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The World Food Program in the Global Logistics Cluster

Światowy program żywnościowy w globalnym klastrze logistycznym

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Abstract. The subject of the article is an analysis of the functioning of the World Food Program (WFP) as a leading organization, directing and coordinating activities in humanitarian logistics at the level of the Global Logistics Cluster (GLC). The article adopts the research goal of defining the role of the World Food Program in activities carried out in humanitarian logistics at the level of the Global Logistics Cluster. Hypotheses were formulated; WFP is responsible for directing and coordinating humanitarian activities of all partner organizations participating in the GLC, and WFP is responsible for the development of the global supply chain and effective cooperation between partners in various humanitarian logistics operations. Achieving the research goal and verifying the adopted hypothesis was possible thanks to the use of research methods such as: analysis of existing data (desk research), analysis of documents published by WFP, as well as logical inference based on the collected research material and conducting a case study. The article shows that the WFP is the leading UN agency in the GLC, contributing to the development of humanitarian logistics and meeting the humanitarian needs of communities in various parts of the world. Humanitarian operations carried out at the initiative of WFP under the GLC can be divided into Logistics Sector Support, Logistics Preparedness and Logistics Cluster Operation. Humanitarian aid directed and coordinated by the WFP, supplemented with development aid, is the result of the development of humanitarian logistics at the GLC level.

Keywords: crisis, logistics cluster, humanitarian logistics, humanitarian aid, WFP

Abstrakt. Przedmiotem artykułu jest analiza funkcjonowania Światowego Programu Żywnościowego (World Food Program, WFP) jako wiodącej organizacji, kierującej oraz koordynującej działania w logistyce humanitarnej na poziomie Globalnego Klastra Logistycznego (GLC). WFP to wyspecjalizowana agencja ONZ powołana do zwalczania problemu głodu i wzmocnienia bezpieczeństwa żywnościowego na świecie. W artykule przyjęto cel badawczy w postaci określenia roli Światowego Programu Żywnościowego w działaniach realizowanych w logistyce humanitarnej na poziomie Globalnego Klastra Logistycznego. Sformułowano hipotezy; WFP spełnia funkcję kierującą i koordynującą działania humanitarne wszystkich organizacji partnerskich partycypujących w GLC, oraz WFP odpowiada za rozwój globalnego łańcucha dostaw i efektywną współpracę między partnerami w zróżnicowanych przedmiotowo operacjach w ramach logistyki humanitarnej. Osiągnięcie celu badawczego oraz weryfikacja przyjętych hipotez było możliwe dzięki zastosowaniu metod badawczych w postaci: analizy danych zastanych (desk research), analizy dokumentów opublikowanych przez WFP, a także logicznego wnioskowania na podstawie zebranego materiału, oraz przeprowadzeniu studium przypadku (case study). W artykule wykazano, że WFP jest wiodącą agendą ONZ w GLC, przyczyniającą się do rozwoju logistyki humanitarnej i zaspokajania potrzeb humanitarnych społeczności w różnych częściach świata. Operacje humanitarne realizowane z inicjatywy WFP w ramach GLC można podzielić na Logistics Sector Support, Logistics Preparedness i Logistics Cluster Operation. Kierowana i koordynowana przez WFP pomoc humanitarna, uzupełniona o pomoc rozwojową, jest rezultatem rozwoju logistyki humanitarnej na poziomie GLC.

Słowa kluczowe: kryzys, klaster logistyczny, logistyka humanitarna, pomoc humanitarna, WFP

Introduction and the need to enrich the state of knowledge about the participation of the WFP in the GLC

The subject of the article is to analyze the functioning of the World Food Program (WFP) as a leading organization, directing and coordinating activities in humanitarian logistics at the level of the Global Logistics Cluster (GLC).

The rationale of the topic is the growing role of international humanitarian aid, with particular emphasis on shaping food security during the international community's response to humanitarian crises in various parts of the world.

The topicality of the issues discussed has increased even more in the context of the problems that many countries had to deal with in the era of the Covid-19 pandemic, interrupted supply chains or growing regional conflicts (Cardwell, Ghazalian, 2020; Laborde, Martin, Swinnen, Vos, 2020, pp. 500-502; Mueller et al., 2021, pp. 92-109).

It is estimated that in the second decade of the 21st century, 1 in 9 people do not have enough food to meet their basic needs. This translates into nearly 795 million people who are malnourished and threatened with hunger, who are of interest from the WFP (Gębska, 2017, p. 355).

An additional justification for the subject of the article is the continuation of considerations on international humanitarian aid, taking into account logistic aspects, bearing in mind the arguments presented in the article on the International Humanitarian City as a leading international logistics hub (Landmann, Bogucka, 2021, pp. 97-111).

The issue of the foundations of the functioning of WFP in GLC has not yet received sufficient attention in the Polish-language literature, while in the

English-language literature the topic was only mentioned, most often when considering the role of the United Nations in humanitarian logistics (O'Connor, Boyle, Ilcan, Oliver, 2017, pp. 5-12; Peters et al., 2022, pp. 8-26; Shaw, 2001, pp. 188-204). The dominant perspective is the functioning of WFP in the context of the food security sector, but a comprehensive analysis on the position and tasks within the GLC is therefore not developed in the scientific literature. The literature in Polish mainly deals with the general tasks of WFP in the UN system. Analyses concern the role of food aid delivery in the context of international solidarity (Sapa, 2010, pp. 90-100; Sapa, 2012, pp. 203-214), the global food crisis and attempts to solve it with the participation of WFP (Lorek, 2011, pp. 38-50) or the global food security system (Gębska, 2017, pp. 354-369). The authors have mainly focused on aspects of food security as a domain of WFP activities, while neglecting the equally interesting area of logistics processes, represented at GLC level. This article seeks to fill such a research gap by analysing and explaining the basis for WFP's involvement in the GLC. The latter is a cluster significantly affecting the resolution of humanitarian crises, one of which is the problem of hunger and malnutrition in the countries of the world.

WFP's involvement in the GLC has previously been addressed in the academic literature in English, and this is basically only in a mentions. Some authors emphasized the importance of WFP in creating sustainable development in the humanitarian supply chain, although at the same time focusing on environmental management rather than logistics operations (Gelal, Sassi, 2021, p. 46; Kliest, Singh, 2012, pp. 15-19). Other authors have analyzed some aspects of logistics activities in connection with the description of the system of supply and distribution of food aid, especially in uncertain regions (Chander, Shear, 2009, pp. 16-79; Leiras, Gonvalves, Chawaguta, de Brito Junior, Yoshizaki, 2012, pp. 6365-6384). The current state of research also shows that the issue of WFP involvement in GLC can be analyzed in the perspective of agile logistics. Agile logistics refers to an approach to supply chain management that emphasizes flexibility, responsiveness, and adaptability. The goal of agile logistics is to create a logistics system that can quickly respond to changes in demand, supply, or other factors that affect the supply chain. Such logistics seem to be part of WFP's response to humanitarian crises (Cozzolino, Rossi, Conforti, 2012, pp. 16-33). It is worth mentioning that the history of transformation and development of WFP in carrying out of UN tasks in various sectors (clusters) of international humanitarian aid is presented in the studies by D.J. Shaw (2001; 2011).

The World Food Program (WFP) acts as an entity steering and coordinating the efforts of various organizations in 3 clusters of international humanitarian aid: Logistics (Logistics Cluster - GLC), Communications (Emergency Telecommunications Cluster), and Food Security Cluster. In the latter case - along with the leading role of other UN agencies, ie the Food and Agriculture Organization of the United Nations - FAO and the United Nations Children's Fund - UNICEF

(Landmann, 2021, pp. 45-46). The cluster approach is widespread in the practice of solving humanitarian crises in the 21st century, leading to the development of international processes and activities in humanitarian logistics (Fredriksen, 2012, pp. 2-7; OCHA, 2022; Stumpenhorst, Stumpenhorst, Razum, 2011, pp. 587-592).

The World Food Program was established on December 19, 1961 as a result of a resolution of the United Nations General Assembly (1961), which was an important event in the context of shaping and developing the foundations for the provision of international humanitarian aid in the institutional system of the United Nations. WFP is responsible for shaping food security on a global scale. In addition, it carries out tasks when it is necessary to respond to crisis situations caused by various factors, is involved in climate protection, feeding campaigns for children in schools and supporting small-scale agriculture. Provides funds to build regions' food security capacity. It supports the implementation of digital innovations in the UN system, acquires and develops strategic partnerships with other entities of international law for the effective provision of humanitarian aid (WFP, 2022a, pp. 1-2).

The article consists of an introduction, research methodology, general considerations on WFP and the need to enrich the state of knowledge about the participation of the organization in the GLC, the issue of financing WFP operations from 2019 to 2021, and an analysis of the role of the GLC as a global supply chain with the key importance of WFP. The author presented the cooperation between WFP and other organizations within the GLC and classified the operations implemented through WFP in the GLC. The final part of the article is the conclusions, extended by the limitations and practical implications of the research.

Research methodology

The aim of the article is to define the role of the World Food Program (WFP) in humanitarian logistics activities at the level of the Global Logistics Cluster (GLC).

In connection with the adopted goal, the article presents the following research problem: What is the position and basic aspects of the activities carried out by WFP in GLC for the development of international humanitarian logistics?

The first adopted hypothesis is: WFP fulfills the function of directing and coordinating humanitarian activities of all partner organizations participating in the GLC.

The second hypothesis was expressed in the following statement: WFP is responsible for the development of the global supply chain and effective cooperation between partners in various humanitarian logistics operations.

Both of these hypotheses should be substantively justified based on the available literature research, as well as legal regulations and statistical data on the functioning of individual United Nations agencies. The organization's activities are

also sanctioned based on General Regulations, General Rules, Financial Regulations, Rules of Procedure of the Executive Board in 2019 (WFP, 2019a). The GLC is part of the UN's humanitarian architecture for addressing humanitarian crises with diverse logistical solutions. WFP is the humanitarian organization responsible for leadership and coordination of cooperation in the GLC. It also plays a leading role in the UN food security system (Landmann, 2021, pp. 45-46).

The timeframe of the study is for the years 2011-2021. The issue of financing WFP activities has been summarized in more detail for the years 2019-2021.

The article uses research methods in the form of: desk research and analysis of documents published by WFP in annual reports and other documents on the organization's activities. A case study was also used. A case study of a single organization provides an insight into the processes organized in that organization and the solutions developed to deal with problems and challenges. The choice of organization for the case study was intentional. The organization was selected for its representation in the leadership and coordination of logistics operations in humanitarian logistics at the GLC level. WFP fulfils a leading role in conducting logistics operations in response to humanitarian crises.

In the supplementary scope, studies from the scientific literature and the method of logical inference based on the collected material were used.

General considerations on the activity of the WFP in the UN system

The World Food Program is one of the leading UN agencies, based in Rome, which is responsible for the development of logistic processes in the humanitarian cluster system (Zwęgliński, 2014, p. 14930). It functions as a humanitarian organization specializing in and traditionally associated with combating the problem of hunger in the world. WFP has offices in 80 countries and is classified in its current shape as the largest humanitarian organization in the world (Peters et al., 2022, p. 8).

The organization is responsible for ensuring food supplies in the event of humanitarian crises, including crises caused by both natural disasters and human activity. It carries out tasks during the crisis and during the reconstruction phase of the damaged critical infrastructure. The main subject of the WFP's activities is to ensure food security, and thus a sense of security in general, of the local community affected by the humanitarian crisis (O'Connor, Boyle, Ilcan, Oliver, 2017, pp. 5-12). The activities of the organization are also to contribute to the popularization of a healthy, active lifestyle in conditions of lasting peace in the world (Peters et al., 2021, pp. 200-205).

WFP counteracts the development of global problems of hunger and malnutrition in various parts of the world. It carries out tasks in the field of saving life and improving its quality among population groups most exposed to the above-mentioned negative phenomena (such as children, pregnant women, the elderly, the disabled, etc.). It is involved in helping local communities exposed to poverty and, consequently, hunger, malnutrition or lack of drinking water supplies. It fights epidemics in various parts of the world, contributes to the reduction of child mortality and the improvement of women's health. The activities of WFP are in line with the global health policy implemented through the United Nations, in the conditions of permanent cooperation with other international organizations (Shaw, 2001, pp. 188-204).

By participating in the UN system, WFP carries out activities in order to contribute to the achievement of the so-called 17 UN Sustainable Development Goals. The objectives included combating poverty and hunger, ensuring good health and quality of life, quality education, gender equality, clean water and sanitation, clean and accessible energy, economic growth and decent work, and fostering innovation, industrial and infrastructure development. Equally important goals are related to reducing inequalities, sustainable urban development, responsible production and consumption, actions in the field of climate protection, protection of life under water and on land, protection of peace and justice, as well as promoting partnership for the achievement of the sustainable development goals (Bexell, Jonsson, 2017, pp. 13-14; Montiel, Cuervo-Cazurra, Park, 2021, p. 999; Ricciolini et al., 2022, pp. 1233-1260).

In order to achieve repeatable effectiveness in solving the problems of hunger and malnutrition in the world, the WFP developed a specific scheme of activities in the international humanitarian aid system. It covers the next steps in responding to the identified humanitarian crisis. The first is to ask local authorities for food assistance from the local WFP office. The response from the organization is preceded by process risk management in order to build the strategic potential of WFP in protection against humanitarian crises. The main tasks are foreseen for the ODEP Early Warning Analysis and Crisis Support Team, which maintains constant contact with the WFP national offices. Risk management includes a structured process that enables the identification and assessment of risk, along with establishing means by which it can be responded to (WFP, 2012, p. 22).

In the case of starting humanitarian aid, an important rule is to guarantee the appropriate speed of assistance, ultimately within the first 72 hours from the moment when the needs of a given community arise. The coordination and management of processes within a given humanitarian operation is carried out by the WFP office closest to the humanitarian crisis (WFP, 2016a, pp. 11-18). During the crisis, WFP appeals to donors through the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to provide financial and material assistance. At the same time, the first regular deliveries are made, adapted to the possibilities resulting from the infrastructure in the receiving country, with preference for air

transport and activities implemented in cooperation with local bus, rail and sea carriers. The last step is to summarize and report on aid activities, assessing good practices and identifying potential difficulties, indicating possible improvements in future activities (Peters et al., 2022, pp. 8-18).

WFP carries out aid tasks based on a checklist, which consists of such areas as managing carbon dioxide emissions during the implementation of activities, human resources management, food supply and the implementation of orders for products and services other than food, financial management, ICT, logistics, administration, security, communication and reporting of results (WFP, 2012, pp. 66-85).

WFP is entirely financed by voluntary donations from donors from both the government, private (enterprises and private persons) and non-governmental sectors (Gębska, 2017, p. 364).

Financing of WFP activities in 2019-2021

The development of WFP activities required guaranteeing financing, bearing in mind the growing humanitarian needs in the world in recent years (Altay, Narayanan, 2020, pp. 1234-1235; Dellmuth et al., 2021, pp. 1-2; Stibral, Zadeh-Cummings, Clarke, 2022, p. 1). Table 1 presents data on the financing of WFP activities by leading donors in 2019-2021.

Table 1. Financing the activities of WFP in 2019-2021 (in USD)

No	Donors	2019	2020	2021
1	USA	3 368 355 780	3 655 823 222	3 779 709 325
2	Germany	886 653 999	1 179 571 659	1 413 997 469
3	Great Britain	696 351 632	548 971 792	376 260 054
4	the European Commission	685 890 294	537 303 487	497 938 815
5	Saudi Arabia	386 676 344	150 005 814	259 000 081
6	Canada	189 743 634	244 020 238	313 342 498
7	UN CERF	148 646 783	243 514 113	120 724 117
8	other UN agencies	158 439 830	201 203 530	149 487 387
9	Japan	157 578 035	196 129 647	226 187 020
10	Sweden	158 727 778	194 938 628	173 499 276
11	private donors	100 983 818	160 664 795	205 295 029
12	Norway	88 677 480	98 375 104	162 903 799
13	other donors	1 024 491 251	1 276 773 256	1 874 853 489
Total:		8 051 216 658	8 438 914 367	9 553 198 359

Source: Own study based on (WFP, 2022b)

Referring to the data in Table 1, it can be stated that in the analyzed years, the WFP was able to obtain more and more funds in order to provide humanitarian activities that are functionally located at the GLC level. In the three analyzed years, an increase of 18.6% was achieved (from over USD 8 billion to USD 9.5 billion). The United States has always remained the largest donor for the development of humanitarian logistics within the WFP. American funding increased from \$ 3.36 billion to \$ 3.77 billion. The second place was taken by Germany, whose share in financing the tasks carried out by the WFP significantly increased (from USD 886 million to USD 1.41 billion). In the group of donors who transferred funds in 2021 with a lower value compared to 2019, there were the United Kingdom, the European Commission, Saudi Arabia, UN CERF and other UN agencies. On the other hand, a reverse tendency was noticed in the case of financing WFP tasks by Canada, Japan, Sweden, Norway, and primarily private donors, who increased the value of donated funds from USD 100.9 million to USD 205 million, i.e. more than twice.

It is difficult to disagree with the position expressed in the literature (Lawson-McDowall, McCormack, Tholstrup, 2021, p. 218) that some states and international organizations participating in WFP activities had to reduce the aid provided as a result of the difficulties caused by the Covid-19 pandemic. A similar trend has been seen in the activities of many enterprises implementing socially responsible business by supporting humanitarian needs, taking into account the dilemmas of participation in humanitarian operations carried out in the UN system (Shaheen, Azadegan, Davis, pp. 4-6).

GLC as a global supply chain with the leading role of WFP

As noted in the scientific literature (Frankowska, 2015, p. 5634), logistics clusters should be seen as links in global supply chains. Financial and material assistance provided to WFP is a necessary condition for the development of the supply chain in GLC for the purposes of shaping the foundations of humanitarian logistics (Quinn, 2010, pp. 313-314). The basic approach to the supply chain in the context of WFP tasks is presented in Figure 1.

As shown in Figure 1, the supply chain for the development of WFP activities in GLC includes international and local supply, the organization of sea, road and air transport, logistic storage processes, as well as the distribution of goods to communities affected by humanitarian crises. In procurement processes, WFP relies on the purchase of goods from the market, as well as material aid provided by individual donors. In transport processes, a strategy of diversifying the modes of transport was adopted in order to facilitate reaching communities in different regions of the world. Warehouse processes, in turn, are based on the strategic location of all logistics hubs in international airports and near seaports, free inventory storage

for humanitarian organizations (international, government and non-governmental) and real-time inventory tracking. The warehouses serve as regional staging areas through which in-kind bilateral aid between the donor country and the beneficiary country can be channeled and transported to crisis areas.

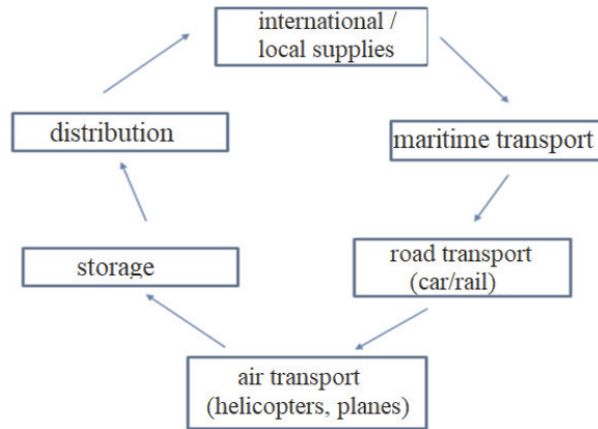


Fig.1. WFP Supply Chain (Baseline)

Source: Own study based on (Quinn, 2010, p. 309)

Managing the flow of goods in the supply chain coordinated by the WFP meets the criteria for the pull system as a set of management methods corresponding to the concept of the so-called “Lean management”. The key principles include keeping stock levels as low as possible and directing aid only when the humanitarian needs of a specific community are met, avoiding oversupply and waste in various areas of the supply chain operation. In the warehousing and distribution processes, WFP works closely with global logistics centers, which include hubs in Dubai, Panama, Accra, Brindisi and Subang Jaya (Quinn, 2010, pp. 312-313).

An extended view of the supply chain under WFP is presented in Figure 2.

As shown in Figure 2, the supply chain developed thanks to the WFP activity in GLC (and more broadly: as part of humanitarian logistics) is based on the implementation of logistics processes, the purchase of goods and services (with the development of specialization in the purchase of food and basic necessities), risk calculation and insurance against the effects of adverse phenomena, bilateral provision of services with partners and business support, implementation of shipments of goods or ensuring food safety and quality. Moreover, the supply chain developed for the purposes of WFP activities uses the United Nations Humanitarian Air Service (UNHAS), develops public health supply chains (ensuring the effectiveness of public health services in countries struggling with humanitarian crises) and carries out logistic planning operations. Equally important are: ensuring current deliveries in

favor of air transport, especially in the case of transports to more distant regions, cooperation with global operators of payment systems and entities from the money markets, joint activities with the Office of the United Nations High Commissioner for Refugees (UNHCR) and long-term managing relations with sellers of goods and services.

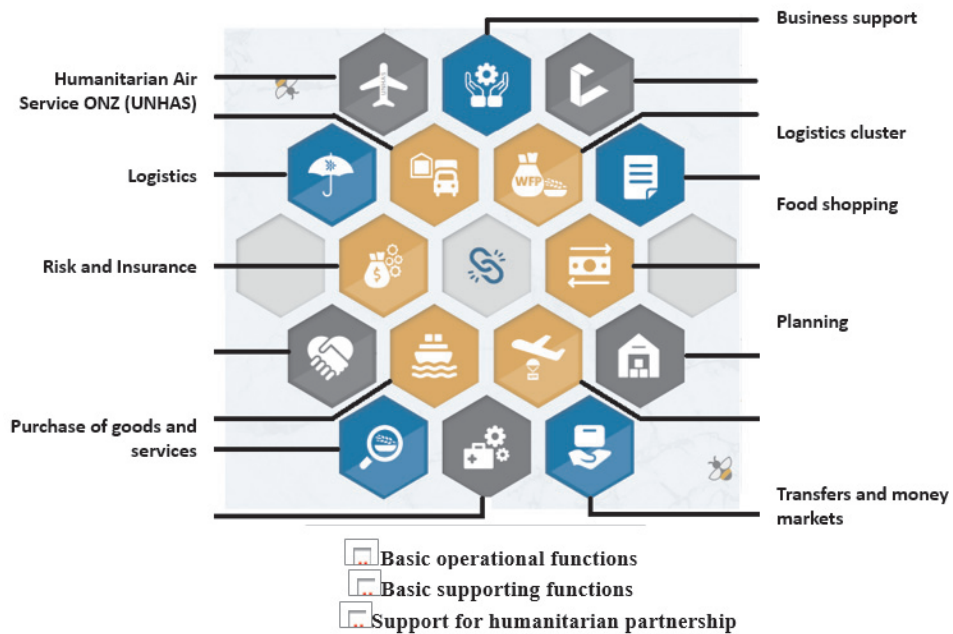


Fig. 2. WFP Supply Chain (Extended View)
Source: Own study based on (WFP, 2019b, p. 4)

Institutional dimension of cooperation between WFP and other GLC organizations

The complexity of logistic operations within humanitarian logistics means that WFP is not able to independently carry out aid tasks under the GLC. In practice, a network of institutional (subjective) dependencies was formed, with the development of a leading and coordinating function assigned to WFP, as shown in Figure 3.

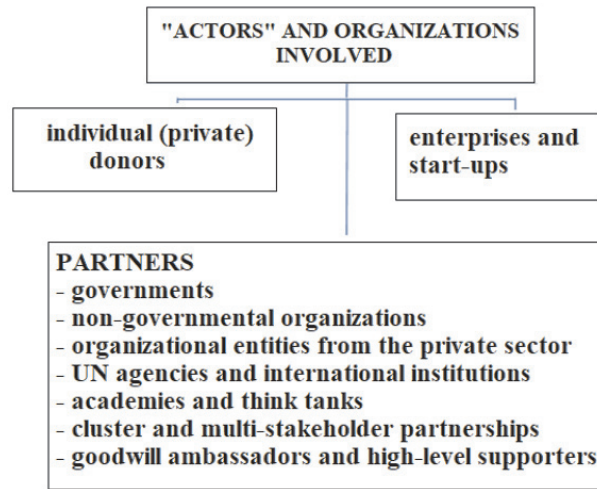


Fig. 3. Entities and organizations involved in activities in the GLC, led and coordinated by the WFP
Source: Own study based on (WFP, 2022c)

With reference to Figure 3, it should be noted that in practice the activities carried out by the WFP have been divided into three categories of entities cooperating in the GLC, i.e. partners, individual (private) donors, as well as enterprises and start-ups. The catalog of strategic partners includes governments, non-governmental organizations, global corporations operating in various markets, UN agencies, international institutions (such as the International Red Cross and Red Crescent Movement), academies and think tanks, clusters and multi-stakeholder partnerships, as well as goodwill ambassadors and persons supporting humanitarian activities due to high positions held in various institutions and bodies. Individual donors are the second key type of entities thanks to which WFP can carry out activities in GLC, thus achieving goals in humanitarian logistics. As shown earlier in Table 1, the important role of individual donors in financing WFP activities should be indicated. The last group of entities and organizations involved in activities managed and coordinated by WFP are enterprises and start-ups, which in practice implies the admission to the GLC and humanitarian logistics system not only of global concerns, but also economic entities from the small and medium-sized enterprise sector, including entities innovative, at the initial stage of designing a business concept. It is worth mentioning that on the initiative of the WFP, a program called the Innovation Accelerator was implemented, in which start-ups were sought for cooperation in order to protect and strengthen the potential of local food supply chains and distribute humanitarian aid among beneficiaries (Wagner, 2021, p. 1146).

The available statistics show that in 2019, 715 partners operated in the humanitarian aid system managed and coordinated under the GLC by WFP, of which 44% were international non-governmental organizations, 31% national non-governmental organizations, 6% governments, 3% specialized agencies UN, while 17% - other partners (WFP, 2022d).

Classification of operations carried out by WFP in GLC

At the initiative of or through the WFP, numerous support operations were carried out in the previous decade to help achieve humanitarian goals under the GLC. These operations can be divided into three types, i.e. Logistics Sector Support, Logistics Preparedness and Logistics Cluster Operation, while the classification indicated is only for the internal use of WFP (Figure 4).



Fig. 4. Support operations carried out by WFP under GLC in 2011-2012

Source: Own study based on (WFP, 2022c)

Figure 4 shows that Logistics Cluster Operation is the most common model of WFP's response to global humanitarian needs through the development of activities in the GLC. This includes shaping local logistics systems to support operational decision-making and to improve the timeliness, effectiveness and predictability of responses to humanitarian crises. It is equally important to make it easier for humanitarian organizations and WFP partners to access shared logistics services. Operations of this type concern the most complex development and humanitarian projects in countries dealing with the risk of crises and the actual consequences of natural and deliberate human disasters. In 2011-2012, they mainly concerned the countries of the African continent, and additionally the Philippines, Pakistan, Vanuatu, Sri Lanka and Yemen.

Operations in the field of shaping logistic readiness were carried out in the countries that are beneficiaries of humanitarian aid (Logistics Preparedness) slightly less frequently. They consisted in developing systems, structures and processes to protect against humanitarian crises and respond to them through planning, designing solutions and training personnel (Jahre, Pazirandeh, Van Wassenhove, 2016, pp. 372-374). WFP carried out similar operations in 2011-2012 in Mozambique, Nigeria, Papua New Guinea, Turkey and Mongolia.

Logistics Sector Support is the third type of operations managed and coordinated by WFP as part of the GLC. These are activities aimed at the development of the protective potential in narrow areas (sectors) of humanitarian logistics, especially in the development of transport infrastructure. In the terminology adopted for the internal needs of WFP, the concept of Special Operation appears on this occasion. Distinctive objectives include information management, logistics coordination and technical assistance, support for logistic services, as well as increasing the capacity of the beneficiary country government to deal with specific humanitarian crises (for example, caused by drought). Similar support was offered in countries such as Ethiopia, Tunisia and Liberia, continuing in the following years (WFP, 2016b).

Conclusions

Based on the presented arguments, several conclusions can be drawn. The first conclusion is that WFP is an agency of the United Nations of key importance for the development of humanitarian logistics at the GLC level. It initiates the activities of various organizations in the field of humanitarian logistics, and in auxiliary activities - efforts to achieve the goals of sustainable development.

What is more, WFP should be assigned a role to guide and coordinate the efforts of organizations participating in the global supply chain in the GLC. The partnership principle remains the key principle of the GLC's functioning as a logistics cluster of significant importance for achieving the goals of international humanitarian aid, which is important, largely due to logistics processes.

Another conclusion is that the development of humanitarian logistics at the GLC level is based on international cooperation. The institutional dimension of WFP's cooperation with other organizations includes logistic activities undertaken with partners (as strategic entities), enterprises and start-ups as well as individual (private) donors.

Furthermore, WFP is responsible for the development of the global supply chain and cooperation between partners in the practice of achieving the goals set for humanitarian operations such as Logistics Sector Support, Logistics Preparedness and Logistics Cluster Operation.

The presented considerations allow to confirm both hypotheses adopted in the methodological part of the article. The first adopted hypothesis was: WFP fulfills the function of directing and coordinating humanitarian activities of all partner organizations participating in the GLC. The article showed that the development of the global supply chain in the form of the GLC depends largely on the initiatives, coordination activities and implementation of improvements prepared by WFP. Cooperation within the GLC, coordinated by WFP, includes activities of individual (private) donors, enterprises and start-ups, as well as numerous partners from the international, governmental and non-governmental sectors. What is more, there is a conclusion about the dominant role of the United States, as well as a significant share of only a few countries in the financing of tasks assigned to the GLC carried out under the control of the WFP.

The second hypothesis was expressed in the following statement: WFP is responsible for the development of the global supply chain and effective cooperation between partners in various humanitarian logistics operations. The article showed that this UN agency offers logistical services to partners to facilitate the delivery of humanitarian aid to communities affected by natural and man-made disasters. Leadership and coordination of activities by the WFP takes place within the GLC. It is based on the implementation of three types of operations, which include Logistics Sector Support, Logistics Preparedness and Logistics Cluster Operation.

Implications for practice and limitations of the study

The implications of the research relate to a wide range of addressees. For other researchers, they imply a resource of valuable data and information on the logistical processes and procedures implemented within the GLC. For society, they entail a better understanding and promotion of the involvement of humanitarian organizations such as WFP and the possibility to support the activities of similar organizations. The case study on the role of the WFP in the GLC also provides a better understanding of how different organizations and even individual sponsors can cooperate with this UN agency in resolving humanitarian crises.

The study provides an overview of WFP's involvement in humanitarian logistics represented at the GLC level. However, it is important to add that logistics operations carried out in response to diverse humanitarian crises can be characterized by great specificity from country to country. The potential for WFP to interact and cooperate with other organizations when responding to humanitarian crises also varies in individual countries. In the presented case study, the author omitted detailed solutions used at the level of individual countries. What is more, the study does not examine the effectiveness of logistics operations carried out in the GLC, as well as the advantages and disadvantages of solutions developed with the participation of WFP. Therefore, future research can refer to these issues to provide a more comprehensive perspective of WFP's involvement in the Global Logistics Cluster.

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