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DYNAMICS OF INVESTMENT AND POST-WAR REVIVAL OF THE AGRICULTURAL SECTOR OF UKRAINE

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SUMMARY

The dynamics and structure of the processes of investment in the primary production and food industry of the agricultural sector of Ukraine in the pre-war years and the period of hostilities are analyzed. The features of investment in different classes of primary and processing production and ups and downs in their provision with capital investments are highlighted.

The consequences of the military aggression of the Russian Federation for the national agro-industrial complex are disclosed and the directions of priority investment in the revival of tangible assets of the agricultural sector, the creation

of sustainable agro-food systems and the development of rural areas are substantiated.

Key words: agricultural sector, investments, trends, damage, losses, pollution, revival, logistics.

Introduction. The development of Ukraine's agricultural sector is characterized by the following temporal and spatial milestones: a) until 2014 - within the traditional post-Soviet borders of 1991; b) 2014-2021 - without the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the temporarily occupied territories in Donetsk and Luhansk regions; c) since February 2022 - during military operations in ten regions, when the frontline is almost 1,500 km long. In this regard, it is advisable to conduct an analytical analysis from 2014, when for eight years the Ukrainian economy functioned on a truncated scale (losing almost 20% of GDP as a result of the occupation of Donbas and Crimea), and from 2022 to the present, when military operations were conducted, are being conducted and will continue to be conducted in a number of regions (economic contraction in the first year of the war by 29.1% [1], in 2023 - growth by 5.3%). At the same time, the economy is expected to suffer the biggest setbacks this year, when almost 40% of the country's total generation capacity ceased to exist due to the destruction of thermal power plants. This will hit the economy, including the agricultural sector, extremely hard this year.

At the same time, the problems of the postwar revival of the agricultural sector have already appeared on the agenda, taking into account Ukraine's European aspirations and its steadfast desire to become a full member of the European Union in the near future. This requires considerable efforts to implement EU production, social and environmental standards in the agricultural sector, including the implementation of the requirements of the European Green Deal in domestic practice, maximum preservation of rural areas, strengthening the self-sufficiency of rural communities, etc.

The methodological basis of the study. Statistical data from the State Statistics Service of Ukraine on the dynamics and structure of capital investments from 2014 to the present, as well as materials on direct losses of the agricultural sector from the destruction caused by Russia's military aggression, prepared by the analytical team of the Kyiv School of Economics (KSE), were used to conduct research on the efficiency of investments and their impact on the performance of primary production and food industry enterprises. Particular attention was paid to the analysis of the destruction and losses caused by the war and the ways to revive the agricultural sector in the postwar period, taking into account Ukraine's active position on the integration of the national food complex into the EU internal market, focus on the gradual implementation of the main provisions of the European Green Deal, support for sustainable rural development and strengthening the self-sufficiency of rural communities.

The results. After the occupation of Donbas and Crimea as a result of Russian aggression in 2014, Ukraine's economy developed in relatively calm conditions, albeit in a truncated version: about 7% of its territory was seized. At the same time, part of the national income was used to maintain the status quo regarding the temporary borders with the unrecognized republics of the DPR and LPR and the annexed peninsula.

Investment in primary production was characterized by a significant 3.5-fold increase in the first four years, but after a local peak in 2018 of UAH 66.1 bln., there was a significant decline until the agrarian crisis of 2020, when only 76.7% of the peak figure, i.e. UAH 50.7 bln., was realized. The post-crisis year of 2021 was marked by a global peak, when capital investments were 38% higher than in the crisis year, amounting to about UAH 70 bln.: that is, almost four times more than at the beginning of the study period (Table 1).

Table 1. Structure and dynamics of capital investments in the agricultural sector of Ukraine*, UAH mln.

CLASSIFIER OF ECONOMIC ACTIVITIES-2010	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
TOTAL (A=01+02+03);	**18796**	**30155**	**50484**	**64243**	**66104**	**59130**	**50680**	**69966**	**51356**
From which:									
01 Agriculture, hunting and related services, from it:	**18176**	**28983**	**49498**	**63263**	**65560**	**59333**	**50146**	**68021**	**49550**
01.1 Cultivation of annual and biennial crops	13203	21297	40996	54037	52694	45302	39590	54691	39130
01.2 Cultivation of perennial crops	421	544	831	912	1410	1037	763	1154	747
01.3 Plant reproduction	62	31	42	86	31	46	70	48	33
01.4 Cattle breeding	3474	6086	6154	6929	9626	10271	9275	9641	8170
01.5 Mixed agriculture	72	168	291	331	398	338	260	423	299
01.6 Support activities in agriculture and post-harvest activities	942	856	1181	964	1342	2188	1146	2029	k
01.7 Hunting, trapping and	k	k	k	k	k	151	43	6	k

related services									
02 Forestry and logging, from it:	**380**	**784**	**768**	**767**	**959**	**546**	**459**	**1407**	**1443**
02.1 Forestry and other forestry activities	66	120	138	156	217	187	142	393	291
02.2 Logging	275	602	585	551	676	341	297	986	1136
02.3 Collection of wild non-timber products	0,3	0,5	0,1	0,1	0,1	0,1	-	0,8	0,5
02.4 providing support services in forestry	38	62	44	59	66	18	20	28	16
03 Fish farming, from it:	**27**	**31**	**54**	**54**	**57**	**31**	**29**	**538**	**362**
03.1 fishing	15	12	32	16	16	13	к/с	332	330
03.2 fish farming (aquaculture)	12	19	22	38	41	18	к/с	206	32
For more information:									
Fixed assets: agriculture, hunting and related services, UAH mln..	167283	205575	264859	335302	399526	460475	530721	583508	n/a
Depreciation of fixed assets, %.	38,4	37,8	36,9	35,4	35,1	38,0	39,9	40,8	n/a
Gross agricultural output, 1990 = 100%	**92,6**	**88,2**	**93,8**	**91,7**	**99,2**	**100,6**	**90,4**	**103,4**	**75,4**
Net profit, UAH mln..	21391	101894	89789	68240	70420	92840	81465	237606	84822
Depreciation, UAH mln..						38205	40746	45898	n/a
Profitable enterprises, *%*	84,9	88,9	88,4	86,7	86,7	83,4	82,9	88,7	78,5
The price index for agricultural products, *%*	145,1	166,0	107,6	111,8	104,4	86,6	153,6	116,7	100,1

* Compiled according to the State Statistics Service of Ukraine: Capital Investments of Enterprises by Types of Economic Activity in 2010-2022; Availability and Movement of Tangible Assets in 2010-2021.

Notes: 1. The data are given without taking into account the results of budgetary institutions, for 2014-2021, excluding the temporarily occupied territory without the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the temporarily occupied territories in Donetsk and Luhansk regions;

Data for 2022 are given without taking into account the territories temporarily occupied by the Russian Federation and parts of the territories where hostilities are (were) conducted.

2. The information for 2021-2022 is based on the reports actually submitted by the companies and the revised indicators.

3. Symbol (k) - data is not disclosed in order to fulfill the requirements of the Law of Ukraine "On Official Statistics" to ensure guarantees of statistical confidentiality of the state statistics authorities.

4. Dash (-) - no phenomena occurred.

Such significant differences in investment in the primary production sectors are due to the fact that the main flows of capital investments are directed to the renewal and expansion of fixed assets, the introduction of new technologies and modern machinery and equipment, the development of new types of production activities, and the expansion of primary production. The main sources of capital investments are the net profit of enterprises, depreciation of fixed assets, other assets of farms, loans from the state and banking institutions and investment funds, foreign investments and international technical assistance. Statistical data for 2019-2021 (Table 1) shows that the net profit of enterprises and depreciation charges in total (UAH 122-283 bln.) are 2.4-4 times higher than the scale of investment in fixed assets (UAH 51-70 bln.). Such high economic performance was also achieved due to the fact that prices for agricultural products increased by 4.7 times between 2013 and 2022.

Thus, agriculture is able to renew its fixed assets on its own: in 2014-2021, fixed assets increased 3.2 times (from UAH 167.3 bln. to UAH 583.5 bln.), but their depreciation slightly increased from 38.4% to 40.8%. This indicates that there are many buildings, structures, and machinery in operation that are beyond their useful life and are worsening the structure of fixed assets. In addition, almost every eighth enterprise, and in 2022 - every fifth, is unprofitable, which means that the depreciation fund alone is not enough to renew fixed assets. Such farms are in dire need of additional investments to attract and use them in the main areas of investment.

In terms of the use of investments by type of economic activity, the following hierarchy has developed in agriculture (2021): **01.1** cultivation of annual and biennial crops (80.4%), 01.4 livestock farming **(14.2%), 01.6** auxiliary activities in agriculture and post-harvest activities **(3.0%), 01.2** cultivation of perennial crops **(1.7%).** This fully coincides with the scale of production and sales of products by these types of economic activity: out of 891 bln. UAH of agricultural products (2021), **01.1** sold 785 bln. UAH (88.1%), **01.4** - 75 bln. UAH (8.4%), **01.6** - 18.4 bln. UAH (2.1%), **01.2** - 6.4 bln. UAH (0.7%). Thus, the scale of economic activity is fully correlated with the scale of investment allocation and utilization.

Of considerable interest is the sharp increase in investment activity in 2021 compared to the previous year: in **02 Forestry and logging** from UAH 459 mln. to UAH 1,407 mln., i.e. three times more, and in **03 Fisheries** from UAH 29 mln. to UAH 538 mln., i.e. 18.5 times more.

As for forestry and logging, in 2021, the state switched to selling timber at open and transparent

auctions. This has significantly increased the revenues of forestry enterprises: sales increased by UAH 8 bln., and net profit increased from UAH 200 mln. to UAH 1.7 bln.. Additional funds were used to upgrade the material and technical base: capital investments increased to UAH 1.4 bln..

The second reason is the organizational reform: instead of almost 300 state-owned enterprises (SOEs), 160 new ones were created, and 124 enterprises were merged with others. In the process of reforming, a huge number of administrative buildings were freed up (which saves costs for heating, repairs, and security). The number of directors was reduced, and the focus was on introducing the most efficient top management.

As for the fisheries sector, pursuant to the Resolution of the Cabinet of Ministers of Ukraine No. 714-r dated 12.08.2022, as of 31.12.2022, 38 water management organizations performing land reclamation and operation of state water management facilities of complex purpose, inter-farm irrigation and drainage systems in the area of operation were transferred from the State Agency of Water Resources to the State Agency of Fisheries. Thus, the powers of the State Agency of Ukraine for Reclamation, which were transferred to the agency in May 2021, began to be implemented in August 2022. At the same time, the capital investments of the State Agency of Ukraine for Water Resources were transferred in 2021 and, after the name of the agency was clarified, the State Agency for the Development of Land Reclamation, Fisheries and Food Programs (State Agency for Fisheries) was already responsible for them. Thus, organizational transformations took place and led to a sharp increase in capital investments in the fisheries sector.

The dynamics and structure of capital investments by main areas of investment deserve special attention (Table 2). Areas of investment resources are divided into two main (tangible and intangible assets) and six (four plus two) differentiated (partial) areas. While the total volume of investments in the period under review increased by 272.5% and slightly less in tangible assets (267.9%), intangible assets increased by 15.2 times. Among tangible assets, the leading positions are held by "investments in machinery and equipment" 285.6% (the share of investments increased from 64.2% and amounted to 67.3% at the end of the study period) and "construction and alteration of buildings" 224, 1% (the share decreased from 22.1% to 18.1%), but almost twice less in the direction of "existing buildings and structures" 125.5% (respectively 1.8% and 0.8%) and a sharp decrease in investment in the direction of "land" 65.1% (respectively 0.5% and 0.1%). The distribution of investments by investment areas shows that agricultural enterprises primarily focus on technical modernization of existing agricultural production and development of new innovative technologies for growing products, and only then on the construction of new and reconstruction of existing production buildings and structures.

Table 2. Dynamics and structure of capital investments in agriculture of Ukraine*, thousand UAH

Years	Capital investments, total	Including:							
		Capital investments in tangible assets	of them:				Capital investments in intangible assets	of them:	
			Into the soil	Into existing buildings and facilities	In the construction and reconstruction of buildings	In machinery and equipment		Concessions, patents, licenses, trademarks and similar rights	In the purchase of software
2014	18175515	18106866	86972	329025	4011595	11668847	68649	8762	22659
2015	28983114	28813268	51658	986240	5558539	19324763	169846	3823	22622
2016	49497718	49231555	95392	572194	7452890	37676540	266163	2498	34557
2017	63262939	62664514	152568	400210	9648129	48433030	598425	10783	49632
2018	65559593	64252982	192955	2162597	12152795	44844023	1306611	5226	56493
2019	59332931	57936339	316584	1085572	11988236	37537085	1396592	41170	38298
2020	50145943	49255915	271439	615575	10154498	32657260	890028	5647	43582
2021	68021358	66341332	179483	1080375	12253169	46586730	1680026	9765	103979
2022	49550064	48504647	56692	412697	8989602	33336561	1045417	1342	62413
2022 : 2014 =%	272,5	267,9	65,1	125,5	224,1	285,6	1522,8	15,3	275,4
2014 = %	100	99,6	0,5	1,8	22,1	64,2	0,4	0,048	0,125
2022 = %	100	97,9	0,1	0,8	18,1	67,3	2,1	0,003	0,126

**** Compiled and calculated by: Capital investments of enterprises by types of economic activity in 2010-2022.***

As for intangible assets, their share in the structure of capital investments increased from 0.4% to 2.1% (15.2 times) in the period under review, but significantly decreased in the area of "concessions, patents, licenses, trademarks and similar rights" (from 0.048% to 0.003%) and practically remained unchanged in the area of "software acquisition" (at the level of 0.125%). The explanation for this "paradox" lies in the definition of these assets. In particular, intangible assets in paragraph 6 of part one of Article 46 of the Law of Ukraine "On Prevention of Corruption" are understood to mean intellectual property rights that can be valued in monetary terms (patent for invention, utility model, know-how, industrial design, rights to the topography of an integrated circuit, plant variety, trademark or commercial name, copyright, etc.), as well as the right to use subsoil or other natural resources, etc. An intangible asset should also include licenses for the right to use intellectual property owned by the declarant or a member of their family. Thus, due to the fact that Table 2 focuses on industrial types of intangible assets, and does not mention agricultural types (plant varieties), which are the main ones for the agricultural sector, there was a sharp decrease in their share.

The second important component of the agri-food complex is the food industry, which includes three enlarged types of economic activity: food production (78.9% of total capital investments in 2022), beverage production (16%, respectively) and tobacco production (5.1%). The dynamics of capital investments from 2014 (UAH 13.7 bln.) to 2019 inclusive was characterized by an upward trend and was consolidated by a global peak of UAH 30.8 bln. (2.2 times growth), and then by a downward trend, with a collapse in 2022, i.e. UAH 17.5 bln. (1.8 times decrease compared to the peak year). In the last year, the decline compared to the previous year, 2021, was almost 38%, which is explained by the conduct of hostilities in a large area and the shutdown of some food industry enterprises, as well as the mobilization of financial resources for the needs of protection against Russian aggression.

Table 3. Structure and dynamics of capital investments in the food industry of Ukraine*, UAH mln.

CLASSIFIER OF ECONOMIC ACTIVITIES-2010	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
TOTAL (10+11+12);	**13665**	**14405**	**18901**	**19325**	**30747**	**30823**	**29023**	**28107**	**17494**
From which:									
10 Food production; including:	**10806**	**11564**	**14954**	**14896**	**25948**	**25471**	**23604**	**21081**	**13815**
10.1 Production of meat and meat products	1172	1269	1837	1649	9157	6733	5158	4628	4150
10.2 Processing and preservation of fish, crustaceans and shellfish	36	52	90	121	108	135	314	261	172
10.3 Processing and preserving fruits and vegetables	638	555	584	1532	940	3017	618	747	933
10.4 Production of oil and animal fats	2787	2945	4240	3455	5020	4988	5679	3646	2520
10.5 Production of dairy products	1966	1315	1671	2362	1838	2450	2737	2003	1423
10.6 Manufacture of milling and cereal products, starch and starch products	398	504	1141	1053	1563	1637	1323	2158	819
10.7 Production of bread, bakery and flour products	443	519	902	1476	2715	2393	4001	3448	1209
10.8 Manufacture of other food products	3261	4230	4189	2938	4209	3791	3352	3616	2251
10.9 Production of finished animal feed	106	175	302	309	397	328	422	574	337
11 Beverage production	**2108**	**1809**	**2618**	**3080**	**2745**	**4044**	**4380**	**5371**	**2793**
12 Tobacco products manufacturing	**751**	**1032**	**1329**	**1349**	**2054**	**1308**	**1039**	**1655**	**886**
For more information:									
Property, plant and equipment: food industry, UAH mln.	125745	136202	163996	182445	207157	260718	316635	316897	n/a
Depreciation of property, plant and equipment, %	47,2	47,5	51,1	50,6	48,3	42,1	49,1	42,8	n/a
Food industry product index, 1990 = 100%	**109,5**	**95,2**	**101,3**	**108,6**	**107,0**	**107,2**	**105,0**	**99,3**	**75,2**
Net profit, UAH mln..	**-16906**	**-16553**	**-7509**	**8896**	**15537**	**24842**	**5249**	**21869**	**-744**

Amortization, UAH mln..						**16019**	**17374**	**20866**	**n/a**
Profitable enterprises, %.	**62,4**	**72,3**	**71,1**	**69,6**	**70,5**	**71,3**	**69,1**	**67,9**	**67,2**

*** Compiled** according to the State Statistics Service of Ukraine: Capital Investments of Enterprises by Types of Economic Activity in 2010-2022; Availability and Movement of Tangible Assets in 2010-2021.

Notes: 1. The data are given without taking into account the results of budgetary institutions, for 2014-2021, excluding the temporarily occupied territory.

Without the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the temporarily occupied territories in Donetsk and Luhansk regions;

Data for 2022 are given without taking into account the territories temporarily occupied by the Russian Federation and parts of the territories where hostilities are (were) conducted.

2. The information for 2021-2022 is based on the reports actually submitted by the companies and the revised indicators.

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4. Dash (-) - no phenomena occurred.

Strong pre-war investment support for the food industry allowed for a 2.5-fold increase in its fixed assets (to UAH 316.9 bln. at the end of 2021) and a significant reduction in depreciation of fixed assets - from 47.2% to 42.8%. A positive role in this was played by the net profit and depreciation in 2019 and 2021 in the amount of UAH 40.8 bln. and UAH 42.7 bln., respectively, which significantly exceeded the amount of capital investments: UAH 30.8 bln. and UAH 28.1 bln., respectively. At the same time, in 2020, net profit and depreciation amounted to UAH 23.6 bln., while capital investments amounted to UAH 29.0 bln., which is almost a quarter more. It should be borne in mind that almost 30% of food industry enterprises are constantly unprofitable. Therefore, to finance capital investments in the food industry, it was necessary to attract additional resources from other sources of investment: government and bank loans, investment funds, etc.

Taking the global peak capital investment of UAH 30.8 bln. as a starting point in 2019, the largest decline in their utilization was observed in the following production classes: **10.3** Processing and preservation of fruits and vegetables - by 3.2 times (from UAH 3017 to UAH 933 mln.), **10.4** Production of oil and animal fats - by half (from UAH 4988 to UAH 2520 mln.), **10.6** Production of milling and cereal products, starch and starch products - by half (from UAH 1637 to UAH 819 mln.), **10.7** Production of bread, bakery and flour products - by half (from UAH 2393 to UAH 1219 mln.). Such a significant decline in the use of capital investments for the reproduction of fixed assets can be explained by several circumstances, in particular: the reduction in the scale of production activities due to the occupation of part of the territory by Russian aggressors; reduction of areas of agricultural raw materials; allocation of free funds for defense needs, etc.

At the same time, certain classes of enterprises maintained a stable level of investment even under such conditions, in particular: **10.2** Processing and canning of fish, crustaceans, and mollusks - a quarter increase in capital investments (from UAH 135 to 172 mln.) and **10.9** Production of ready-made animal feed - investment remained at the pre-crisis level (from UAH 328 to 337 mln.). This is due to a steady increase in the production of such types of specific products (aquaculture products and concentrated feed and feed additives) and their increased demand for renewal and modernization of fixed assets.

During the war, a significant part of the free funds of enterprises is withdrawn under various organizational measures and directed to the needs of fighting the aggressor. At the same time, this trend will continue not only in the context of the ongoing war, but also after its completion. This is due to the fact that in the post-war period, the main efforts will be aimed at eliminating the devastating consequences of the war, but there are a number of uncertainties, in particular:

- lack of possible timeframes for when the war will end (this year or the next 2025, or maybe even later);
- inability to obtain the necessary physical data on production and facilities due to the presence of occupied territories and areas of active hostilities;
- assessment of indirect losses and a list of their main areas and industries in the absence of an agreed methodology for monetary determination;
- estimation of the costs of restarting the production process by manufacturers who were unable to carry out a full production cycle at the enterprise due to hostilities, occupation or mine contamination, etc.

In this regard, the process of resuming production at food industry enterprises will be carried out using different approaches and options. At the current stage, the main efforts of enterprises in the free and de-occupied territories outside the combat zone are focused mainly on maintaining the working condition of agricultural machinery and mechanisms and production facilities of the food industry. This is due to the fact that the first priority is to ensure timely preparation for and conduct of spring-summer and autumn field work and strict compliance with technological requirements for processing food raw materials. At the same time, the rest of the potential capital investments are used to solve acute but low-cost problems in order to create a certain "safety margin" to maintain production processes in agriculture and the food industry. With the end of the war, the problems of reviving the destroyed and damaged farms and enterprises will be solved.

As a result of the unauthorized aggression of the Russian Federation on February 24, 2022, according to experts, direct losses from destruction and damage to infrastructure amounted to 157.2 bln. dollars. The agro-food complex suffered $10.3 bln. in direct losses (January 2024) [2, p. 13]. According to the World Bank's Rapid Assessment of Damage and Recovery Needs, indirect losses due to reduced production capacity of the agricultural sector amount to $31.5 bln., demining costs reach $37.6 bln., losses and damages in the irrigation and drainage sectors amount to $380.5 mln. and $282.5 mln.

USD respectively (February 2023) [3]. The assessment of direct losses of the agro-industrial complex (January 2024) and agricultural infrastructure includes the following main components: loss of agricultural machinery; loss of elevators and other grain storage facilities; damage and destruction of reclamation systems; losses of livestock from animal deaths and slaughter due to the inability to keep them; losses of perennial crop producers due to damage to plantations; losses of beekeeping; losses of inputs and finished products due to damage and theft. These areas of losses and damages are described in Table 4.

Table 4. Assessment of direct damage to agriculture and land resources

Types of losses	**Unit of measurement**	**Initial number of objects**	**Number of damaged objects**	**Estimated losses, mln. U.S. dollars**
Destroyed				
Agricultural equipment	units	764323	130603	5,43
Grain storage facilities	capacity, thous. tons	75084	11351	1,7
Dead animals (including poultry and fisheries)	thous. heads	203292	1899	0,1
Destroyed apiaries	bee families	2272740	86902	0,0
Perennial crops	hectares	197100	16364	0,4
Destroyed and stolen production factors	tons	962051	135993	0,1
Destroyed and stolen finished agricultural products	tons	25486613	4037542	1,9
Aquaculture and fishing facilities	units	2102	228	0,03
Damaged				
Slaughter of animals due to the impossibility of keeping them	thous. heads	203292	11963	0,1
Dead and missing bees	bee families	2272740	192526	0,0
Agricultural equipment	units	764323	50521	0,4
Grain storage facilities	capacity, thous. tons	75084	3341	0,1
Total direct damage to the infrastructure	**X**	**X**	**X**	**10,3**

Source: calculations of the CSE AgroCenter (Center for Food and Land Use Research).

As of January 2024, the largest share of losses was due to destruction and damage to agricultural machinery, resulting in estimated losses of more than USD 5.8 bln.. The second largest category is losses due to the destruction and theft of manufactured products, with the total value of destroyed and stolen products estimated at USD 1.9 bln.. The infrastructure for storing agricultural products suffered significant losses. The total capacity of the destroyed grain storage facilities reaches 11.4 mln. tons of production, and the capacity of the damaged grain storage facilities reaches 3.3 mln. tons of simultaneous storage capacity. The cost of restoring the destroyed facilities is 1.8 bln. dollars [2, p. 13].

According to the World Bank's Rapid Assessment, the needs for reconstruction and restoration of agricultural production in Ukraine will amount to 29.7 bln. USD. USD in the period from 2024 to 2033, including USD 0.6 bln. in 2023. In 2023, the amount of USD 0.6 bln. will be used mainly for immediate resumption of production [3].

In addition, the damage caused by the destruction of logistics routes in the occupied and de-occupied territories and internationally, which was associated with the closure of the transport corridor for the export of agricultural products to Asia and Africa, has not yet been fully assessed. Particular attention should be paid to the assessment of losses from contamination of land plots by damaged equipment, used ammunition and military equipment; compaction and physical destruction of soil cover as a result of heavy military equipment moving across agricultural land; prolonged non-use of agricultural land as a result of mining in areas where active hostilities are taking place or have taken place; chemical contamination of soil in previously mined areas, which will have a negative impact on agriculture for a long time.

It should be noted that the principle of “rebuilding better than before” implies that reconstruction will be aimed at addressing key environmental issues that threaten the sustainability of food production, such as soil degradation, water and air pollution, as well as the biodiversity loss crisis and the climate crisis. The post-war development of the sector should be viewed in the broader context of sustainable rural development in Ukraine, which should be carried out in an inclusive manner, with the participation of all stakeholders. And not only for the purpose of increasing production, but also to ensure the long-term sustainable development of Ukraine on its way to EU membership [3].

Therefore, in the process of revival, agri-food production should return to pre-war levels, and its post-war reconstruction should be coordinated with Ukraine's aspirations to deepen integration into the European market, which requires the adoption of relevant EU requirements and rules. It is worth noting that most of Ukraine's European integration initiatives in the field of

agricultural production have so far been aimed mainly at introducing standards for the marketing of agricultural products. However, increasing trade with the EU will also require compliance with European technologies and best practices in agricultural production.

It should be added that Ukraine gained EU candidate status in June 2022. At the same time, the European Commission has to agree on a negotiating framework by the end of 2024. But given the size of Ukraine's agricultural sector, this particular negotiating chapter may become one of the cornerstones of the negotiations between Ukraine and the European Commission. Currently, Ukraine is at an early stage of preparations for accession with regard to the chapter on Agriculture and Rural Development.

Conclusion. Given the extremely wide range of traditional rules and regulations, as well as the overstated demands on agriculture in terms of compliance with the Green Deal and strengthening the fight against the negative effects of climate change, especially in the center and south of Ukraine, it is necessary to adjust the investment priorities for the revival of the agricultural sector to the new circumstances. That is why it is necessary to ensure the development of the agricultural sector through the introduction of modern technologies and forms of production organization, in particular:

- revival of the material base on an innovative basis, accelerating the integration of EU requirements into agricultural production, in particular through the introduction of Best Agricultural Practices and Best Available Technologies, to reduce and prevent environmental pollution, strengthen its resilience to environmental disasters, and achieve pre-war agricultural production levels;

- transferring agricultural production to the use of technologies that are sustainable and friendly to climatic and environmental extremes, and introducing modern agroecological practices: precision and organic farming, small-scale livestock farming, modern micro-crop rotations, and agrotechnologies that will help reduce greenhouse gas emissions;

- intensify humanitarian demining of the territory to reduce long-term indirect losses of the agricultural sector due to soil degradation and contamination of agricultural land;

- creating conditions for the development of sustainable and decentralized agri-food systems with the active participation of small, small and medium-sized producers, designed to promote the revival and development of rural areas. Farms, family and small farms, and their cooperatives should become the basis for additional jobs and diversification of the local economy in rural areas, and self-sufficiency of rural communities;

- maintaining ecosystems in a condition no worse than before the hostilities, except for the areas affected by Russian aggression and requiring special surveys and implementation of restoration programs, to protect biodiversity and maintain stable climatic conditions.

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