, and poverty.
- ❖ Role of goats are consequential to food and nutrition, economic, and environmental sustainability.
- ❖ Therefore, health interventions are crucial achieve food insecurity, malnutrition, and poverty through goat husbandry

Thanks