

Use of Nuclear Techniques for Sustainable Livestock Production Increase while Mitigating Impact on Climate Change

Prof. Dr. Dodik R. Nurrochmat

Bogor Agricultural University (IPB) - Indonesia



IAEA Scientific Forum

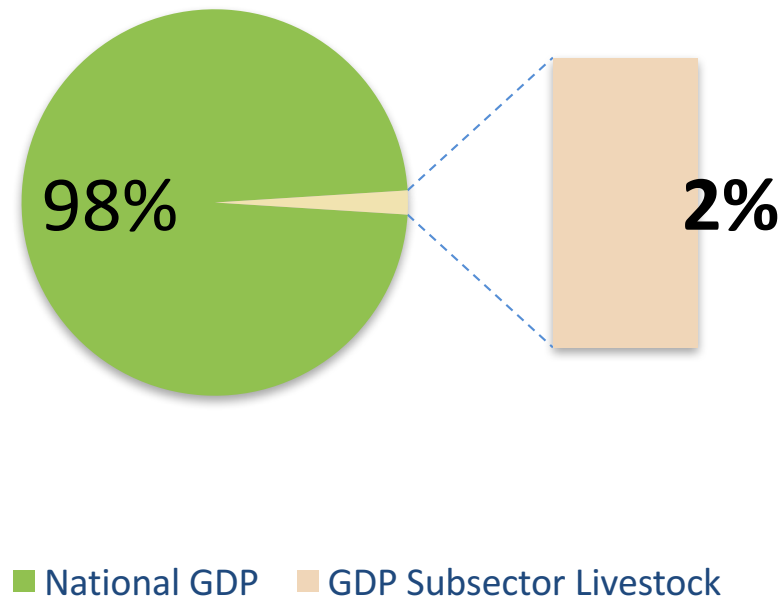
Nuclear
Technology
for Climate

Mitigation, Monitoring, Adaptation

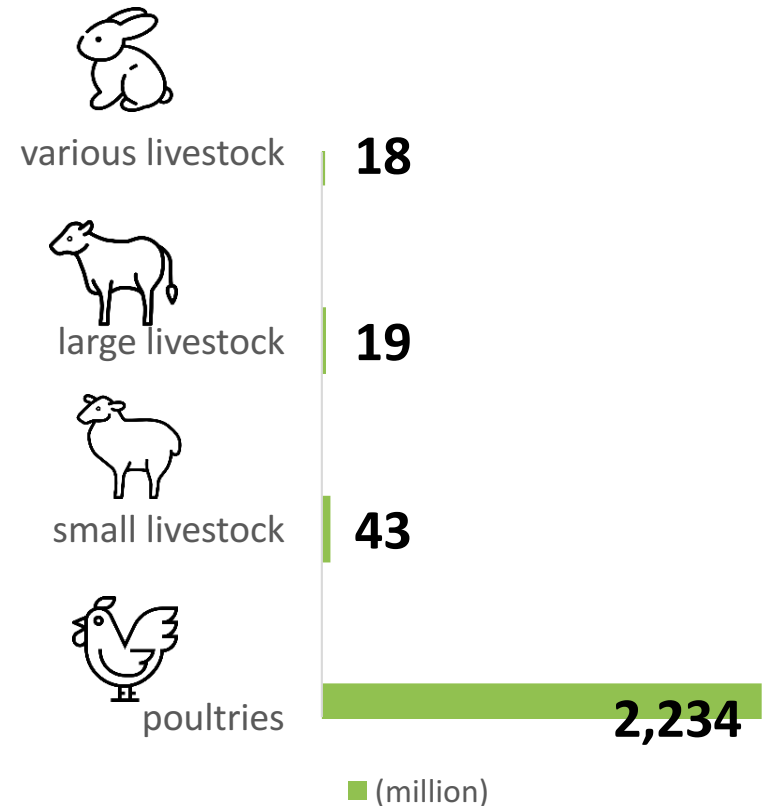
18–19 September 2018

Overview: Indonesia's Livestock Sector

GDP from Subsector Livestock



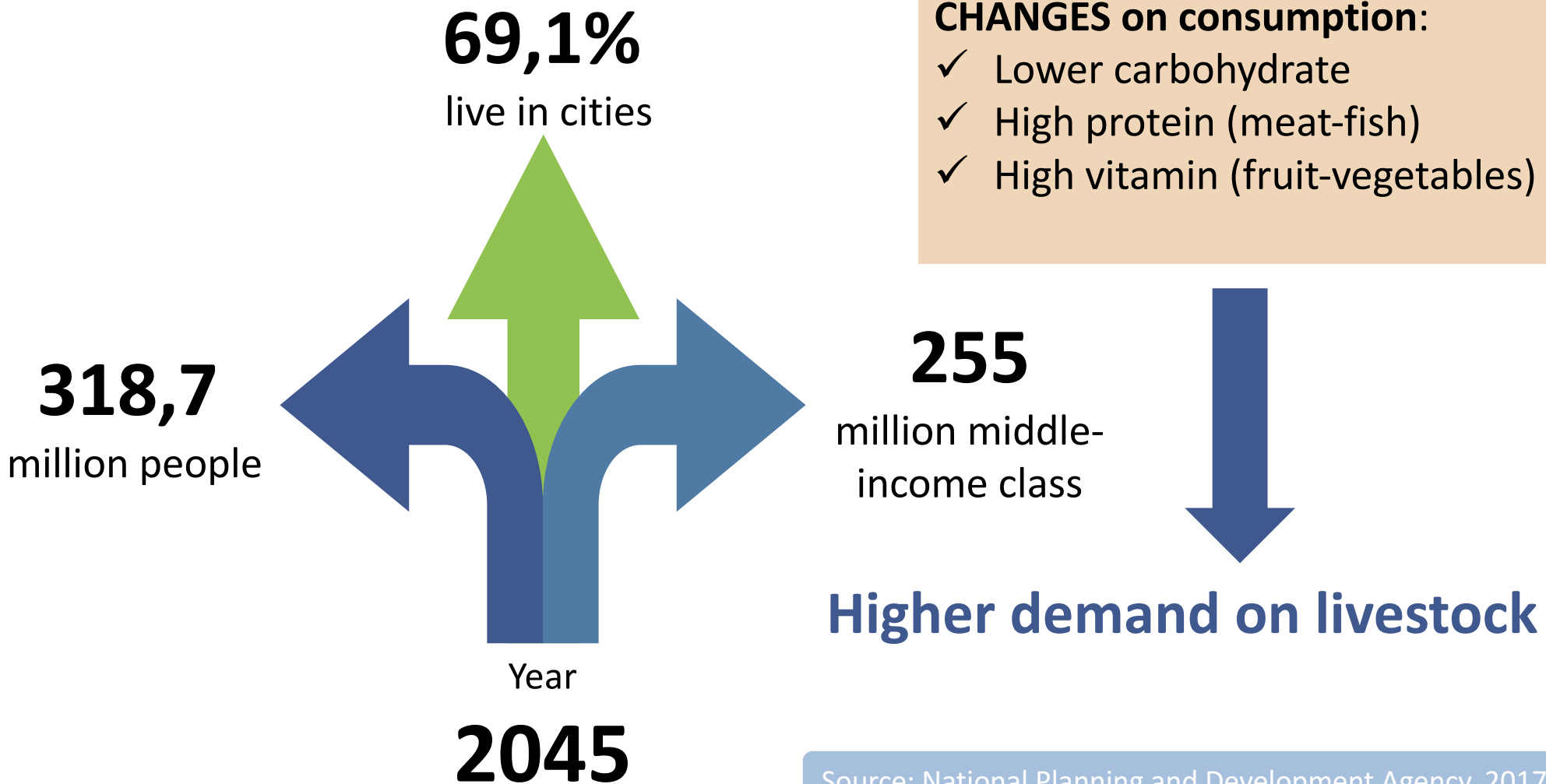
Livestock Population



Source: Ministry of Agriculture, 2017



Indonesia's Demographic Trends



IPB Profile

Founded on
September 1st, 1963

9 Faculties

Faculty of Agriculture, Veterinary Medicine, Fisheries and Marine Science, Animal Husbandry, Forestry, Agricultural Technology, Mathematics and Natural Sciences, Economics and Management, and Human Ecology

3 Schools

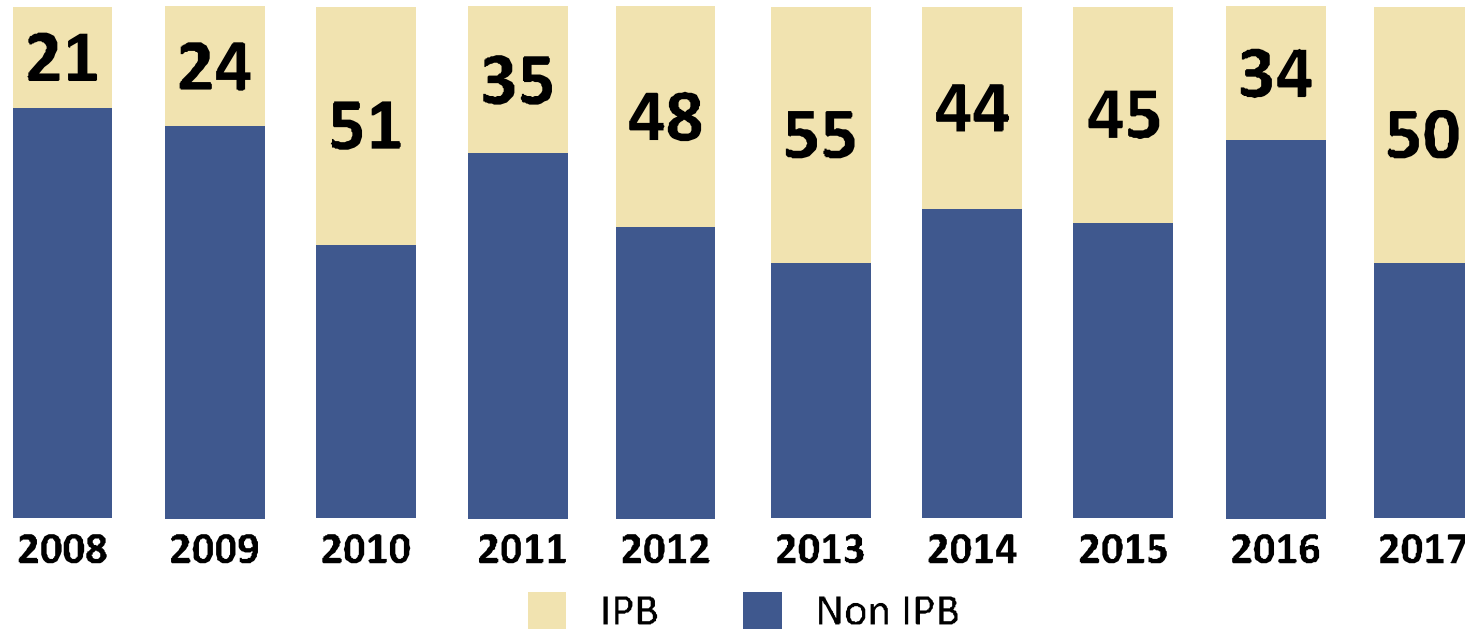
Vocational School, Business School, and Graduate School



Vision 2045

Becoming the leading **techno-socio entrepreneurial university** in strengthening the nation's dignity through excel higher education at the global level in field of **agriculture, marine, and tropical bioscience.**

IPB as national top innovation producer



38,95%

from 1.045 Indonesia's prospective innovation

Source:
Indonesian Ministry of Research, Technology and Higher Education & Business Innovation Centre

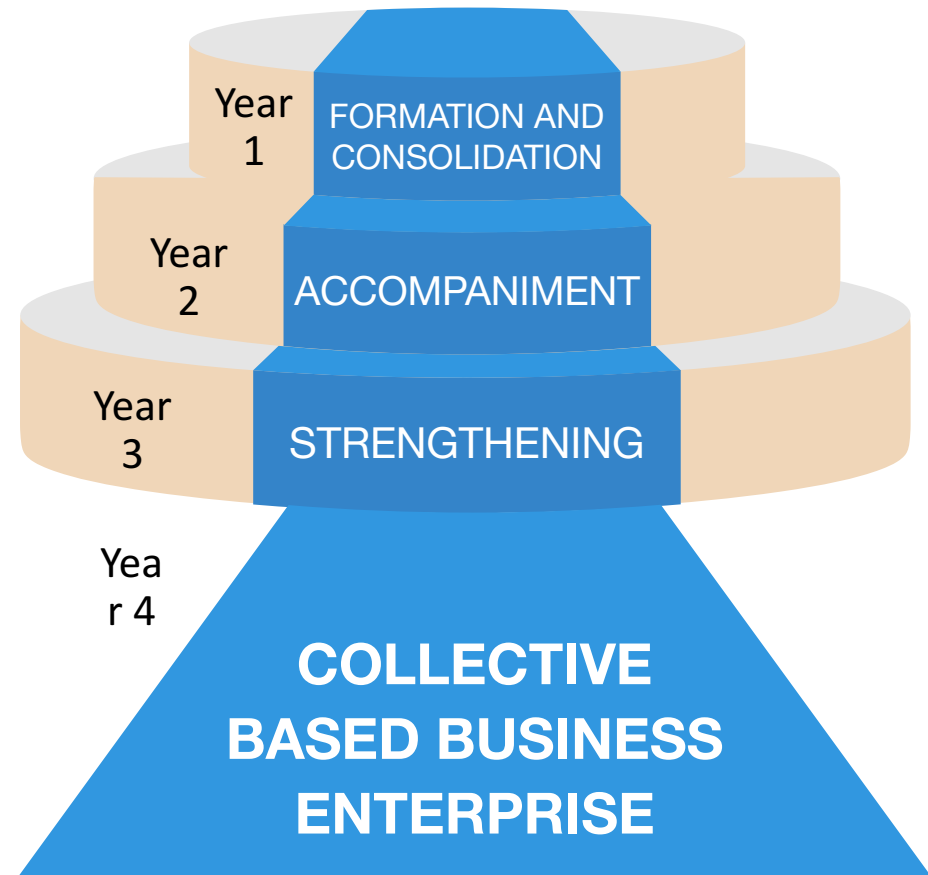


Innovation on sustainable livestock production

SPR

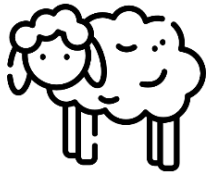
Sekolah Peternakan Rakyat/
People's Farm School

One SPR consists of a minimum of **1000 productive female cattle**, a maximum of **100 male cattle**, and applying 10 main strategies to achieve 1 vision (**sovereign farmers**)



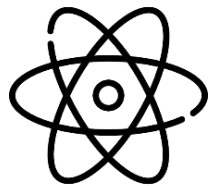
Source: lppm.ipb.ac.id

Use of nuclear techniques



In livestock reproduction, breeding, artificial insemination and disease control programs

Solution to problem of harmful residues and contaminants in food products




Improve the traceability systems in food products with stable isotope analysis

New mutant crop varieties, adapt to climate changes



Source: Food and Agriculture Organization of United Nation



“Science and technology coupled with improved human capital have been powerful drivers of positive change in the performance and evolution of smallholders system”

Food and Agriculture Organization UN

