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GLOBAL INITIATIVES ON IMPLEMENTATION OF ZERO HUNGER POLICY

Purpose. *The study aims to analyze critically the system and functions of specialized agencies, programs and United Nations (UN) funds that ensure the implementation of the second goal of sustainable development (GSD2), to identify the components of global initiatives for the successful implementation of the Zero Hunger Policy.*

Methodology / approach. *The methodological approach of the study are theoretical provisions and practical recommendations for the formation of the food supply system, economic theory, which determines the patterns of food distribution, scientific works of domestic and foreign scientists on sustainable development of the agricultural sector to achieve Zero Hunger. The following methods were used in the research process: statistical (regression analysis of the assessment of factor 's impact on the level of daily energy value of food consumed in households in Ukraine), monographic (mechanism of GSD2 implementation in the global dimension), historical method (the UN's composition and function in guaranteeing GSD2 implementation), systematic analysis (composition and roles of international institutions within the United Nations in guaranteeing GSD2 implementation), direct analysis and synthesis (areas of FAO's activities in ensuring the implementation of GSD2 at the national level) etc.*

Results. *The study found that global initiatives for successful implementation of the Zero Hunger Policy are based on three components: regulatory support, the activities of international organizations coordinated by the UN, and the implementation of the GSD2 framework and programs at the national level, which support most countries across the globe interaction with the Food and Agriculture Organization (FAO).*

Originality / scientific novelty. *Theoretical provisions regarding global initiatives for the implementation of Zero Hunger Policy have further developed: the main functions of specialized agencies, programs and UN funds that ensure the implementation of GSD2 were systematized, the degree of their spread and influence was determined; it was proved that FAO had a significant potential comparative advantage in assisting countries to meet new challenges in GSD2 monitoring; it was found that the activities of FAO together with partners to ensure global processes for the implementation of GSD2 include different areas.*

Practical value / implications. *The obtained results are important for building a network of institutional and international cooperation for the successful implementation of Zero Hunger government policies.*

Key words: *Global Initiatives, Zero Hunger, GSD2 monitoring, GSD2 implementation mechanism, international institutions, Ukraine.*

Introduction and review of literature. The world community has recognized the importance of the problem of food security and has realized that its solution is to ensure the sustainable development of agriculture. This confirms several resolutions, programs, strategies and policies that have been helping the relevant institutions to

implement across the globe for seven decades in order to make significant progress in the implementation of GSD2.

National governments do not always adopt and disseminate Zero Hunger practices offered by international institutions and programs. Mostly, the rejection of the offered practices is politically justified by national identity and significant dissimilarities in different areas of countries' activity, while governments and, especially, businesses are guided by economic interests, perceiving any social programs as a priori economically unprofitable. However, this position, as it is shown by the research, is not justified, because the commercial and non-commercial components complement each other. In particular, Farooq et al. [1] have proved that non-profit orientation can be promoted and maintained in commercial business, and social and environmental development depends on social and environmental protection.

Of course, there are critical differences between countries starting from ethical norms of behavior accepted in society up to natural and climatic conditions and available resources in a given area, which significantly affect the limits of opportunities for quality nutrition of the population. In Nghe An (Province of Vietnam) the main source of income for farmers is plantation forests and livestock, while forest lands comprise more than 90 % of households [2], which is not typical for Ukrainian farmers at all. However, it should be understood that engagement in the programs does not have an aim to establish uniform approaches and practices for all. On the contrary, the creation of communication platforms involves discussions aiming at the identification and taking into account all the differences to develop specific measures for each country, based on the common experience and knowledge of a wide range of experts.

Developing countries are often simply not fully aware of existing international institutions, the scope of their functions, the programs they implement, and their participation in such projects. The study by Puig et al. [3] found that there was a significant gap between what governments in developing countries perceive as key factors and barriers to technology transfer and what technology programs can offer according to the UN Framework Convention on Climate Change. In this regard, the scientists are giving advices in how governments can solve this problem in practice.

Not only the programs but also the tools offered by international institutions for sustainable development level's assessment can be successfully used by national governments, local authorities and businesses. Mamun and Yaya [4] explain how to use the Multidimensional Poverty Index methodology as an effective tool for assessing the influence of assistance in Poverty Reduction and Zero Hunger Programs. Moreover, such experience is useful for countries that have not developed national indicators of GSD achievement yet, where the analysis of sustainable development is conducted by individual scientists on their methods and their initiative because the national system of indicators is not developed.

In general, it should be noted that some countries are trying to withdraw from participating in international programs, including for such reasons as the requirement of openness and transparency in their implementation, as well as compliance with certain rules and procedures that are the same for all participants. Such countries, due

to their domestic policy of secrecy and limited access, along with aggressive policies of interference to the activities of other states, do not follow generally accepted rules, and on the contrary – they try to establish and impose their demands, without respect for freedoms, democracy and interests of other participant parties. In particular, the study of Manulak [5] showed that powerful countries, headed by the United States, strived to maximize the autonomy of the United Nations Environment Programme (UNEP) secretariat and the developing countries wanted to ensure strong intergovernmental control over the UNEP secretariat.

On the other hand, scientists observed that the UN actors are initiating actions to shape the norms of global trade, and thus – food security. In particular, Margulis [6] proves "that UN actors have influenced the discourse, agenda and outcomes of trade negotiations by analyzing three cases: (1) the FAO orchestrating a Uruguay Round agreement in favor of food insecure developing countries; (2) the World Food Programme's blocking of trade rules on international food aid during the Doha Round negotiations; (3) a proposal by the UN Special Rapporteur on the right to food for a legal waiver to protect public food stockholding that was taken up by the World Trade Organization (WTO) member states in 2013".

However, in our opinion, such a position is quite justified – the UN does not defend the interests of an individual country, but protects the right of every person, and creates opportunities for humanity as a whole to live in dignity.

Among the countries, joining international programs to achieve Zero Hunger, not all can achieve certain goals. Mostly, this can be applied to developing countries like Pakistan that have the same domestic, political, and economic problems [7]. Emediegwu and Monye-Emina [8] state that despite the significant resources and efforts put by the Government of Nigeria to achieve the first Millennium Development Goal (MDG1) in trying to halve the share of the poor by 2015, this task has not been accomplished due to uncoordinated political actions in related areas and problems of poverty, corruption, etc.

Problems of implementation of the best practices into national Zero Hunger Programs do exist, but the findings of Hall [9] show that they do not lay within the economic plane, at least the economic component is not decisive. In particular, the scientist determined that the main factors in the ambiguity of international programs, disseminated by governments in terms of their implementation into national policy, are the spread of adaptation measures and the difficulties in tracking and monitoring of the assistance in an adaptation of Zero Hunger practices.

Taking into account the experience of other countries, it is expedient to carry out the process of implementation of the best world practices for achieving Zero Hunger into the national policy in cooperation with scientific institutions and educational establishments. Facultad Regional Multidisciplinaria de Chontales (FAREM Chontales) works grounding on these principles, where the work of the Faculty in performance with the GSD is addressed within the framework of Public Policies of Nicaragua. Within this framework, two programs that the Faculty is developing are analyzed: The Observatory Program for Quality of Life and Development of Health

Education (OCAVIDEPS) and University in the Country (UNICAM). The Observatory for Quality of Life and Health Education Development Program (OCAVIDEPS) is a strategy developed by FAREM Chontales with the support of Excellency Dos Hermanas City Council in Seville, Spain, in order to face psychosocial risks and poverty, to meet the needs of the population, mainly children, adolescents and young people, since it is a very vulnerable sector and therefore responds to environmental risk factors. Likewise, the Faculty participates in the project "Universidad del Campo" (UNICAM), which was implemented by UNAN-Managua within the framework of the UE ALFA program. It is a project aimed at the inhabitants of rural areas of the country [10]. The study of the Indian school showed that "in such a complex societal issue if a school operates on a complex spectrum of activities with state-mandated compulsory education elements and with practical training to guarantee the financial and moral appreciation of graduates in the local community, with the functional involvement of the community, including the organization and operation of various adult education and income enhancement programs along with opportunities that fit into the cultural environment, all this with the underlining principle of environmental awareness and sustainability, has the potentials to eradicate extreme poverty and all the horrors associated with it" [11].

The policy of international institutions regarding engagement of governments into solving the problem of hunger at the national level, and engagement of institutions and organizations at the regional level, through the creation of a quality communication platform has positive practical results. For example, studies by Benevenuto and Caulfield [12] have shown "how transport policies can effectively tackle the intergenerational poverty transfer". Scientists Zakaria et al. [13] investigated the influence of microcredit upon the achievement of GSD1-2 and the improvement of life quality of the poor by the Malaysian government. Considering COVID-2019 pandemic's impact upon the quality of life of the world's population, the results of these studies are of interest to many national governments. The influence of companies' policies about nutrition in the workplace upon productivity indicators have shown that they will obviously be useful for any enterprise, institution and organization, regardless of the country [14].

Thus, the influence of international institutions and programs in achieving Zero Hunger is undoubtedly significant, and the application of the best practices by governments at the national and local levels in a solution of hunger issue can notably reduce the expenses of financial, human and time resources. However, taking into consideration the obstacles to this process, in particular the lack of awareness of potential participants about such international programs, it is advisable to present such institutions, their functions and programs systematically and comprehensively, and in a single document. Thus, the subject of the study includes a critical analysis of the system and functions of specialized UN agencies, programs and funds in ensuring the implementation of GSD2 and establishing the degree of their dissemination and impact on achievement of goals.

The purpose of the article. The study aims to critically analyze the system and

functions of specialized agencies, programs and UN funds that ensure the implementation of GSD2, to identify the components of global initiatives for the successful implementation of the Zero Hunger Policy.

Results and discussion. ***1. The GSD2 implementation mechanism in a global dimension.*** Schematically, work on GSD2 implementations in the global dimension is as follows (Figure 1): the results of monitoring global changes are the basis for creating regulatory support in the GSD implementation system, but for various reasons they cannot be automatically implemented into national practices – for implementating regulations and their adaptation at the national level are joined by international institutions, which ultimately contribute to the implementation of the GSD in each country, taking into account its particular problems.

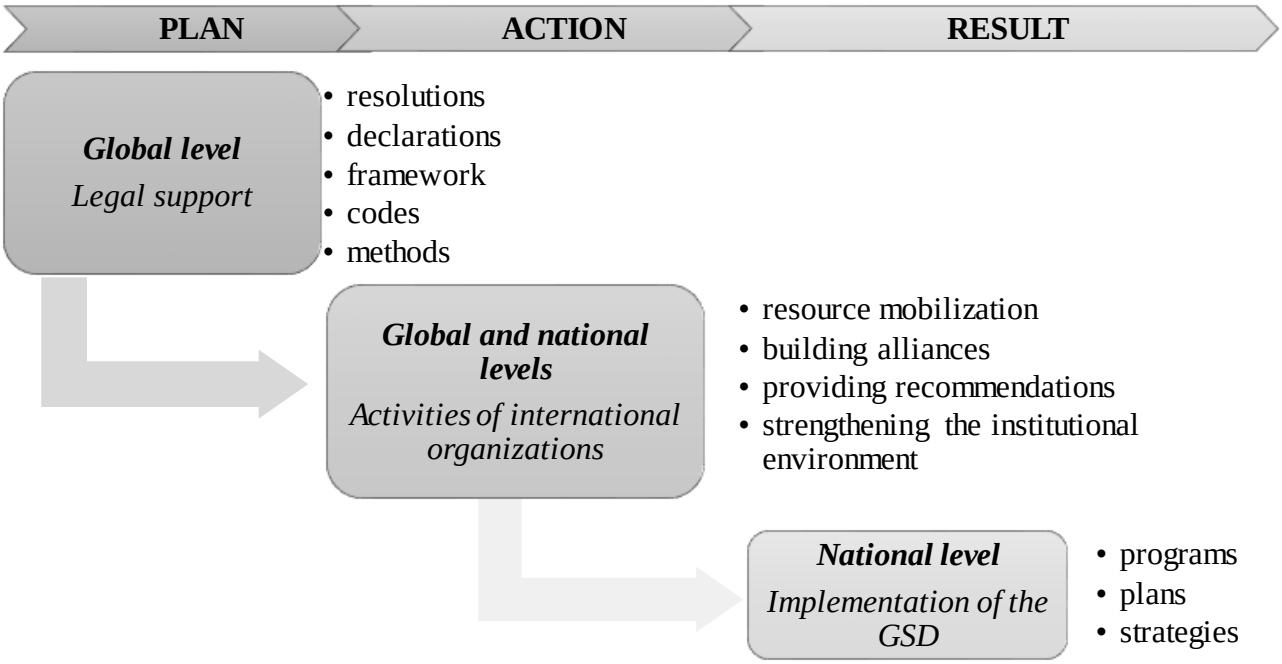

Figure 1. Mechanism of GSD2 implementation in the global dimension

Source: developed by the authors.

In order to trace the genesis of changes in the food security system as a result of the impact of the adoption of appropriate policies and programs, it is necessary to systematize them, which in a global dimension is a challenge. At the same time, it should be noted that the UN is the fundamental institution in the formation of the regulatory system and international institutions (Figure 2).

2. International institutes in the UN for the implementation of GSD2. Successful implementation of global GSD2 policies in national systems is possible through the effective work of international institutions. Of course, their goals and scope are much broader than indicated in Figure 3, however, we have noted only those that are directly relevant to the implementation of GSD2.

Thus, only following the results of the 74th session in 2019, the UN General Assembly, on the proposal of the Second Committee on economic and financial affairs, which, among other things, addresses sustainable development, adopted 46 resolutions, of which 28 gave recommendations on the implementation of GSD2.

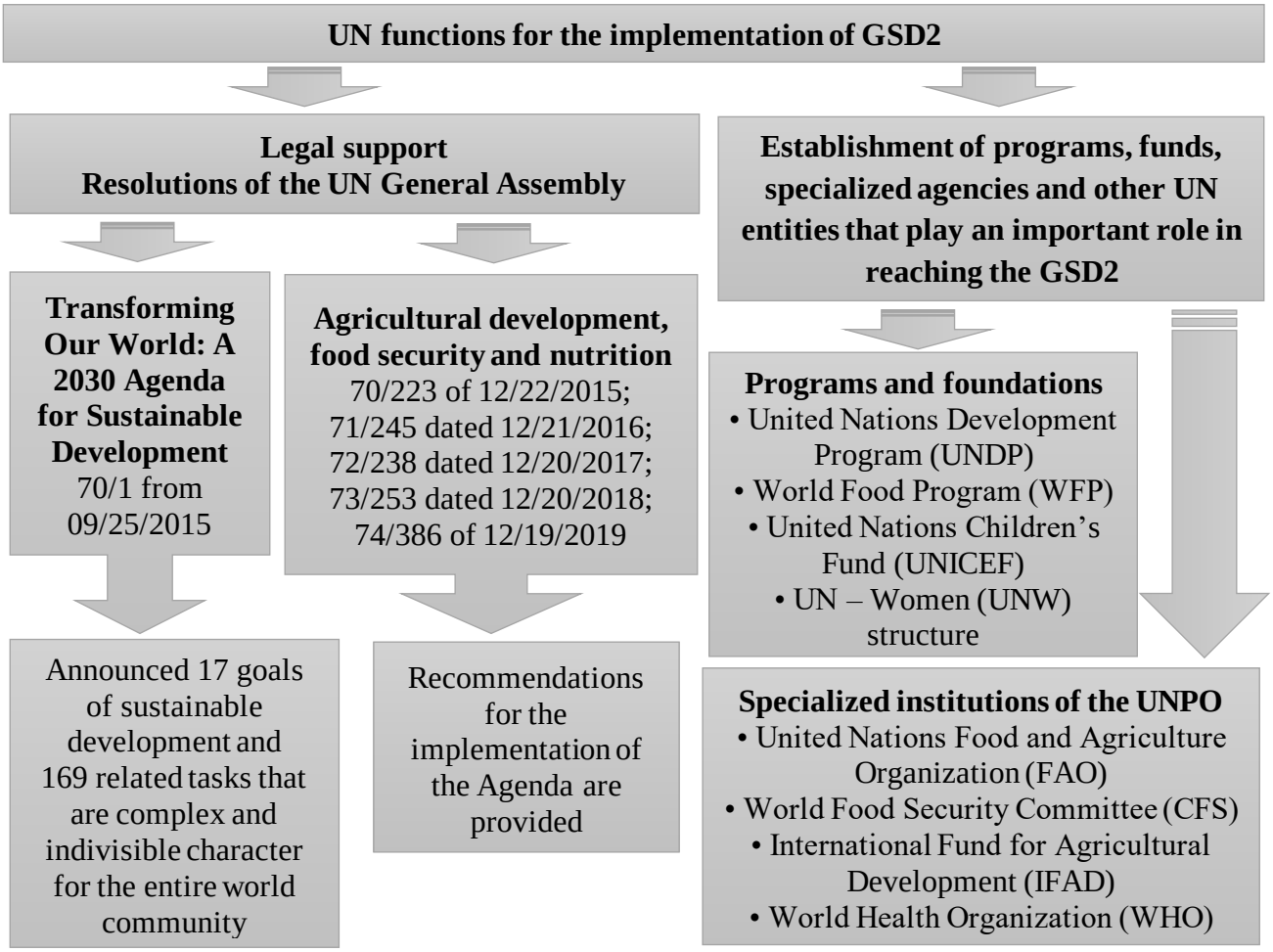

Figure 2. The UN's composition and function in guaranteeing GSD2 implementation

Source: developed by the authors.

For instance, the scope of activities of the World Health Organization (WHO) include:

- health systems (WHO acts as a global security guard for health information and collaborates with countries to strengthen mechanisms for the creation, exchange and use of high-quality information resources);

- non-communicable diseases (non-communicable diseases account for more than 70 % of all deaths in the world, eight out of ten of these occur in low- and middle-income countries);

- promoting lifelong health (promoting lifelong health concerns all of WHO's activities and takes into account the need to address environmental risk factors and social determinants of health, as well as gender, justice and human rights);

- infectious diseases (WHO is working with countries to expand and ensure sustainable access to prevention, treatment and care in HIV, tuberculosis, malaria, and to reduce vaccine incidence);

- preparedness, surveillance and response (WHO supports countries in enhancing their national capacity to manage health risks in the event of emergencies to prevent, respond to, and recover from emergencies).

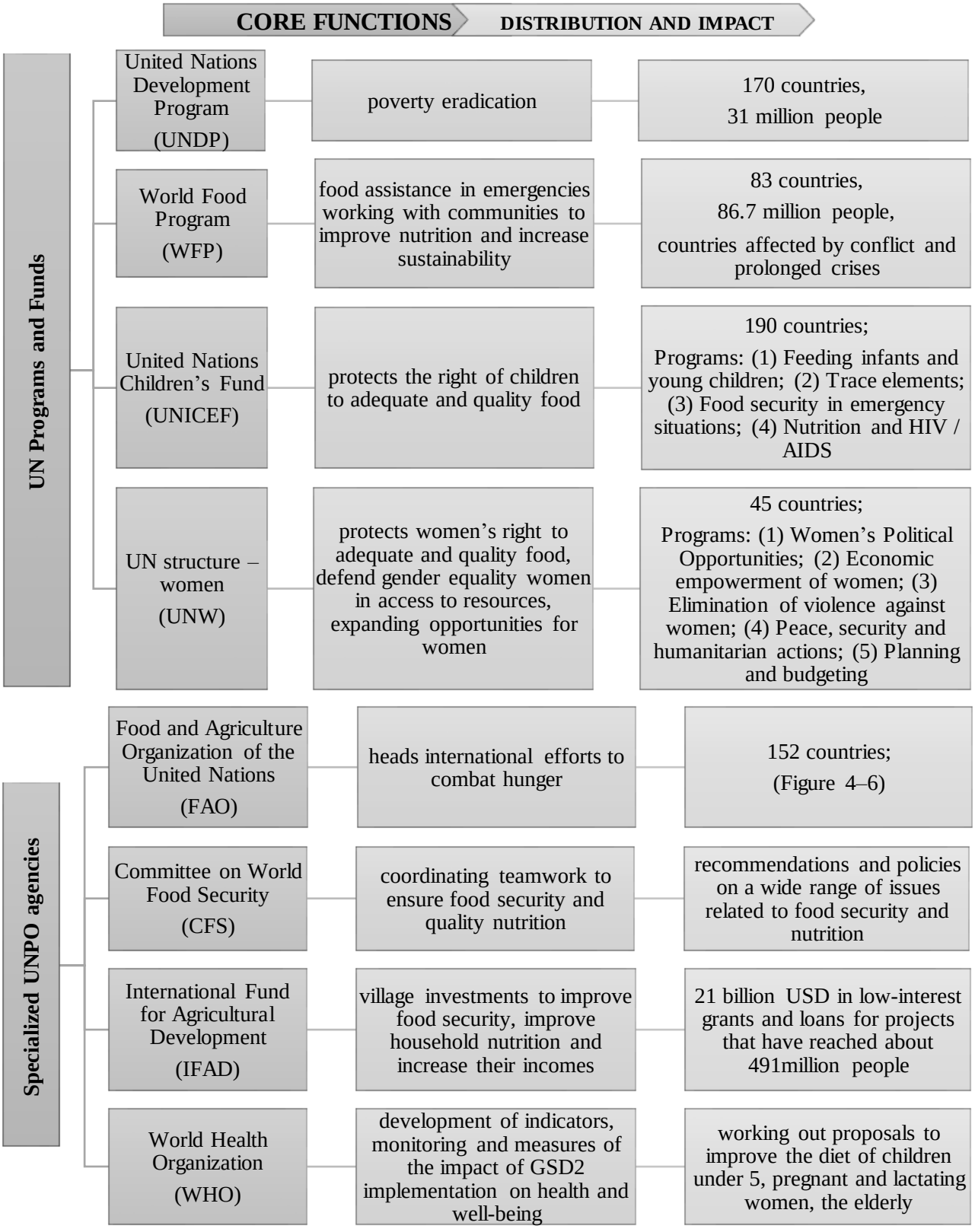

Figure 3. The composition and roles of international institutions within the UN in guaranteeing GSD2 implementation

Source: systematized by the authors [15–23].

For the implementation of GSD2, the main functions of WHO are:

- developing indicators, monitoring and measuring the extent to which sustainable

agriculture policy promotes health and well-being;

- develop proposals for improving the diet to prevent stunted growth and depletion of children under 5 years old, meet the nutritional needs of adolescent girls, pregnant women and lactating women, the elderly.

In Ukraine, in addition to the already mentioned indicators, a significant impact on the level of nutrition is exerted by such social and economic levers of influence as household size, household location, food expenditures, income level and the presence of children. There was used a regression analysis to determine the degree of influence of the factors described above on the level of nutrition (Figure 4, Table 1).

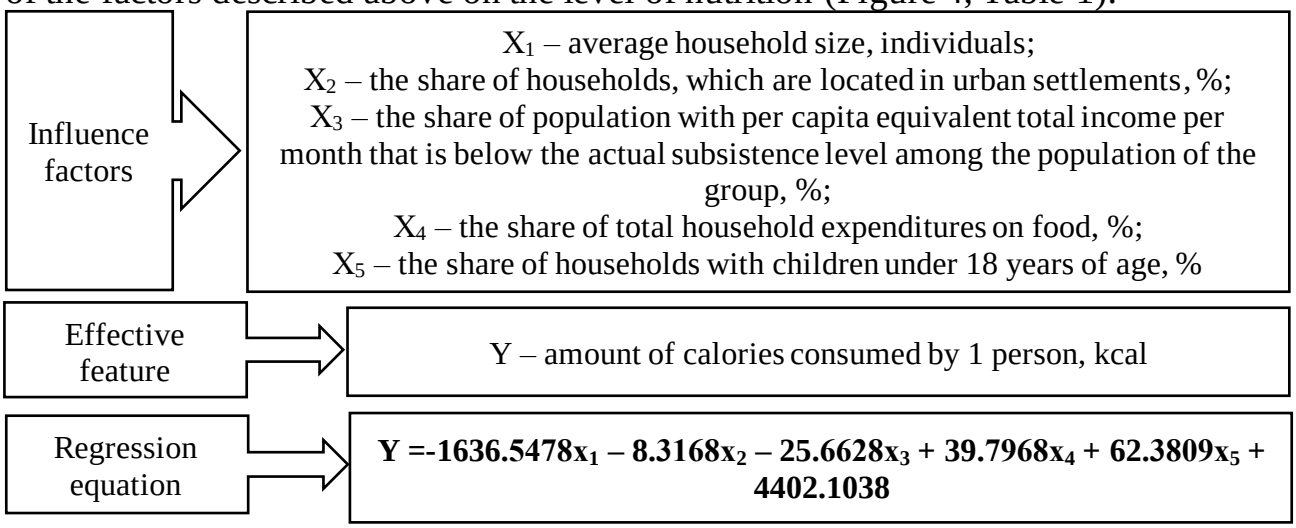

Figure 4. Regression analysis of the assessment of factor's impact on the level of daily energy value of food consumed in households in Ukraine

Source: calculated by the authors.

The findings of regression analysis showed a close relationship between factor and result features, therewith: the increase of average household size per 1 person, the share of households located in urban settlements by 1 % and the share of the population with per capita equivalent total income per month that is below the actual subsistence level by 1 %, the energy value of the diet will decrease by 1636.8 and 26 kcal, respectively; and with the increase in the share of total expenditures of households on food and the share of households with children under 18 years of age by 1 %, the energy value of the diet will increase by 38 and 62 kcal, respectively (Table 2). This substantiates the conclusions made earlier.

Table 1

Input data for regression analysis of the factors' impact upon the level of daily energy value of food consumed in households in Ukraine

Region	X_1	X_2	X_3	X_4	X_5	Y
Vinnytsia	2.47	47.5	28.2	47.3	35.6	3420
Volyn	3.03	52.4	37.6	53.0	48.9	3092
Dnipropetrovsk	2.37	84.0	35.8	48.6	34.6	2919
Donetsk	2.33	84.7	44.6	53.0	35.1	3291
Zhytomyr	2.51	56.2	40.3	48.5	38.3	3160
Zakarpattia	3.49	40.6	31.5	49.1	55.1	3217
Zaporizhzhia	2.46	76.7	38.7	39.7	35.7	2655

Continuation of Table 1

Region	X_1	X_2	X_3	X_4	X_5	Y
Ivano-Frankivsk	3.00	45.1	18.7	45.0	48.0	3392
Kyiv	2.62	57.8	48.5	52.1	37.4	2552
Kirovohrad	2.32	61.8	33.6	46.4	33.4	3043
Luhansk	2.28	69.9	32.9	45.4	29.0	2712
Lviv	3.02	63.3	31.1	51.7	46.2	2982
Mykolaiv	2.55	68.3	43.9	46.3	40.0	2844
Odesa	2.65	68.6	35.7	53.3	38.8	2960
Poltava	2.37	60.5	23.5	39.7	32.3	2935
Rivne	3.14	49.0	44.6	56.1	48.3	2930
Sumy	2.40	66.9	38.1	45.6	34.8	3093
Ternopil	2.93	45.6	32.7	41.5	46.7	2991
Kharkiv	2.44	80.2	34.4	47.2	34.0	2791
Kherson	2.49	62.9	45.0	52.1	36.7	3151
Khmelnytsky	2.63	52.8	38.6	48.0	39.8	3131
Cherkasy	2.35	54.6	35.9	48.2	34.8	3299
Chernivtsi	2.90	44.0	39.4	42.3	51.5	2964
Chernihiv	2.30	60.1	31.1	45.9	33.8	3467

Source: developed by the authors according to the data of State Statistics Service of Ukraine.

Table 2

Findings of regression analysis of the factors' impact on the level of daily energy value of food consumed in households in Ukraine

m_5, m_4, m_3, m_2, m_1, b	62.3809	39.7968	-25.6628	-8.3168	-1636.5478	4402.1038
se_5, se_4, se_3, se_2, se_1, se_b	19.4123	10.1975	6.2259	3.7859	422.7090	568.7897
R^2, se_y	0.6419	160.9784				
F, df	6.45	18				
SS regr., SS resid.	836152.35	466452.61				

Y =-1636.5478x1 – 8.3168x2 – 25.6628x3 + 39.7968x4 + 62.3809x5 + 4402.1038

F, Fcrit.	6.45	2.93	The assumption of relationship abscence is not confirmed			
t-statistics	3.213481	3.902593	4.121954	2.196762	3.871571	7.739423
TDIST	0.002409	0.000522	0.000320	0.020687	0.000559	0.000000
Comparison of evaluation	effective feature	effective feature	effective feature	effective feature	effective feature	

Note: m_5, m_4, m_3, m_2, m_1, b – coefficients for variables in the regression equation; se_5, se_4, se_3, se_2, se_1, se_b, se_y – averages of absolute values of deviations of data points from the average; R^2 – coefficient of determination, F – Fisher's criterion calculated to assess the adequacy of the constructed model; Fcrit – Fisher's criterion is critical; df – the number of degrees of freedom; SSregr. – fraction of variance, which is described by the regression equation (sum of squares due to regression); SSresid. – the proportion of variance that is not taken into account when writing the equation (residual sum of squares); TDIST and t-statistics are standard errors (auxiliary values used to check the significance of model coefficients).

Source: calculated by the authors.

3. FAO's activities in ensuring the implementation of GSD2. We should note that among the international institutions in the GSD2 implementation system, the most

significant is the influence of the FAO, the Committee on World Food Security (CFSP) and the International Fund for Agricultural Development (IFACS).

In its activities, FAO sets out five strategic goals.

1. *Assist in overcoming hunger, eliminating food insecurity and malnutrition.* FAO is expanding the capacity of all stakeholders to implement governance, coordination and broader partnerships for more targeted and coordinated action to eliminate hunger and malnutrition; helps countries ensure that policy, investment and action plans are evidence-based; assists countries in producing reliable data, statistics and enhancing analytical capacity; works with partners to monitor progress, assess the impact and draw lessons from their efforts on food security and nutrition [24].

2. *Make agriculture, forestry and fisheries more productive and sustainable*. FAO supports the development of effective governance mechanisms, policies and laws for the transition to sustainable agriculture; develops tools to monitor progress towards sustainable agricultural development and assist countries in their implementation; ensures that international commitments to sustainable agriculture are supported by national laws and policies [24].

3. *Promote poverty reduction in rural areas*. FAO helps countries to develop rural diversification strategies and policies that help create decent jobs and skills for rural workers, especially young people and women; supports the empowerment of farmers to improve access to and sustainable management of natural resources, better access to markets, technologies and services to increase their productivity and generate income; supports national statistical processes for collection and analysis of rural poverty and agricultural development trends, facilitates monitoring of Sustainable development goals related to rural poverty [24].

4. *Introduce efficient agricultural and food systems*. FAO collects and shares market access and development information. FAO helps countries more fully participate in global and regional markets through increased trade; strengthens financial mechanisms to support the growth of agriculture and the food industry; develops the capacity of regional organizations to promote efficient food markets [24].

5. *Increase resilience to threats and crises*. FAO supports countries and regions in mobilizing adequate resources to reduce and manage poverty in agriculture, food and nutrition to ensure sustainability; assists countries and communities in developing mechanisms to collect, analyze and disseminate data for monitoring, preventing and responding to crises and threats to agriculture, food security and nutrition; protect and provide humanitarian assistance to protect livelihoods of vulnerable farmers before, during and after emergencies; builds and promotes partnerships and synergies with academic, public and private agencies, the UN to work together to achieve sustainable development [24].

In general, FAO's GSD2 implementation can be organized in three directions (Figure 5).

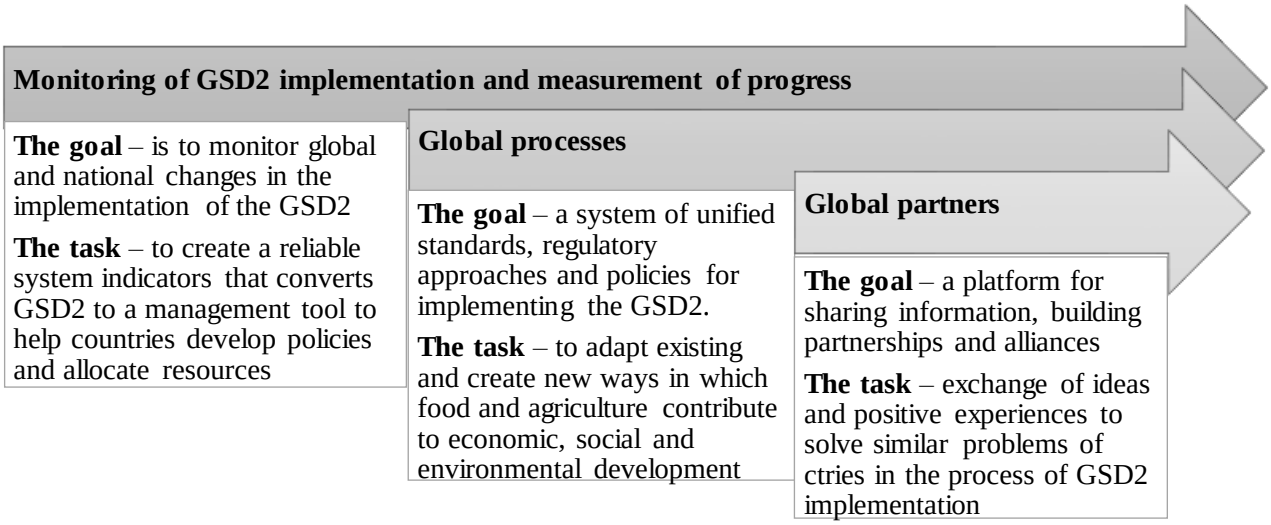

Figure 5. Areas of FAO's activities in ensuring the implementation of GSD2 at the national level

Source: generalized by the authors [24; 25].

In partnership with Rome-based agencies and other partners, FAO leverages its own interdisciplinary knowledge and experience to develop indicators that can monitor effectively progress towards GSD2 in different countries.

To ensure the development of the best and most relevant indicators, FAO is working closely with the United Nations Statistics Commission (UNSC) and the Inter-agency and Expert Group on GSD (IAEG-SDG) from 28 countries. FAO can support countries in monitoring at least 25 of the 230 GSDs identified by the IAEG-SDG. These indicators relate to GSD 1, 2, 5, 6, 12, 14 and 15 and include both established and emerging indicators in areas where FAO has unique experience and knowledge in monitoring GSD2 implementation and measuring progress as a leading UN specialized agency in the field of food security and sustainable development. The objectives mainly cover areas such as the cessation of hunger, the elimination of food and malnutrition, and the rational use of natural resources.

FAO has significant potential comparative benefits in helping countries meet new GSD2 monitoring challenges and has already initiated several projects with partners (Figure 6):

1. With the Global Strategy to Improve Agricultural Statistics [26], the largest in the history of the Agricultural Statistics Capacity Building Initiative, FAO is developing guidelines for new cost-effective methods for collecting food and agriculture data on education and training of statistics workers, as well as providing technical assistance for the development of sectoral strategic plans, institutional coordination and verification of new statistical tools [24; 25].

2. FAO also directly supports countries in enhancing their ability to use national surveys to monitor the GSD2 [24; 25]. To promote consistent implementation of GSD2 indicators in FAO national statistics, it advises countries on the best ways to collect and analyze food intake data to assess malnutrition and to implement the Global Food Insecurity Experience Scale module [16; 27].

3. FAO, in collaboration with the World Bank (WB), has launched a Global Survey Hub 2020 to support countries in the development and implementation of comprehensive agricultural surveys that will collect data to monitor many agricultural and food security goals, as well as GSDs, such as small business productivity and revenue goals and equal access to land.

4. According to many other indicators related to ecosystems and sustainability of natural resources, FAO collects data from officially approved national agencies. In some cases, information provided by member states is enriched by other sources of data [24; 25]. For example, remote sensing of land use and land degradation is possible through the Collect Earth Online 2019 project [28].

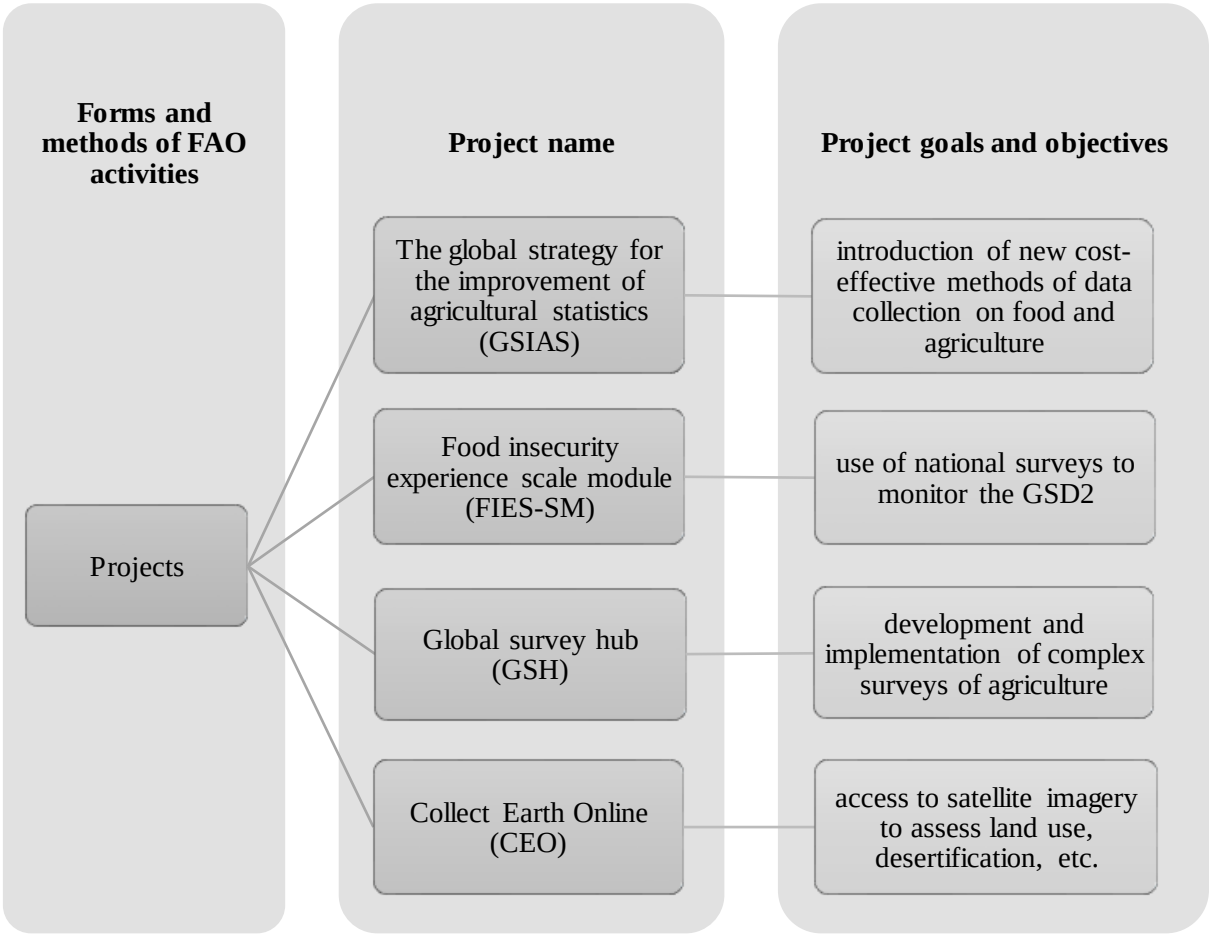

Figure 6. FAO's activities in monitoring GSD2 implementation and measuring progress

Source: generalized by the authors [17; 24; 26; 27; 28; 29].

GSD2's great ambitions can only be achieved through collaboration (North-South, South-South and tripartite) and global partnerships between many participants and across a wide spectrum. FAO participates in global processes and partnerships to ensure that GSD2 goals truly reflect countries' perspectives on their development and recognize the many ways in which food and agriculture contribute to economic, social and environmental development.

FAO participates and frequently chairs, deploys or represents the Technical

Secretariat for major interagency and multilateral alliances, including the United Nations Standing Committee on Nutrition (UNSCN), the World Food Security Committee (CFS), the United Nations High-Level Task Force on Global Food (HLTF), UN-Energy, UN-Water, and UN-Oceans (Figure 7).

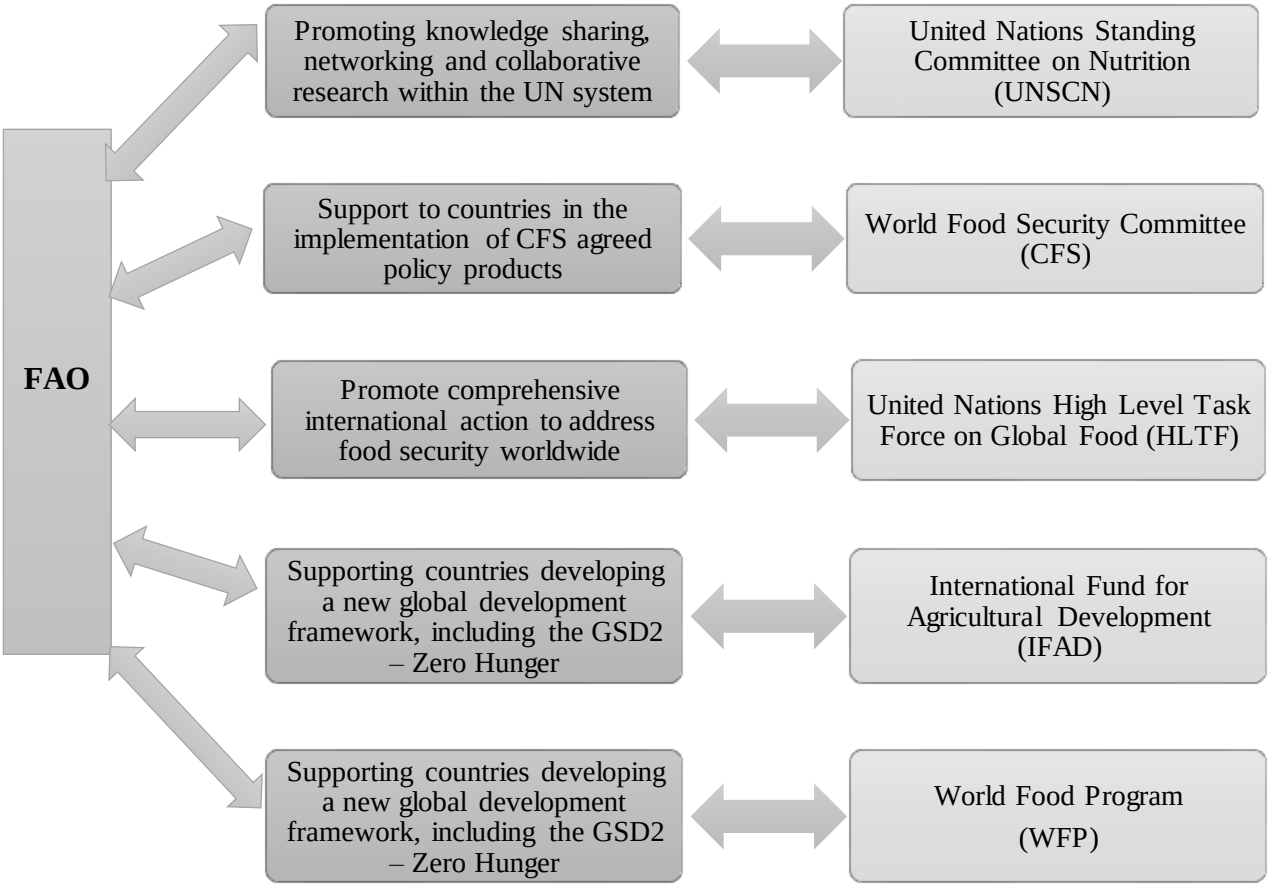

Figure 7. FAO's leading interagency and multilateral alliances

Source: generalized by the authors [24; 25].

FAO's cooperation with the International Fund for Agricultural Development 2020 and the World Food Program 2020 play a significant role in supporting countries developing a new global development framework, including GSD2 – Zero Hunger. This close relationship is ongoing as work is currently focused on metrics to measure global goals and objectives, with a focus on the productivity of farmers and small-scale agrarians and the implementation of comprehensive agricultural surveys.

The most productive, in terms of assisting in the implementation of GSD2 guidelines, frameworks and policies by national agencies, is FAO's cooperation with the World Food Security Committee (CFS). FAO is a key partner of the World Food Security Committee, a major international and intergovernmental platform that brings together all stakeholders in a joint work on food security and nutrition for all, led by a joint Secretariat of the Rome-based agency and support participation of CFS in the implementation of GSD2. FAO supports countries in the implementation of CFS agreed policy products, such as Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security [30], Principles for Responsible Investment in Agriculture and Food Systems [31] and the

Framework for Action for Food Security and Nutrition in Protracted Crises [32], which addresses several GSDs, and in particular GSD2. FAO also supports CFS policy discussions aimed at identifying global challenges and policy gaps to facilitate global thematic reviews of progress in the GSD2 implementation system over the next 15 years.

FAO's activities with partners in securing global GSD2 implementation processes include different areas (Figure 8).

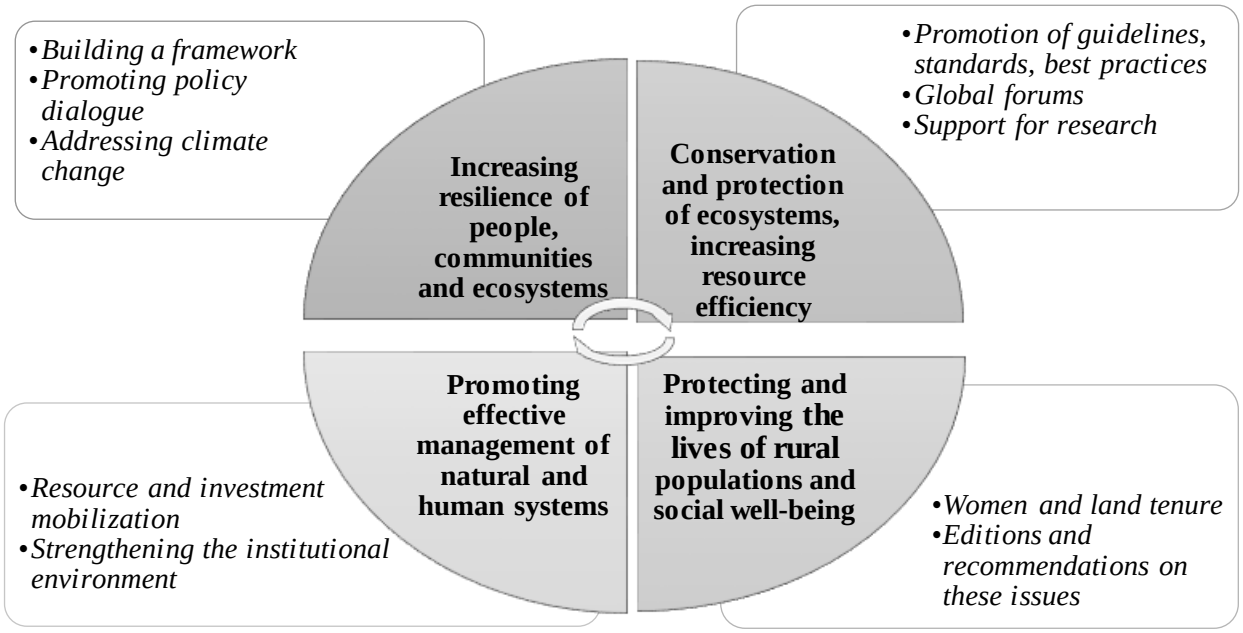

Figure 8. FAO's activities towards ensuring global processes for GSD2 implementation

Source: generalized by the authors [24; 25; 33–45]

Resource and investment mobilization. FAO's new food and agriculture investment strategy addresses both the 2030 Agenda and the Addis Ababa Action Agenda (AAAA), which helps countries to develop and implement quality investment proposals and mobilize resources for GSD2. FAO helps also countries increase their capacity to develop and implement stakeholder investment.

Addressing climate change. United Nations Climate Change Agreement: Paris Climate Change Agreement 2015 continues. The Paris Agreement unites all countries in the common cause of climate change adaptation and adaptation through enhanced support and assistance to developing countries. The Paris Agreement requires all parties to make every effort through United Nations Climate Change: Nationally Determined Contributions 2015 and to intensify these efforts in the years to come. These countries are now turning to the international community for support in meeting their commitments and reporting on their Nationally Defined Contributions over the coming years. FAO, in addition to building relationships with the Ministries of Environment and Finance to participate more actively in national processes, also works with the Green Climate Fund (GCF) and other potential donors interested in financing

climate action.

Provide evidence and policy recommendations. With increasing focus on partnerships and various sources of funding, such as South-South cooperation, FAO is increasingly focusing on outreach and technical support. As part of the GSD2 commitments to reaching FAO's Zero Hunger by 2030, FAO and the World Food Program have estimated the additional investment needed to address extreme poverty and hunger at 265 billion UAH annually between 2016 and 2030 [24]. FAO's technical assistance includes developing public investment management strategies and policies. Support for public investment will also be aimed at creating favorable conditions for private investment.

Women and land tenure. For rural women and men, land is often the most important asset for a household to support production and provide food and income. Therefore, the Sustainable Development Goals Knowledge Platform [42] places particular emphasis on women's rights to land. GSD encourages reforms that give women equal rights to economic resources and access to land ownership. Based on FAO technical recommendations, two indicators were adopted to measure GSD5a. The FAO gender and land rights database, which includes over 84 country profiles and the Legal Assessment Tool (LAT) [41], provides country-level information to monitor progress towards GSD.

Promotion of guidelines, standards, best practices. The Global Agenda for Sustainable Livestock (GASL) is a multilateral stakeholder partnership in the livestock sector committed to the sustainable development of the sector. It also addresses the social, environmental and economic aspects of animal husbandry growth: a growing scarcity of natural resources, climate change, poverty, food security and global threats to animal and human health. It focuses on three main areas: global food security and health; equity and growth; resources and climate [39]. The agenda uses GSD17 (Partnership) goals as a key mechanism for achieving GSD2.

Building a framework. An important element to achieving sustainable development is the Sendai framework for disaster risk reduction 2015–2030 (SFDRR) – a 15-year voluntary, non-binding agreement that recognizes that the state plays a leading role in disaster risk reduction, but responsibility must be distributed to all parties, including local governments and the private sector [45]. In line with its four priorities, the FAO sustainability program strengthens early warning and risk monitoring systems, integrates a disaster risk reduction framework into agricultural policy, promotes best practices in disaster risk reduction, supports emergency response and resistant recovery of the economy after crises and shocks.

Promoting policy dialogue. The second international conference on nutrition (ICN2) was a high-level intergovernmental meeting focusing on global malnutrition in all its forms. The meeting was attended by more than two thousand participants, including representatives from more than 170 governments, 150 civil society representatives and nearly 100 business representatives [38]. Two key summary documents – the Food and Agriculture Organization of the United Nations: Rome Declaration on Nutrition 2014 and the Framework for Action on Food Security and

Nutrition in Protracted Crises 2015 – were signed by the participating governments to call on world leaders to develop a national policy to eradicate malnutrition and transform food systems to make food diets accessible to all.

Strengthening the institutional environment. FAO has taken the lead in improving information on the agricultural market – a key component in avoiding future food price crises and excessive volatility – by hosting the agricultural market information system (AMIS). The agricultural market information system is an interagency platform for improving the transparency of the food market and responding to food security policies. The platform was launched in 2011 by the G20 ministers of agriculture following the global rise in food prices in 2007/08 and 2010. In order to bring together major agricultural suppliers, AMIS assesses global food supplies (focusing on wheat, maize, rice and soybeans) and provides a platform for policy coordination in a context of market uncertainty [34]. Most importantly, AMIS promoted political dialogue and mutual learning between participating countries, for example by regularly meeting with national coordinators within the global food market information group 2011 and the AMIS rapid response forum [35].

Global forums. The FAO global forum on agricultural research 2003 is a unique multilateral forum for open dialogue, knowledge sharing, alignment of priorities and catalyzing collective action in agri-food research and innovation [46]. The partners of the forum are working to ensure that agricultural research and innovation through research, knowledge, education and entrepreneurship delivers the best results for the development of agricultural farmers and rural communities. Soils provide an unparalleled value to society through ecosystem services (providing food, fiber, fuel and biological materials, regulating water quality, nutrient cycling, regulating climate and floods), providing a high level of return on investment in Sustainable Soil Regulation (SSR). The introduction of SSR has many social benefits, especially for small farmers who are directly dependent on local soils. The partnership aims to promote the SSR at all levels. GSD2 recognizes that security and nutrition require the creation of effective sustainable agricultural production, which is not possible without the SSR.

Research support. The International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), adopted by the FAO conference in November 2001, is the only binding international agreement, which relates directly to the sustainable management of Plant Genetic Resources for Food and Agriculture (PGRFAs). The multilateral system for accessing genetic resources and sharing the benefits of ITPGRFA provides the necessary cooperation between countries to exchange PGRFAs for agricultural research and breeding, providing an important impetus to continue developing, preserving and providing PGRFAs to the global community to promote food security.

Conclusions. It was concluded that the following steps should be implemented:

1. Initiatives on Global zero hunger policy have been identified to be based on three components: regulatory support, the work of international organizations coordinated by the UN, and the implementation of the GSD2 framework and programs at the national

level, which support most countries around the world through interaction with FAO.

2. The main functions of the specialized agencies, programs and UN funds in ensuring the implementation of GSD2 are systematized, the extent of their distribution and impact is determined.

3. It is argued that in general terms, FAO's GSD2 implementation can be organized into three areas: monitoring the implementation of the GSD2 and measuring progress; global processes; global partners. Such distribution is determined by the specificity of goals and objectives according to the specific activity and level.

4. FAO has been shown to have significant potential comparative benefits in helping countries meet new challenges in the GSD2 monitoring area, in particular through the implementation of projects: the global strategy to improve agricultural statistics (GSIAS); Global Food Insecurity Experience Scale module (FIES-SM); Global Survey Hub (GSH); Collect Earth Online (CEO).

5. It has been identified that FAO's work with partners in securing global processes for the implementation of GSD2 involves different areas: mobilizing resources and investment; addressing climate change; providing evidence and policy advice; women and land tenure; promotion of guidelines, standards, best practices; frame construction; promoting policy dialogue; strengthening the institutional environment; global forums; research support.

Further research should be focused on the mechanism of EU countries' positive experience implementation while solving similar issues of GSD2 realization, where it is possible and appropriate for the national economy, as well as on developing new approaches to business conduct, forming a platform for information exchange, creation of partnerships and alliances, which at all levels are guided by the principles of Zero Hunger and Zero Poverty.

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