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The effects of the activities of The United Nations Humanitarian Air Service (UNHAS) in humanitarian logistics in 2019-2022

Efekty działań The United Nations Humanitarian Air Service (UNHAS) w logistyce humanitarnej w latach 2019-2022

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Abstract. The subject of the article are selected results of the activities of The United Nations Humanitarian Air Service (UNHAS) as a service of the United Nations carrying out air operations for humanitarian purposes. The article adopts a research goal of explaining the specialization and effects of UNHAS activities in humanitarian logistics in 2019-2022.

The research problem in the work is as follows: What were the results of UNHAS activities in humanitarian logistics in 2019-2022? The research hypothesis in the article is as follows: UNHAS effectively implemented international humanitarian aid in 2019-2022, serving United Nations agencies and non-governmental organizations in particular. UNHAS activities included such trends as the increase in the number of passengers transported from crisis areas and goods for humanitarian purposes, the increase in the number of destinations for providing humanitarian aid and the increase in the value of financing humanitarian operations. The main sources of problems and challenges in the functioning of UNHAS in 2019-2022 are the difficulties in forecasting the scale of humanitarian needs and the growing financial gap and dependence on the political will of the United States and the state of cooperation between that country and OCHA as a UN body and additionally the European Union. For the purposes of the article, research methods were used in the form of analysis of existing data (desk research), analysis of documents published by WFP as the organization managing UNHAS activities, as well as a case study for UNHAS as a specialized humanitarian aid support service in the UN institutional system. The article shows that

UNHAS is the UN humanitarian service specializing in the implementation of air operations for humanitarian purposes. From 2019 to 2022, most of UNHAS's efforts focused on delivering humanitarian aid to African countries. The Covid-19 pandemic temporarily weakened the capabilities of humanitarian operations, which, combined with the financial gap, amplified the challenges in humanitarian logistics at the turn of the second and third decades of the 21st century.

Keywords: humanitarian crisis, humanitarian logistics, UN, UNHAS, management

Abstrakt. Przedmiotem artykułu są wybrane rezultaty działalności The United Nations Humanitarian Air Service (UNHAS) jako służby Organizacji Narodów Zjednoczonych realizującej operacje lotnicze z przeznaczeniem humanitarnym. W artykule przyjęto cel badawczy w postaci wyjaśnienia specjalizacji oraz efektów działań UNHAS w logistyce humanitarnej w latach 2019-2022.

W pracy postawiono następujący problem badawczy: Jakie były rezultaty działalności UNHAS w logistyce humanitarnej w latach 2019-2022?

Hipoteza badawcza w artykule brzmi następująco: UNHAS pozwalała skutecznie realizować międzynarodową pomoc humanitarną w latach 2019-2022, obsługując przede wszystkim agendy Organizacji Narodów Zjednoczonych i organizacje pozarządowe. W działaniach UNHAS uwidoczniły się takie trendy, jak wzrost liczby przewiezionych pasażerów z miejsc kryzysów i towarów z przeznaczeniem humanitarnym, wzrost liczby destynacji świadczenia pomocy humanitarnej oraz wzrost wartości finansowania operacji humanitarnych. Główne źródła problemów i wyzwań w funkcjonowaniu UNHAS w latach 2019-2022 to trudności prognozowania skali potrzeb humanitarnych, rosnąca luka finansowa, a także zależność od woli politycznej Stanów Zjednoczonych i stanu współpracy między tymi krajem a OCHA jako organem ONZ i dodatkowo Unią Europejską.

Na potrzeby artykułu wykorzystano metody badawcze w postaci analizy danych zastanych (desk research), analizy dokumentów opublikowanych przez WFP jako organizację kierującą działaniami UNHAS, a także studium przypadku (case study) dla UNHAS jako wyspecjalizowanej służby wsparcia pomocy humanitarnej w systemie instytucjonalnym ONZ.

W artykule wykazano, że UNHAS to służba humanitarna ONZ wyspecjalizowana w realizacji operacji lotniczych z przeznaczeniem humanitarnym. W latach 2019-2022 większość wysiłków UNHAS koncentrowała się na dostarczaniu pomocy humanitarnej do krajów afrykańskich. Pandemia Covid-19 osłabiła przejściowo możliwości działań humanitarnych, co w połączeniu z luką finansową wzmocniło wyzwania w logistyce humanitarnej na przełomie drugiej i trzeciej dekady XXI wieku.

Keywords: kryzys humanitarny, logistyka humanitarna, ONZ, UNHAS, zarządzanie

Introduction. Identification of research gaps

The subject of the article are selected effects of the activities of The United Nations Humanitarian Air Service (UNHAS), a service carrying out tasks under the auspices of the United Nations (UN). In Polish-language literature it appears only in references as the UN Humanitarian Air (Lipold, 2022). The article adopts a research goal related to explaining the specialization and effects of UNHAS activities in humanitarian logistics in 2019-2022.

The research problem in the work is as follows: What were the results of UNHAS activities in humanitarian logistics in 2019-2022?

The research hypothesis in the article is as follows: UNHAS effectively implemented international humanitarian aid in 2019-2022, serving United Nations agencies and non-governmental organizations in particular. UNHAS activities included such trends as the increase in the number of passengers transported from crisis areas and goods for humanitarian purposes, the increase in the number of

destinations for providing humanitarian aid and the increase in the value of financing humanitarian operations. The main sources of problems and challenges in the functioning of UNHAS in 2019-2022 are the difficulties in forecasting the scale of humanitarian needs and the growing financial gap and dependence on the political will of the United States and the state of cooperation between that country and OCHA as a UN body and additionally the European Union.

The article is based on research methods such as analysis of existing data (desk research), analysis of documents published by WFP as the organization managing UNHAS activities, as well as a case study for UNHAS as a specialized humanitarian aid support service in the UN institutional system.

The issue of the functioning of UNHAS has not yet been the subject of consideration in the Polish-language scientific literature. In turn, the English-language literature mentions the functioning of this service in the UN institutional system. The most detailed analysis on this topic was presented by Walter Dorn and Ryan Cross (2015), but the article focuses more on the outline of activities in a few selected countries, rather than on the basis and effects of UNHAS financing, and does not contain a precisely marked time horizon and does not cover the situation after 2012 year.

In another article, some authors, addressed the possibility of UNHAS and the UN at large using the operational characteristics of lighter-than-air (LTA) and hybrid aircraft to support peacekeeping and humanitarian operations (Dorn et al., 2019).

Tadanori Inomata (2008) has prepared a general overview of UNHAS activities until 2008 in order to provide assistance to executive directors and those responsible for managing the service's activities. The analysis is therefore of an operational nature and was prepared under the auspices of the UN itself.

Stephan Niemansburg, Paul Roling and Jonas Van Goethem (2019) also wrote about UNHAS in the context of optimizing humanitarian air operations and improving the routing and planning of humanitarian air missions, as an academic project.

References to UNHAS in the management of humanitarian aid during the 2010 Haiti earthquake also appear in articles by Michael Morales and Doral Sandlin (2015), as well as Walter Dorn (2020).

Based on the conducted query, a certain research gap should be identified in relation to the functions and results of operations carried out by UNHAS in recent years. This article is of an introductory nature to the issue, at least partially helping to fill this gap.

UNHAS in international humanitarian aid and humanitarian logistics

For the purposes of further considerations, the article is based on the definition of humanitarian logistics, according to which it is the process of planning, implementing and controlling the efficient and cost-effective flow and storage of goods and materials, as well as related information, from the point of origin to the point of consumption, with the aim of alleviating the suffering of vulnerable people in humanitarian crises (Kembro et al., 2024). Humanitarian logistics can be considered to be closely linked to international humanitarian aid.

UNHAS is functioning as a narrowly specialized support service in the UN institutional system. Its activities are managed by the World Food Program (WFP), which is a UN agency based in Rome (Zwęgliński, 2014). The primary goal of UNHAS is to participate in the provision of international humanitarian aid, including humanitarian flight operations. The role of UNHAS is to provide support in the international humanitarian aid system, ensuring that entities implementing such aid have access to people affected by a natural disaster or the effects of an armed conflict. The infrastructure administrator and entity managing activities implemented under UNHAS is WFP (Inomata, 2008). Operationally, UNHAS has played a key role in the 21st century in serving humanitarian organizations in many countries around the world, in accordance with the guidelines and procedures implemented by WFP. It is estimated that in the first decade of the 21st century, nearly 170 various types of humanitarian and non-governmental organizations used UNHAS air services (Cozzolino et al., 2012). The activities of UNHAS are located in the structure of the global humanitarian cluster, taking into account the particular importance of the area of logistics (Global Logistics Cluster - GLC), managed by WFP (Żurak-Owczarek, 2014). More details on the role of WFP in humanitarian logistics implemented under the Global Logistics Cluster were described by T. Landmann and S. Ślusarczyk (2022). WFP also manages the Emergency Telecommunications Cluster (ETC) in relation to information management for international humanitarian aid and humanitarian logistics (Landmann, Zamiar, 2023).

UNHAS provides safe, reliable, effective and economically efficient transport of passengers and light cargo not only for the needs of WFP activities, but also for other UN agencies and non-governmental organizations, and therefore for the broader humanitarian community. Transports are carried out to and from areas affected by the humanitarian crisis. UNHAS plays a key role in humanitarian logistics delivered through civilian air operations (Dorn et al., 2019). It carries out tasks by transporting humanitarian personnel between facilities, airdropping emergency supplies (especially food), as well as conventional cargo transport by air. Air drops are used only when there is a need to reach a large number of people (usually refugees) or

when the landing of the plane is not considered safe. In contrast, conventional cargo transportation is usually carried out using medium and light aircraft. Aircraft are often required to be able to take off and land quickly and thus meet the guidelines for the Short Take-Off and Landing (STOL) procedure (Taiwo, 2005).

In the implementation of air operations, UNHAS relies on the regulations and principles outlined in the standards and guidelines entitled: United Nations Aviation Standards for Peacekeeping and Humanitarian Air Transport Operations (AVSTADS). It is a set of regulations for the implementation of peacekeeping and humanitarian operations by air, established for the safe and effective use of aviation resources. AVSTADS also serves as a set of guidelines for humanitarian logistics implemented for the delivery of humanitarian aid by air (Sakane, 2012). The guidelines are consistent with the Standards And Recommended Practices (SARPs) issued in this area by the International Civil Aviation Organization (ICAO). SARPs serve as an implementing instrument in managing aviation safety risks, coordinating standards and guidelines with the rules applied by individual aviation service providers. They are used to harmonize global standards for the safety and efficiency of civil aviation, as well as to standardize the functional and operational requirements of facilities, aircraft and the principles of operation of air navigation services. Their use is a manifestation of the implementation of the Convention on International Civil Aviation (the so-called Chicago Convention), drawn up on December 7, 1944, and in force since 1947 (Sreejith et al., 2023).

Selected UNHAS activities in 2019-2022

UNHAS's activities are characterized by the provision of international humanitarian aid and logistics services through air operations. In the years 2019-2022, it was characterized by a focus on African countries, as shown in Figure 1.

As Figure 1 shows, many of the humanitarian and logistical support air operations involved countries in regions such as Central and West Africa. UNHAS's involvement was also visible in the Middle East (Syria and Yemen), Afghanistan and Haiti. The focus on the African continent responded to the specific humanitarian needs of the local population and the ability of WFP as the UN agency responsible for using UNHAS's capacity in food distribution to meet these needs (Canton, 2021).

In response to the question about entities using UNHAS logistics services, it is worth using Figure 2.

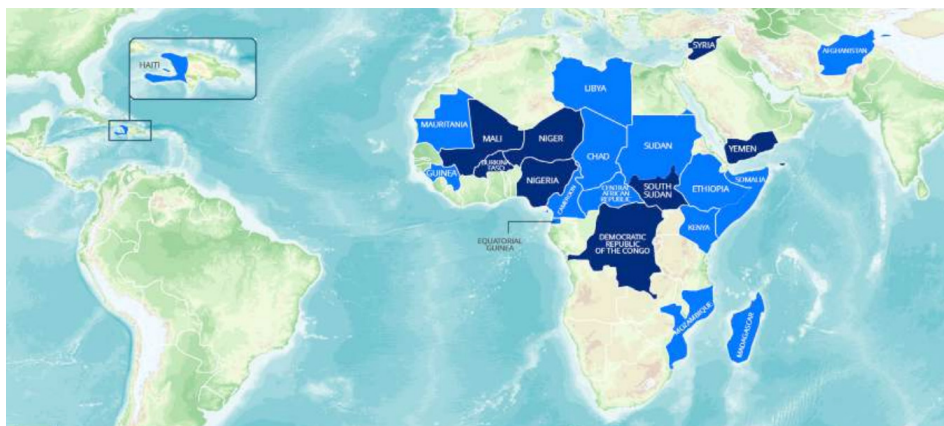


Fig. 1. UNHAS activities geographically – example for 2020

Source: UNHAS, 2021

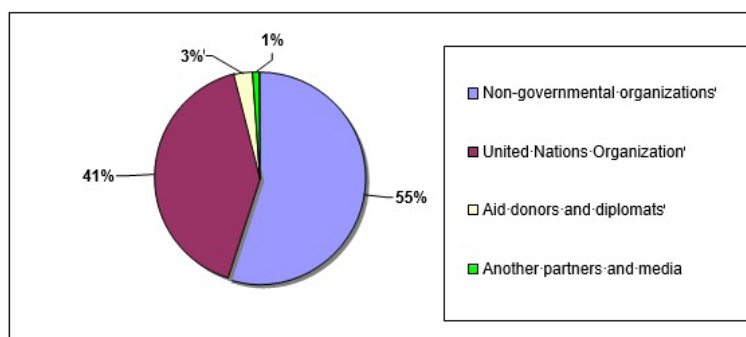


Fig. 2. Entities using logistics services provided by UNHAS – example for 2019*

Source: WFP, 2019

* – data for subsequent years reveal a similar share of entities cooperating with UNHAS. For example, in 2022, the share of NGOs was 56%, while the UN - 39% (UNHAS, 2023)

As shown in the data presented in Figure 2, UNHAS distributed humanitarian aid and provided air logistics services primarily in response to the needs reported by non-governmental organizations (55% of all recipients of services) and individual United Nations agencies (41% of recipients). To a much lesser extent, the distribution of air services covered aid donors and diplomats in countries receiving or ordering aid (3%), as well as other partners and the media (1%). When it comes to non-governmental organizations, the five largest recipients of logistics services enabling humanitarian aid to reach the crisis site include: The International Committee of the Red Cross, the Danish Refugee Council, the Christian humanitarian

organization World Vision, Doctors Without Borders (Médecins Sans Frontières) and the International Rescue Committee.

The second largest recipients of services provided by UNHAS were individual United Nations agencies, in particular the United Nations Children's Fund (UNICEF), the World Health Organization (WHO), the United Nations High Commissioner for Refugees (UNHCR), the International Organization for Migration (IOM) and World Food Program (WFP) (WFP, 2019).

UNHAS guaranteed passenger air transport to and from places affected by humanitarian crises. The scale of such services in 2019-2022 is shown in Figure 3.

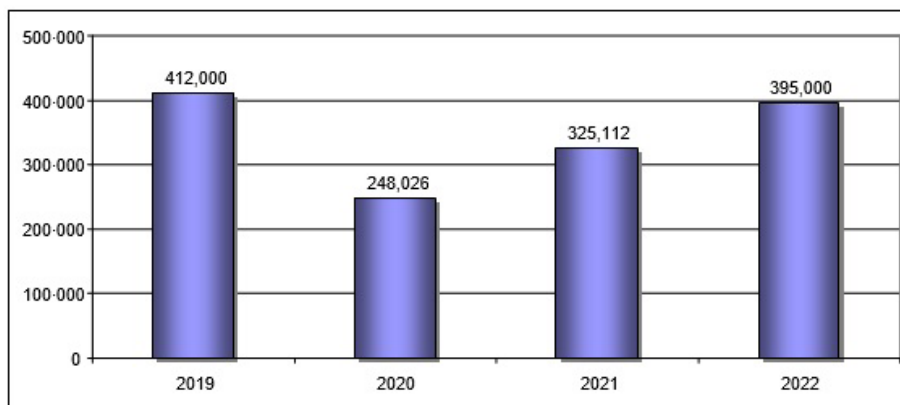


Fig. 3. Number of passengers transported as part of humanitarian aid provided by UNHAS in 2019-2022

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

Interpreting the data presented in Figure 3, the number of passengers transported as part of humanitarian aid and logistics services provided by UNHAS varied unevenly. In 2019-2020, it decreased significantly (from 412,000 to over 248,000), i.e. by approximately 39%, which can be explained by the intensification of restrictions and limited supply of transport services in individual countries due to the increased risk of infection during the Covid-19 pandemic. After 2020, the number of passengers transported increased significantly - up to 395,000. in 2022. Therefore, for the years 2020-2022, a growth dynamic of 59.2% was recorded.

In the years under study, UNHAS also remained a service specialized in cargo transportation, which is shown in more detail in Figure 4.

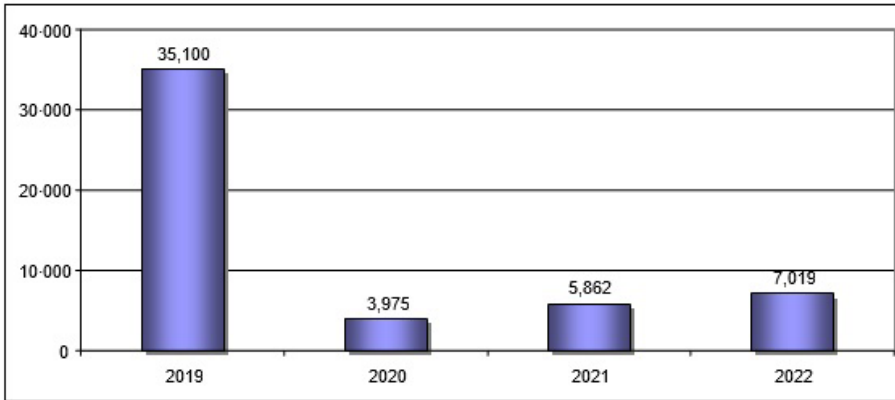


Fig. 4. Weight of cargo transported as part of humanitarian aid provided by UNHAS in 2019-2022 (tons)

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

According to the data presented in Figure 4, in 2019 the weight of cargo transported by air transport organized under UNHAS was 35.1 thousand tons, more than twice the weight of cargo transported for the entire period 2020-2022. In 2019-2020, there was a particularly noticeable decline in the weight of transported cargo, which can largely be identified with the weakening dynamics of transport services in the economies of countries struggling with the Covid-19 pandemic. In turn, in the years 2020-2022, the increase in the weight of transported cargo was nearly 77%. The report for 2019 shows that there was an increased demand in two categories of transported cargo, i.e. food and the so-called essential non-food items (Non-Food Items, NFI) (WFP, 2019). The group of NFI goods for the purposes of international humanitarian aid includes primarily tools and everyday items, such as hoes, wheelbarrows, canisters, bowls, mosquito nets, flashlights, as well as clothes, radios, hygiene products, household items and others (Rohwerder, 2014).

The number of countries in which humanitarian aid operations were carried out and, therefore, logistics services by dedicated air transport also changed (Figure 5).

As shown in Figure 5, UNHAS reached the largest number of countries with humanitarian aid and civil aviation logistics services in 2020 (24 countries), while in 2019 it was the least, 20 countries. The number of countries did not change significantly, which can be explained by the fact that most missions were planned to be implemented for a period longer than 1 year.

In turn, the number of destinations that received humanitarian aid distributed through UNHAS changed significantly in 2019-2022 (Figure 6).

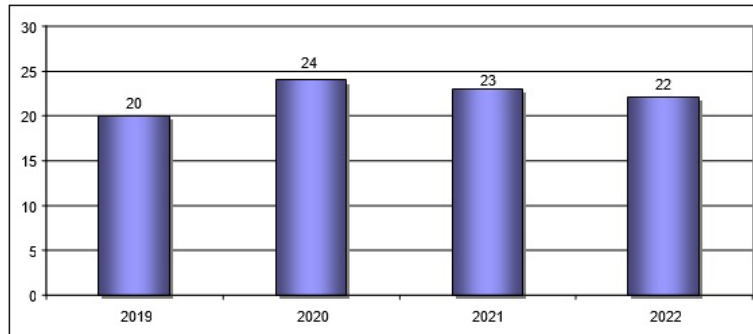


Fig. 5. Number of countries where UNHAS humanitarian aid operations were carried out in 2019-2022.

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

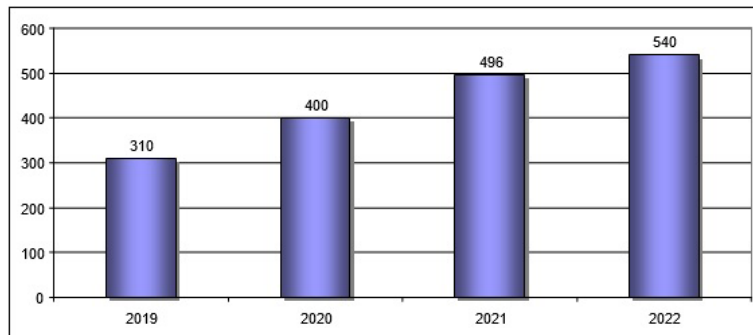


Fig. 6. Number of destinations that received UNHAS humanitarian aid in 2019-2022.

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

According to the data in Figure 6, in the years 2019-2022 there was a significant increase in the number of destinations for receiving humanitarian aid distributed by UNHAS. While in 2019 there were 310 places, in 2022 - 540 places. The growth dynamics was 74.1%. Importantly, the number of these places increased systematically with each subsequent year. It can be assumed that despite the lack of far-reaching changes in the number of countries, attempts were made to increase the possibilities of receiving humanitarian aid in new locations in the countries currently receiving such aid. For comparison, in 2013, UNHAS carried out humanitarian air operations in over 200 locations in 13 countries around the world (McGuire, 2015). Data from 2019-2022 show a clear increase in the scale of implemented activities, even despite temporary difficulties resulting from the effects of the Covid-19 pandemic.

UNHAS was also used to conduct evacuation missions of people and humanitarian personnel from places affected by humanitarian crises (Figure 7).

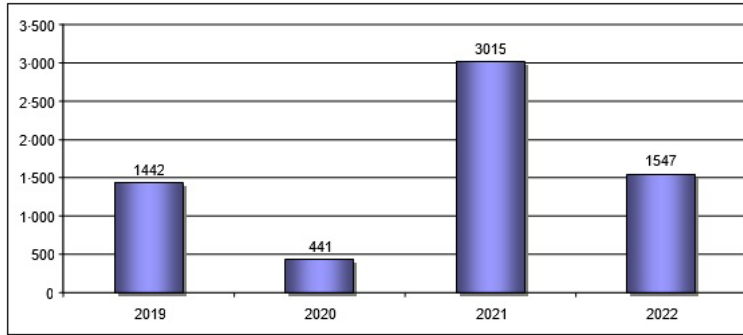


Fig. 7. Number of evacuation missions carried out by UNHAS in 2019-2022

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

The data collected in Figure 7 shows that in the years 2019-2022, UNHAS carried out a total of 6445 evacuation missions, of which over 4000 of this number was for 2021 alone. The evacuation missions carried out can be divided into two types, i.e. MEDEVAC (Medical Evacuation) and SECEVAC (Security Evacuation or Security Relocation). The first of these referred to medical evacuation, addressed to people requiring treatment that was not available in the field. Air transport was used to move patients to the nearest health center or main operational base equipped with specialized medical equipment. In turn, SECEVAC missions concerned the evacuation of humanitarian personnel and other people from at-risk areas, such as conflict zones or natural disaster sites. A detailed list of priorities for both types of missions was adapted to the specificity of conducting humanitarian air operations in individual countries (UNHAS-SUDAN SAOP, 2019).

UNHAS carried out evacuation missions using an appropriately prepared fleet (Figure 8).

According to the data presented in Figure 8, the number of aircraft used by UNHAS initially increased (from 90 to 100 in 2019-2020) and then reached a similar level of 74-75 different machines in 2021-2022. In 2022, the largest share in the fleet consisted of machines such as Cessna 208 Caravan (12), DHC 8 (10), Beechcraft 1900 (9), Dornier Do 228 (6), Embraer ERJ 145 LR (4) and LET 410/420 Turbolet (3). UNHAS also had 22 helicopters and 1 medium-range Airbus A320 aircraft, with a capacity of up to 180 passengers (UNHAS, 2023).

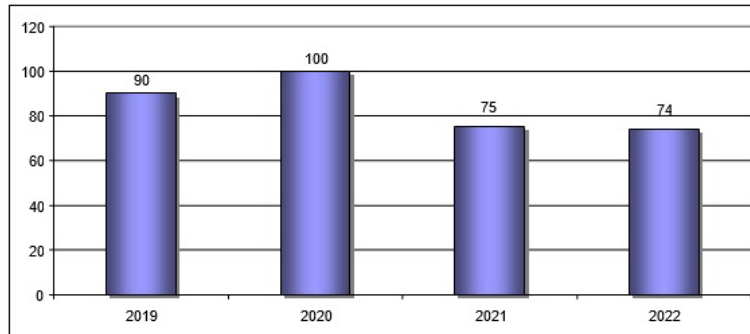


Fig. 8. Number of aircraft used by UNHAS to provide humanitarian aid in 2019-2022

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

Financing of UNHAS humanitarian air operations in 2019-2022 – selected results

UNHAS finances its activities mainly from donors' contributions for the implementation of humanitarian missions classified as Special Operations Projects. WFP plays a leading role in obtaining financing through voluntary contributions from donors. Of some importance in the financing of UNHAS is the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), which obtains funds for the implementation of Special Operations Projects through mechanisms such as the Consolidated Appeals Process (CAP), the Central Emergency Response Fund (CERF) and Country -Based Pooled Funds (CBFP). Financing is covered to a marginal extent by income from payments collected from passengers, as well as funds provided by users of aviation services provided through WFP in the form of ad hoc UNHAS services (Inomata, 2008).

Figure 9 presents the basic principles of financing humanitarian air operations carried out by UNHAS in 2019-2022.

As Figure 9 shows, the Centralized Financing Mechanism is an important source of rules for financing logistic support for international humanitarian aid thanks to air services provided by UNHAS. The first stage is the identification of resources that can be allocated under the Mechanism, which leads to the selection of criteria for setting financing priorities. At the WFP management structure level, proposals are then discussed with donors, which results in the approval of the initial project by HQ WFP Aviation Service. The project is being discussed with WFP's Government Donor Offices as WFP has regional offices in various countries around the world. The final stage is submitting an application to the donor and sanctioning the financing agreement.

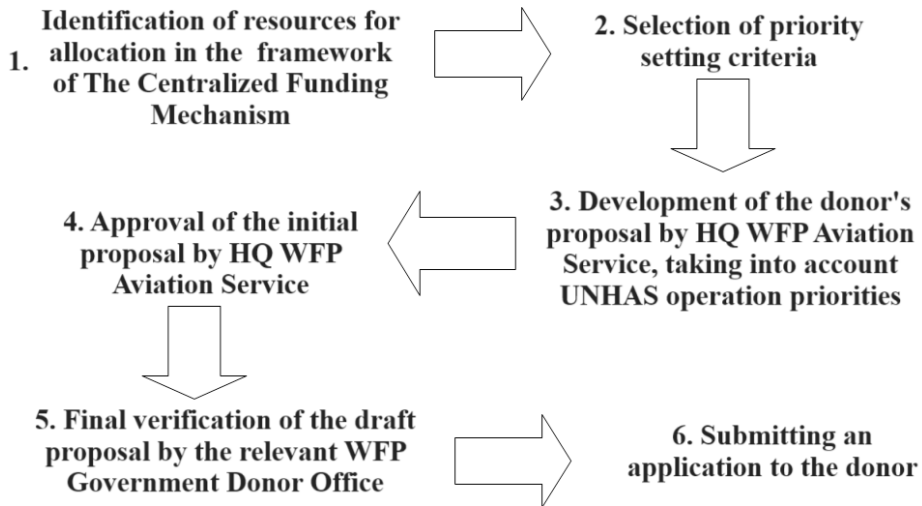


Fig. 9. Centralized Financing Mechanism for humanitarian aid under WFP-UNHAS in 2019-2022

Source: UNHAS, 2023

The amount of financing for UNHAS activities in 2019-2022 has changed, as shown in Figure 10.

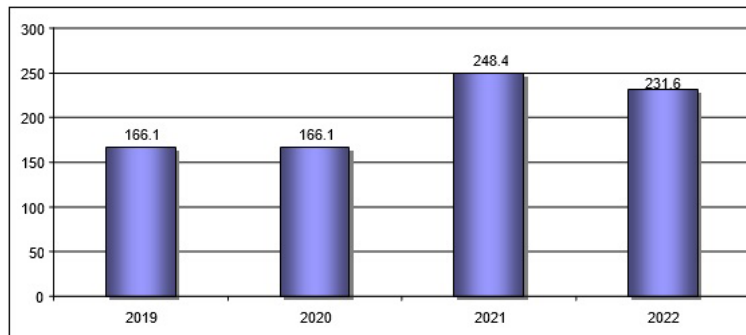


Fig. 10. Amount of financing for UNHAS activities in 2019-2022 (in USD million)

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

Interpreting the data from Figure 10, in 2019-2020 the amount of funding covered similar annual budgets of USD 166.1 million. In the following years, this value increased significantly, amounting to USD 248.4 million in 2021 and USD 231.6 million in 2022. In 2022, the amount of financing for UNHAS activities was therefore 39.4% higher compared to the base year. This meant an increase in the

need to provide logistics services in the form of air operations in countries requiring humanitarian aid.

The amount of financing for UNHAS activities by individual contribution payers varied, as shown in more detail in Table 1.

Table 1. Amount of financing for UNHAS activities by main contribution payers in 2019-2022 (in USD million)

COUNTRY/ ORGANIZATION	2019	2020	2021	2021	TOTAL
United States*	70.9	69.3	90.4	106.4	337.0
ECHO	18.7	21.5	47.9	28.2	116.3
Germany	16.0	19.1	27.0	32.2	94.3
Great Britain	16.7	12.0	13.8	8.5	51.0
UN CERF	13.8	4.3	9.8	10.0	37.9
Canada	4.2	4.7	8.9	12.9	30.7
Sweden	6.8	6.6	6.5	7.7	27.6
UN CBPF	8.2	8.3	6.4	4.3	27.2
Norway	0.8	4.8	4.0	3.4	13.0
France	1.2	1.2	4.4	5.7	12.5

Source: WFP, 2019; UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

* – in the case of funding from the United States, the sum of funds provided separately by the Bureau for Humanitarian Assistance (BHA), U.S. Agency for International Development, the US government and the Bureau of Population, Refugees, and Migration (PRM) as one of the offices within the Department of State

According to Table 1, the United States remained the largest contributor to the WFP budget in each of the analyzed years for the implementation of UNHAS tasks. Payments made by the United States amounted to USD 337 million, which constituted over 82% of all payments made by the remaining 9 largest payers (USD 410.5 million). The second largest payer was the European Commission's Directorate-General for Humanitarian Aid and Civil Protection (ECHO), the entity representing the European Union (with payments of USD 116.3 million). Over USD 94 million came from Germany, and USD 51 million from Great Britain. Strategic contribution payers also include Canada (USD 30.7 million), Sweden (USD 27.6 million), Norway (USD 13 million) and France (USD 12.5 million). Funding obtained from UN member states through mechanisms such as the Central Emergency Response Fund (CERF) and Country-Based Pooled Funds (CBFP) was important. It accounted for \$37.9 million and \$27.2 million, respectively. Therefore, there were significant differences in the amount of payments between individual countries. At the same time, the advantage of the United States and other highly developed economies,

based on the example of European Union countries, in financing UNHAS tasks in the years under study was noticed.

It is worth deepening the analysis by determining the main directions of support, i.e. countries where logistics services and humanitarian aid were provided thanks to UNHAS air operations (Table 2).

Table 2. Amount of financing by UNHAS operations in individual countries in 2020-2022 (in USD million)*

COUNTRY	2020	2021	2022	TOTAL
South Sudan	54.0	55.4	55.4	164.8
Afghanistan	18.7	57.2	51.1	127.0
Democratic Republic of Kongo	42.1	42.5	36.9	121.5
Sudan	27.6	33.2	47.2	108.0
Yemen	33.0	38.3	27.9	99.2
Nigeria	24.0	27.1	31.5	82.6
Somalia	25.2	19.8	19.7	64.7
Central African Republic	22.5	22.7	16.6	61.8
Chad	16.6	13.8	14.6	45.0
Burkina Faso	5.2	5.3	24.5	35.0
Mali	8.7	11.6	12.7	33.0
Etiopia	4.5	12.2	12.1	28.8
Haiti	4.4	8.4	14.4	27.2
Syria	8.5	5.8	5.7	20.0

Source: UNHAS, 2021; UNHAS, 2022; UNHAS, 2023

* – Due to the lack of synthetic data, the 2019 ranking was omitted

According to Table 2, South Sudan (USD 164.8 million), Afghanistan (USD 127 million), the Democratic Republic of the Congo (USD 121.5 million) and Sudan (USD 108 million) are the countries in which the amount of financial outlays in connection with UNHAS operations exceeded USD 100 million in 2020-2022. A slightly lower share was recorded in the case of financing humanitarian missions in Yemen (USD 99.2 million). The presented list of countries was dominated by African countries. Of the 14 countries with the most funding, only 4 (Afghanistan, Yemen, Syria and Haiti) were not in Africa.

It should be emphasized that UNHAS was struggling with financial shortfalls that negatively impacted its operational capabilities in places affected by humanitarian crises. Similar difficulties resulted largely from the gap in financing for international humanitarian aid during the Covid-19 pandemic. It is estimated that at the end of June 2020, humanitarian organizations managed to meet only 20% of the total need for humanitarian aid in the face of Covid-19, and additional needs determined by other negative events (Global Humanitarian Assistance Report, 2020).

The complexity of the financing process and its unpredictability prevented WFP from achieving all its goals in providing international humanitarian aid through UNHAS. These difficulties sometimes resulted in the interruption of flight operations during the humanitarian mission, leading to difficulties in long-term financial planning (Inomata, 2008). An argument to support this statement is the fact that in the years 2019-2022, surpluses in the annual budgets for financing humanitarian activities were recorded only in the case of air operations carried out in single countries. For example, in 2020 these were Mali (USD 101,991) and Burkina Faso (USD 1,052,805) (UNHAS, 2021). In 2021, a similar situation concerned the financing of humanitarian activities carried out in Afghanistan (USD 1,324,824) and Mozambique (USD 1,305,685) (UNHAS, 2022), in turn, in 2022 - only activities in Ethiopia (USD 1,963,484 (UNHAS, 2023). Financial challenges therefore constituted serious constraints in the context of improving the results of UNHAS activities in 2019-2022.

Conclusions

As a summary, the following conclusions from the article should be presented:

UNHAS carried out important tasks as part of specialized logistics services covering humanitarian air operations in 2019-2022. During the analyzed period, there was an increase in demand for similar services, which corresponded to the growing humanitarian needs of people suffering from natural disasters and armed conflicts. The effects of UNHAS activities in humanitarian logistics in 2019-2022 depended largely on changes in the environment that are difficult to predict, such as humanitarian crises, epidemiological threats or barriers to financing international humanitarian aid.

In the years 2019-2022, there was a significant increase in the importance of evacuation missions as a result of UNHAS activities in humanitarian logistics. At the same time, there were difficulties in effectively forecasting the scale of evacuation missions in the coming years, importantly, in the conditions of the growing workload of the transport fleet at UNHAS' disposal.

The effects of UNHAS's activities in humanitarian logistics in 2019-2022 were closely related to the increase in the value of financing for this organisation's activities. The United States was largely responsible for the financing and, therefore, the effectiveness of UNHAS activities in humanitarian logistics. UNHAS's dependence on funding from the United States should be treated as a specific problem and a challenge for the future.

The main recipients of humanitarian aid provided through UNHAS in 2019-2022 were African countries. UNHAS's activities were characterized by a focus on the Central and West African regions.

The article confirms the hypothesis that UNHAS effectively implemented international humanitarian aid in 2019-2022. The activities were mainly directed at supporting individual United Nations agencies and non-governmental organizations. The support was visible in the increase in the number of passengers and goods transported for humanitarian purposes, the increase in the number of destinations for providing humanitarian aid and the trend of increasing financing of international humanitarian aid implemented by air. The article also confirms the sources of problems and challenges in international humanitarian aid implemented through UNHAS in 2019-2022. These included difficulties in forecasting the scale of humanitarian needs, a growing financial gap, as well as dependence on the political will of the United States and the state of cooperation between that country and OCHA as a UN body and additionally the European Union, although in the latter case it depended mainly on financial participation from Germany. The hypothesis should be supplemented by confirmed difficulties in forecasting the number of evacuation missions for a particular year and the increase in the workload of the transport fleet due to the decrease in the number of available aircraft in 2019-2022.

Among the author's recommendations regarding the further functioning of logistics in the humanitarian area, it is necessary to formulate, firstly, more comprehensively inform partners in the international forum about humanitarian needs and the possibilities of meeting them thanks to operations carried out by UNHAS. This includes promotional activities and the search for new partners from the government, non-governmental and commercial sectors.

Secondly, it is worth raising the issue of the dependence of UNHAS operational effectiveness on funding from the United States. Effective humanitarian operations depended in the years 2019-2022 on the political will of this country and the state of cooperation with UN agencies and European Union countries and Great Britain. Reducing UNHAS's dependence on the United States relies on increased funding from other countries, which should increase once developed economies have dealt with the negative economic effects of the Covid-19 pandemic.

Third, it is necessary to recommend additional planning procedures for evacuation missions and to secure additional financial resources for this area of UNHAS activity after 2022. Rapid arrival of humanitarian aid and evacuation of

people from threatened places should constitute a permanent element distinguishing UNHAS in the system of international humanitarian aid in the third decade of the 21st century.

Some limitations that affect the findings of this article should be mentioned. They concern the lack of some reliable data (especially for 2019) and the lack of uniform statistical reporting by WFP in the context of presenting data on UNHAS activities. Equally important is the omission of the specificity of UNHAS activities in individual countries, which should be justified by the size limitations of the article. Focusing on the comparative perspective for 2019-2022 also involves taking into account a specific, particularly dynamic period when it comes to the effects and limitations in the implementation of humanitarian tasks by UNHAS.

BIBLIOGRAPHY

- [1] Canton, H., 2021. World Food Programme – WFP. In: Z. Bakaki, P. Stoeva, J. Yao, K. O'Neill, S.P. Lockhart, J. Money (eds.). *The Europa Directory of International Organizations*. London: Routledge.
- [2] Cozzolino, A., Conforti, A., Tafuri, S.R., 2012. Agile and lean principles in the humanitarian supply chain. The case of the United Nations World Food Programme. *Journal of Humanitarian Logistics and Supply Chain Management*, 2 (1).
- [3] Dorn, W.A., 2020. United Nations Peace Operations. Precedents and Progress in the Four Facets of Air Power. In: S. Paget (ed.). *Allies in Air Power. A History of Multinational Air Operations*. Lexington: University Press of Kentucky.
- [4] Dorn, W.A., Baird, N., Owen, R., 2019. Airships in U.N. Humanitarian and Peace Operations. Ready for Service? *The Journal of Aviation/Aerospace Education and Research*, 27 (2).
- [5] Dorn, W.A., Cross, R.W., 2015. Flying Humanitarians. The UN Humanitarian Air Service. In: A.W. Dorn (ed.). *Air Power in UN Operations. Wings for Peace*. London: Routledge.
- [6] Global Humanitarian Assistance Report, 2020. Bristol: Development Initiatives.
- [7] Inomata, T., 2008. Review of The United Nations Humanitarian Air Service (UNHAS). Geneva: Joint Inspection Unit of the United Nations System.
- [8] Kembro, J., Kunz, N., Frennesson, L., Vega, D., 2024. Revisiting the definition of humanitarian logistics. *Journal of Business Logistics*, 45 (2).
- [9] Landmann, T., Ślusarczyk, S., 2022. The World Food Program in the Global Logistics Cluster. *Military Logistics Systems*, 57 (2).
- [10] Landmann, T., Zamiar, Z., 2023. Information Management in Humanitarian Aid on the Example of the Humanitarian Emergency Telecommunications Cluster (ETC). *Military Logistics Systems*, 59 (2).
- [11] Lipold, P., 2022. Kluczowe czynniki wypychające w migracji mieszkańców wybranych państw Sahelu. *Kwartalnik Bellona*, 2.
- [12] McGuire, G., 2015. *Handbook of Humanitarian Health Care Logistics* [online]. Available at: https://books.google.pl/books/about/Handbook_of_Humanitarian_Health_Care_Log.html?id=Opm8ERPLfFgC&redir_esc=y [Accessed: 11 June 2024].
- [13] Morales, M., Sandlin, D.E., 2015. Managing airborne relief during international disasters. *Journal of Humanitarian Logistics and Supply Chain Management*, 5 (1).

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- [14] Niemannsburg, S.P., Van Goethem, W.J.C.D., Roling, P.C., 2019. Humanitarian Flight Optimization. Delft: Delft University of Technology.
 - [15] Rohwerder, B., 2014. Non-food items (NFIs) and the needs of women and girls in emergencies. Birmingham: University of Birmingham.
 - [16] Sakane, T., 2012. Public Procurement of UNPKO. Focusing on Its Budgetary Significance and Basic Modalities. In: the 5th International Public Procurement Conference, Seattle, 17-19 August 2012 [online]. Available at: <https://ippa.org/images/PROCEEDINGS/IPPC5/Part7/PAPER7-15.pdf> [Accessed: 11 June 2024].
 - [17] Sreejith, S.G., Srinivasan, L., Irani, V., 2023. The Philosophy of International Aviation Law. *Indiana International & Comparative Law Review*, 33 (1).
 - [18] Taiwo, P., 2005. Air Transportation in Humanitarian Missions. Williamsburg: Peace Operations Training Institute,
 - [19] UNHAS. 2020 Overview, 2021. Rome: WFP.
 - [20] UNHAS. Annual Review 2021, 2022. Rome: WFP
 - [21] UNHAS. Annual Review 2022, 2023. Rome: WFP.
 - [22] UNHAS-SUDAN SAOP, United Nations Humanitarian Air Service. Standard Administrative and Operating Procedures, 2019 [online]. Available at: https://cdn.logcluster.org/public/saop_unhas_sudan_version_4.6_user_edition_05.07.2020.pdf [Accessed: 11 June 2024].
 - [23] WFP Aviation Annual Report 2019, 2019. Rome: WFP.
 - [24] Zwęgliński, T., 2014. Wybrane zagadnienia zarządzania logistyką w międzynarodowych operacjach pomocy humanitarnej. *Logistyka*, 6, 14924-14936.
 - [25] Żurak-Owczarek, C., 2014. Koncepcja klastra w logistyce humanitarnej. *Logistyka*, 5, 2140-2146.