



SUSTAINABLE DEVELOPMENT OF ECOSYSTEMS AND FOOD SECURITY: A COMPARATIVE STUDY IN PORTUGAL AND UKRAINE

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- Biosecurity is a strategic and integrated approach that encompasses the policy and regulatory frameworks for analysing and managing relevant risks to humans, health, and associated risks to the environment. Thus biosecurity including food security is a concept of direct relevance to the sustainability of agriculture, and wide-ranging aspects of public health and protection of the environment.
- Sustainable Development Goals include a significant number of interconnected objectives related to agriculture and food. **One of such goals is Food Security.**



- Food security is associated with the social determinants of health, which are the conditions in which people are born, grow, live, work.
- Food security in the context of social determinants of health is interconnected with population growth, political instability, economic development, urbanization, migration, agricultural policy, and environmental factors such as land use and climate change.
- At the same time, food security is one of the important factors that can determine nutritional outcomes.
- Other such factors include educational level; gender equality, resources allocated to national policies.
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Key Elements to Achieve Food Safety, Food Security, Farmers' Wealth and Sustainability Goals

- Food Standard & Certification
- Law Enforcement
- Educate Consumers



Food Safety

- Food Bank / Seed Bank
- Food Emergency Plan
- Off-farm Income Program
- Sufficiency Economy Program



Food Security

- Cost Reduction Program
- Quality Product Improvement
- Revenue Sharing Program
- Farmers' Welfare Program



**Farmers'
Wealth**

- Green Technology
- Incentive Measures
- Inclusive Development



Sustainability

FOOD SECURITY INDEX – AN EFFECTIVE WAY OF ASSESSING THE COUNTRY'S POTENTIAL

- In the general rating Ukraine was ranked 58 among 113 countries, having scored 62.0 points.
- Portugal 21 scored 75,2
- Several factors influence the food security of the country:
 - production volumes,
 - weather conditions,
 - geographical location and others, including even corruption.
- In 2012 The Economist Intelligence Unit introduced the Global Food Security Index which until recently consisted of three main parameters:
 - quality,
 - safety,
 - financial and physical accessibility of food.
- Last year the fourth parameter was added – natural resources and sustainability.
- <https://foodsecurityindex.eiu.com/Index>

21 / 113 index countries

Portugal / 26 countries in Europe



21

Portugal

75.2 score Figures are from the annual baseline model.



Portugal vs. all index countries

score / 100 Strengths (11)

- 100 Food safety net programmes
- 100 Protein quality
- 99.2 Proportion of population under global poverty line

[View all strengths](#)

Challenges (1)

- 0 Food security and access policy commitments

GDP(\$PPP) ● 358.2 billion

Population ● 10.28 million

Land Area ● 91,606 sq km

PREVALENCE OF UNDERNOURISHMENT ● 2.5 %

HUMAN DEVELOPMENT INDEX ● 0.86 Rating 0-1

PREVALENCE OF OBESITY ● 24.2 %

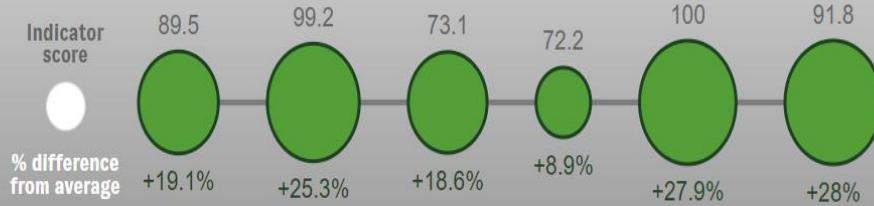
Low ————— High



18 category rank

AFFORDABILITY

88.8 category score



23 category rank

AVAILABILITY

67.1 category score



17 category rank

QUALITY AND SAFETY

88.3 category score



42 category rank

NATURAL RESOURCES & RESILIENCE

57.3 category score

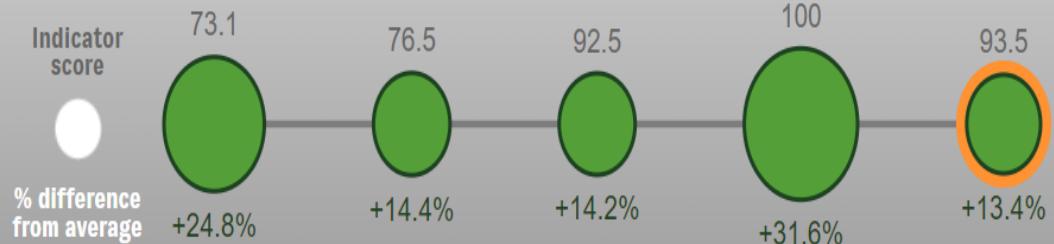




17 category rank

QUALITY AND SAFETY

88.3 category score



Indicator name

% score (% difference from GFSI mean score)

Dietary diversity

73.1% (+24.8%)

Nutritional standards

76.5% (+14.4%)

Micronutrient availability

92.5% (+14.2%)

Protein quality

100% (+31.6%)

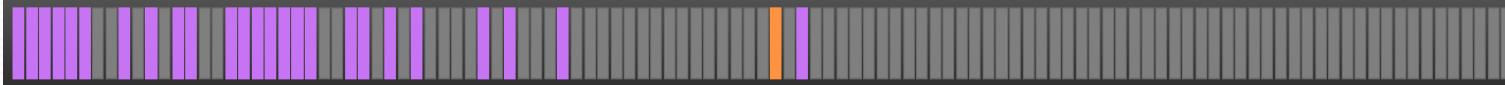
Food safety

93.5% (+13.4%)



58 / 113 index countries

Ukraine / 26 countries in Europe



58

Ukraine

62 score

Figures are from the annual baseline model.

Strengths (7)

99.8 Proportion of population under global poverty line

87 Micronutrient availability

86.5 Change in average food costs

[View all strengths](#)

Challenges (1)

0 Food security and access policy commitments

Ukraine vs. all index countries

GDP(\$PPP) ● 411.2 billion

Population ● 42.01 million

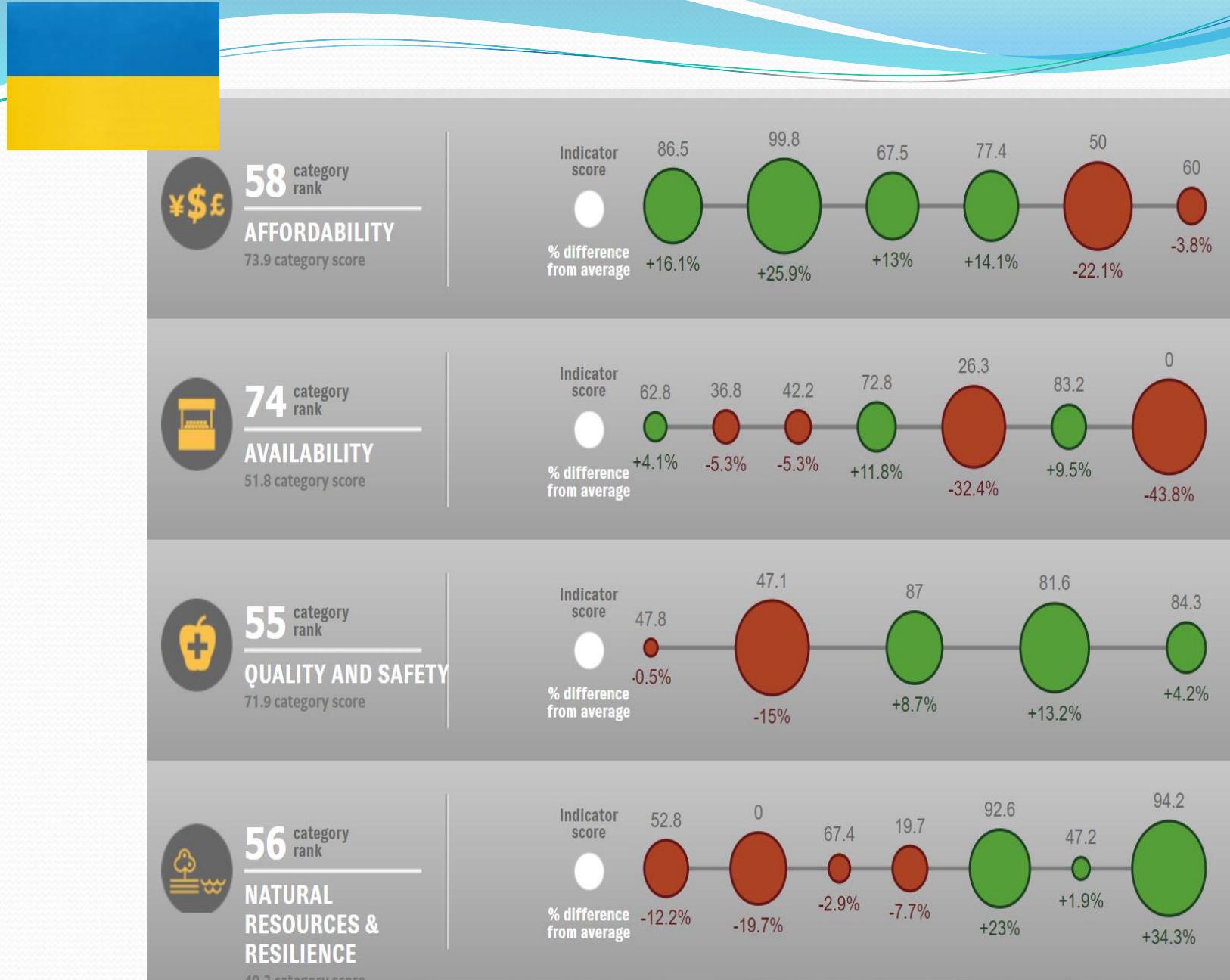
Land Area ● 579,290 sq km

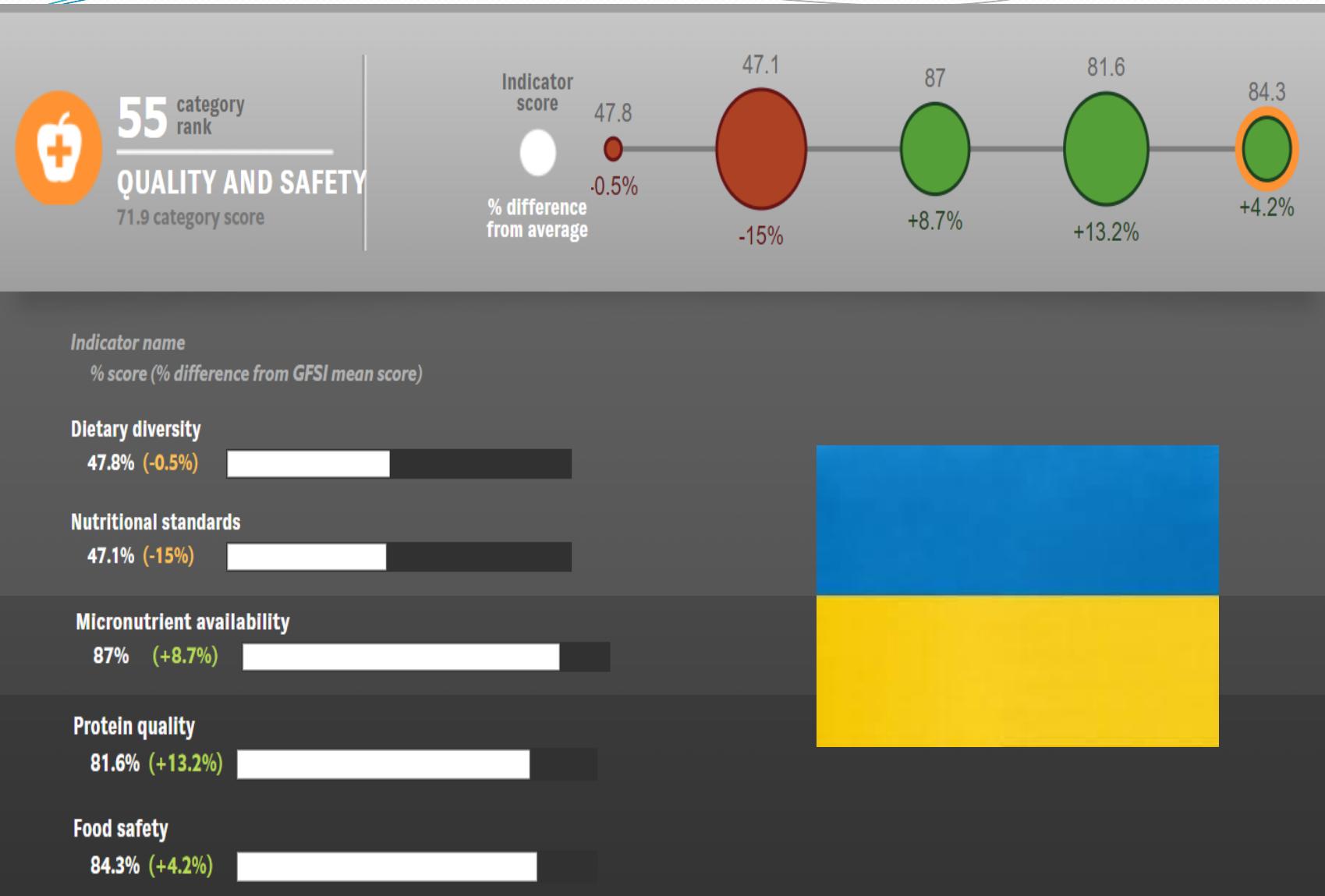
PREVALENCE OF
UNDERNOURISHMENT ● 2.5 %

HUMAN DEVELOPMENT INDEX ● 0.78 Rating 0-1

PREVALENCE OF OBESITY ● 28.4 %

Low ————— High







CONCLUSION

- For the estimation of food security in different countries was proposed GFSI (The Global Food Security Index) which considers the issues of food affordability, availability, quality and safety, and natural resources and resilience across a set of 113 countries. The index is a dynamic quantitative and qualitative benchmarking model constructed from 58 unique indicators that measure the drivers of food security across both developing and developed countries. Index of Natural Resources and Resilience including exposure to the impacts of a changing climate; its susceptibility to natural resource risks; and how the country is adapting to these risks, all of which impact the incidence of food insecurity in a country. According to GFSI Portugal is on 21st place and Ukraine on 58th place with overall score 75.2 and 62.0. Natural Resources and Resilience is the lowest scoring pillar among the four categories of food security, dragging down the GFSI score overall. The countries in the index score only 50.8 out of 100 for this pillar, compared with a GFSI score of 60 across the board. Portugal score 52.3 and Ukraine only 49.3. Food security in Portugal and Ukraine depends on the sustainable use of natural resources and sustainable development of ecosystems.



THANK YOU FOR YOUR ATTENTION!!!

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