Food and Agriculture Organization of the United Nations

Socioeconomic impact and needs assessment

Donetsk and Lugansk regions - Ukraine

ISBN 978-92-5-130035-0

FAO information products are available on the
FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org

Photo: ©FAO/Antoine E.R. Delaunay

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Kyiv, 2017

Contents

Abbreviations

GCA	Government control area
GCB	Exclusion zone in proximity to government controlled territory
FAO	Food and Agriculture Organization
FSC	Food Security Cluster
Ha	Hectare
HRP	Humanitarian Response Plan
IDP	Internally Displaced Person
Kg	Kilogram
MAPF	Ministry of Agrarian Policy and Food of Ukraine
NGCA	Non-government control area
NGCB	Exclusion zone in proximity to the Non-government controlled territory
NGO	Non-Governmental Organization
REU	FAO Regional Office for Europe and Central Asia
SRP	Strategic Response Plan
UAH	Ukrainian Hryvna
UN	United Nations
USD	United States Dollar
WFP	World Food Programme

Executive summary

Affirmation

This report was prepared on behalf of FAO Ukraine by a team consisting of Dragan Angelovski (author), Yana Voitovska and Farrukh, Toirov (Editors).

Our thanks for the excellent collaboration go especially to Elena Prorochenko, Yuriy Nesterov and Andriy Volkov, whose support and contribution was crucial for the successful realization of the research.

A very special thank you goes to the respondents who were willing to share their experience and to openly discuss the barriers and obstacles they face in their daily lives.

Background

The political crisis that resulted in unrest in the Donetsk and Lugansk regions of Ukraine evolved into a war between the post-revolutionary Ukrainian government and pro-Russian insurgents.

The agricultural sector in the two oblasts has suffered enormous losses due to the conflict and ensuing instability. Prices for basic foods have increased dramatically due to the disruption of trade links and a significant reduction in local production.

Needs in the agricultural sector have been presented and the Humanitarian Response Plan needs to be adjusted based on an accurate evaluation of the situation, including the needs of the conflict-affected population.

Conceptual framework

This report presents an analysis of social and economic vulnerability in the conflict-affected Donetsk and Lugansk regions region of Ukraine, with a particular focus on rural people living along the engagement line. The study measures the economic and social vulnerability of 662 933 residents (229 696 households), investigating their level of exposure to shocks and prevalent coping strategies.

Methodology and data

Based on the conceptual framework, assessment vulnerability indicators were defined (i.e. household resources, use of resources, exposure to risk, and coping strategies) and adapted to the specific situation.

A total sample for the assessment consisted of 648 interviews, of which half were conducted in Donetsk and half in Lugansk region. The level of reliability is valid for the heavy weapon exclusion zone, the Government Control area, and the Non-Government Control area.

The actual sampling was executed in several different steps, starting at the administrative level of each area and ending at the smallest unit, in this case households.

Before commencing the interviews, FAO designed, pre-tested and adjusted the questionnaires, based on feedback and recommendations.

Trained interviewers visited the targeted communities at different times of day. No age limit

was applied to the respondents, although minors were excluded.

The period of data collection for the assessment was April 2017. Data collection was carried out using the KoBoToolbox software. Quality control of the field work and data entry was ensured by FAO controlling the processes and cleaning the database prior to the analysis. Data analysis and reporting was conducted by FAO experts.

Main results

The availability of resources is an important aspect for determining the resilience of households against shocks, and as such their economic and social vulnerability. Household resources include financial, physical, human and social resources. Each resource dimension protects the household in different ways.

The availability of sufficient financial and physical resources allows households to smooth consumption over time, and reduce the risk of falling into monetary poverty in the event of a shock.

The availability of human resources determines the current and future earning power of a household.

Social resources are important for social inclusion and participation in family and community life. Access to a broad social network in the event of a shock can facilitate food security, finding work, gaining access to informal financial support, or simply accessing information.

The average size of the conflict affected households is very small, averaging less than three persons per household. There has been an approximate 10 percent decrease in the average number of household members in the last 18 months. This was noted in all areas.

More than a third of the population has reached retirement age, and the share of women in the population is slightly more than half. Compared to the 2015 assessment the number of minors has somewhat decreased. This is especially notable in the exclusion zones. The share of the population over 60 years of age has increased by 6.2 percent on average while the working age population has decreased by 8.6 percent.

A small share (1.7 percent) of households hosts IDPs, representing an overall reduction by half compared to the 2015 findings. Sixty three percent of the households housing IDPs are in the Government Control areas.

There has been an increase (approximately 10 percent) in the average number of cash earners, mainly in the Non-Government Control areas. On average the share of households with one and two income sources has risen, on account of the households with multiple income sources.

The current average household monthly income is calculated at USD 144.1, representing a USD 65.4 increase compared to 2015. However, this is still considerably less than the monthly income before the conflict (USD 390). Incomes in Non-Government Control areas recorded in 2015 have improved on average for a smaller share of the population, but decreased for most. Incomes in the Government Control areas have decreased on average and more considerably for a small share of the population, while they have increased slightly for the majority of the population.

Overall, as in 2015, pensions remain the most important income sources for many households, followed by social transfers, daily labour and sales of agricultural produce.

Three quarters of the surveyed households have income earners with permanent jobs, which is approximately 11 percent less than before the conflict. The share of households with permanent jobs in the Government Control areas has almost reached pre-conflict levels. Most of the decrease in permanent employment is noted in the Non-Government Control areas, with temporary jobs replacing the lost permanent employment.

The share of households with debt has fallen almost to pre-conflict levels on average. However, in parallel, more than half of the respondents have access to funds, although the share has significantly decreased compared to 2015 (67.6 percent). Credit is now harder to come by, leaving respondents to rely mostly on borrowing from their social circles. The access to commercial and formal credit sources is almost non-existent, which adds another obstacle to maintaining and increasing the agricultural efficiency of producers.

Considerable and increasing levels of outmigration from the target areas (approximately 70 043 households) is notable. A third of households have members who have migrated, which is a significant increase since 2015 (16.2 percent).
More than half of the households in the Non-Government Control areas have members who have migrated. The majority of migrants send remittances, with the average amount being USD 47 per month, which is somewhat higher than in 2015 (USD 42 per month).

The pursuit of employment is the most common reason for migration (more than half of households).

The share of households using food security coping mechanisms has drastically decreased to less than half of all households surveyed, as has the number of coping mechanisms used (from 3.57 mechanisms in 2015 to 1.3 in 2017). The types of coping mechanisms mainly indicate a reduction in quality, rather than a reduction in the quantity of food consumed.

One third of the surveyed households reported a family shock over the past six months, which is a slight increase on 2015. The incidence of livelihood shocks is high.

Poverty levels have somewhat reduced in line with the findings on employment and debts. However, almost half of households are still unable to cover their basic consumption needs and used coping strategies. The most frequently used strategies are related to changing consumption patterns by reducing costs and economizing on the consumption of goods and services.

With 95 percent of households having access to land, 91 percent engaged in plant production and 66.4 percent engaged in livestock production. The cultivated land area continued to decrease, although most of the respondents have remained engaged in agricultural production. The share of households that cultivate land decreased to 60.7 percent in particular for winter crops.

Cropping patterns are shifting towards backyard production of high-value crops. A fifth of the households in the Government Control areas are commercial farmers, while in the Non-Government Control areas this is nearly two fifths. The residents of the Non-Government Control areas are more active producers of cash crops both in terms of land size and shares of households, compared to the Government Control areas.

In the Non-Government Control areas, agricultural production contributes to approximately one additional average monthly salary for each

household. In the Government Control areas, the annual income from crop production accounts for less than half a monthly salary.

Input supply has remained one of the major constraints for conflict affected households, mainly in terms of costs. Less than one quarter of households meet their needs for fertilizers through their own manure, and this is mostly the case in the Non-Government Control areas. In the Government Control areas procured mineral fertilizers predominate. Respondents in the Non-Government Control areas still rely on their social connections to a significant extent for their supply of fertilizers.

The share of households buying seeds on the market has decreased, especially in the Non-Government Control areas, indicating limited functioning of the market. In contrast the share of respondents that procure seeds on the market has significantly increased in the Government Control areas in line with changes to cropping patterns.
The number of animals per household in all target areas is fairly uniform, which is characteristic for subsistence production with occasional sales of surpluses. No significant changes compared to the situation in 2015 were noted for most livestock types, mainly due to constraints which mean forced slaughters have continued in 2016. As a result, the livestock populations persist at approximately half or less than pre-conflict levels. On average the target households are oriented towards subsistence livestock production, and mainly aim to meet their household needs.

Prices of major agricultural inputs have increased by roughly 20 percent in the last 12 months, in addition to the recorded average increase in 2015 (86.2 percent), in particular in the Non-Government Control areas.

The majority of all households consider the inaccessibility of agricultural inputs, both in terms of access and costs, to be the main constraints on their production. The importance of improving access to agricultural inputs was identified by an estimated 199 835 households (100 607) in 2015.

The need for seeds has doubled (87 percent) compared to 2015 (43.8 percent) and the need for fertilisers has significantly increased compared to 2015 (short term 40.7 and mid-term 22.5 percent). Animal feed also continues to predominate as a major need for the target households.

The conflict-affected population has relied mainly on social connections for support, especially in the Non-Government Control areas. This is likely due to the significantly larger number aid interventions in the Government Control areas, as well as the type of aid provided.

A quarter of households have received assistance from their social connections in the last 12 months. Respondents in the Non-Government Control areas have received significantly more support than those in the Government Control areas and compared to 2015. This reflects the limited support provided by external actions.
Food remains the most common type of support. Food is provided to one third of, or an estimated 74 651 households (88 072 in 2015). In parallel overall cash support, has significantly decreased (7.9 percent in 2015 for all households).
The recovery needs of the conflict affected have not been addressed.

Projects have frequently established farmers' organizations by grouping farmers around a specific crop, commodity or activity. The number of households with members has more than tripled since 2015, accounting for 10.7 percent of the respondent households. These increases have been substantial in the

Government Control areas, and modest in the Non-Government Control (6.5 percent in 2015).

Eighteen percent of households have benefited (in any form) from joining farmers' organizations, compared to 5.4 percent in 2015. More than half of the households with members in the Government Control areas have not benefited from joining in any form.

One third of respondents would consider joining of a farmers' organization, which is a significant development compared to 2015 (4.5 percent). The residents of the Non-Government Control areas are the most enthusiastic about joining.

Key needs

There is significant and urgent need to support the restarting of agricultural production of the affected households, as a way of safeguarding and restoring livelihoods, recovering incomes, and ensuring sustainable food security.

The objective is to support the productive capacities and help the target groups engage and restart their agricultural production through support programs that recover, maintain and improve the production and productivity of the evolved agricultural production patterns and add to their income generation and food production capacity.

The overall value of support required by the most vulnerable population is estimated at approximately USD 5,940 .000 million.

Recommendations

There is a significant and urgent need to support the production of the affected population by stabilizing agricultural activities. Addressing these needs would provide sustainable support to food security and incomes, at the same time facilitating the return of the sizeable internally displaced population.

Bearing in mind the agricultural profiles of the target population and the constraints identified, the following interventions targeting the agricultural sector are recommended as an immediate response to the deteriorating situation:

- Immediate response to recover and support the agricultural production and sustainability of incomes of the affected population, by optimizing opportunities to strengthen livelihoods;
- Support the transition from the extended period of relief to development interventions, by strengthening the people's capacity to utilize available potentials;
- Provide development opportunities and work with communities to maximize the benefits of the changes in cropping patterns, building their resilience by addressing their main challenges in support of income generation and use of local resources, by strengthening local knowledge and cooperation.

Background

Conflict broke out in Ukraine in early 2014, following a series of protests across major cities in the east of the country. Since then, the several ceasefires announced by the conflicting sides have not held and the humanitarian situation continues to deteriorate. An estimated 5.2 million people are affected through the breakdown of law and order, separation of families and communities, the destruction of infrastructure and disruption to essential services. Over 1.4 million people remain displaced from the conflict-affected areas of the Lugansk and Donetsk Oblasts. Internal displacement has intensified the need for humanitarian, recovery and development assistance both in the areas directly affected by the conflict and in the areas hosting large number of IDPs.

Conflict has divided the territories of the Lugansk and Donetsk Oblasts into Government Controlled Areas (GCA) and Non-Government Controlled Areas (NGCA). This division is causing various problems in the Socioeconomic architecture that existed before the start of the conflict. The conflict contact line is becoming a de-facto border and dividing communities that once lived together. Over time, the structure of the relationships between the divided communities is changing and the consequences of this division may become irreversible.

The economy of the region and its markets and businesses are adjusting to the new realities. This adjustment is becoming painful for many and not all businesses are managing to retain their operations. There was a lot of interdependence between the businesses operating in various parts of the two Oblasts with their administrative centers, namely the cities of Lugansk and Donetsk. These links have been broken because the two administrative centers are now located in the NGCA and all the economic ties have been cut by the line of conflict.

A gradual reduction of the production capacities and even the closure of factories have resulted in increased unemployment in the two conflict-affected Oblasts. Before the conflict, industry provided the majority of jobs, followed by services. This left only about 10 percent of the labor force employed in the agricultural sector. The slowdown in production capacities and the closure of factories have put many people out in unemployment. Self-employment opportunities are very limited and therefore many are turning to migration in search of seasonal jobs elsewhere in Ukraine and abroad.

The population in rural areas are better positioned to engage in agricultural production for self-employment as they often have farm land widely available, which is a significant asset. However, disruption of market links for supply of farming inputs and marketing of produce makes it difficult to engage in and scale-up farming activities. Broken value chains are limiting the opportunity that agricultural activities can offer. With no other opportunities for income generation, labor migration is gradually becoming a tendency in rural areas as well.

Food prices have increased in both GCA and NGCA territories. Various factors have resulted in food price increases, such as currency depreciation, logistical complications in the conflict areas, damaged road infrastructure, closure of the food processing plants, cutoff the supply chains and many others. Food price increases have been more rapid and higher in the NGCA. Smaller agricultural production capacities in the NGCA territories, switching to the Russian Ruble, and closer alignment with the higher end market of the Russian Federation have been some of the contributing factors. The increase in food prices has created opportunities for local farmers both in GCA and NGCA to sell their products at higher prices.

Methodology and data

Conceptual framework

The purpose of this assessment is to evaluate the Socioeconomic impacts, status and needs of the conflict affected population in the Donetsk and Lugansk regions region of Ukraine and in particular to compare the evolution of the Socio-economic impact compared to the same scope assessment conducted at the end of 2015.

The assessment analyses and compares the livelihoods indicators of conflict affected rural households in the Donetsk and Lugansk administrative regions, and it considers both rural households not engaged in agriculture, as well as farming households engaged in substance production and commercial farming.

Based on the conceptual framework, the assessment indicators used in the 2015 assessment were largely retained.

This assessment considers the status of the surveyed households from multiple perspectives and tries to determine the overall spatial and temporal distribution of the impact of the conflict. The assessment aims to 1) analyse and evaluate the changes in vulnerabilities over time, 2) the abilities of households to cope with shocks, 3) the needs for improvement of their livelihoods, and 4) changes in the Socioeconomic indicators in the last 18 months.

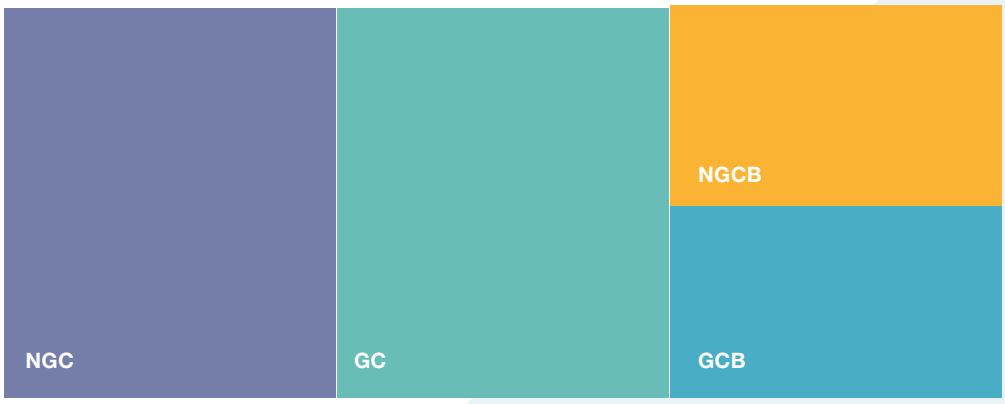
An integral aspect of the assessment is that it considers the availability of resources as an important aspect for determining the resilience of households, which can take different forms, including: financial, physical, human and social resources.

Each resource dimension protects households in different ways, and for the purposes of this assessment the availability of the following resources has been considered and assessed:

- Financial resources allow households to meet consumption needs over time and reduce the risk of falling into poverty in the event of a shock, impacting their incomes.
- Physical resources go beyond purely financial protection of households and provide an indication of the living condition of a household.
- Human resources determine the current and future earning power of a household. The more educated adult household members are, the less the vulnerable the household should be to unemployment. Finally, good health has positive effects on the learning abilities of children and increases the chance of adults having work.
- Lastly, social resources are important for social inclusion and the participation in family and community life. Access to broad networks of social connections is beneficial in the event of a shock. It can facilitate finding work, providing access to informal financial support, or simply be a source of information.

The methodology for this assessment follows a two-step approach. First, each indicator is analysed separately using descriptive statistics, providing an overview of the most common problems faced and the resulting needs for each of the target areas. Second, the descriptive analysis is further complemented with a multivariate analysis of the key indicators.

FIGURE 1. SAMPLE SHARES PER AREA



Source: FAO, 2017

Level of reliability and sample size

The assessment targeted the rural population residing in the Donetsk and Lugansk regions, on both sides of the contact line, as provided in Annex 2.

TOTAL TARGET POPULATION

Area	GCA	NGCA	Total
Persons	399 254	263 680	662 933
Households	145 183	84 513	229 696

The number of households provided in the assessment were calculated using the average household sizes obtained from the survey results, for each of the target areas. In order to reach a reliability level of 85 percent in each of the target areas, the total sample for the assessment consisted of 648 interviews, half of which were conducted in Donetsk and half in the Lugansk region.

Based on the following formulas, usually used for Socioeconomic studies in rural areas, the sample size was calculated:

$$SS = \frac{Z^2 * (p) * (1-p)}{C^2}$$

Z — Z value (e.g. 1.96 for 95% confidence level)

p — share picking a choice, expressed as decimal (0.5 used for sample size needed)

C — confidence interval, expressed as decimal (e.g., .05 = ±5)

SS — sample size

The obtained Sample Size (SS) was adjusted to the population size of the targeted area where the reliability was applied using the following formula:

$$Adj.SS = \frac{SS}{1 + \frac{SS-1}{Pop.}}$$

Adj.SS — adjusted sample size

SS — sample size

Pop. — population size

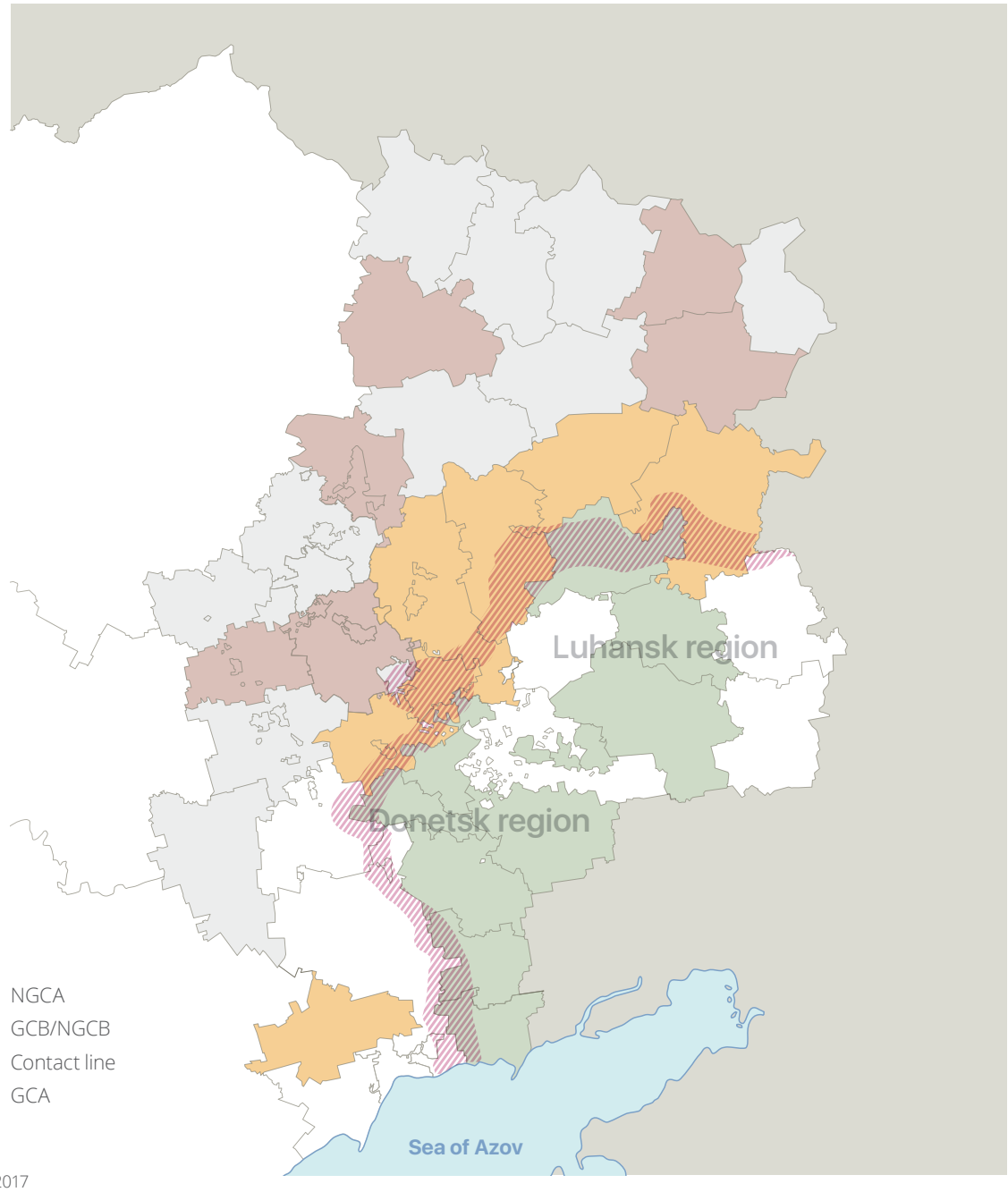
The level of reliability for this survey is valid for of the following areas:

1. heavy weapon exclusion zone (contact line)
2. Government Control area (GC) and
3. Non-Government Control area (NGC).

One third of the total sample was dedicated to each of those three areas to be assessed.

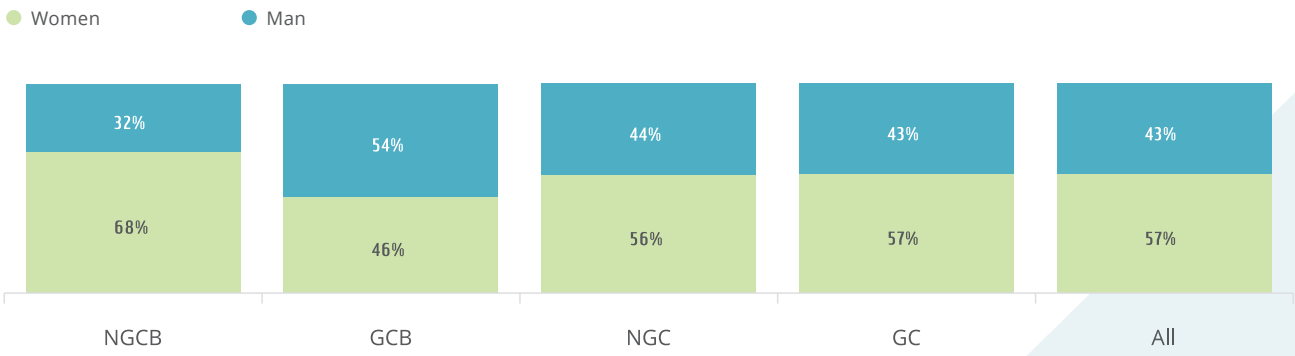
However, in order to capture the differences on both sides of the borderline, the sample for the exclusion zone was further subdivided into: heavy weapon exclusion zone in proximity to the Government Controlled area (GCB in further references) and heavy weapon exclusion zone in proximity to the Non-Government Controlled area (NGCB).

The sample composition for the assessment per share in each target area is provided in Figure 1.



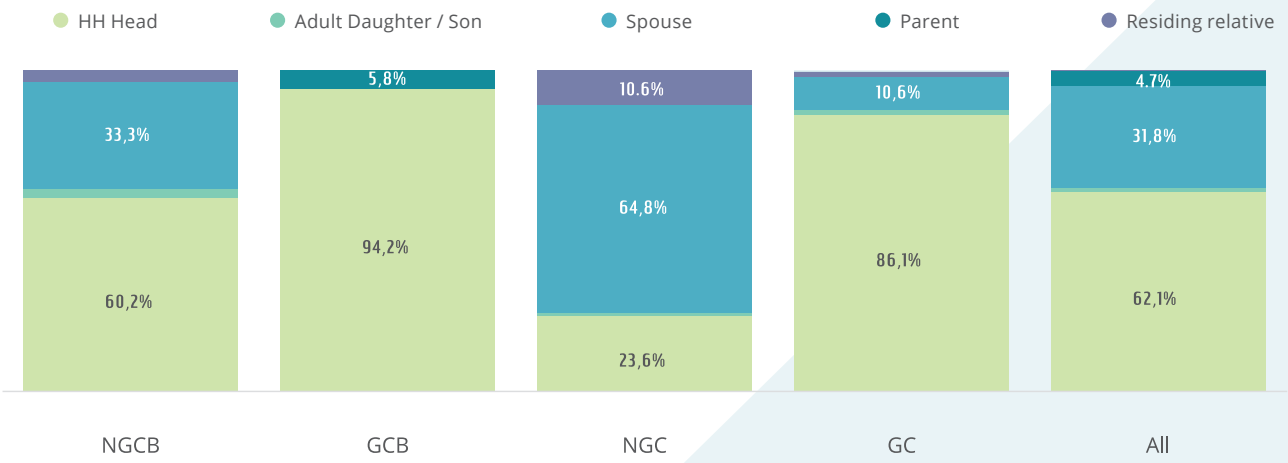
Source: FAO, 2017

FIGURE 2. SEX OF THE RESPONDENTS



Source: FAO, 2017

FIGURE 3.RESPONDENT RELATION TO HH



Source: FAO, 2017

Sampling methodology

The actual sampling was executed in several steps starting at the administrative level of each target area and ending at the smallest unit, in this case the households.

- During the first stage a random selection of six rayons to be surveyed (out of all affected) was conducted for each target area;
- During the second stage: in each area twelve villages were identified through purpose sampling (accessibility / security and representativeness), by selecting two villages in each of the previously selected rayon;
- During the third stage: selection of the households at village level was conducted, using transects and a systematic selection.

Before the interviews, FAO designed the questionnaire, which was tested and adjusted based on the feedback and recommendations received by the interviewers.

All of the interviewers underwent training prior to the field work. The trained interviewers visited the target communities at different times of the day, in order to capture both the residents venturing out of the communities and those remaining mainly at home.

There was no age limit applied to the respondents, although minors were excluded.
The work flow of the interviews is provided below:

1 person → 6 HH / day

1 team/3 persons/1 village/day → 18 HH/village

6 rayon / specific area → 18 rayon overall

2 villages / rayon → 36 HH / rayon

12 villages / area → 216 HH / area

3 * 216 HH / specific area → 648 HH overall

The field work, testing and translation of the questionnaire, interviews at household level and the data entry process, was outsourced to an external institution (local NGO).

The data was collected in April 2017 using the KoBoToolbox software.

Quality control of the field work and data entry was ensured by FAO controlling the processes and cleaning the database prior to analysis. Data analysis and reporting was conducted by FAO experts.

Both men and women were interviewed for the assessment. Women respondents outweighed men, due to the age structure of the population and the higher employment rate of men (and thus the absence of men during the working hours of the day).

The share of respondents specified by gender and target area is provided in Figure 2.

When the head of household was not present, a relative living in the household was interviewed. The relationship of the respondents to the head of the household is provided in Figure 3, indicating that a significant majority of the respondents are heads of the households or the spouses of the heads of the household.

Results

Demographic indicators

The term household refers to all the members of a family sharing the consumption (sharing the same meal or eating together) daily and contributing directly or indirectly to the income of the household through work, cash or in kind.

The average size of the conflict affected households is very small, averaging less than three persons per household. There has been an approximate 10 percent decrease in the average number of household members in the last 18 months. This was noted in all areas.

The average household size in the heavy weapon exclusion zones remain smaller, indicating the effect of the conflict and the proximity of the engagement line on household size.

On average the following Demographic makeup is notable:

- 34 percent of the households have a minor (0.62 minors per household), which is decrease compared to the average 0.68 minors per household in 2015.
- The number of adults has significantly declined from 2.26 persons per household in 2015 to 2.025 in 2017.
- 55.5 percent have a working age adult (1.04 persons per household).
- 98.9 percent of the households have at least one person of retirement age (0.98 pensioners per household).

On average, more than a third of the population has reached retirement age, less than a quarter is underage and the share of the working age population is similar across all surveyed areas. Bearing in mind the share of residents over 60 years old, and the share of households with pensioners, the results are characteristic of an aging population.

It is notable that compared to the 2015 assessment the number of children (0-11) has somewhat decreased, while the number of young people has somewhat increased (12-17). The fall in the number of minors is especially notable in the exclusion zones in proximity to the Non-Government Controlled areas.

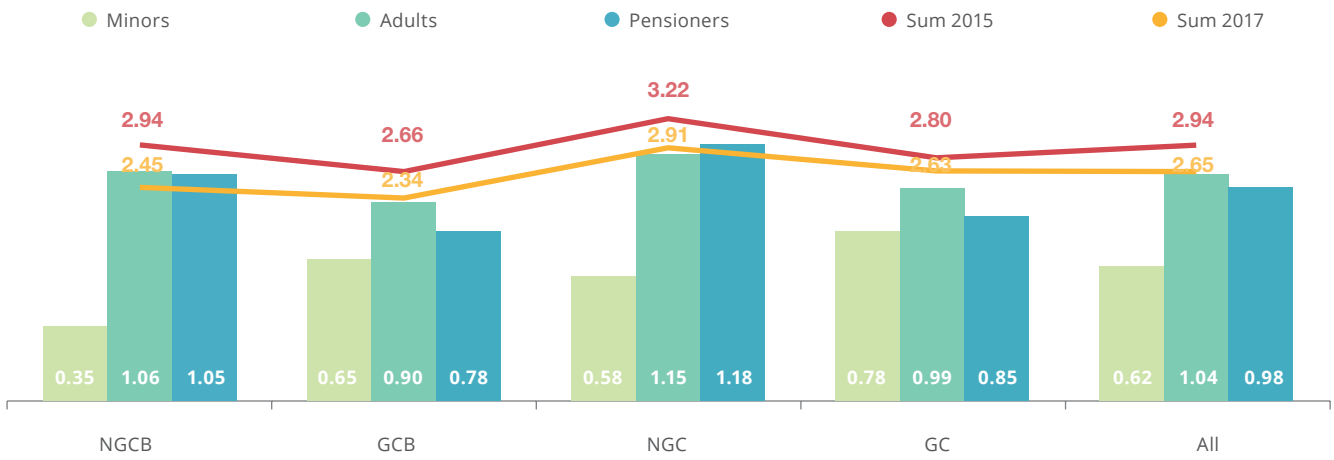
The share of the population over 60 years of age has increased by 6.2 percent on average while the working age population has decreased by 8.6 percent.

All these indicators, in addition to the reduced househild size, suggest that migration of the working population is on the rise, especially for those with small children, while young people, who are less independent tend to stay behind along with the retirement age population.
In costrast to the 2015 assessment the Non-Government Control areas now have a lower share of minors and a higher share of pensioners, indicating an increase in migration possibilities compared to the situation in 2015.

The average share of women in the population is slightly more than half. A significantly higher presence of women is notable in the Government Control areas.

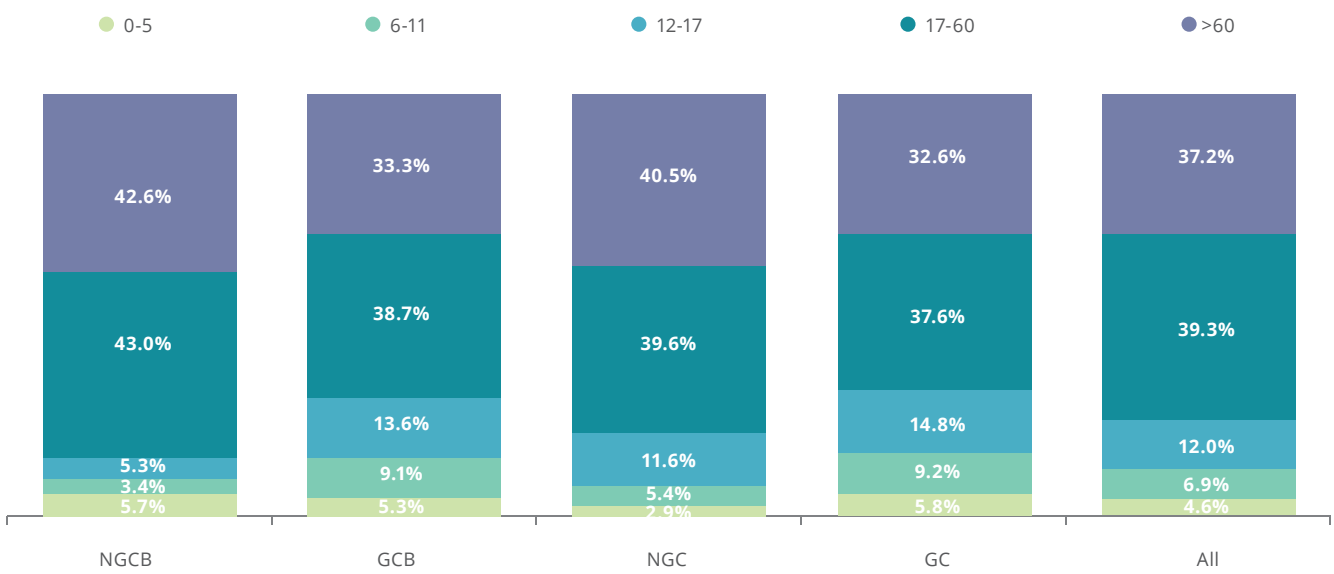
A small share (1.7 percent) of the interviewed

FIGURE 4. HOUSEHOLD SIZE (WITHOUT IDPs)



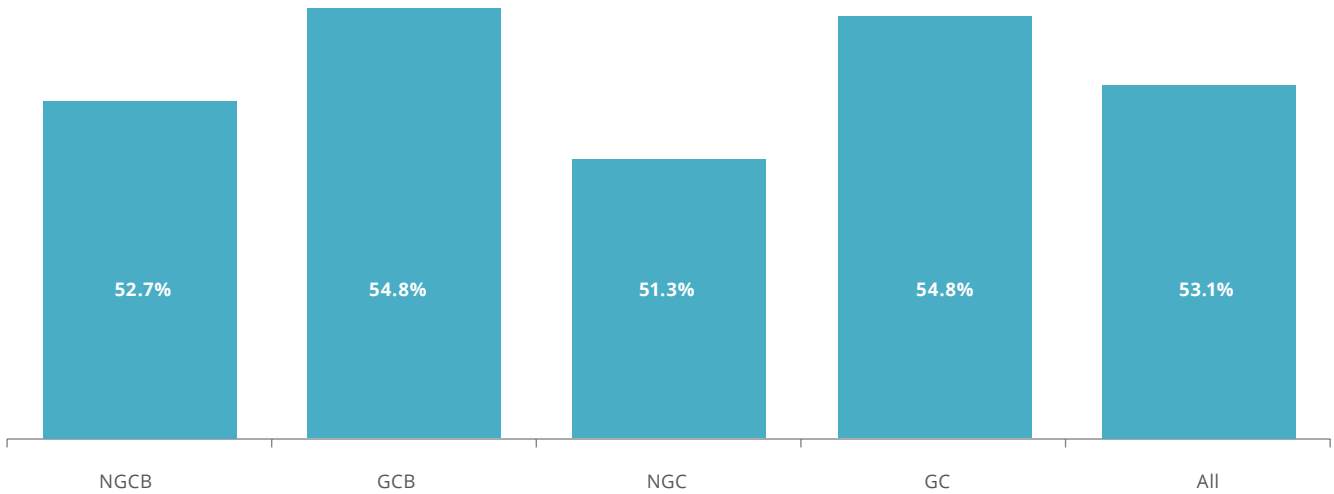
Source: FAO, 2017

FIGURE 5. HOUSEHOLD COMPOSITION - AGE



Source: FAO, 2017

FIGURE 6. SHARE OF WOMEN IN POPULATION



Source: FAO, 2017

households hosts IDPs, indicating an overall reduction by half compared to the 2015 findings. Sixty three percent of households housing IDPs are in the Government Control areas, whereas in 2015 the higher share was in the Non-Government Control areas.

The average number of IDPs hosted is 2.3 persons per household, significantly increasing the average size and needs of the host families but representing a negligible contribution to the needs of the overall population.

On average, 80 percent of the IDPs hosed are children/parents of the host families and 20 percent are relatives.

On average in very similar shares of households, decision is made by men, women or through consensus of the spouses (both). Significant differences are notable in the Non-Government Control areas where most households make decisions jointly, while in the Government Control areas the vast majority of household decisions are made by one person, with men slightly overweighing women decision makers.

Education is an important human resource that protects households from (monetary) poverty. A higher level of education generally has a positive effect on wages and household incomes. People with higher education have more opportunities to find jobs and earn higher incomes, thus making their families less vulnerable.

On average the education level of the respondents is high, with more than two thirds having completed tertiary or higher education.

The Non-Government Control areas have a slightly higher share of household heads with a high level of education and significantly less with secondary education, compared to the Government Control areas, indicating that proximity to urban centres influences the overall education level.

The increase of the overall share of elementary education compared to the 2015 assessment stems from the improved division of education levels used in this assessment.

Economic indicators

Financial vulnerability (lack of sufficient monetary resources) is measured by the current income level, the ability to borrow, and the presence of debts. Poor households have fewer resources to cope with a shock and are more vulnerable to social and economic hazards.

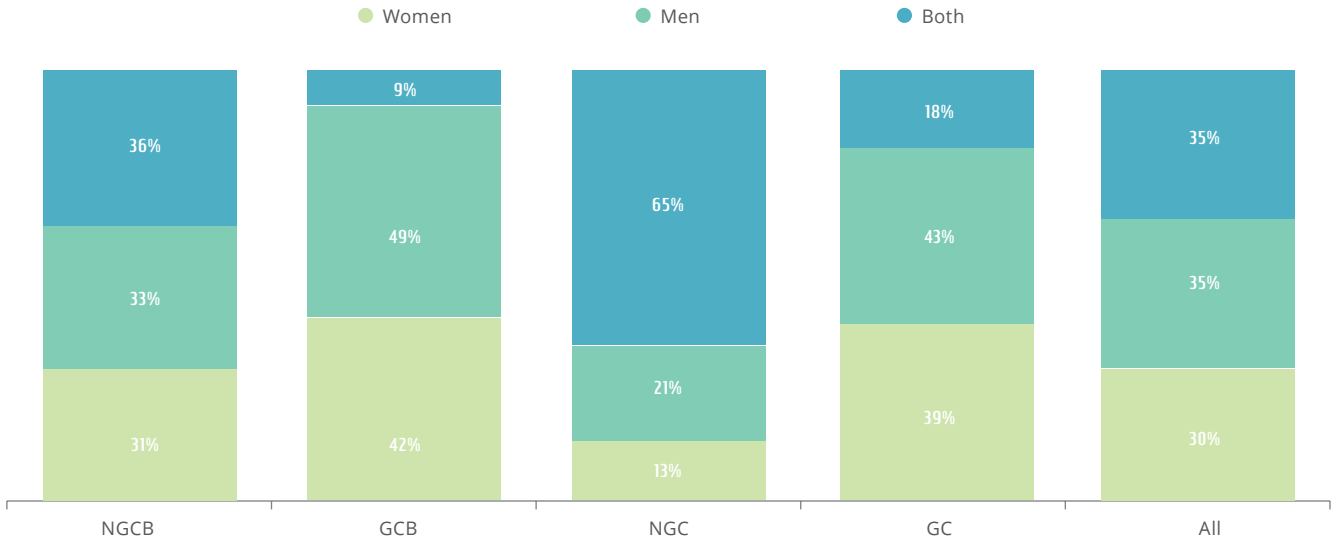
Poverty indicators vary and include the share of people living in poverty, the depth of poverty and the poverty severity. Overall, and especially in rural areas, households headed by women with children are particularly vulnerable to poverty.

In order to determine whether a household is vulnerable from a purely monetary perspective, the results on household incomes are compared to the national average wage[1], assuming that households with income of over one average wage are less vulnerable to monetary poverty.

We also try to assess the effects of the conflict on the poverty indicators, by comparing the differences between the pre-conflict situation and during the assessment.

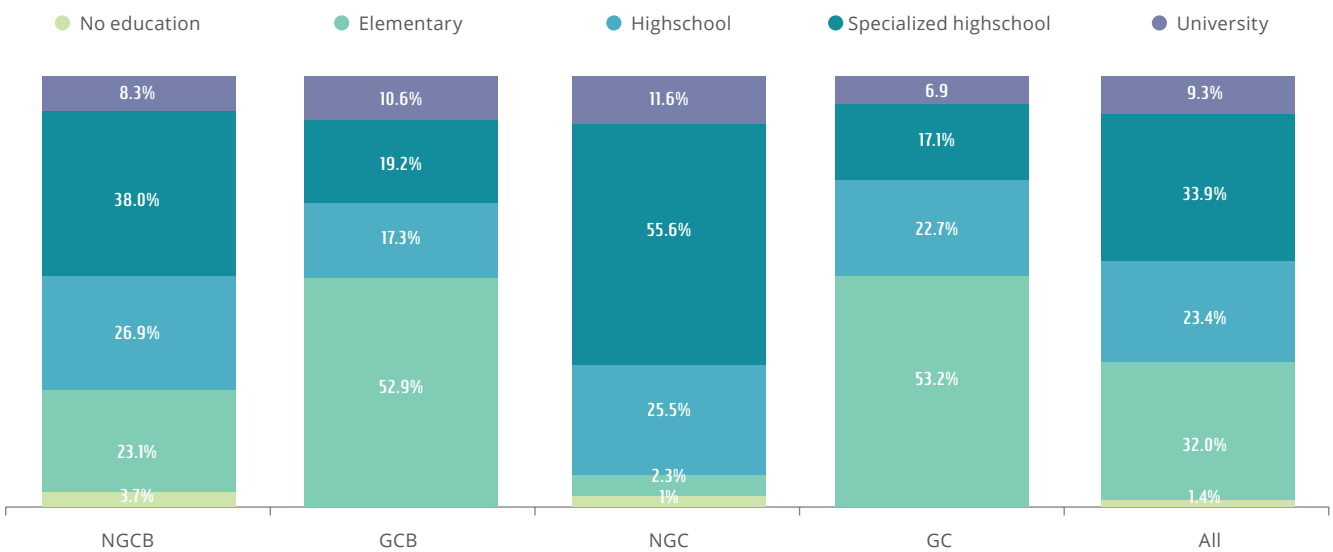
[1] Average national wage in Ukraine was aapproximately UAH 4 400 in June 2015, equaling USD 200 using the UN exchange rate of 22 UAH/1 USD. Average national wage in Ukraine was approximately UAH 6 659 in April 2017, equaling USD 245 using the UN exchange rate of 27.12 UAH/1 USD.

FIGURE 7. DECISION MAKERS



Source: FAO, 2017

FIGURE 8. EDUCATION OF THE HOUSEHOLDS



Source: FAO, 2017

Incomes

Having sufficient monetary resources protects households against shocks. Having income from a stable source may also offer more protection compared to working in informal or otherwise uncertain jobs. Households are considered more vulnerable if they have no stable income sources. The decision as to which income source is stable is conservative, and only formal wage income and old-age pensions are perceived as stabile by the respondents.

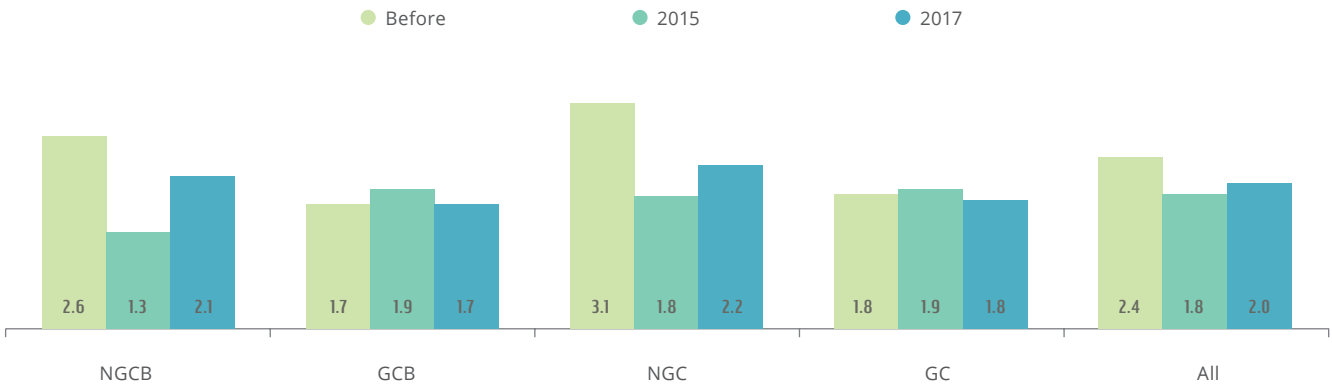
Since Ukraine has a universal pension scheme, all individuals of pension age are classified as pension recipients. As a result, all households with pensioners are considered less vulnerable.

Incomes from self-employment, agricultural production or property (e.g. land lease) as well as informal transfers (remittances, transfers from relatives and friends) are considered as less reliable.

Bearing in mind the relativity of the perceptions, the quantitative measures of the financial resources are complemented with measures of quality.

As households are more complex economic units than individuals, information on the number of household "cash earners" before the conflict, in 2015 and at present, is provided in Figure 9.

FIGURE 9. INCOME SOURCES #/HOUSEHOLD



Source: FAO, 2017

An average increase of approximately 10 percent in the number of cash earners on is evident. However, this increase is only on account of the Non-Government Control areas, while the Government Control areas display a decrease in the average number of income sources per household.

All surveyed households had incomes prior to the conflict, compared to one percent of households with no income in 2015 and two percent at present.

The shares of the population per number of income sources (Figure 10), provides for the evolution of the conflict in terms of the number of income sources. In all areas, it is evident that the share of households with one and two income sources has risen, on account of the households with multiple income sources.

The Non-Government Control areas have significantly higher shares of households with three income sources, likely due to the application of various coping strategies due to small individual incomes. In the Government Control areas, the once small but relevant share of households having more than three income sources has almost entirely disappeared.

The average annual incomes of the surveyed households are provided in Figure 11 both in UAH and in USD, adjusted for the exchange rate at the time of the respective assessment. The current monthly income of the average household in the conflict affected area is calculated at USD 144.1. Overall incomes in both currencies have somewhat increased compared to 2015 (USD 65.4[2]). However, they are still less than half of the monthly income before the conflict (USD 390[3]).

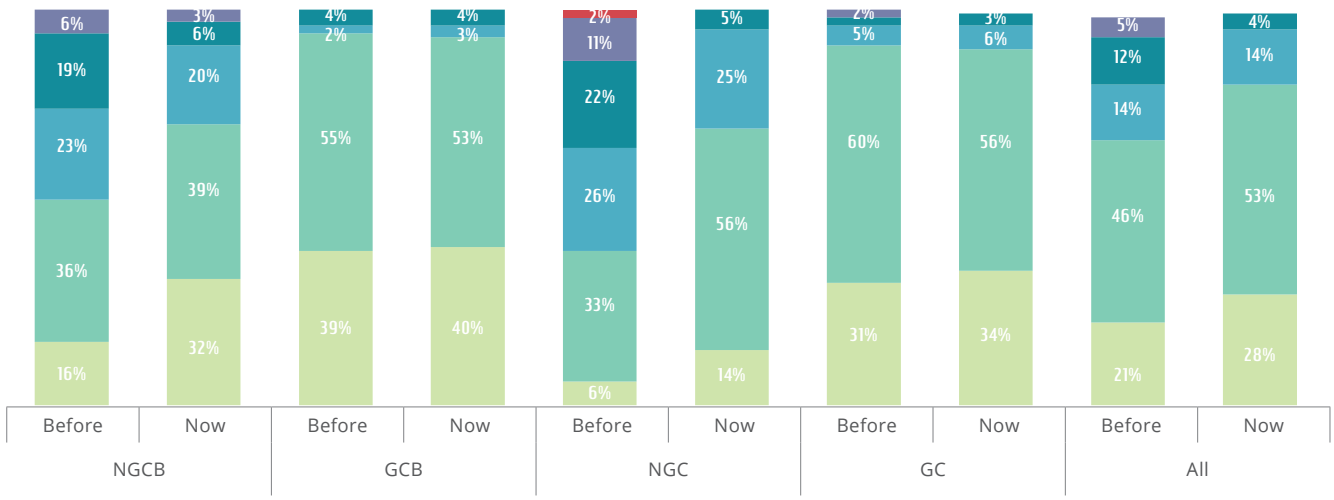
The lower incomes in the Non-Government Control areas recorded in 2015 have significantly improved when converted to USD, using the prevailing historic exchange rate. Reduced annual incomes are notable in the Government Control areas.

The contribution of the agricultural sector both in terms of number of income sources per household and in terms of values is provided in Figure 12. On average, households involved in agricultural production have 2.37 sources of income per household, whereas 1.2 of the sources are related to agricultural activities.

Given the higher importance of agriculture, households from the Non-Government Control areas have more agricultural and additional income sources compared to those in the Government Control areas. In line with this finding, the incomes of households involved in agriculture (considering the size of the average producer) in the Non-Government Control areas are similar to or higher than the average monthly incomes of non-agricultural households. Increases in food prices in the Non-Government Control areas might be driving the increase of the recorded incomes. Average incomes of households involved in agricultural production in the Government Control areas are lower than the average monthly incomes of non-agricultural households, further confirming the limited cash contribution of subsistence production.

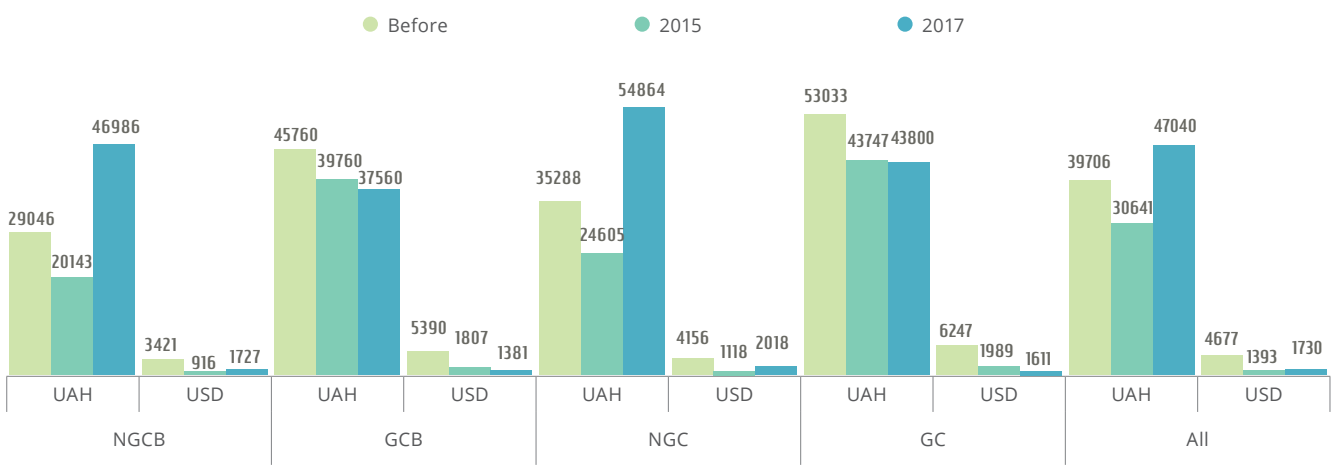
[2] UN exchanged rate used: 22UAH to 1 USD
[3] UN exchanged rate used: 8.49UAH to 1 USD

FIGURE 10. POPULATION % / # OF INCOME SOURCES



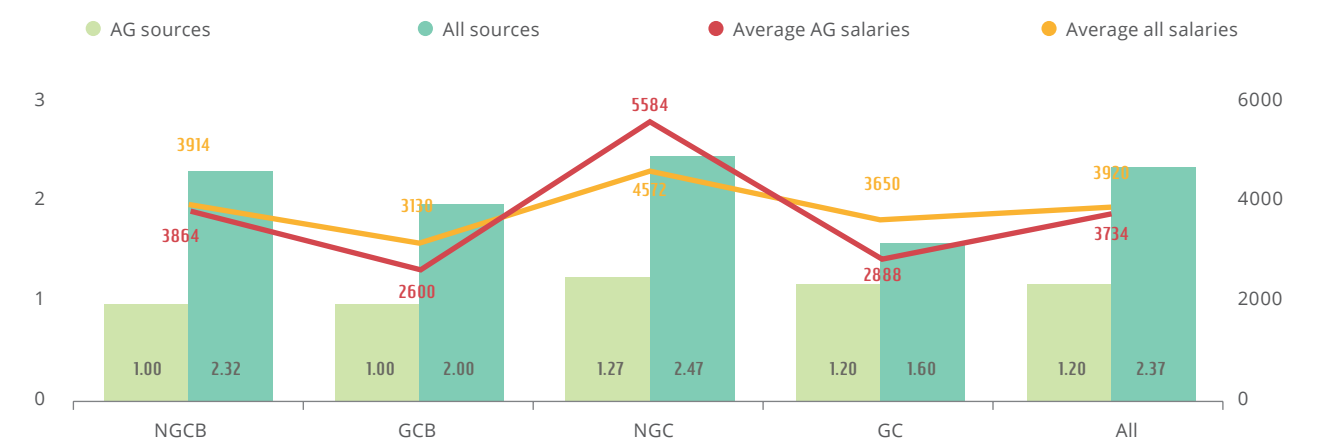
Source: FAO, 2017

FIGURE 11. ANNUAL SALARY LEVELS



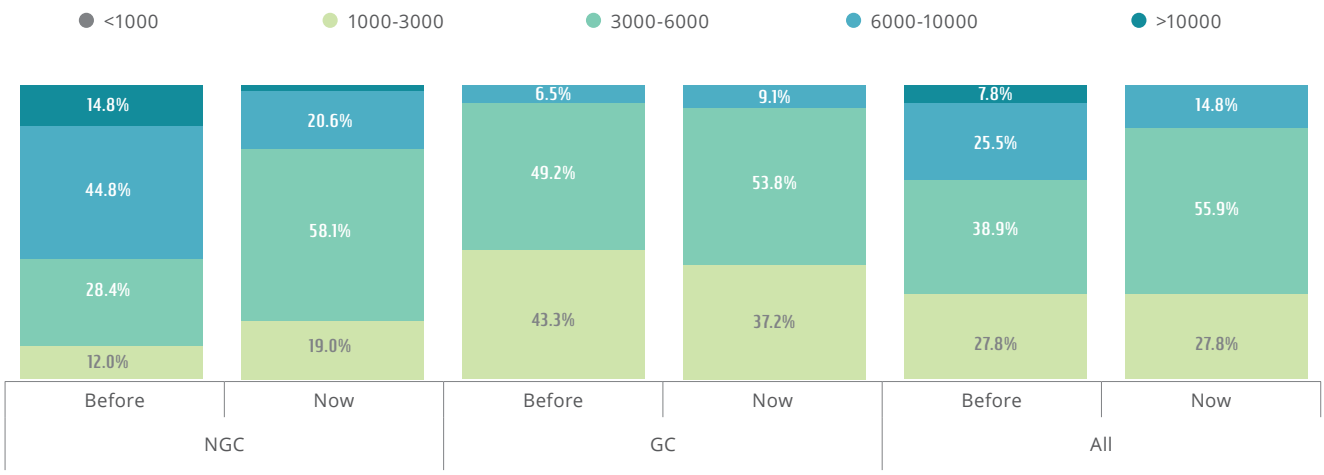
Source: FAO, 2017

FIGURE 12. INCOME SOURCES AND AGRICULTURAL INCOMES



Source: FAO, 2017

FIGURE 13. POPULATION SHARE PER INCOME



Source: FAO, 2017

The shares of households based on the size of income sources compared in the pre-and post-conflict situation, indicate that:

1. marginal share of respondents with incomes of less than UAH 1 000 (36.7 USD), being on the verge of absolute poverty;
2. overall slight increase in the number of households with incomes from UAH 1 000 - 3 000;
3. significant increase in the number of households with incomes from UAH 3 000-6 000;
4. significant decrease of the share of households with incomes UAH 6 000 - 10 000;
5. almost complete phasing out of the households with incomes above UAH 10 000.

Further analysis of the data confirms that 15 percent (25 percent in 2015) of the respondents have household incomes higher than the national average wage[4] (UAH 6 659 in April 2017); 55 percent of respondents (representing 364 613 persons within 126 332 households) can be considered exposed to monetary poverty, while one third of the population (representing 112 589 persons within 64 774 households) lives in poverty, with an average monthly income of less than USD 100. The Government Control areas have significantly higher shares of very low income households, surpassing one third of the population, compared to less than one fifth in the Non-Government Control areas.

In addition, in the Non-Government Control areas the share of households with very low income has increased from 12 percent to 19 percent, while in the Government Control areas it has reduced from 43.3 percent to 37.2 percent.

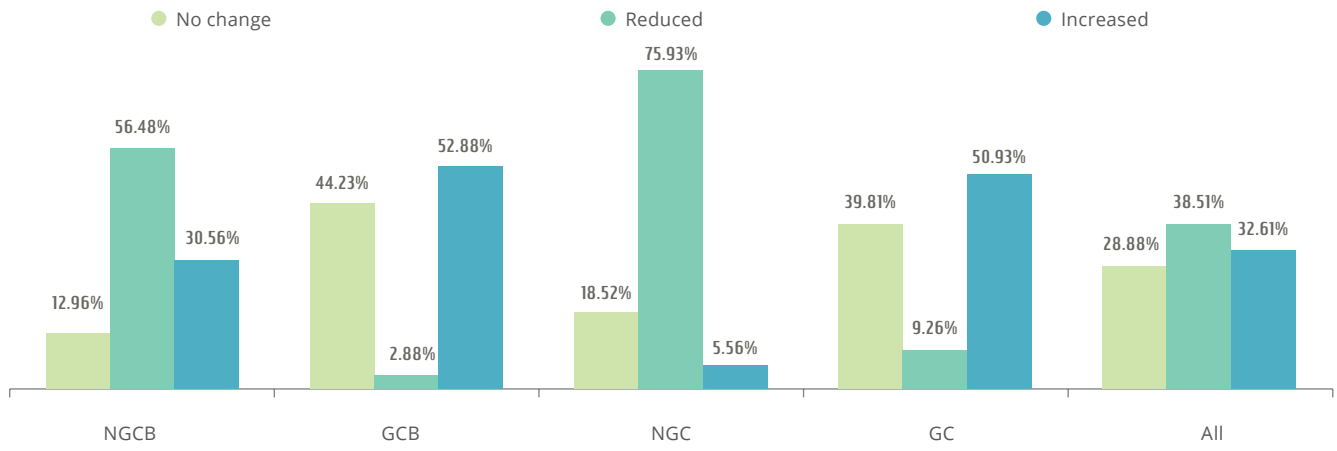
The overall development of the economic situation considering incomes from all sources is presented in Figure 14.

Overall, incomes for the majority of the households have remained stagnant with a slight decrease. Although there have been positive developments on some income indicators, more than two thirds of the respondents from the Non-Government Control areas have experienced a decline in their household incomes, compared to less than a tenth in the Government Control areas. More than half of the households the Government Control areas and less than a third in the Non-Government Control areas have noted an increase in their incomes, with the remaining part of the household incomes remaining stagnant.

Figure 15 provides feedback in the quantitative increase and reduction of incomes. On average those with reducing incomes have observed a decrease of 43 percent, while those with increase have quantified it on average at 17.5 percent. Severe reduction of overall household incomes is recorded in the Non-Government Control areas

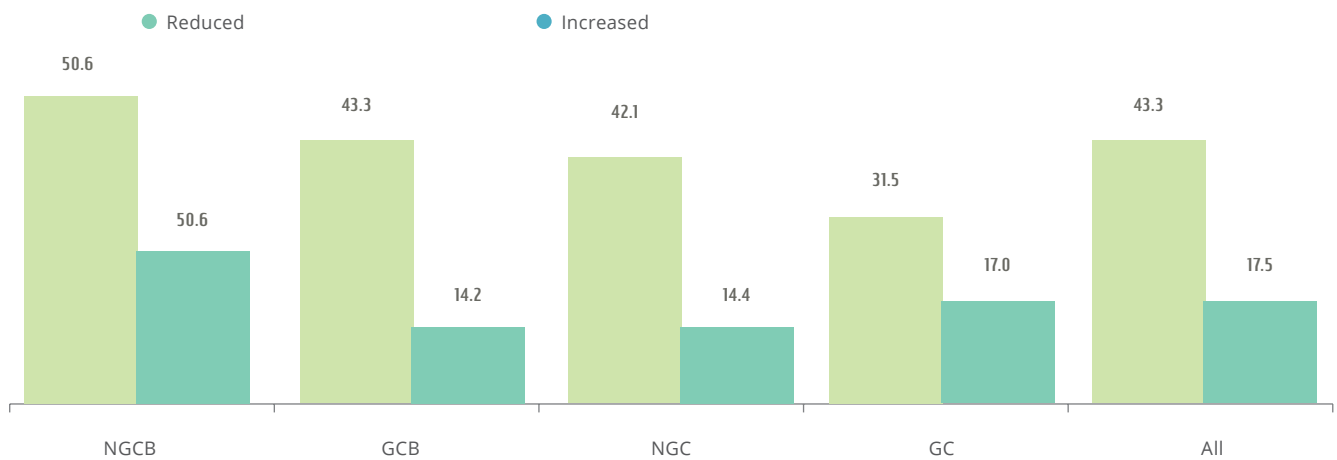
[4] https://tradingeconomics.com/ukraine/wages

FIGURE 14. INCOME VARIATIONS (HH SHARE)



Source: FAO, 2017

FIGURE 15. CHANGE IN VALUE OF HOUSEHOLD INCOMES (%)



Source: FAO, 2017

with two thirds of the respondents losing almost half of their household incomes, compared to a tenth of the households losing a somewhat more than a third of their incomes. On the other hand, a smaller number of household from the Non-Government Control areas and more than half of the households in the Government Control areas noted an increase of less than a fifth of their overall household incomes. It can be concluded that third of the households are failing to adapt to the new situation and faces monetary poverty, in the Non-Government Control areas with the status of a limited part of the households improving.

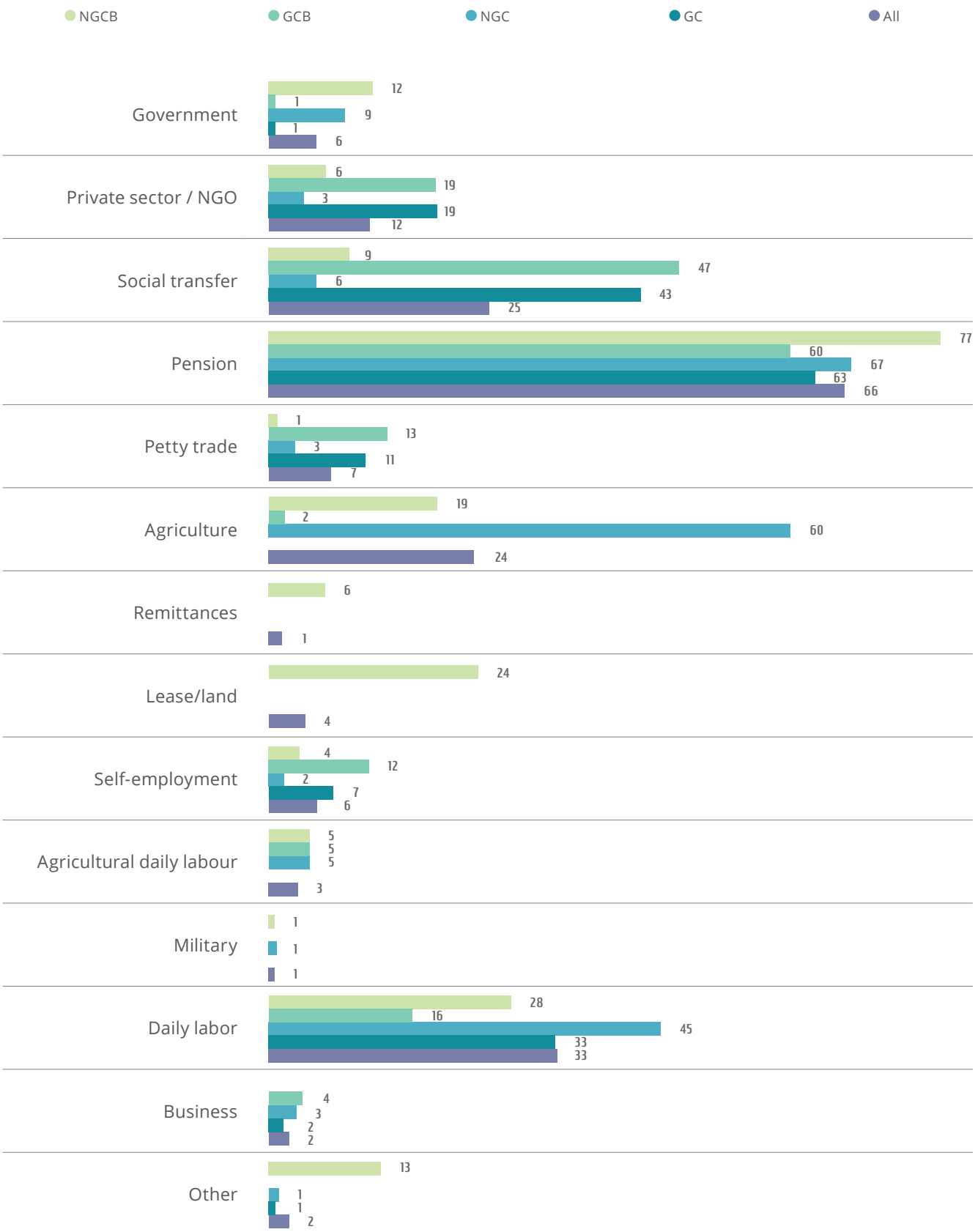
The type of income, in parallel with the number of incomes and size of the household, is a significant determinant of monetary poverty.

The likelihood of vulnerability increases with the number of dependents in the household, and with the number of low incomes (such as pensions).

The probability of living in poverty is lower for individuals where a larger share of household members contributes incomes from different sources, or if the household has income from a regular wage, self-employment or agriculture.

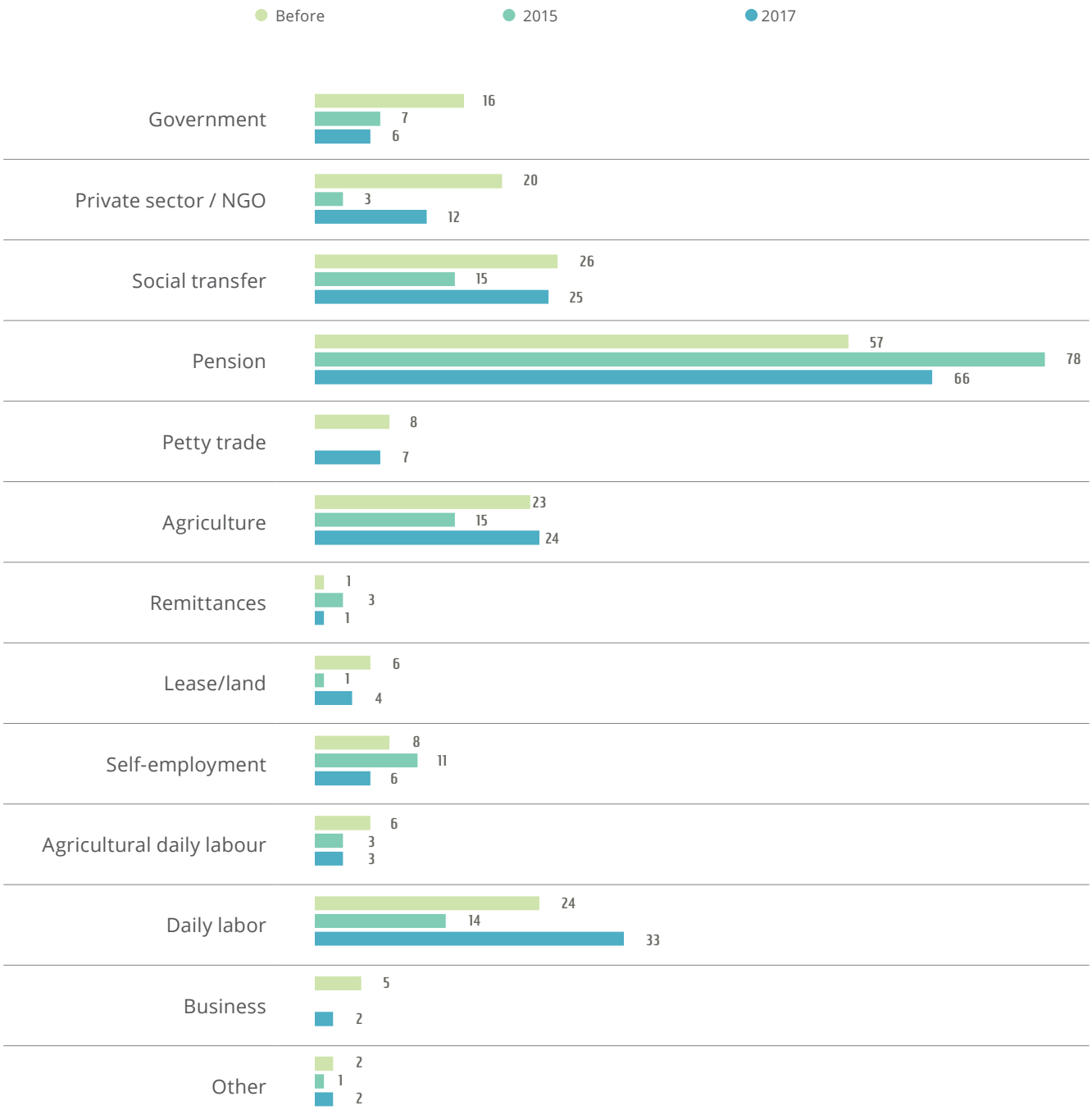
The most important types of household incomes are provided in Figure 16. Overall, as in 2015 pensions remain the most important income sources for households; followed by social transfers, daily labour and sales of agricultural produce.

FIGURE 16. INCOME SOURCE / HOUSEHOLD SHARE (%)



Source: FAO, 2017

FIGURE 16. INCOME SOURCE EVOLUTION (%)

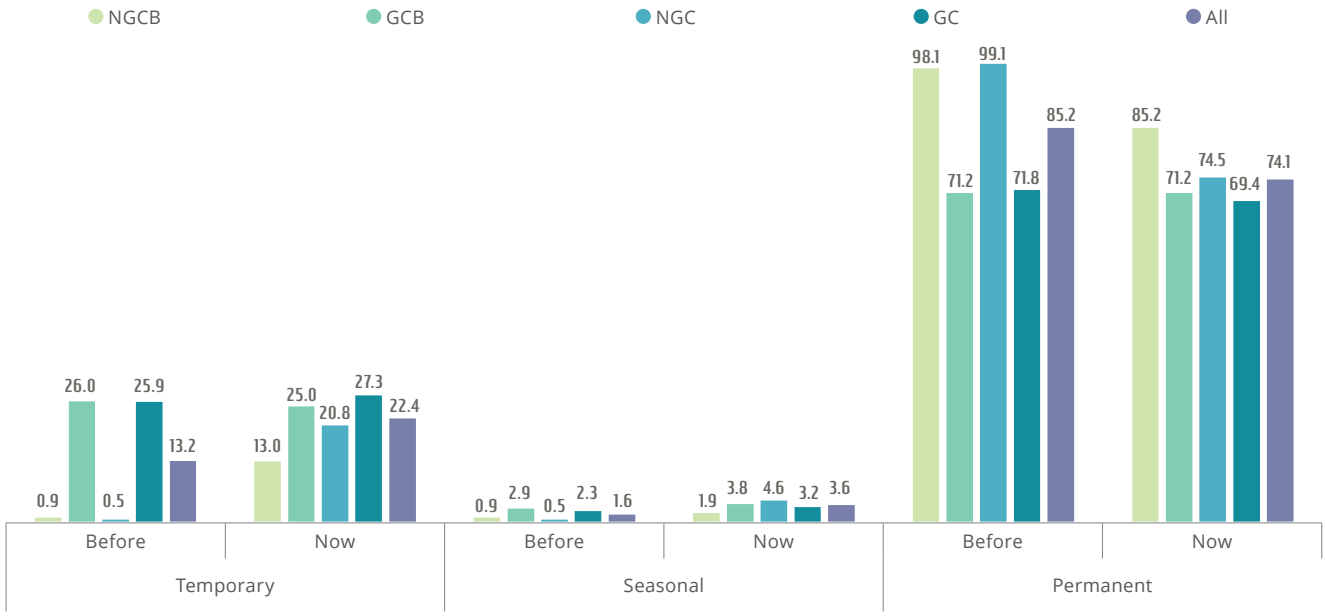


Source: FAO, 2017

Analysis per target area indicates that:

- Government jobs are of limited relevance in the Non-Government Control areas and of low relevance in the Government Control areas;
- Social transfers are highly relevant in the Government Control areas and of low importance in the Non-Government Control areas;
- Incomes from the private sector and petty trade are more important in the Government Control areas;
- Land leases and remanences have importance only in the Non-Government Control areas;
- Self-employment is of some importance in the Government Control areas, but has limited role in the Non-Government Control areas.
- Agriculture is a relevant income source in all areas and especially in the Non-Government Control areas, with the exception of the Government Control areas further from the exclusion zone, where it seems that agriculture has most retracted since 2015.

FIGURE 18. TYPES OF EMPLOYMENT (%)



Source: FAO, 2017

The comparison of the main pre-conflict and current income sources in the conflict affected areas illustrates the following trends:

1. Government employment overall has continued to decrease, meaning less permanent and secure jobs for the population.
2. Private sector employment, petty trade, leases of land and business as income sources, have started to recover from the all-time lows in 2015, providing partly more stable jobs and more diverse incomes.
3. Social transfers and agricultural incomes have recovered in terms of importance to the pre-conflict levels.
4. The importance of pensions has decreased since 2015, indicating the availability of other income sources, although it is still yet to reach pre-conflict levels.
5. Remittances have decreased.
6. Low paying and unreliable daily labor has acted as a buffer, absorbing the available workforce and has currently increased to well above pre-conflict levels.

The comparison of the situation before the conflict and in 2017 in terms of type of employment held by the conflict affected households is shown in Figure 18.

Overall, three quarters of households have income earners with permanent jobs, or approximately 11 percent less than before the conflict. The share of households with permanent jobs in the Government Control areas has almost reached the pre-conflict levels. Similarly, the situation has reverted in terms of seasonal and temporary jobs. Almost all the decrease of permanent employment is noted in the Non-Government Control areas, with temporary jobs such as daily work, and to a lesser extent seasonal jobs, replacing the lost permanent employment in the Non-Government Control areas. However, it must be cautioned that the average increase of stable income sources per household, does not mean a proportional decrease of unemployment for the entire work able population.

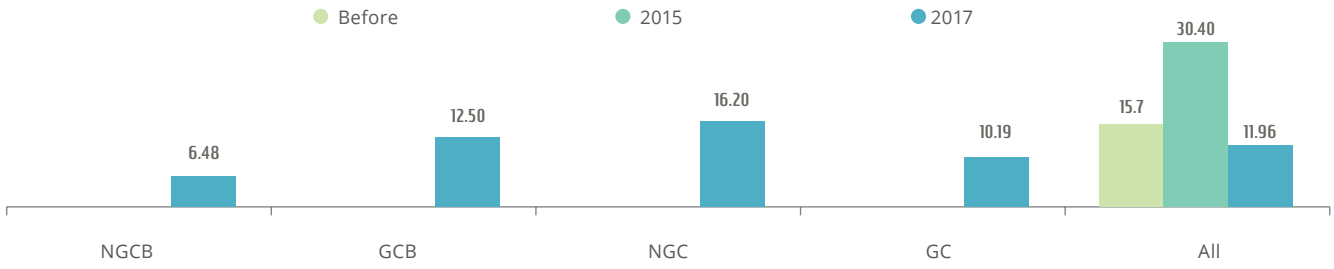
Debts

The presence of formal and/or informal debts may increase the financial vulnerability of households.

The share of respondents with debts towards financial institutions, utility providers or the informal sector (such as relatives and friends) has reduced to almost to pre-conflict levels on average.

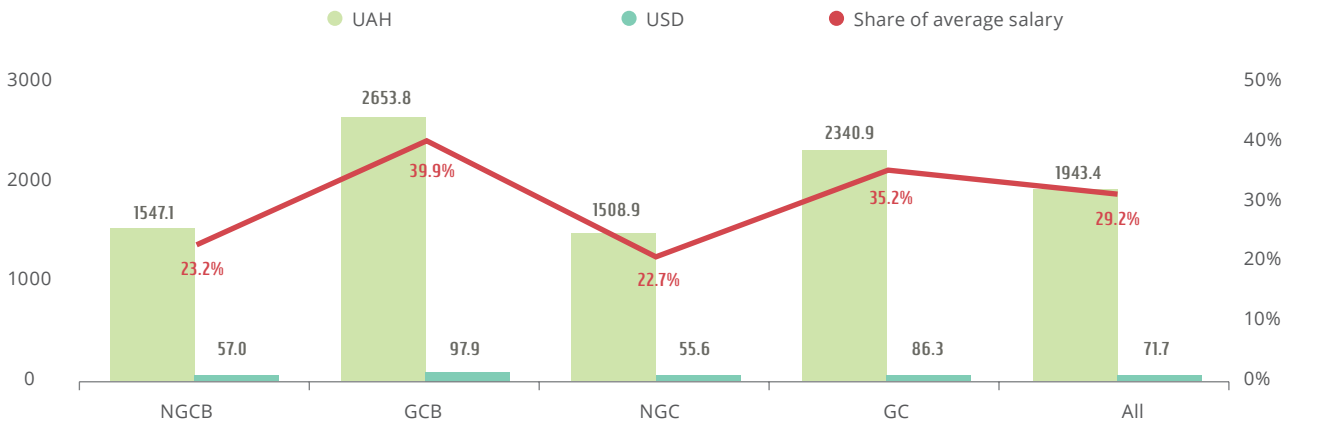
The decrease in debt is more pronounced in the Government Control areas, where it is lower than

FIGURE 19. HOUSEHOLDS WITH DEBTS (%)



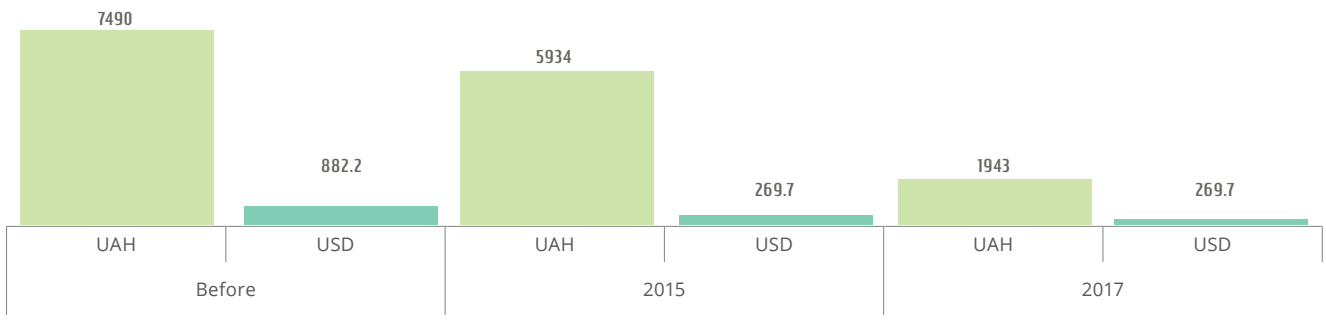
Source: FAO, 2017

FIGURE 20. HOUSEHOLDS DEBTS



Source: FAO, 2017

FIGURE 20. HOUSEHOLDS DEBTS EVOLUTION



Source: FAO, 2017

before the conflict, while in the Non- Government Control areas it has significantly lowered but it is still somewhat higher than the pre-conflict situation.

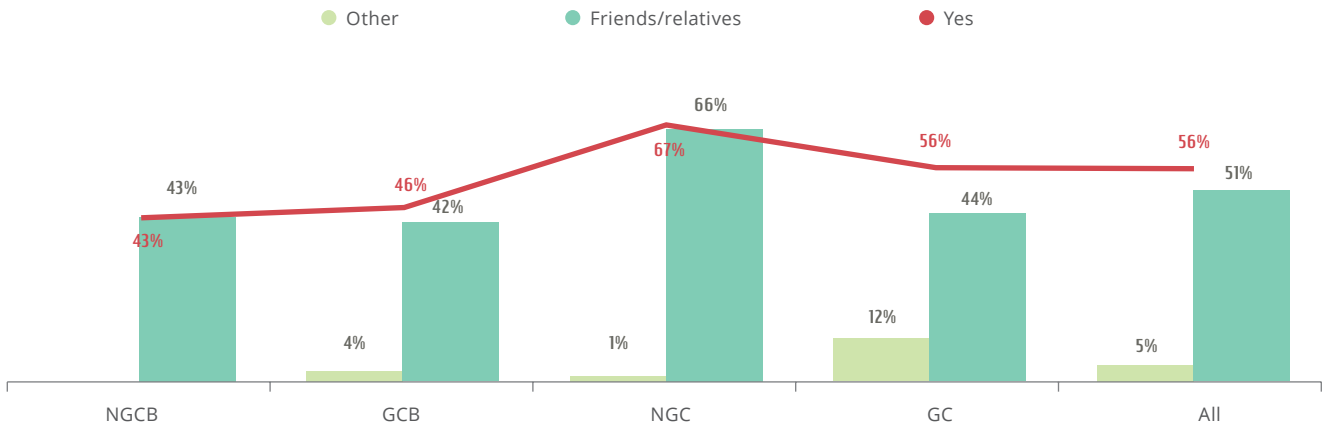
This finding matches the overall development in terms of incomes in both quantitative and qualitative terms.

Average household debt is UAH 1 943 (71.7 USD)[5] or approximately one third of the average annual salary in Ukraine in April 2017. This represents a decrease in debts by three quarters compared to 2015. The most significant decrease is notable in the Non-Government Control areas. A proportional decrease in terms of shares of debt free households is notable in the Government Control areas, although in terms of value, debts remain significantly higher compared to the Non-Government Control areas, as in 2015.

Figure 21 shows the evolution of the debts, adjusted in accordance to the exchange rate at the time of the respective assessment. Limited and diminishing access to funds, rather than overall improvement of the economic wellbeing of the population, is a likely reason for the result.

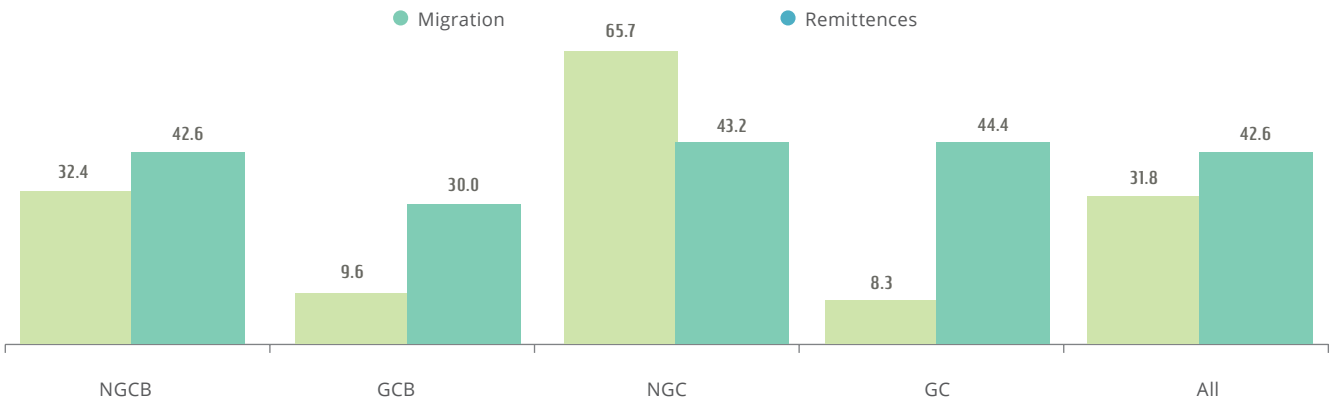
[5] Calculated on basis of the UN exchange rate from June 2017 (27.12 UAD/1USD)

FIGURE 22. ACCESS TO FINANCE



Source: FAO, 2017

FIGURE 23. MIGRATION REMITTENCES (%)



Source: FAO, 2017

Access to funds

Access to financial markets can help households bridge monetary shortfalls and smooth their consumption over time. Access to informal credit is also used as an alternative indicator for access to cash, especially in scenarios where the functioning of the markets has been impacted.

Since households use both formal and informal financial channels, we have considered both access to financial institutions and the possibility of borrowing money from family, relatives and friends.

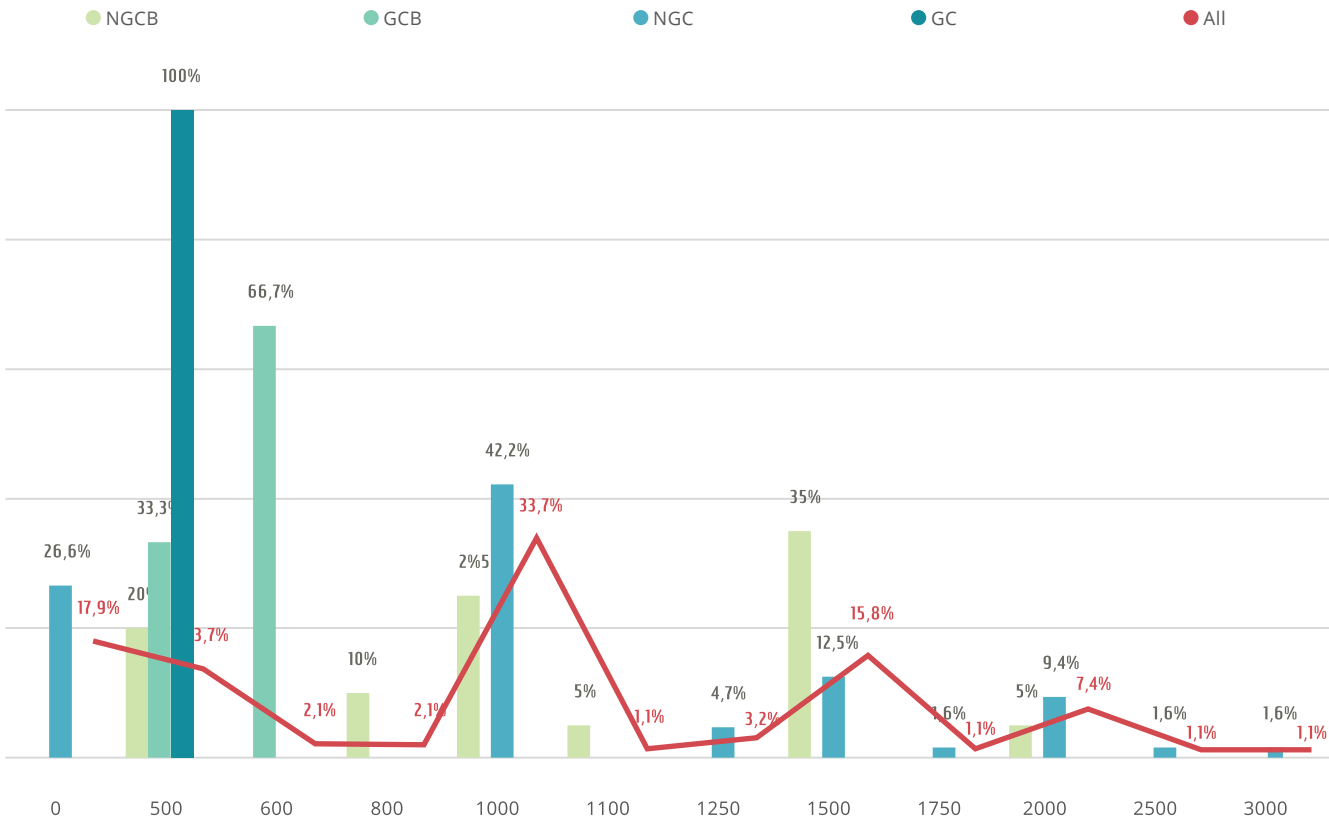
Figure 22 shows the share of households with access to finance, indicating that on average, more than a half of respondents still have access to funds, although the share is significantly lower than in 2015 (67.6 percent). It is also notable that the credit sources have also reduced, leaving the respondents to rely mostly on their social connections.

A somewhat lower share of the households in the Government Control areas are able borrow funds, compared to a quarter in the Non-Government Control areas, in contrast to the 2015 findings.

Respondents had virtually no access to commercial / formal credit sources, as the local banking systems continue to be unwilling to provide credit to the conflict affected area (in particular for the agricultural sector, due to a lack of collateral, high sector risks and the low profitability of farms). The inaccessibility of formal credit adds yet another obstacle to maintaining and increasing the agricultural efficiency of the producers.

In the Non-Government Control areas, the banking sector seems not to provide any services and households rely only on family, friends and relatives as sources of credit. In the Government Control areas, the banking sector does operate, although with seemingly very limited services, which is typical of high risk environments.

FIGURE 24. SHARE OF REMITANCES PER VALUE (UAH/MONTH)



Source: FAO, 2017

Migration

Although migration contributes to temporary separation and livelihood shocks in households, it can also improve its resilience by protecting the most vulnerable, reducing consumption needs and increasing incomes. Households that receive income from informal transfers (remittances) are less likely to be exposed to monetary poverty, all else being equal.

The overall migration trend of the conflict is considerable and increasing levels of outmigration from the target areas (approximately 70 043 households) is notable. A third of households have migrants, which is a significant increase since 2015 (16.2 percent). Migration has reduced only in the exclusion zone (23.1 percent in 2015) under Government Control and has increased in all other areas. A slight increase has been noted in the Government Control areas (6 percent in 2015) and large increases in the Non-Government Control areas (28.2 percent in 2015) and its exclusion zone (5.6 percent in 2015), suggesting that more than half of households in the Non-Government Control areas have migrants.

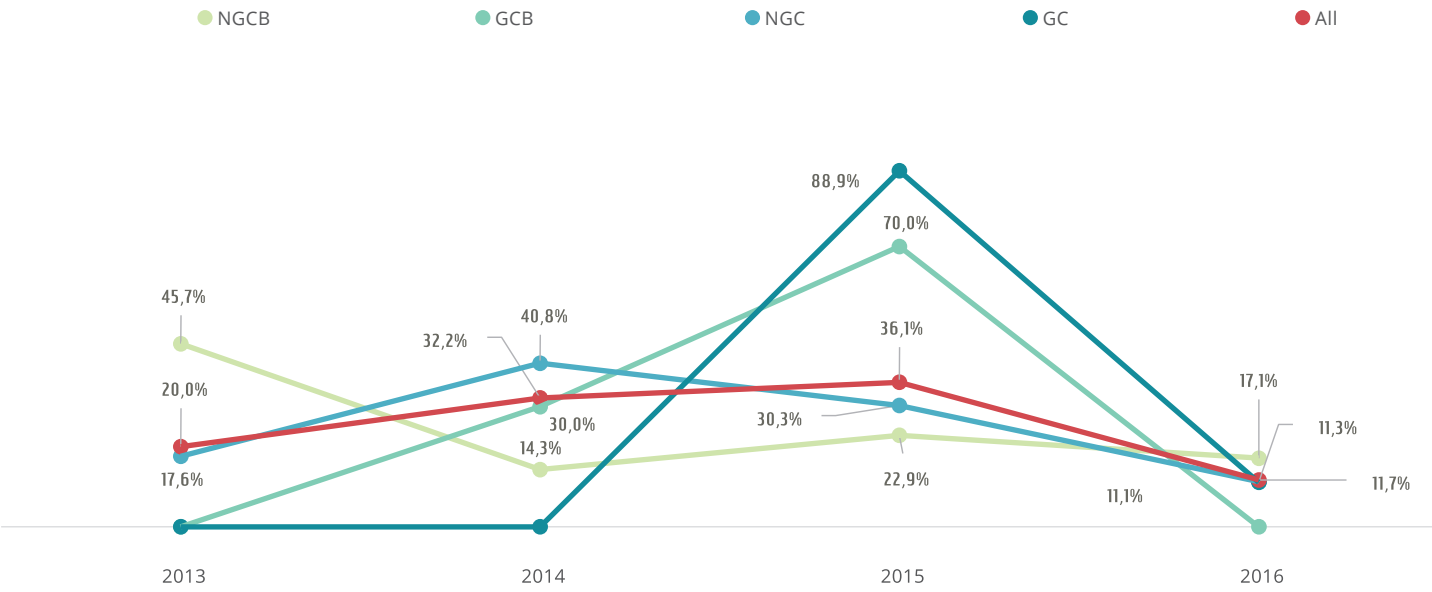
A significant share of households with migrants are receiving remittances, with relatively similar shares across all areas. However, this is an overall a significant reduction compared to the 78.4 percent of migrants sending back remittances in 2015. This occurrence is connected both to the improving food security situation as well as with the more permanent type of migration.

The majority of migrants from the Government Control areas tend to send lower value monthly remittances compared to the migrants from the Non-Government Control areas.

The average value of remittances sent back by the migrants is USD 47 per month[6], or somewhat higher than the average remittance from 2015 (USD 42 per month[7])

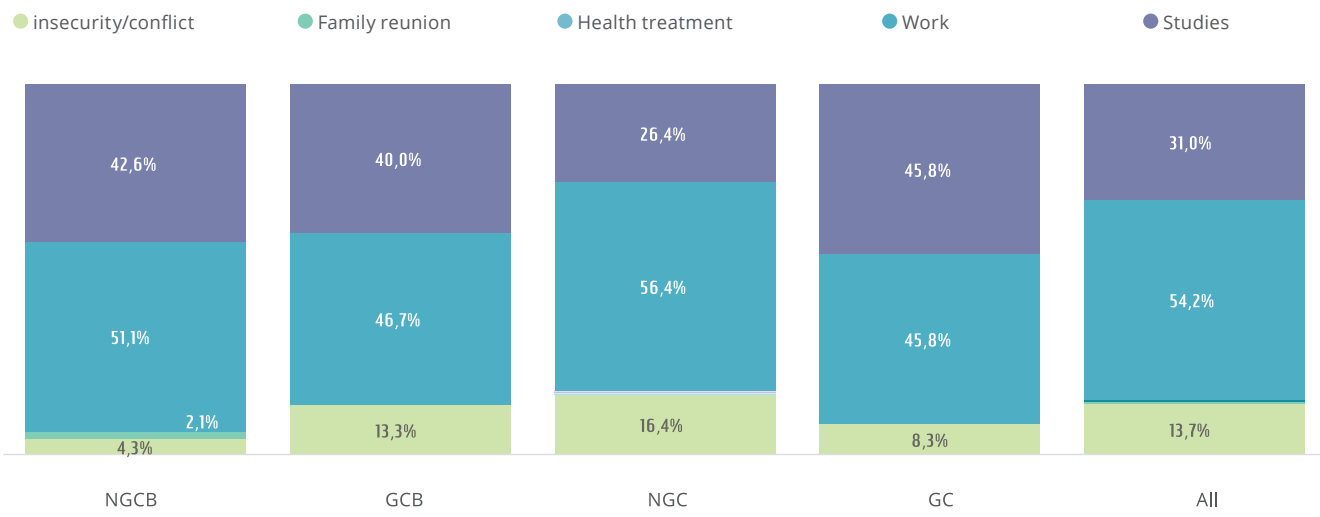
[6] Calculated on basis of the UN exchange rate from June 2017 (27.12 UAD/1USD)
[7] Based on the UN exchange rate for September 2015 of 22 UAH for 1 USD.

FIGURE 25. MIGRATION TIMELINES



Source: FAO, 2017

FIGURE 26. MIGRATION REASONS

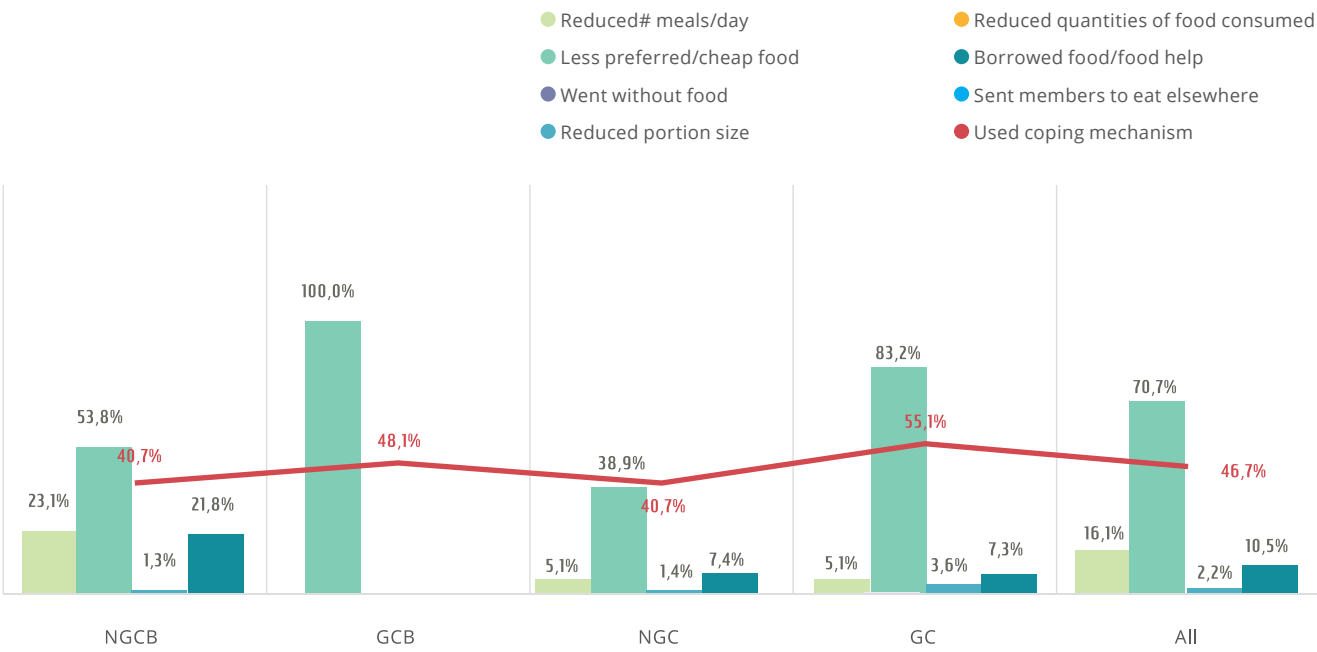


Source: FAO, 2017

Most migrants from the Non-Government Control areas left during the early stages of the conflict with a largely persisting trend up to 2016. Conversely, the number of migrants from the Government Control areas sharply increased during the post conflict period, culminating during 2015. All areas showed a similar decrease of migration in 2016. There are no significant differences in migration on regional level.

The pursuit of employment is the most common reason for migration and was listed by more than half of the households with migrants (25.1 percent in 2015), followed by family reunion (4.8 percent in 2015) and insecurity (47.9 percent in 2015), indicating that the migrants' main motivation is economic.

FIGURE 25. MIGRATION TIMELINES



Source: FAO, 2017

Food security and coping mechanisms

Exposure to shocks contributes to the economic and social vulnerability of households. Analysing the occurrence of shocks provides an indication of the level of shock exposure of different households.

Most of the shocks listed by the respondents are covariate shocks. On the other hand, idiosyncratic shocks take place at the household level. We distinguish between family related and livelihood shocks. A serious illness, the death of a household member, or loss of employment are family shocks. Livelihood shocks refer to displacement, loss of a dwelling, a lost harvest, or loss of livestock.

The assessment evaluated the food security related impact of the conflict by measuring the use of coping strategies over the last six months. The households had to implement at least once one of the different coping mechanisms to qualify.

Overall, the number of households that used food security coping mechanisms has drastically decreased, accounting for less than half of the households surveyed. In parallel the number of coping mechanisms used has also halved, from 3.57 mechanisms in 2015 to 1.3 in 2017.
The types of coping mechanisms used have also changed, which indicates a reduction in the quality, then the quantity of food, which is a significant improvement compared to the findings in 2015, which ranged for most indicators between half and more than three quarters of households.

It is evident that the food security of the targeted households has improved and is currently impacting the nutritional quality of the majority of the households and the quantitative nutritional intake of less than a fifth of households. The Non-Government Control areas are somewhat more affected in terms of food security.

One third of the surveyed households reported a family shock over the past six months, which is a slight increase compared to 2015. The incidence of livelihood shocks is high. Loss of employment has somewhat increased and loss of harvest has decreased compared to the 2015 findings. However, most of the identified difficulties are still related to the overall increasing monetary poverty levels.

The most prominent difficulties listed by the respondents are 1) high food prices, identified by almost one third of households (41 percent of all

respondents in 2015), followed by 2) high costs of utilities and fuel (14.2 percent in 2015) and 3) poor physical condition of elderly residents (21.2 percent in 2015).

The inability to cope with a lack of funds to cover the basic non-food needs (clothes, utilities etc.) in the last six months, is illustrated in Figure 29; indicating that poverty has somewhat reduced, in line with the findings on employment and debt. However, almost half of households are still unable to cover their basic consumption needs.

The residents in the Non-Government Control areas have slightly lower rates compared to the Government Control areas, in contrast to the 2015 findings.

A shock does not necessarily have a negative impact on the economic situation of the household. The type of the shock, available resources and whether a household took preventive measures determine its actual impact; this also depends mainly on the level of resilience of the affected households.

Household resilience is essentially measured in terms of access to resources and the ability to use them. The higher the initial endowment, and the better the exchange opportunities, the more likely a household is to be able to protect itself in the event of a shock.

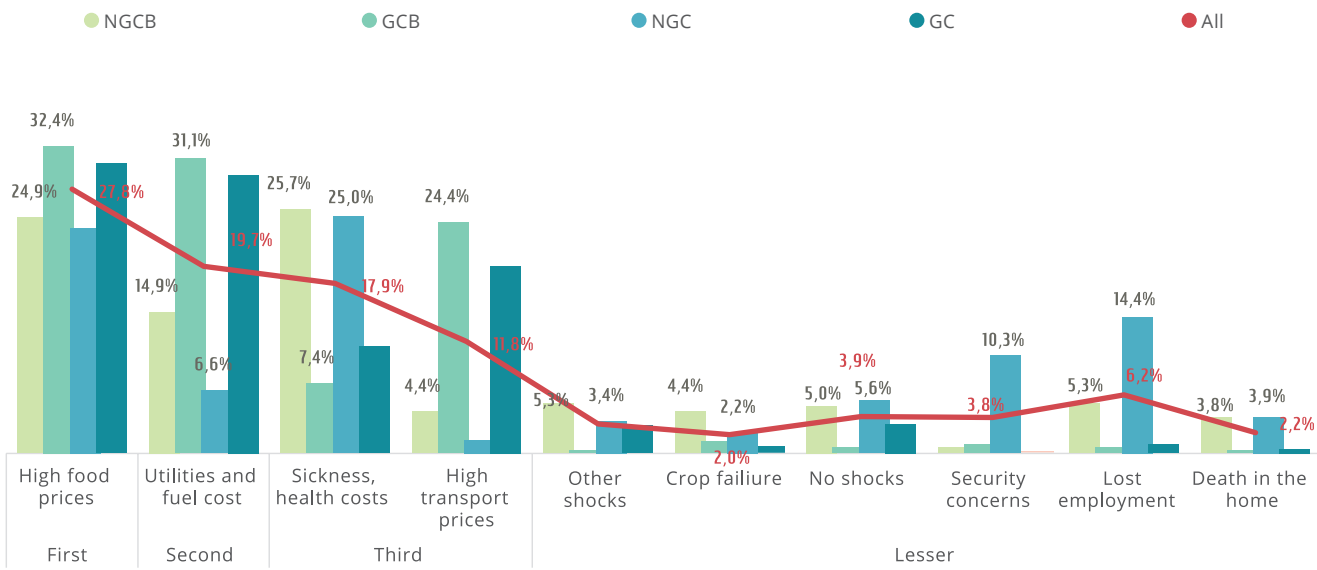
Households apply different strategies to cope with resource related shocks:

1. Resource generation can go along different channels, ranging from additional income generation activities, asking families, relatives or friends for assistance, applying to public or private support organizations or taking out loans.
2. Reducing expenditures is the second prevailing coping strategy, including economizing on the use of goods and services, incurring debts or, in the worst-case scenario resorting to measures which jeopardize the household's future capacity to maintain its well-being through the loss of its productive assets.

Various strategies for mitigating shocks and difficulties were used by the households. Almost half of households have used at least one coping strategy, which is an overall slight reduction compared to 2015. On average the respondents used only one coping mechanism per household. The most frequently used strategies are related to changing consumption patterns by reducing costs, economizing on consumption of goods and services, sale of household assets and incurring debts (e.g. not paying utility bills, rent or paying back loans).

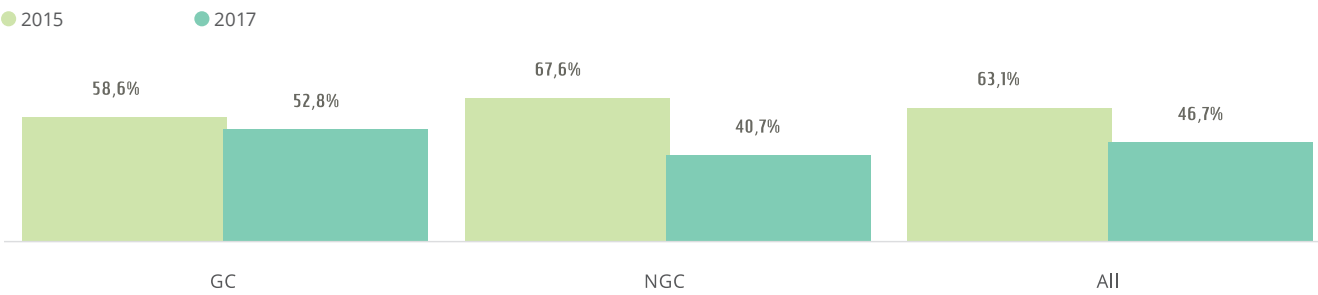
Very few respondents referred to devastating measures, such as taking a child out of school, begging, prostitution etc. which is a significant reduction compared to the one tenth assessed in 2015.

FIGURE 28. DIFFICULTURES/SHOCKS EXPIRIENCED



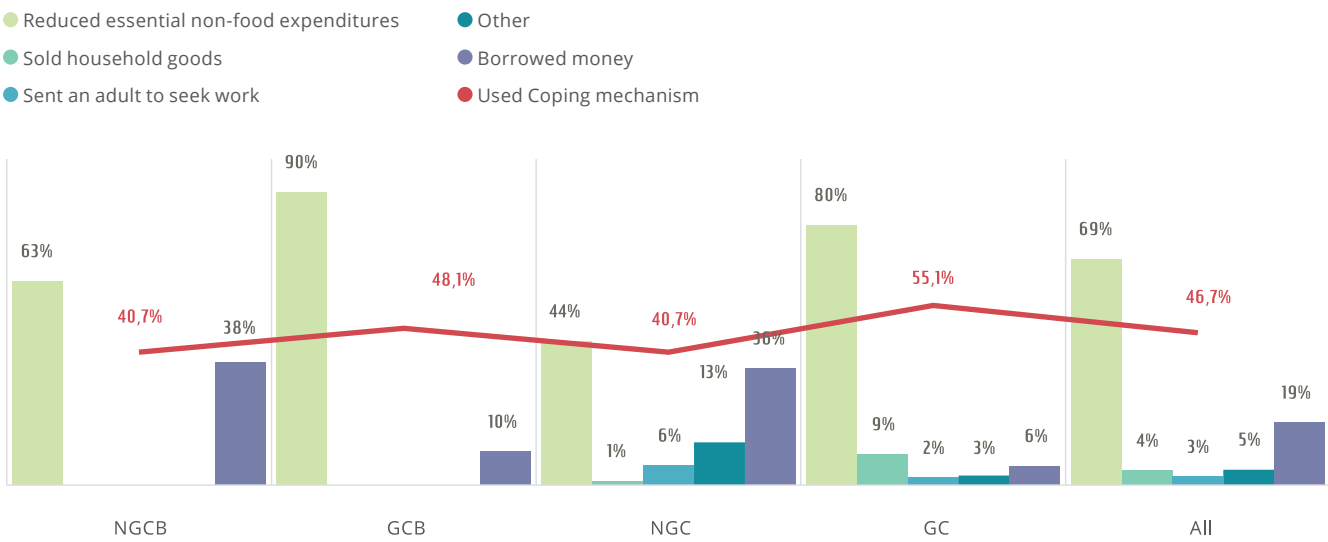
Source: FAO, 2017

FIGURE 29.LACK OF CASH FOR BASIC NEEDS



Source: FAO, 2017

FIGURE 30. COPING STRATEGIES



Source: FAO, 2017

Agricultural production

This chapter describes the results of the survey related to agricultural production in the targeted communities. It aims to describe the agricultural activities and to evaluate their contribution to household wellbeing (food security and incomes), further assessing the impact of the conflict on the rural livelihoods and the support needs for mitigation.

Lack of physical resources contributes to the vulnerability of households, as no assets are available to be exchanged or utilized in times of need. With agricultural production being a mainly resource driven activity, the indicators mostly relate to the availability and ownership of physical resources such as land, livestock and durable goods, as well as agricultural engagement.

Plant production

Plant production is a key contributor to food security and to rural incomes in the target areas and is integrally linked to land ownership and the availability of land. Land ownership is an important asset for agricultural households, as it matters whether they own the land they cultivate, or whether they have to lease it.

Considering that with the privatization of state land and the standing moratorium on land sales, most rural households own land. Other ownership and cultivation arrangements are uncommon.

The share of households producing crops and cash crops (commercial farmers) compared to the findings from 2015, confirms the trend of land abandonment, as farmers have been unable to restart or continue their production unassisted. The share of households that cultivated land in 2014 by planting summer crops decreased from 91 percent to 88 percent. The share of households planting winter crops in 2014[8] has drastically reduced to 44 percent. The decrease continued in the 2016/2017 season with 60.7 percent of households planting summer crops and a very small share planting winter crops, which is a very significant overall reduction.

Commercial farmers account for a fifth of households in the Government Control areas and almost double the share in the Non-Government Control areas.

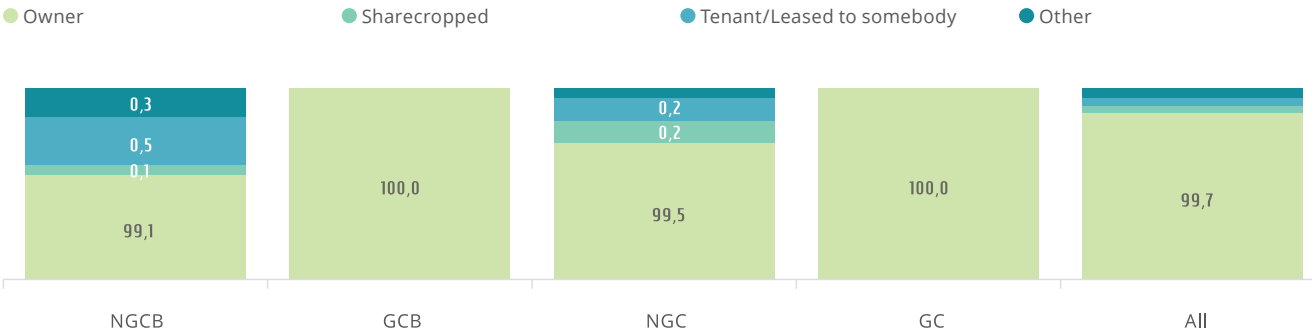
The average size of land cultivated is illustrated in Figure 33, providing a comparison of the seasonal variations in the last two years.

The results confirm the findings from 2015, that cropping patterns in the target areas have continued to change due to increasing costs and reduced affordability of agricultural inputs, further shifting towards production of high value crops (vegetables and fruits). The decreases noted in 2017 confirm that the overall trend of reducing agricultural production is tailored to the manual cultivation capacity of the households.
The overall production has halved in terms of area planted under winter crops, and has decreased by one third for summer crops.

The area based comparison indicates that in the Non-Government Control areas a very small share of farmers planting winter crops have almost doubled their production, while the clear majority of farmers that are planting summer crops have decreased their production from 0.9 ha in 2014, to 0. 7 ha in 2015 and further to 0.64 ha in 2016.

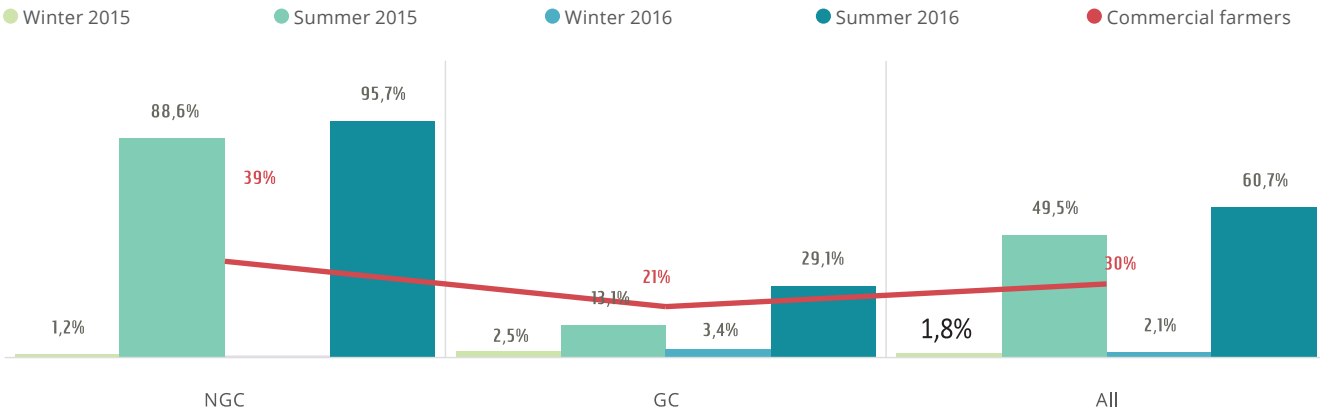
[8] During August 2015, 46 percent were planning to plant winter crops (SIENA 2015)

FIGURE 31. LAND OWNERSHIP AND LAND TITLES



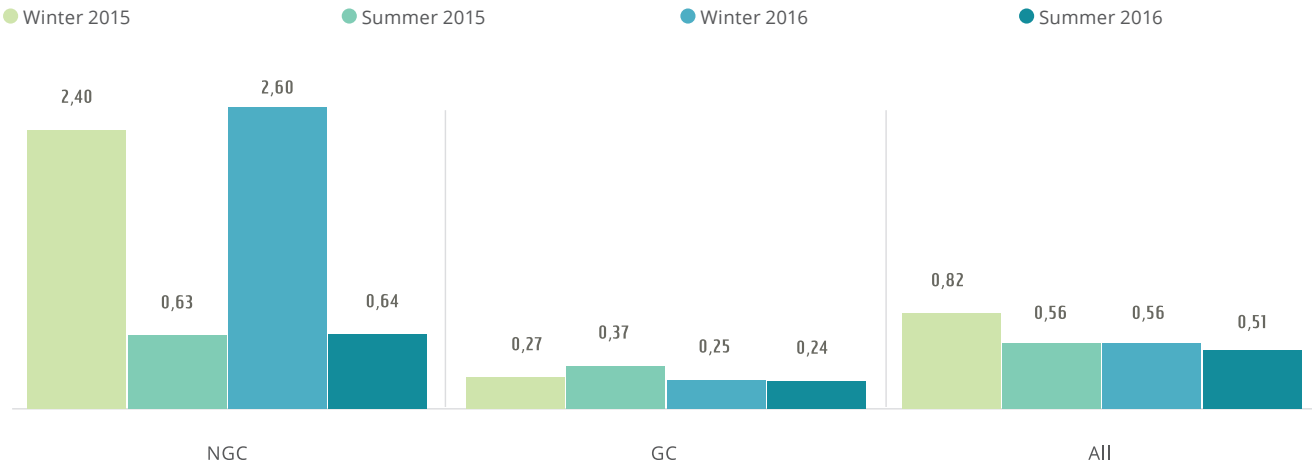
Source: FAO, 2017

FIGURE 32. SHARE OF POPULATION PRODUCING CROPS



Source: FAO, 2017

FIGURE 33. AVERAGE SIZE OF PRODUCTION

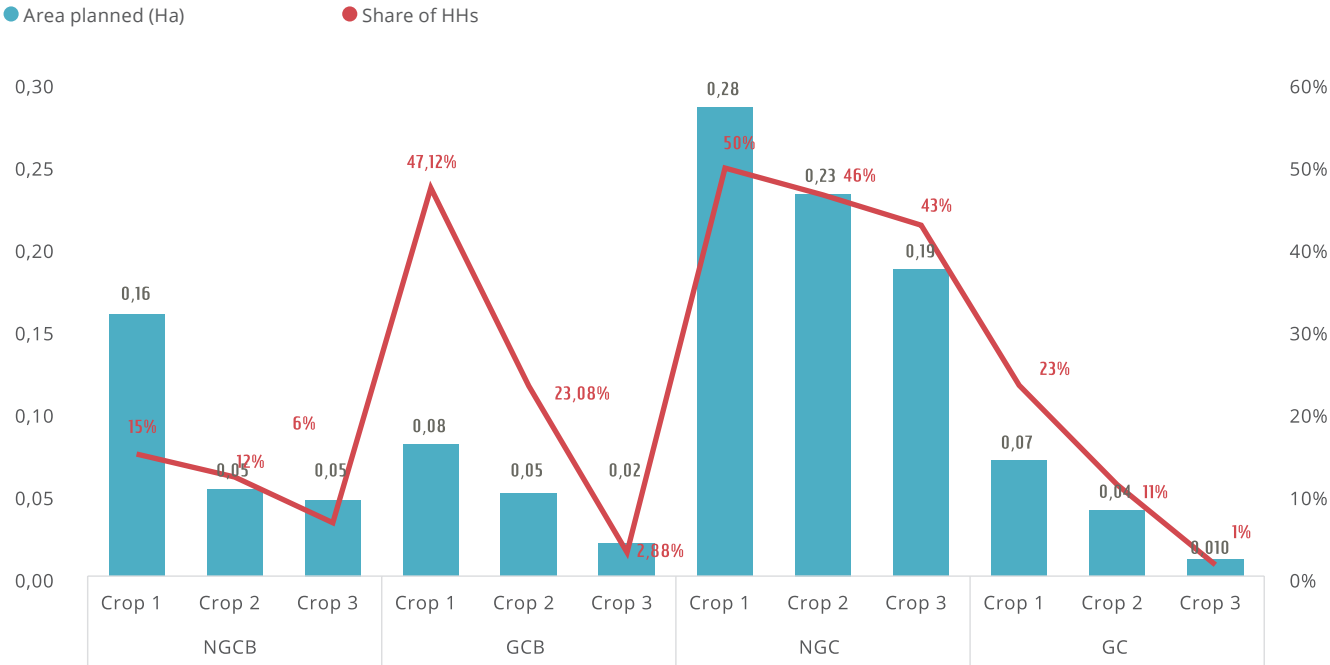


Source: FAO, 2017

The situation has changed even more in the Government Control areas, where winter crops have reduced from 0.9 ha in 2014, to 0.7 ha in 2015 and further to 0.26 ha in 2016. In parallel, the share of farmers planting summer crops has more than halved their production from the estimated 0.8 ha in 2014 and 2015.

Feedback on typical crops produced, land sizes used, yields and incomes obtained, and the contribution to the households' food security was collected. In the Non-Government Control areas farmers plant a mix of combinable crops (approximately 80 percent of owned land) and high value crops (20 percent of the owned land).

FIGURE 34. PRODUCTION OF MAIN CROPS



Source: FAO, 2017

In the Government Control areas farmers plant crops mostly on small plots with similar areas dedicated to both summer and winter crops.

A detailed analysis of the crops planted reveals that farmers plant a variety of vegetables and a smaller share of fruit crops, complemented in a few households with combinable crops. Fruits and vegetables are produced during the summer season as high value crops and account for most of the production in the Government Control areas.

To evaluate the impact of agricultural production on food security and income, the respondents elaborated on the main crops produced relevant for their household incomes.

The results in Figure 34 show that overall, between one third and one half of the area under summer crops is used for cash crops. Most of the production area is reserved for subsistence production.

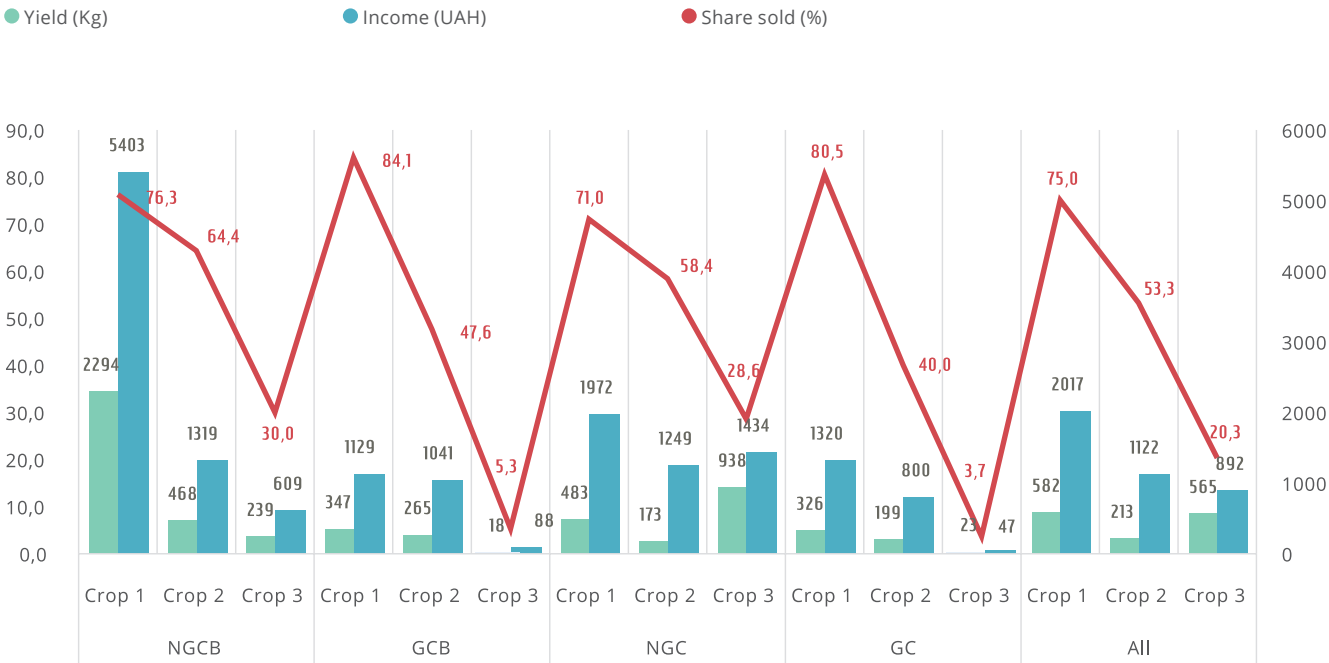
Depending on the area, the share of farmers engaging in the production of the cash crops varies significantly. The residents of the Non-Government Control areas are more active producers of cash crops both in terms of land sizes and share per households compared to the Government Control areas. In addition, higher shares of respondents from the Non-Government Control areas rely on more than one cash crop, compared to the residents of the Government Control areas. Comparatively, the residents of the exclusion zones have a lower share of households engaged in farming activities.

The contribution of the main crops produced to household incomes and consumption/food security is presented in Figure 35. Assessing the annual yields in terms of quantities and value indicates that in the Non-Government Control areas agricultural production contributes to approximately one additional average monthly salary for the household. In the Government Control areas the annual income from crop production accounts for less than half a monthly salary.

The shares of sales of the main cash crops suggest that most farmers rely on one, and in some cases two, crops, destined exclusively for sales (over three quarters of the yield), as well as on additional crops destined mainly for home consumption with occasional sales of production surpluses.

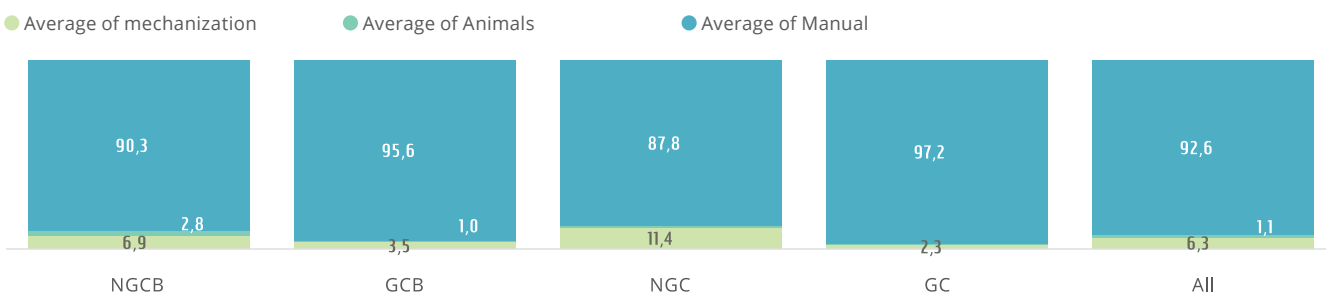
It can be concluded that the respondents use agriculture mainly as a means for generating additional, rather than primary income, remaining overall subsistence producers, as identified in 2015.

FIGURE 35. PRODUCTION OF MAIN CROPS



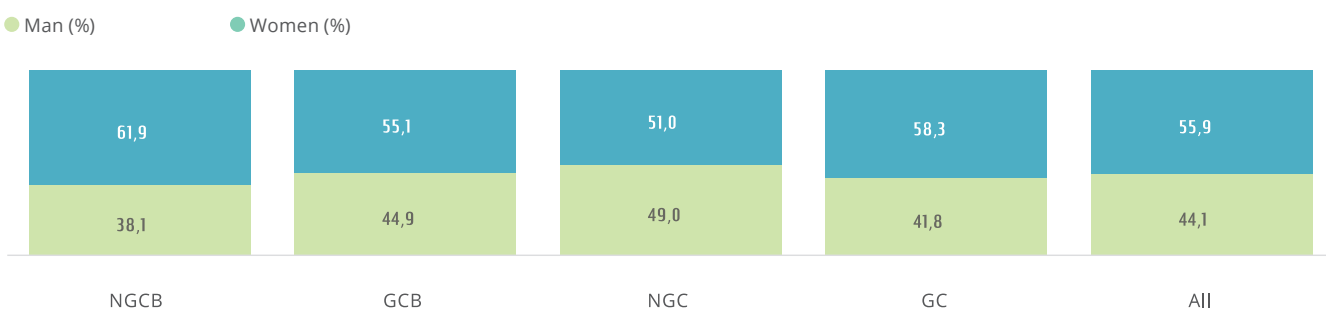
Source: FAO, 2017

FIGURE 36. CULTIVATION OF LAND



Source: FAO, 2017

FIGURE 37. AGRI LABOUR DIVISION



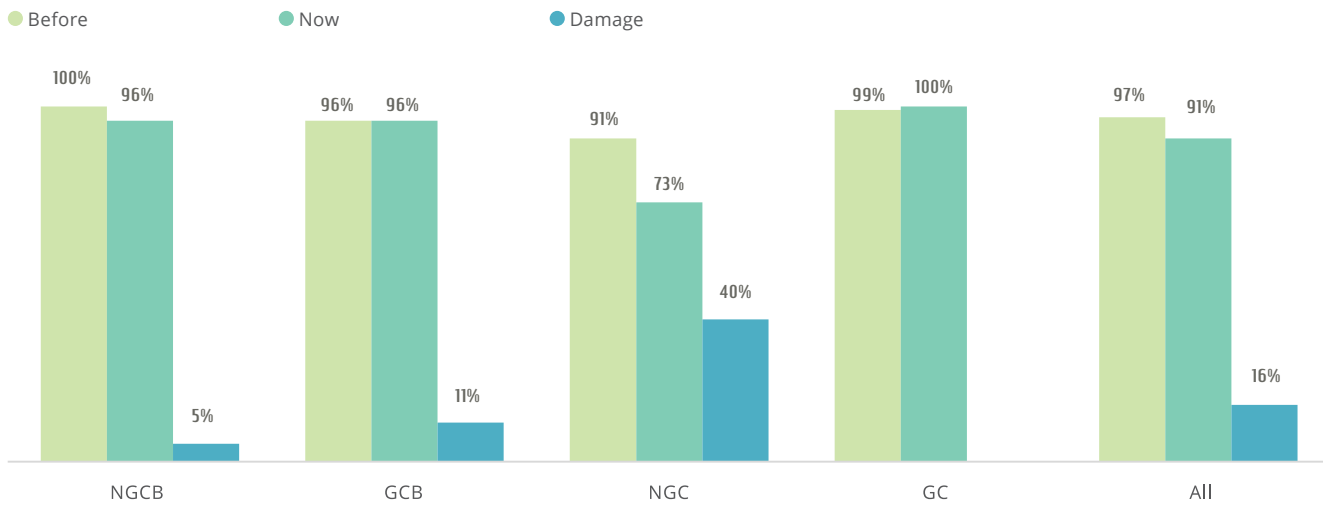
Source: FAO, 2017

Most of the respondents continue to cultivate their land by hand, with limited increase compared to the findings in 2015 (88.3 percent of households).

The shares of land cultivated using mechanization have decreased, especially in the Government Controlled areas (13.4 percent in 2015), again confirming the overall contraction of the crop production and the continuation of the shift towards high value crops, on account of combinable crops.

In contrast, the share of mechanized cultivation has increased in the Non-Government Control areas and especially in the exclusion zone (1.6 percent in 2015).

FIGURE 38. ACCESS TO IRRIGATION



Source: FAO, 2017

Women participate slightly more in the overall labour, in line with the traditional division based on type of production. The overall distribution of labour per area, region, and in total, shows marginal fluctuations compared to the results from 2015.

Access to irrigation per target area continues to be high, confirming that the conflict has had a limited impact on and caused limited damage to agricultural infrastructure, mainly in the Non-Government Control areas.

The identified damage to the irrigation infrastructure is concentrated in the Donetsk region.

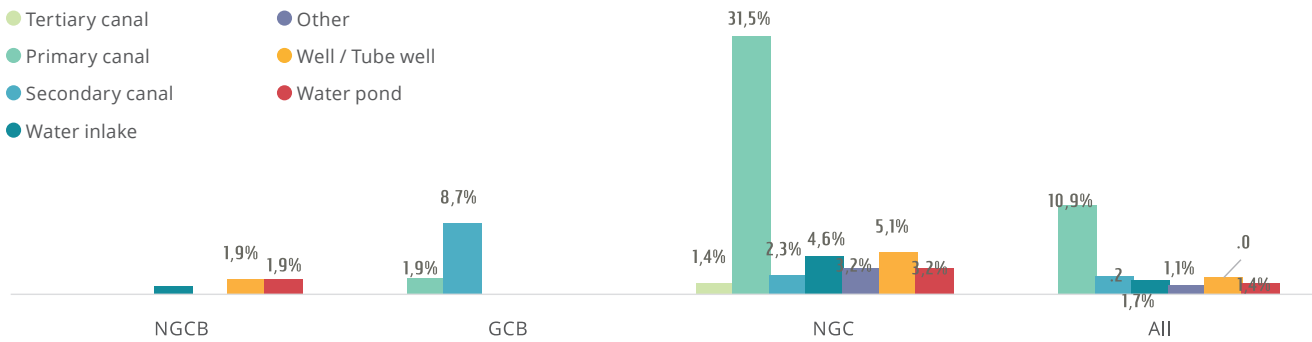
The lack of inputs and agricultural equipment limits the potential of farmers to increase their production and sell their produce on local markets. Furthermore, for agricultural households, having access to a functioning input and product markets is essential for maintaining their well-being.

As input supply has been listed as one of the major constraints for conflict affected households in 2015, both in terms of access and costs, the respondents were asked to confirm the sources of seeds and fertilizers for their ongoing production.

The results provided in Figures 40 and 41, indicate that:

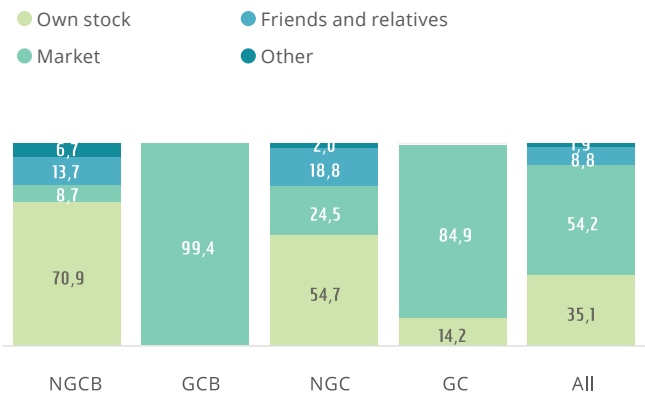
- Less than one quarter of households (27.8 percent in 2015) meet their needs for fertilizers through their own production (manure). While there has been an overall decline in the use of manure, there has been a significant increase in its use in the Non-Government Control areas (32 and 21.4 percent in 2015), as well as reduction of the share of procured mineral fertilizer. In contrast, in the Government Control areas manure has been almost entirely replaced by procured fertilizers (35.1 and 23.7 percent in 2015), with households relying entirely on market supply (mineral fertilizers).
- External support in terms of fertilizers and seeds provided in the target areas is negligible;
- Respondents in the Non-Government Control areas still rely on their social connections to a significant extent for their supply of fertilizers, in shares similar to those identified in 2015 (13.6 and 23.8 percent).
- One quarter of the farming households in the Non-Government Control areas do not use fertilisers, indicating yet again the declining investments in agricultural production and a further reduction in the sustainability of future production and yields.
- The overall share of households buying seeds on the market has slightly decreased compared to 2015 (59.9 percent), largely due to a significant decrease in the Non-Government Control areas, the households in which rely even more on their own production of seeds to meet their needs, indicating limited functioning of the market. In contrast the share of respondents that procure seeds in the market has significantly increased in the Government Control areas (70.8 and 67.3 percent in 2015) in line with change to cropping patters and a focus on fruits and vegetables.

FIGURE 39. DAMAGE TO IRRIGATION INFRASTRUCTURE



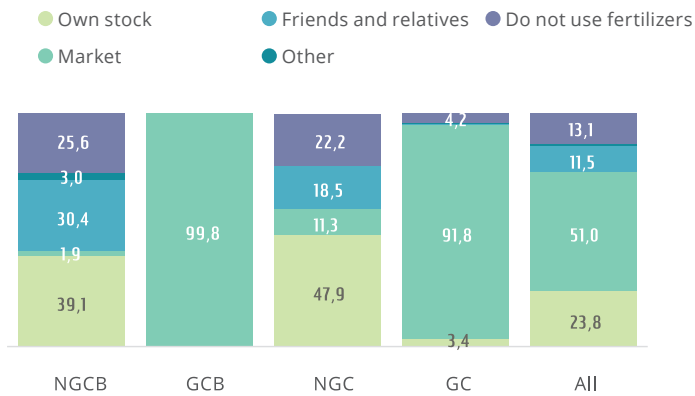
Source: FAO, 2017

FIGURE 40. SOURCES OF SEEDS



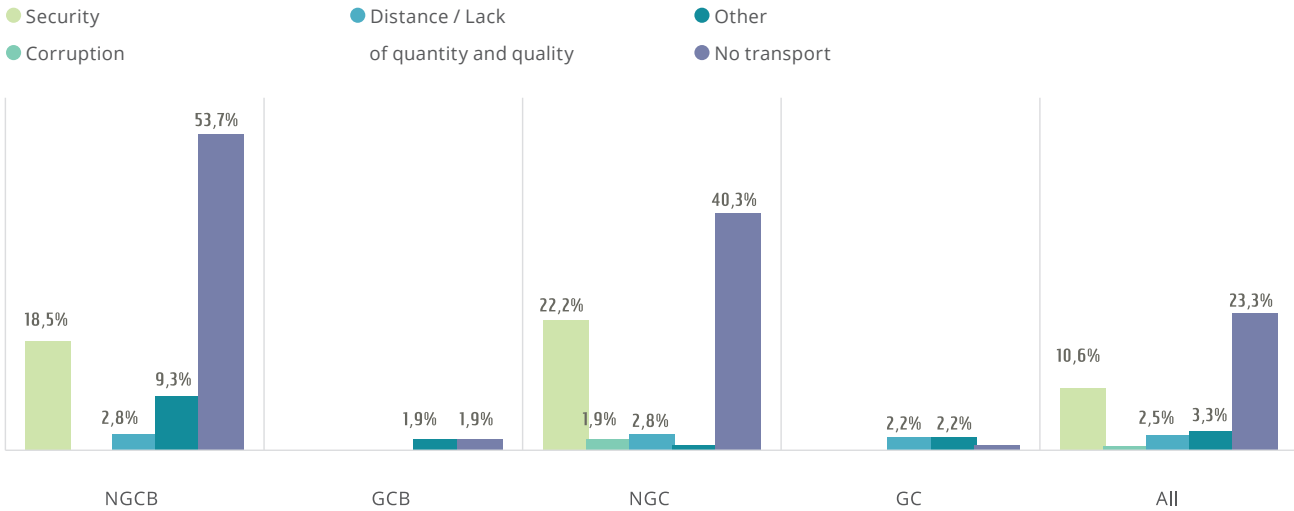
Source: FAO, 2017

FIGURE 41. SOURCES OF FERTILIZERS



Source: FAO, 2017

FIGURE 41. ACCESS TO MARKETS

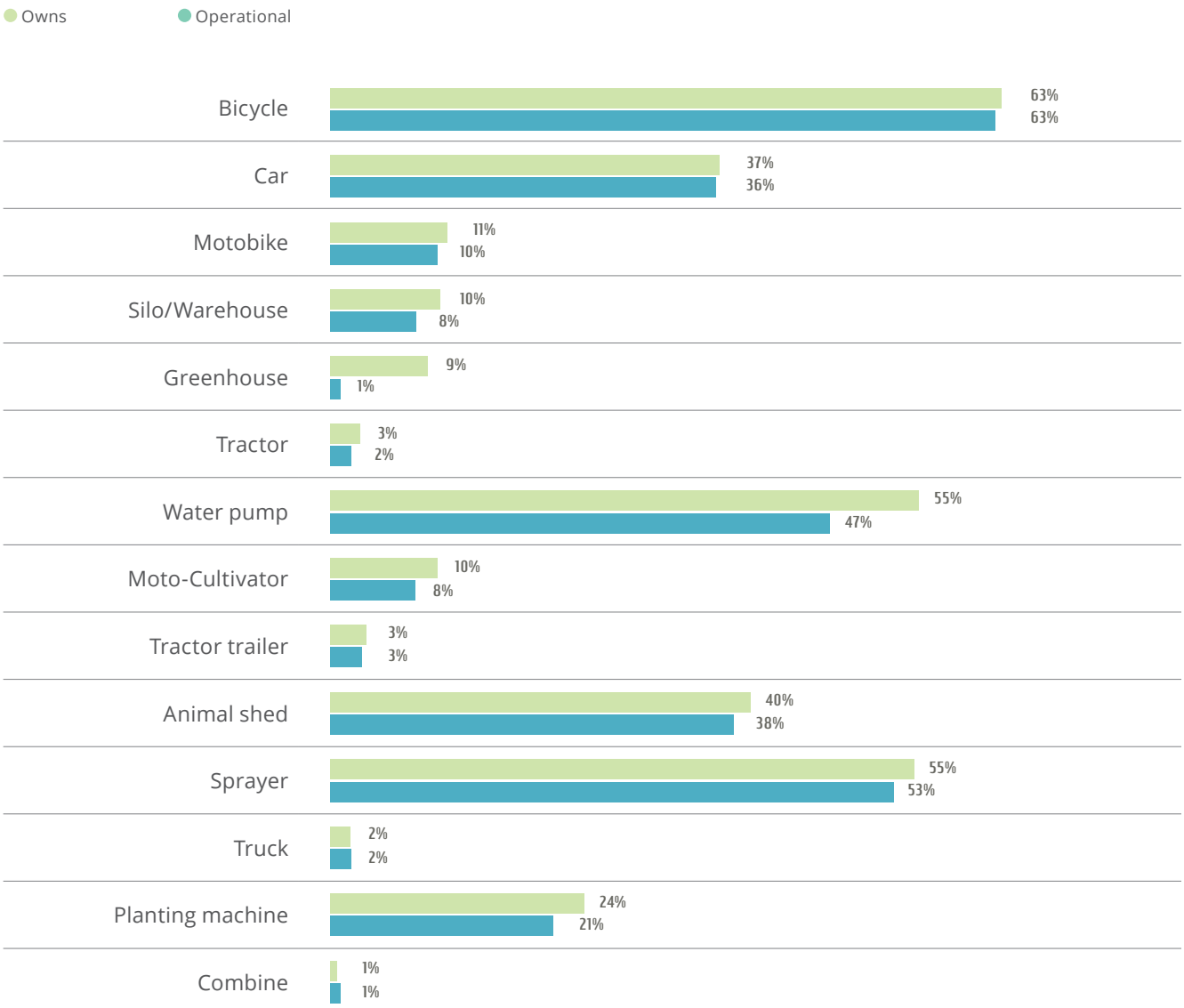


Source: FAO, 2017

Most households are facing difficulties in accessing markets, although this perception varies per target area. The limited access to markets is more prominent in the Non-Government Control areas, which is a significant development compared to the 2015 findings.

The qualification and quantification of the difficulties indicates that the respondents perceive the most severe difficulty to be the lack of transportation, and costs of transport, which were second ranked in 2015.

FIGURE 42. ACCESS LINKED TO AGRICULTURAL PRODUCTION



Source: FAO, 2017

Insecurity, which was quoted as affecting almost one third of respondents in 2015 has decreased and remains a significant issue only in the Non-Government Control areas. The share of households in the Government Control areas quoting difficulties in access to markets is negligible compared to the Non-Government Control areas.

Whether a household has a means of transportation is a resource vulnerability indicator for both agricultural production and access to inputs and product markets. The availability of transport and land cultivation assets is frequently used as an important measure for accessibility to services, especially if they are not available in the community. The term "means of transport" is defined broadly and includes bicycles, motorbikes, cars and tractors.

The overall capacity to engage in agricultural production and to access markets is confirmed through household ownership of assets.

A household should have at least one functional agricultural asset and one functional means of transport in order not to be vulnerable. Based on this definition, slightly more than half of the surveyed households can be considered as vulnerable. Whereas:

- Compared to 2015 there is slight reduction in the ownership of most types of assets, indicative of the limited reinvestment in agriculture.

- The most common assets owned by households are bicycles, water-pumps and cars, followed by motor-cultivators, motorbikes, greenhouses and animal sheds, and to a lesser extent tractors, farm machinery, silos and warehouses. No significant differences were recorded between the areas, except for water-pumps, sprayers and bicycles, for which the shares in the Government Control areas are higher.
- A very small share of the respondents owns a cultivator, confirming that most of the land cultivation is done manually.
- A very limited share of the respondents owns a tractor and a tractor trailer, of which more than one third are not functional. This indicates that most of the respondents depend on service providers for land cultivation operations (ploughing, roto-cultivating). The overall ownership of farm mechanization (harvesters, planter, etc.) is very low and matches the number of operational tractors.
- Approximately half of respondents own water pumps, indicating that irrigation is often used for production of high value crops during the summer season.
- Less than one tenth of respondents greenhouses (17.5 percent in 2015), out of which some ten percent are in use (two thirds in 2015).
- Approximately half of respondents own a functional means of transport enabling them to access their land plots and markets.

Livestock production

Livestock production is a very significant contributor to food security and to incomes in rural Ukraine. Animals are mainly produced extensively, with relatively low feed conversion and productivity, and with matching mortality and disease prevalence.

More than half of respondents own livestock. There are slight variations in the shares of livestock owners in each region and in total (less than five percent) compared to 2015. However, this is due to seasonal livestock cycles (for poultry and pigs) considering the timeframes of the assessments (August/15 and April/17).

Slightly more residents of the Non-Government Control areas own livestock compared to the Government Control areas. In the Government Control areas a third of the households own cattle compared to less than a quarter in the Non-Government Control areas (24.4 percent in 2015). An increase in the number of heads of cattle is notable in the Government Control areas (18.5 percent in 2015), while the numbers of other livestock types are largely similar to the 2015 numbers.

Residents of all target areas own a similar number of animals per household, which allows for subsistence production with occasional sales of surpluses. No significant changes compared to the situation in 2015 were noted for most livestock types.

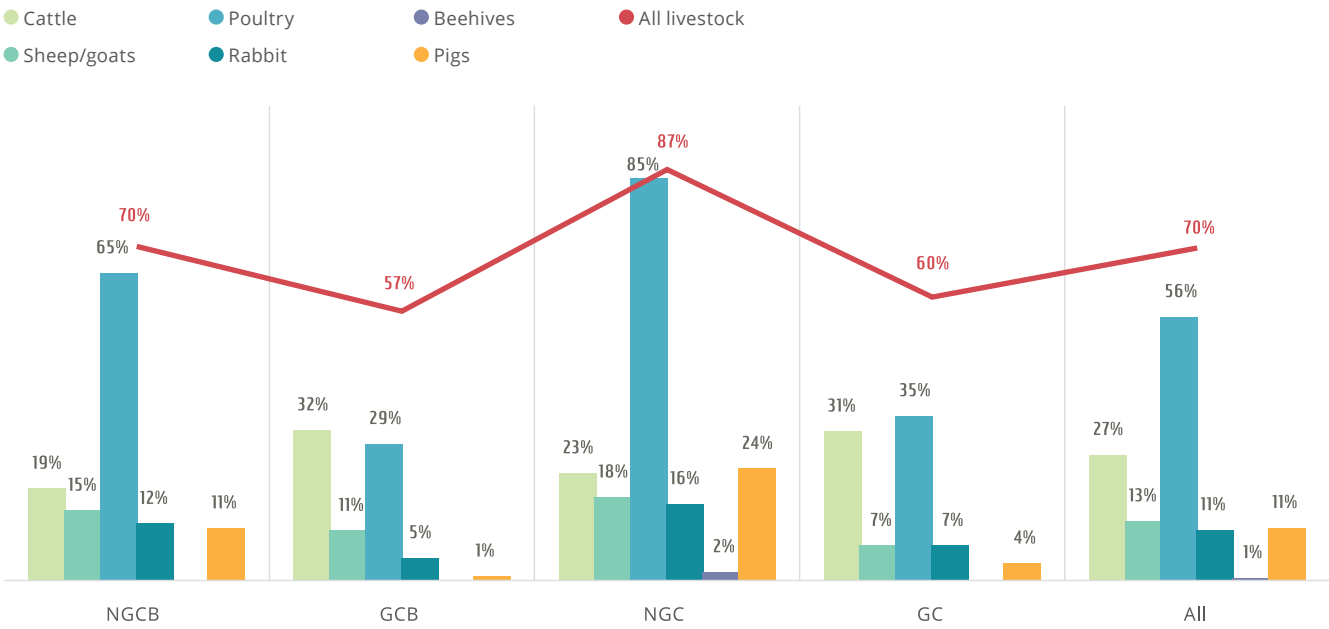
There has been a significant decrease in the number of households owning beehives, and in the average number of beehives per owner. On the other hand, the share of pig producers has increased, both in terms of the number of households with pigs and the number of animals per household.

The households in the Non-Government Control areas keep higher value livestock and are more likely to sell the fast reproducing animals to generate cash income.

The quantitative review of the loss of livestock presented as a number of heads of different livestock is shown in Figure 45.

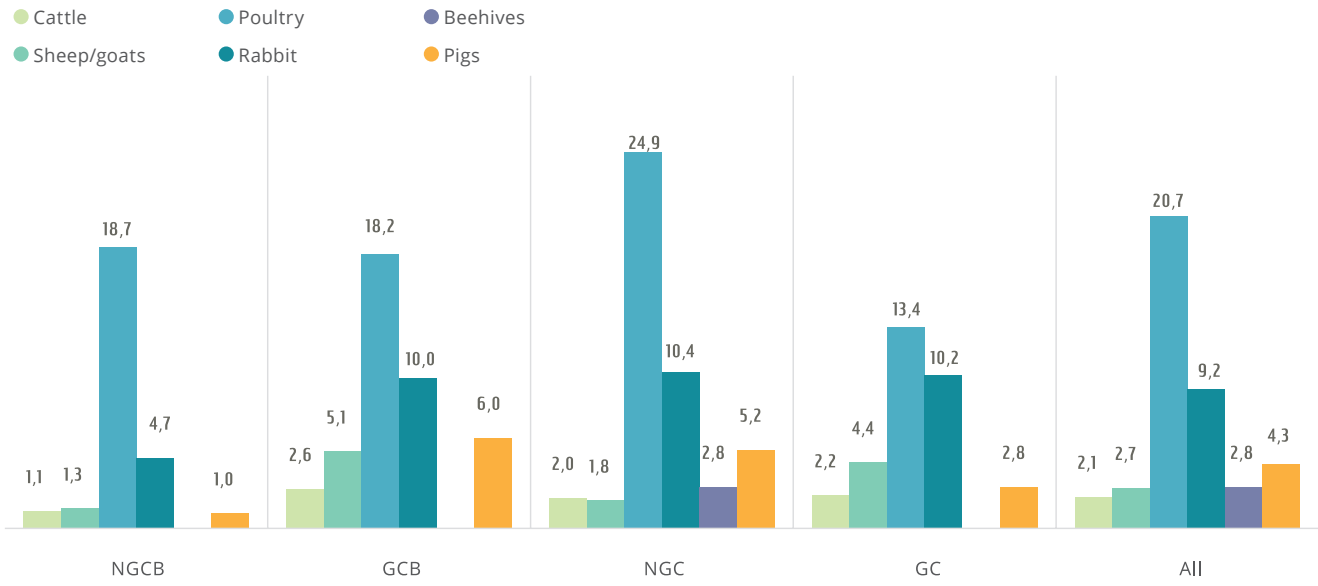
In post-conflict situations, with the reduction of military activities the number of animals usually starts to recover and increase as households aim to re-establish their production. However, the overall development of the livestock population is stagnant to low, mainly due to constraints which continued forcing slaughter in 2016. As a result, livestock populations continue to persist at approximately half or less of pre-conflict numbers.

FIGURE 43. LIVESTOCK OWNER HOUSEHOLD



Source: FAO, 2017

FIGURE 44. AVERAGE NUMBER OF LIVESTOCK PER PRODUCER



Source: FAO, 2017

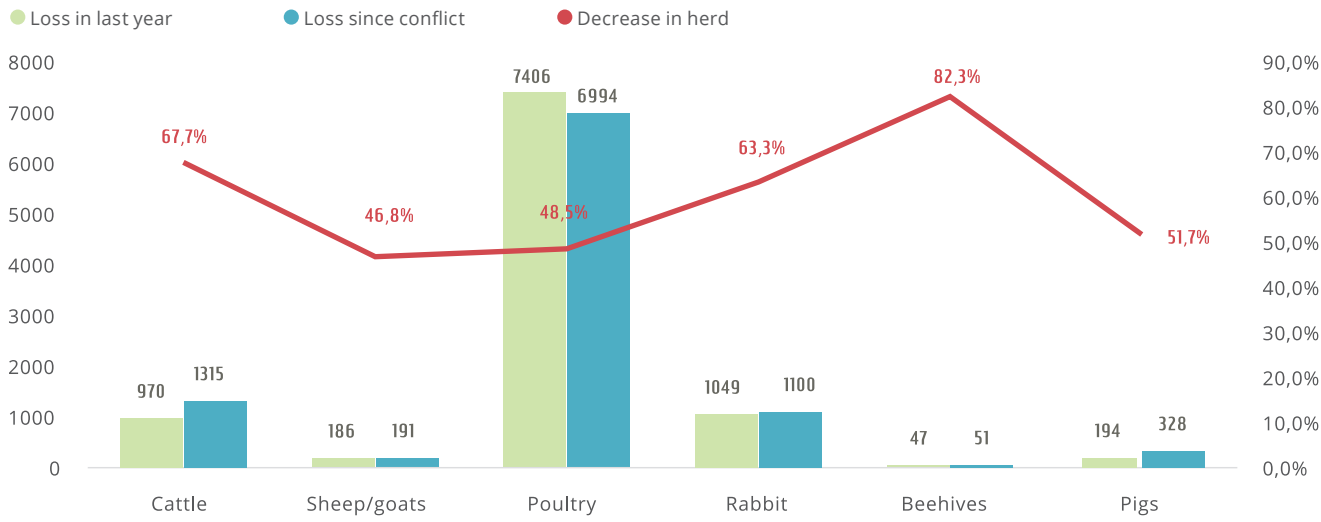
The most compelling reasons for animal deaths/losses in declining order of response frequency are 1) need for cash and 2) forced slaughter for food, 3) lack of preconditions in terms of availability of water and 4) lack of animal shelters.

The results are a significant change compared to 2015, when the main reasons were 1) Forced slaughter due to the conflict and 2) killed in the conflict. Various reasons prevent the natural recovery of livestock populations in the conflict area, with the residents of the Non-Government Control areas facing multiple constraints, which are limiting their development without external intervention. The livestock population continues to serve as a safety net for food security in the Non-Government Control areas.

The lack of investment capital and low incomes affect the development of similar shares of producers in all areas.

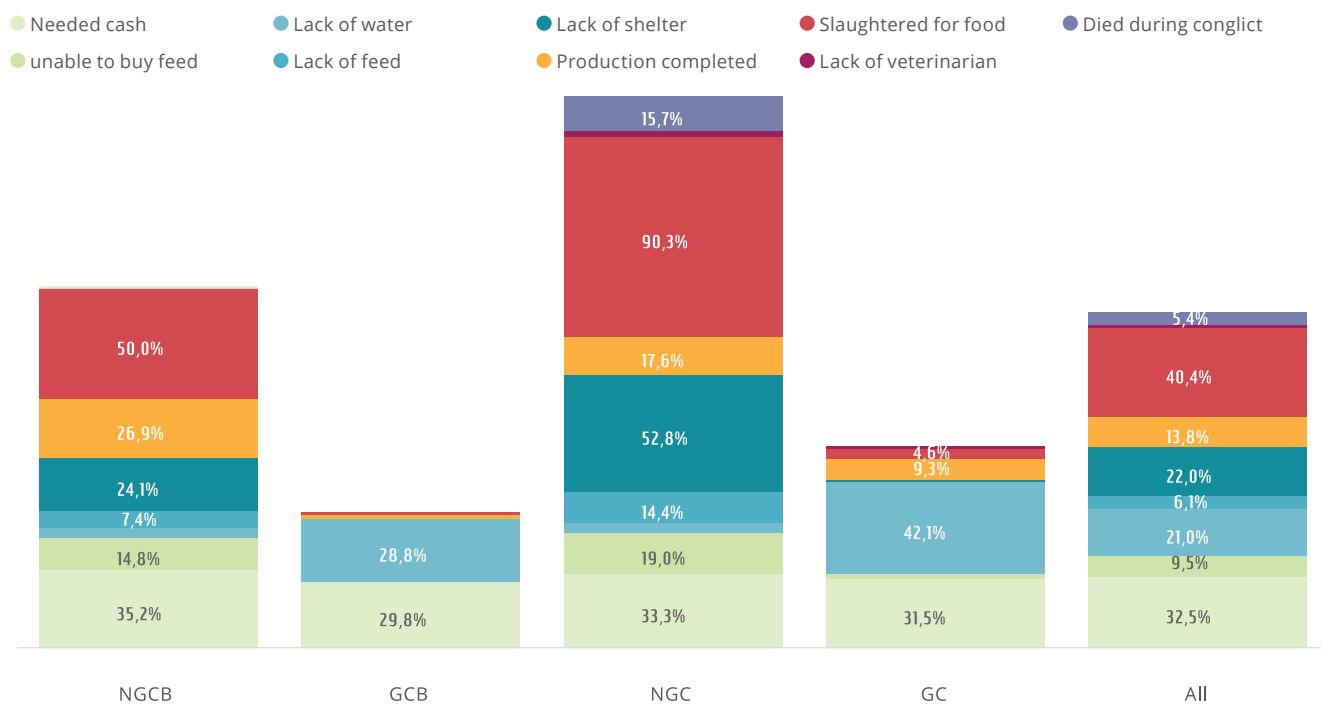
Overall there has been a limited increase in the number of households selling animal produce

FIGURE 45. QUANTITATIVE LOSS OF LIVESTOCK



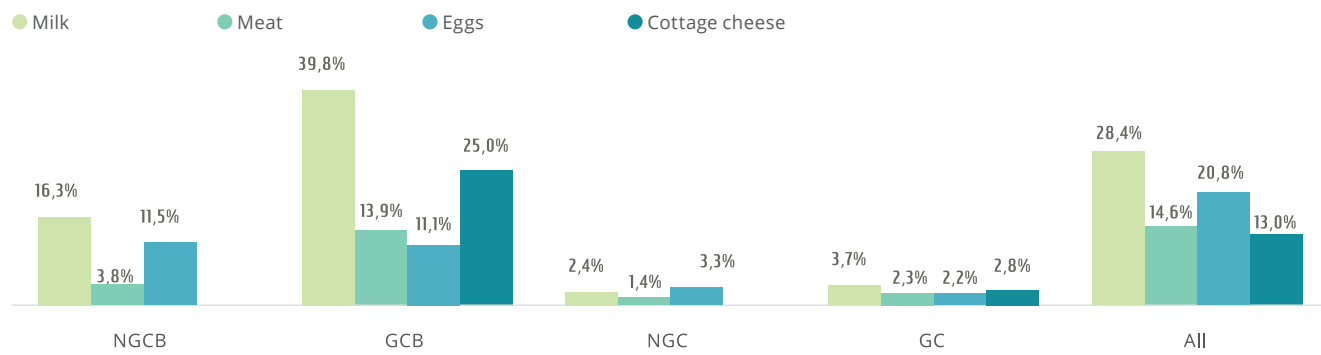
Source: FAO, 2017

FIGURE 47. REASONS FOR LOSS OF LIVESTOCK IN THE LAST SIX MONTH



Source: FAO, 2017

FIGURE 47. SHARES OF HOUSEHOLDS SELING ANIMAL PRODUCE



Source: FAO, 2017

on both sides of the contact line. However, more residents of the Government Control areas now sell animal produce, and they are selling more types of produce as well.

The qualitative aspects and the impact of the animal produce sold is shown in Figure 48, illustrating the share of produce sold and given away, as well as the average monthly income earned from the sales.

Residents of the Government Control areas tend to sell significantly higher shares of their production, earning up to 10 percent of a national level salary per month, which does not significantly impact the income of the average livestock producing household. This is partly enabled by the improved food security situation and reduced production impediments. In addition, double the number of households in the Government Control areas give away animal products to members of their web of social connections.

Compared to 2015 the situation seems stagnant with some increase in the Government Control areas, as food distribution seems to allow households to sell a larger portion of their production.

It can be concluded that on average the target households are oriented towards subsistence livestock production, mainly aiming to meet their household needs, despite a limited increase in the share of households selling produce. The stagnation of the number of households owning livestock and the average number of animals per household further confirms the limited impact of the decimated livestock populations, and the inability of the population to recover without assistance.

The difficulties faced in terms of maintaining and developing livestock production indicate that the lack of cash for turnover costs and investments, and the lack of animal feed, remain to are still the main constraints faced by the surveyed producers, as in 2015.

Limited workforce is not as strong a production constraint as it was, but remains an issue in the Non-Government Control areas.

Market opportunities are barely identified as a constraint (20.8 percent in 2015) and animal diseases and lack of veterinary support are mainly notable in the Government Control areas.
It is important to note that the share of the households experiencing security related constraints has halved and is confined to the Non- Government Control areas.

Although the prevalence and relative importance of different difficulties faced by livestock holding households are broadly similar in the Government Control and Non-Government Control areas, significantly fewer households in the Non-Government Control areas are facing constraints.

Impact of the conflict on the agricultural production

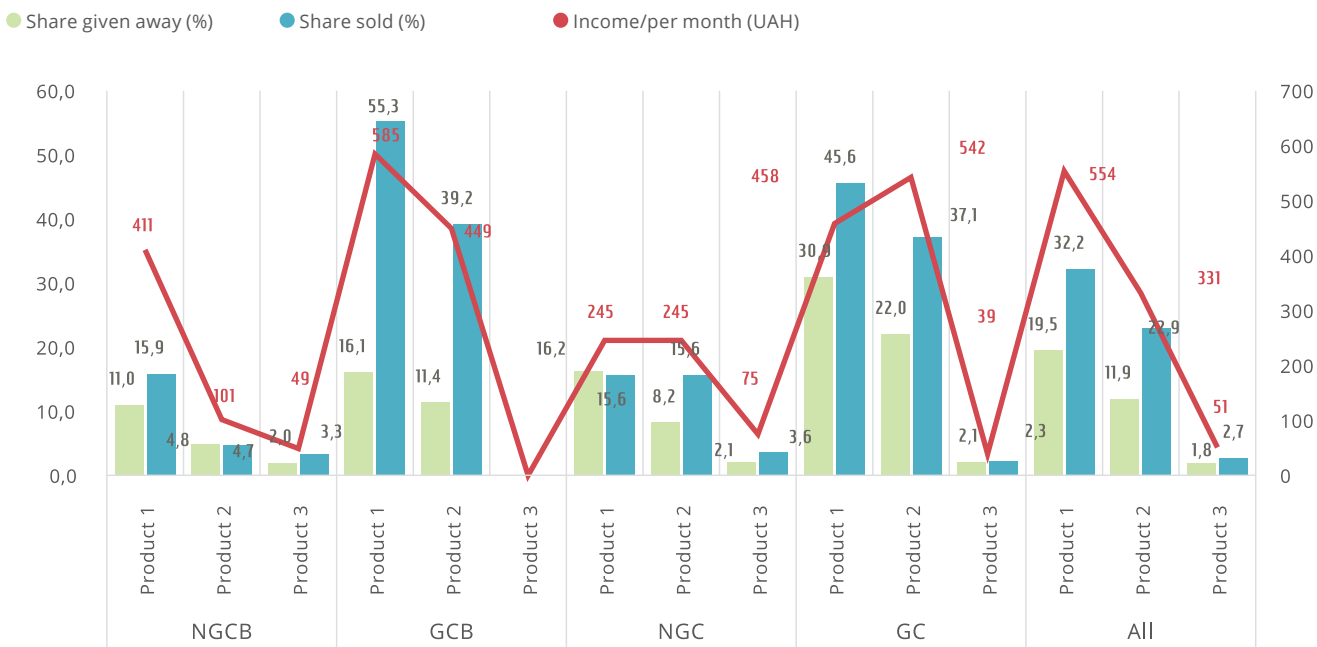
The impact of the conflict on the livelihoods and the agricultural production is provided in Figure 50.

The lack of agricultural inputs is perceived as by far the most important impact, increasing in importance and affecting a higher share of households compared to 2015 (44.9 percent). This is followed by outbreaks of diseases (19.9 percent in 2015) and lack of labour (19.6 percent in 2015), which affect half of farmers in the Non-Government Control areas.

It is also evident that a significantly larger share of households in the Non-Government Control areas are facing a variety of constraints, compared to the few prominent constraints in the Government Control areas. This confirms the 2015 findings that the Non-Government Control areas are more impacted in terms of the number of households affected, and are also currently facing a wider range of impacts.

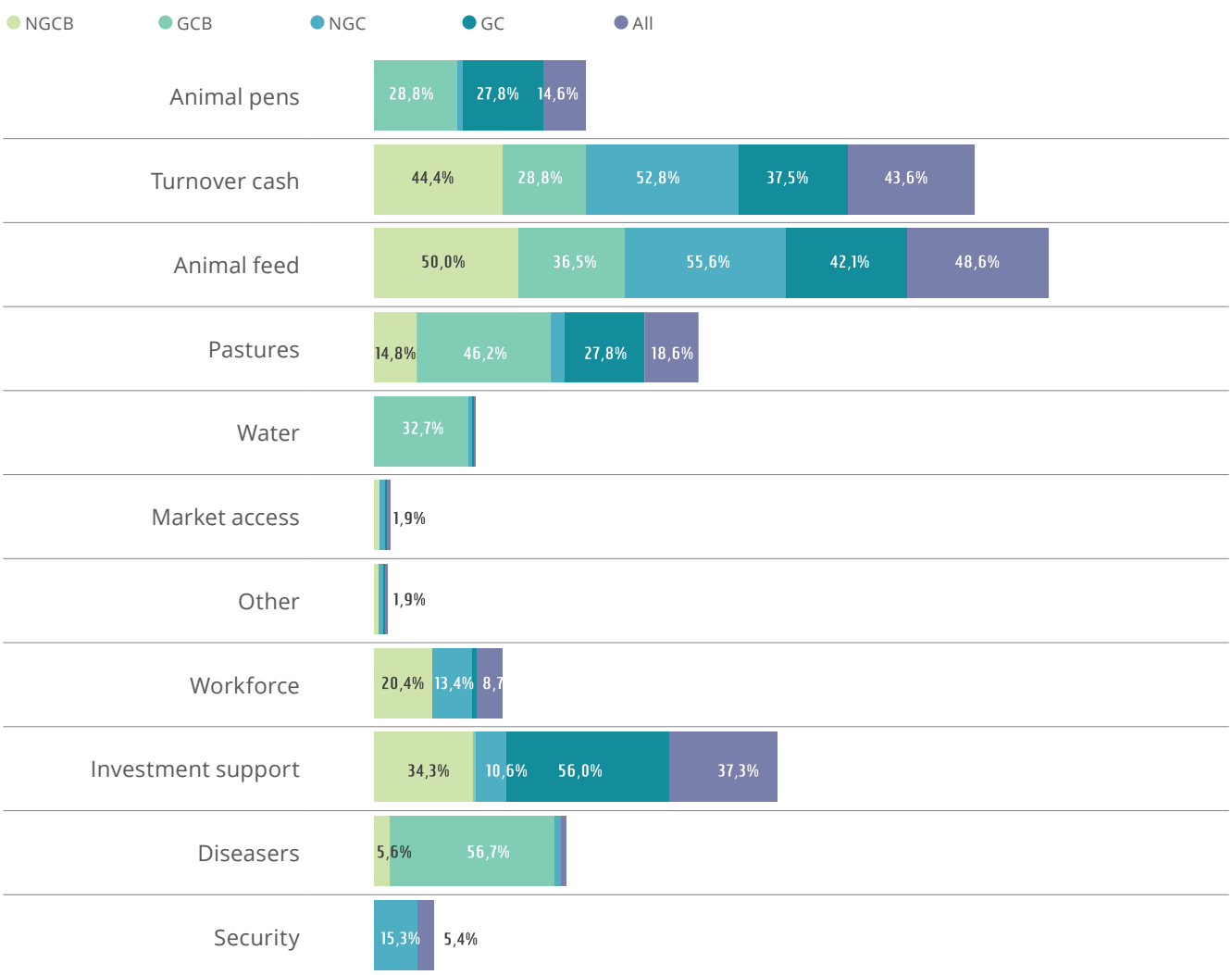
Prices of major agricultural inputs have increased by roughly 20 percent in the last 12

FIGURE 48. SHARE OF PRODUCTS SOLD AND GIVEN AWAY



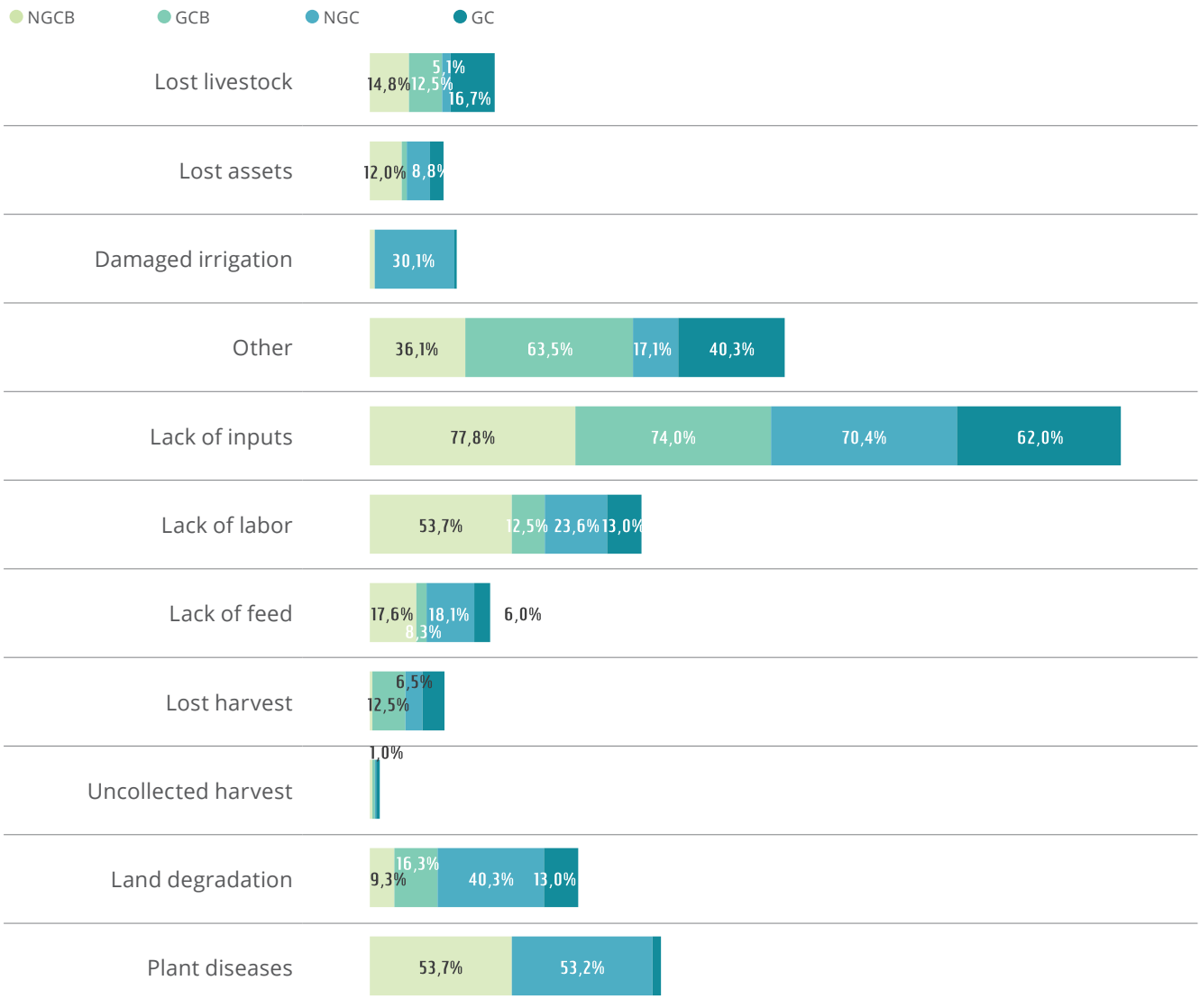
Source: FAO, 2017

FIGURE 49. CONSTRAINS FOR ANIMAL PRODUCTION



Source: FAO, 2017

FIGURE 50. CONFLICT IMPACT



Source: FAO, 2017

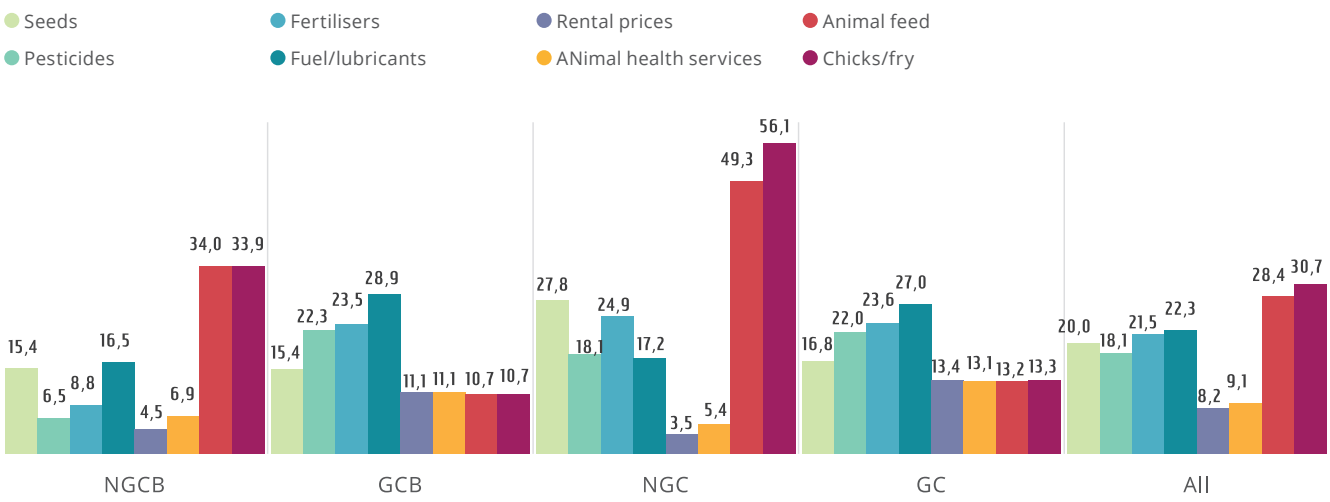
months, in addition to the recorded average increase in 2015 (86.2 percent).

The largest increase is notable for animal feed and chicks/fry, especially in the Non-Government Control areas. Rental prices and animal health services have increased significantly in the Government Control areas, along with pesticides and fuel and lubricants.

The increase of prices was largely estimated to be based on depreciation of the Ukrainian Grivna, and to a lesser degree on a variety of other reasons. In contrast, the majority of respondents in 2015 (60.3 percent) attributed the price hike to the security situation.

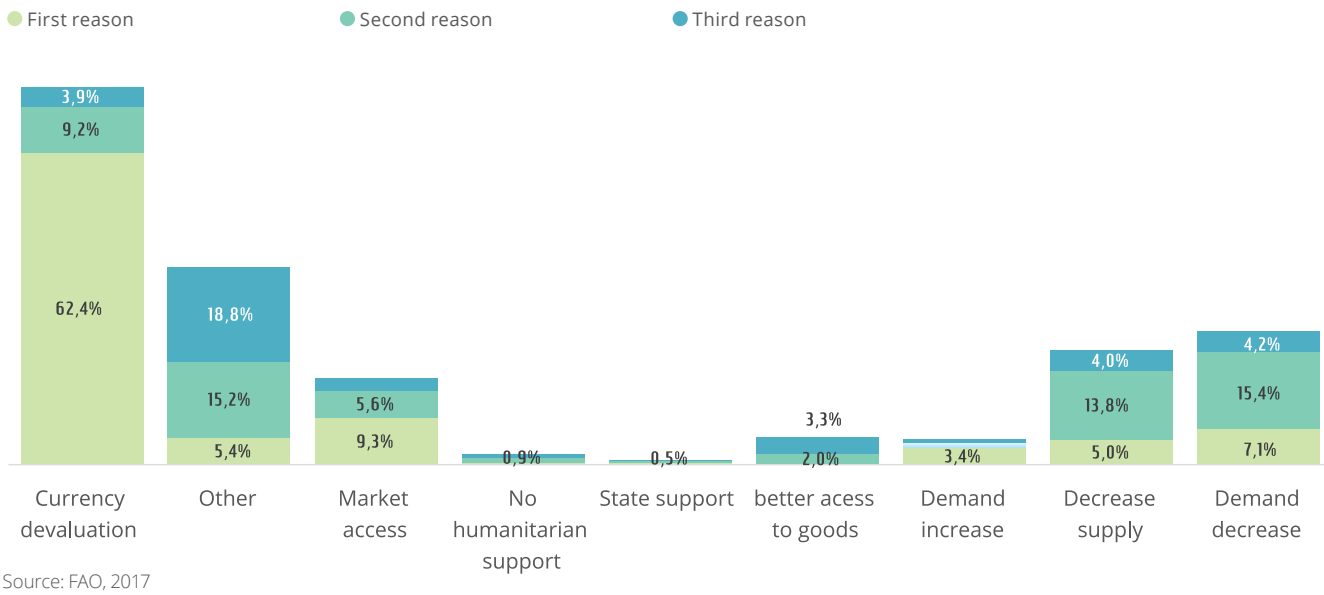
Considering the overall results set out in this chapter, it can be concluded that as anticipated in 2015, due to lack of access to funds (along with an increase in debt) the overall impact of the conflict and the type of assistance provided, farming households have stagnated or reduced their production further, which has eroded their level of self-sufficiency and agricultural incomes.

FIGURE 51. INCREASE OF PRICES OF AGRICULTURAL INPUTS (%)



Source: FAO, 2017

FIGURE 52. REASON FOR INCREASE OF PRICES OF AGRICULTURAL INPUTS



Source: FAO, 2017

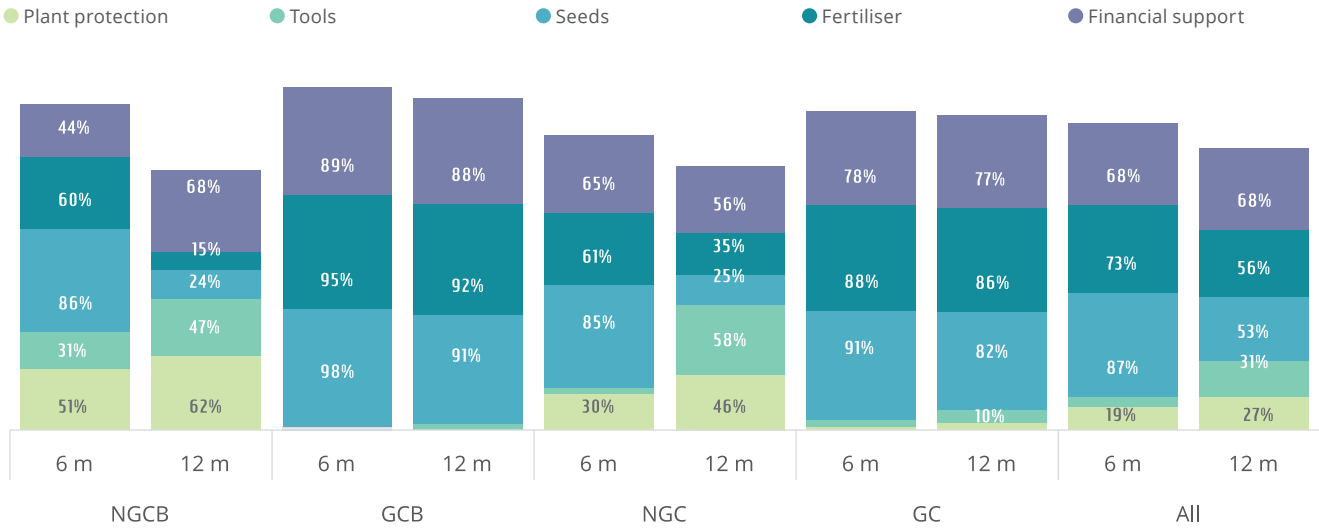
Agricultural production needs

The support that is needed most in the next 3-12 months matches the most prominent constraints identified by the respondents.

The majority of all households from each targeted consider the inaccessibility of agricultural inputs, both in terms of access and costs, as the main constraints to their production. The importance of improving access to agricultural inputs (seeds, fertilisers, plant protection and tools) was identified by an estimated 199 835 households (100 607 in 2015). That is, 126 320 households in the Government Control areas (59 089 in 2015) and 73 526 households in the Non-Government Control areas (37 017 in 2015).

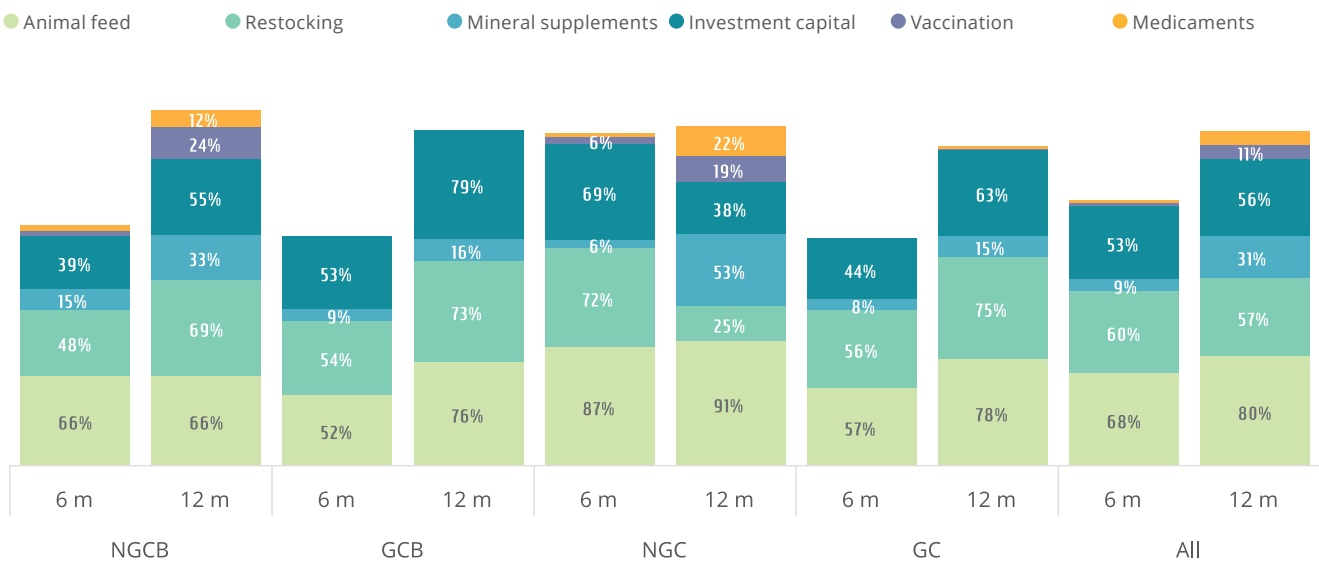
There is notable increase in the share of households in need of agricultural inputs compared to 2015. In particular, the need for seeds has doubled (87 percent) compared to 2015 (43.8 percent) in the short term and has significantly increased in the mid-term (53 percent). The need for fertilisers has also significantly increased compared to 2015 (short term 40.7 and mid-term 22.5 percent), as has as the need for tools and plant protection in the Non-Government Control areas, in line with the sizes and types of prevailing cropping practices.

FIGURE 53. PLANT PRODUCTION NEEDS



Source: FAO, 2017

FIGURE 54. LIVESTOCK PRODUCTION NEEDS



Source: FAO, 2017

Among the support needed for maintaining livestock activities in the next 6-12 months, animal feed continues to predominate as a major need for the target households (as in 2015). An estimated 156 193 households need animal feed to continue their livestock production (99 228 in 2015). That is, 98 724 households in the Government Control areas (62 719 in 2015) and 57 468 households in the Non-Government Control areas (36 509 in 2015).

Other needs such as restocking (7 percent in 2015) and investment capital (negligible in 2015), were identified by over half of the respondents.

The need for mineral supplements, vaccination and veterinary medicines is more pronounced in the Non-Government Control areas than the Government Control areas, and also more pronounced when compared to the 2015 results.

All identified needs stem from the most prominent conflict impacts (lowered incomes and increased prices of agricultural inputs (seeds, fertilisers, animal feed and limited access to input and produce markets), with higher needs overall noted in the Non-Government Control areas.

Addressing those needs would provide sustainable support in terms of food security and the incomes of the conflict affected population.

Assistance received

Social connections and support

Unlike personal resources, which include variables such as gender, age, religion, education, occupation, income and property, social resources include social connections and social ties that play an important role in the interaction of individuals with their communities.

Social resources determine an individual's access and use of social interactions, which are necessary for maintaining and promoting self-interest and well-being, for maximizing benefits from friendship, neighbours or relatives, and for ensuring social support in minimizing economic and social risks. The availability of social resources may provide the leverage to overcome shocks and diminish vulnerability.

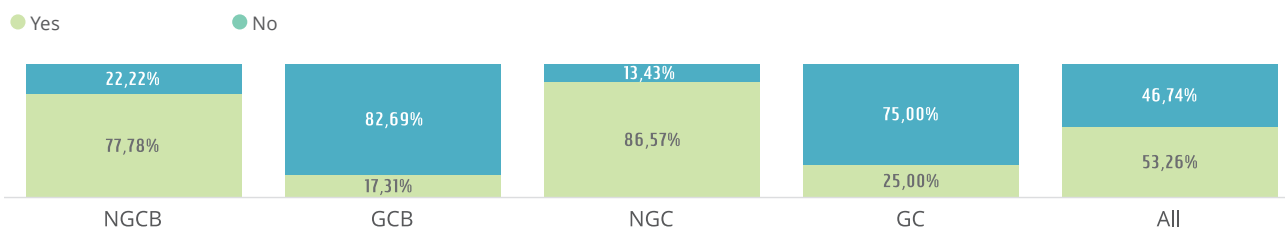
Social connections comprise of daily interactions with groups and individuals with similar social, cultural and economic conditions, such as friends, relatives and the community. They share social and economic values and ensure mutual support. Physical neighbourhoods in communities play an essential role in providing mutual help and the exchange of values.

Within this domain, we already investigated the strength of social connections in terms of the ability to obtain or borrow cash (Figure 22) and agricultural inputs from friends, relatives and social contributors (Figure 40 and 41). As provided in Figure 55, we inquired whether they are assisted by friends, family and relatives in their times of need.

On average more than half of the respondents maintained good social connections on which they relied in moments of crisis. Notably, a significantly higher share of households from the Non-Government Control areas rely on such support than in the Government Control areas. This result is likely due to the significantly higher number and type of aid interventions in the Government Control areas.

In addition, one quarter of households have received assistance from their social connections in the last 12 months (46.8 percent in 2015) and one third have provided assistance (40.9 percent in 2015). Respondents in the Non-Government Control areas have received significantly more support (estimated 73 162 households) compared to the Government Control areas and compared to 2015 (33 129 households), reflecting the limited support provided by external actions.

FIGURE 55. RECIPIENTS OF ASSISTANCE FROM SOCIAL NETWORKS



Source: FAO, 2017

Other support provided

The humanitarian assistance received from the government, local authorities and non-governmental organizations is presented in Figure 57. This indicates a focus on food assistance, which is unevenly distributed throughout the target areas.

In contrast to 2015, significantly fewer respondents from the Non-Government Control areas have received assistance compared to the Government Control areas, both in terms of quantities and in terms of types of assistance. On average, 2.1 types of assistance per household were received, whereas 1.3 types of assistance in the Non-Government Control areas, and 2.5 types of assistance in the Government Control areas.

Compared to 2015, food remains the dominant type of support, and is still provided to one third of households. The number of households receiving clothing has doubled (10 percent in 2015) and the number of recipients of household items and heating fuel has increased five and ten-fold respectively (4.3 percent and 1.1 percent in 2015). In parallel, overall cash support has significantly decreased (7.9 percent in 2015 for all households).

Food assistance is still being provided to an estimated 74 651 households (88 072 in 2015), indicating that recovery needs in the conflict affected have not been addressed and confirming the need for more sustainable livelihood support.

Farmers' organizations

Farmers' organizations are considered part of extended webs of social connections available to agricultural producers. In the last few years the Ukrainian agricultural sector has been significantly assisted in the establishment of formal farmers' organizations and informal community based organizations.

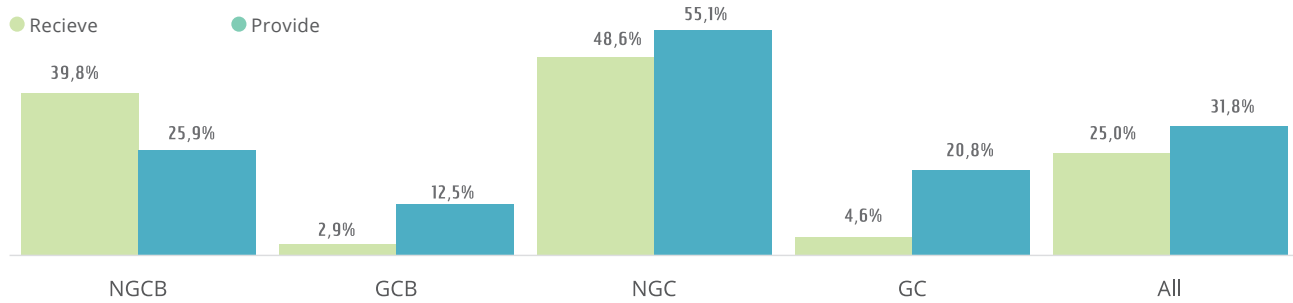
Projects frequently establish farmers' organizations by grouping farmers around a specific crop, commodity or activity.
Almost 41 percent of respondents are able to identify a farmers' organizations within, or close to their communities, as provided in Figure 57. This is a significant development compared to the situation in 2015.

The number of households with members has more than tripled since 2015, accounting for 10.7 percent of respondent households. The gains are substantial in the Government Control areas, and more modest in the Non-Government Control (6.5 percent in 2015). Activities of Farmers' organizations are limited in the exclusion zones.

In the Non-Government Control areas those respondents who are not members of farmers' organizations abstained due to age and limited understanding of these organizations. The predominant reasons in the Government Control areas are lack of time (employed), lack of trust and lack of need (limited or non-existing agricultural activities).

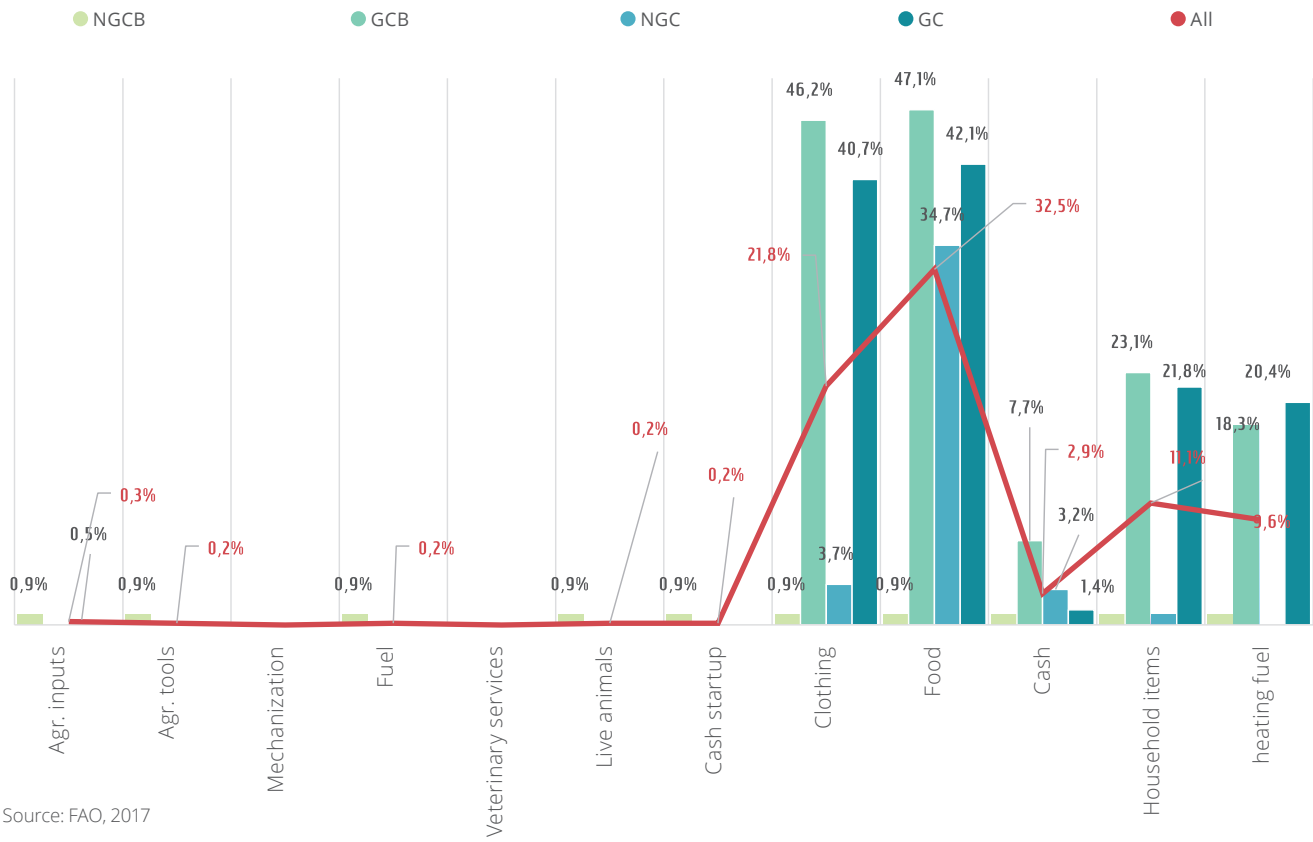
Establishing and disseminating the benefits of farmer cooperation usually takes a long time, which the prolonged post-conflict has been aiming to address.

FIGURE 56. CURRENT RECIPIENTS/PROVIDERS OF ASSISTANCE



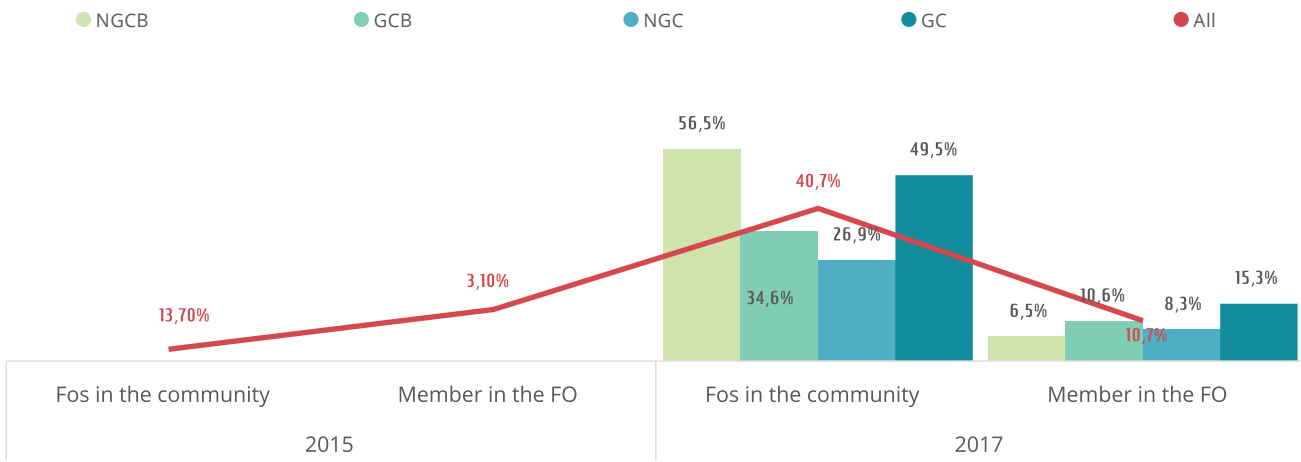
Source: FAO, 2017

FIGURE 57. SHARE OF HOUSEHOLDS RECIEVING ASSISTANCE



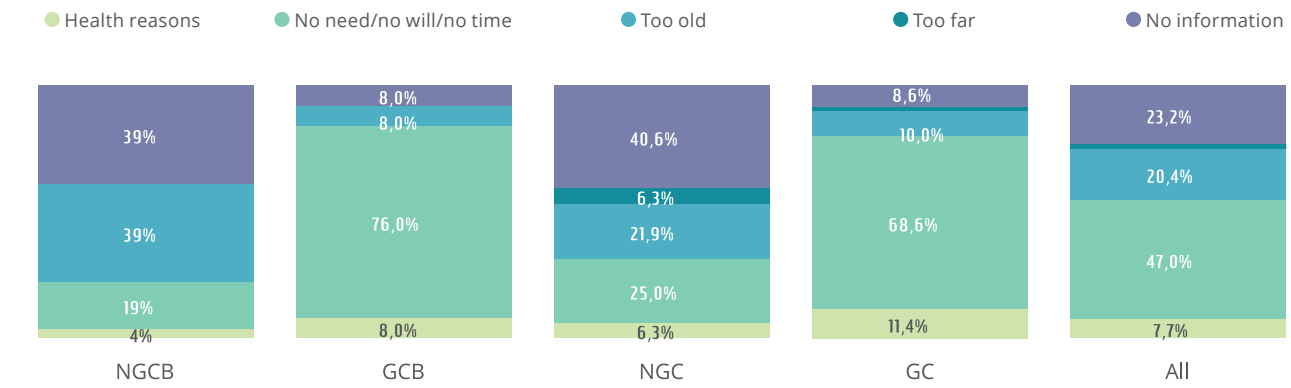
Source: FAO, 2017

FIGURE 57. FOS IN COMMUNITIES AND MEMBERS



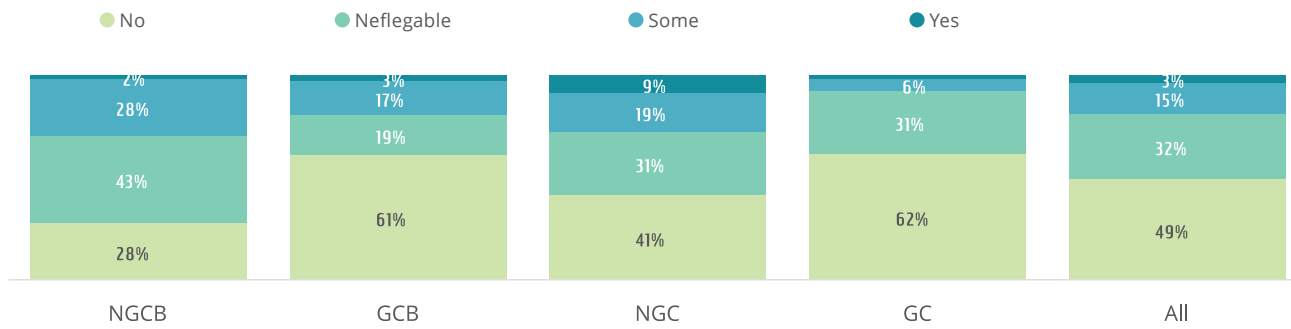
Source: FAO, 2017

FIGURE 58. FOS IN COMMUNITIES AND MEMBERS



Source: FAO, 2017

FIGURE 58. FOS AND BENEFITS



Source: FAO, 2017

Members of farmers' organizations elaborated on the benefits of joining, as provided in Figure 59. Eighteen percent of households with members have benefited (in any form), which is a significant increase compared to 2015 (5.4 percent). In contrast to 2015, more members in the Non-Government Control areas have benefitted more substantially and directly, although the share of those with "marginal benefits" is also higher in the Non-Government Control areas. More than half of households with members in the Government Control have not benefitted from joining.

The services provides to members and communities are listed in Figure 60, confirming that 40.7 percent of respondent households are aware of and can identify the activities of farmers' organizations.

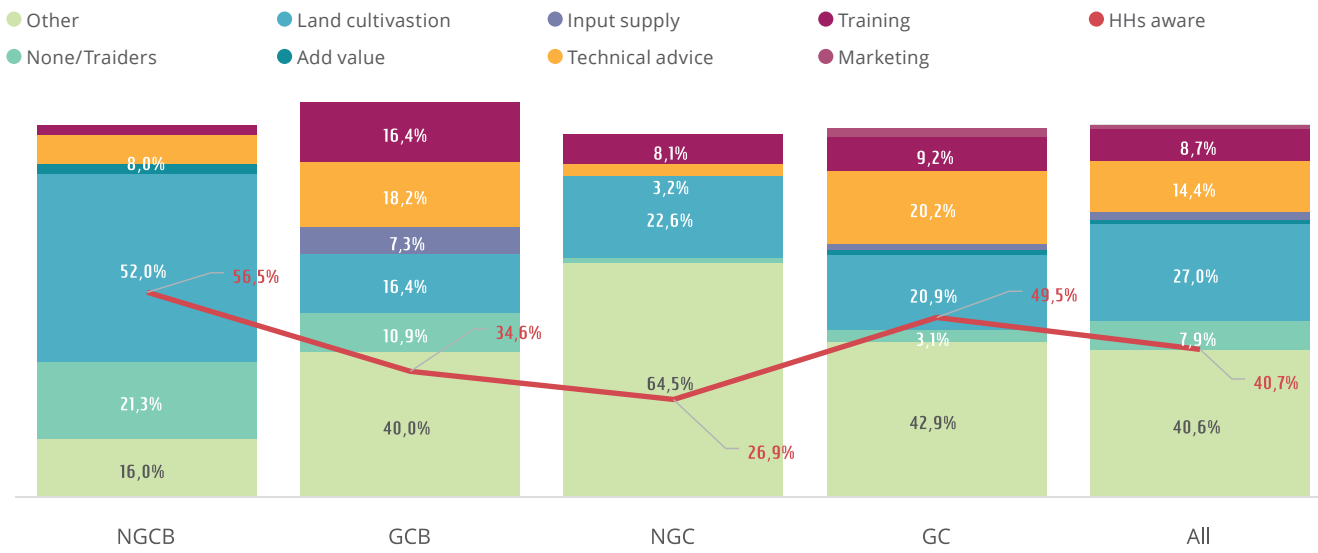
The activities and services of farmers' organizations are predominated by various activities and cultivation services (35 percent in 2015), and to a lesser extent technical advice (28 percent in 2015) and capacity development/training (2 percent in 2015).

One third of respondents would consider joining of a farmers' organization, which is significant development compared to 2015 (4.5 percent). Most enthusiastic are residents of the Non-Government Control areas.

Thirty seven percent of respondents are interested in increasing their incomes (13.6 percent in 2015), followed by interest in obtaining a start-up grant (32 percent in 2015), knowledge, access to markets (21.8 percent in 2015), reduction of costs/labour (13.6 percent in 2015) and adding value to production (15 percent in 2015).

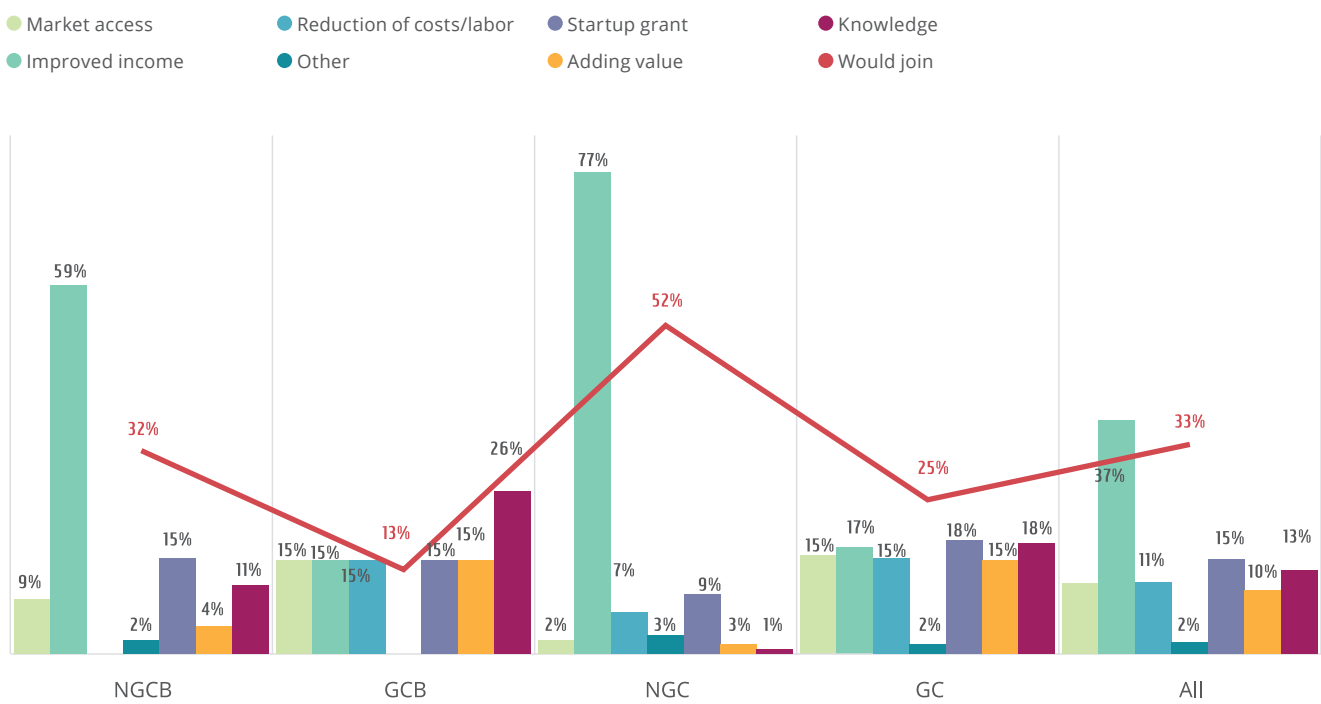
Improved incomes are a priority for the respondents from the Non-Government Control areas, while a range of diverse interests compete in the Government Control areas.

FIGURE 60. FOS AND SERVICES



Source: FAO, 2017

FIGURE 61. MOTIVATION FOR JOINING A FARMERS' ORGANIZATION



Source: FAO, 2017

Conclusions

This report presents a comprehensive analysis of the extent, patterns and determinants of social and economic vulnerability affecting 662 933 people in 229 696 households. The report reflects the situation in rural areas in the GCA and NGCA, and in proximity to the contact line. It aims to assess to what extent the conflict affected population is impacted, how vulnerable they are and what their recovery needs are.

Based on household well-being, vulnerability is conceptualized as economic and social vulnerability, with economic vulnerability being a risk of becoming income poor, or unable to maintain the living standard in the event of a shock, while social vulnerability is a risk of not being able to fully participate in economic, social and civic life in the community.

Economic and social vulnerability are driven by deprivations in resources (financial, physical, human and social), an inability to use those resources (access to markets), local characteristics and the probability of shocks occurring.

The exposure to shocks in the target population has been analysed along with the prevalent coping strategies. Based on the findings of this assessment the following conclusions on the exposure of shocks and the consequent vulnerabilities can be extrapolated:

- **Exposure to both covariate and idiosyncratic shocks affects a third of the households,** which is a significant reduction compared to 2015. The frequency of family-related shocks has also decreased, although economic out migration has increased.

- **The reduced shocks contributed to a decrease the social and economic vulnerability of the households.** However, 55 percent of households are still exposed to monetary poverty, with one third living in poverty on incomes of less than USD 100 per month. Absolute poverty persists in a very small share of the households.

Vulnerability indicators have decreased, with less than half of the households exposed to monetary/economic vulnerability and less then third exposed to access vulnerability.

Overall a quarter of the households remain vulnerable in both respects.

Social vulnerability is not an issue for the target population, thanks to persistent and strong social connections, especially in the Non-Government Control areas.

- **Despite the recent improvements in certain income indicators, households in the Non-Government Control areas are more affected by the conflict in almost all aspects.** The frequency and severity of the effects on their livelihoods are more significant than in the Government Control areas.

In parallel, households in the Non-Government Control areas have received a fraction of the assistance provided to those the Government Control areas both in qualitative and quantitative terms.

The economic profile has continued to change for the majority of households, as result of the post-conflict adaptation and the type and scale of the ongoing relief efforts. Based on the findings, the following conclusions can be extrapolated:

- **Household incomes have improved on average since hitting an all-time low in 2015, albeit at a very unbalanced rate in each target area.** In the Non-Government Control areas, average incomes (in terms of

value and number of sources per household have shown improvement less than a fifth of households, and there has been a decrease in household income in the majority of households. Conversely, in the Government Control areas, despite the stagnation of the average incomes in value, the share of the households experiencing limited improvement is significantly higher compared to the share of households experiencing decrease.

- **The participation of "stable" sources of incomes has increased**, although state transfers remain most relied on. Entrepreneurial activity has shown some initial recovery, while agriculture has maintained its contribution to the incomes for a significant share of households.

- **Debts have significantly reduced in number and value, indicating both increasing incomes and inability to borrow and invest in recovery.** The commercial credit system plays virtually no role, as it fails to enable access to funds for the households which continue to rely on social connections.

- **Economic (work) related migration is rampant,** affecting up to 30 percent of households in the Government Control areas and half of the households in the Non-Government Control areas. Several indicators illustrate long term and permanent migration of the working population, further eroding the recovery potential.

The food security of the population in the rural areas in the GCA and NGCA has significantly recovered, impacting mainly the quantitative nutritional intake. Based on findings, the following conclusions can be extrapolated:

- **While the majority of households continue to use some form of food security coping mechanism, most refer to a qualitative impact on nutrition.** In parallel, the number of coping strategies used per household has reduced twofold. The share of households using food deprivation coping mechanisms has reduced to less than half, which can be directly attributed to continued food distribution.

The share of households using livelihoods coping mechanisms has only slightly reduced, with the notable prevalence of expenditure reduction, economizing on goods and services and changing consumption patterns, phasing out of the use of devastating measures.

- **High food and livelihood prices are one of the main difficulties for approximately third of households,** and limit the development of the population, allowing persistence of monetary poverty. Devaluation of the national currency is evaluated as the main reason for price increases.

- **Agricultural production and food distributions have prevented severe food insecurity,** although the further erosion of agricultural production will undoubtedly affect and erode the sustainability of food security in both the medium and long terms.

The agricultural sector acts as a significant buffer and softens many of the conflict related shocks and impacts. However, there are clear signs of its contraction due to limited mitigation of needs and further erosion of the production capacity and productivity. The following conclusions can be extrapolated in terms of agricultural production:

- **There has been a significant decrease in the share of households that engage in agricultural production, and in their production size. There have also been moves towards self-subsistence activities on small land plots and decreasing commercial production.**

With 95 percent of the households having access to land, the share of households engaging in crop production has decreased from 91 percent in 2015 to 61 percent in 2017. The sizes of cultivated plots have drastically decreased for winter (combinable) crops and contracted by 30 to 50 percent for summer crops.

Agricultural mechanization ownership remains limited and production assets have further deteriorated. The share of farmers cultivating land by hand has increased to 92.6 percent, limiting the productivity and profitability of agricultural activities.

- **As anticipated in 2015, persisting challenges (increasing inputs prices, high migration and lack of cash and access to finance) have contributed to the retraction of agricultural production.**

  Farmers changing their cropping patterns no longer rely on their own seeds and fertilizer (manure), further increasing their production costs. Access to markets still presents a challenge and it costs more for farmers to procure inputs and sell production surpluses. The negative trend in terms of production and productivity are expected to continue if the agricultural sector remains unassisted.

- **Most livestock producers, representing 87 percent of all farmers, have reported partial destocking**, mainly due to the lack of animal feed and turnover cash, which are also direct results of increasing prices and changing cropping patterns. The livestock populations and shares of producers have largely remained stagnant, with the livestock population approximately half of what it was before the conflict.

- **The Non-Government Control areas, despite being significantly more impacted, have retained more of their production sizes and share of farmers**, largely due to necessity, limited support, and lack of alternatives and economic opportunities.

  In contrast, the Government Control areas have contracted significantly in terms of agricultural production. Although faced with different challenges, the situation in both cases seems unsustainable and in need of assistance that would allow preservation of the on-going production and restarting production on abandoned land.

- The most urgent needs are for agricultural inputs and animal feed, which are unaffordable. Additional needs include restocking of live animals, plant protection for control of pests and disease outbreaks and agricultural equipment and tools.

  If left unsupported, the agricultural subsistence sector is expected to further contract, in proportion to the scale and length of food distributions. This casts doubts on whether the livelihoods and food security of the targeted population can recover, especially beyond the continuing "emergency phase".

  The continuing deterioration of agricultural production and the lack of support for agricultural production means increasing costs and reducing feasibility for its comprehensive recovery in the medium and long term.

The support provided has continued to be mainly funnelled largely towards "immediate and emergency" needs, even two years after the conflict. Based on the findings, the following conclusions can be extrapolated:

- **The conflict-affected population in the Non-Government Control areas continues to rely mainly on their social connections to address food insecurity and basic needs**, confirming the value in maintaining the household resilience capacity within the rural/agricultural sector.

The continuing assistance provided to the Government Control areas has significantly decreased the dependence on social connections.

- **External assistance has been mainly focused on food distribution in rural areas** and to a lesser extent on clothing, household items and fuel (Government Control areas). The food support has reduced for the population in the Non-Government Control areas but has increased in the Government Control areas from approximately one third, to approximately one half of the households.

  Other areas of life, including of the agricultural sector, have received symbolic support. A decreasing overall trend in the provision of assistance to the affected households continues to be notable overall, and in particular for the exclusion zone in proximity to the Non-Government Control areas.

- **The decline in agricultural production seems linked to the continuing food support** provided, contributing towards setting "entitlement" and "dependence" mentalities among the support beneficiaries, as there is a clear correlation between food distribution and reduction in the share of agricultural households and the area planted with crops. The continuation of food aid is only likely to add to this trend as households see little need to dedicate efforts to agricultural/food production.

- **There is a significant and urgent need to support the restarting of agricultural production of the affected households, as a way of safeguarding and restoring livelihoods and recovering incomes and ensuring sustainable food security.** Addressing those needs would provide sustainable support to the sustainability of livelihoods, at the same time facilitating the return of internally displaced population. Continued food aid and stagnating incomes, especially in the Government Control areas, seem to have contributed to a reduction in economic activities and out migration, as the cash deprived population is dependent on distributions, while lacking development opportunities.

- **A significant increase in investments in farmers' organizations is notable** compared to the findings from 2015. However, although an increase in awareness and membership is sizable, the overall benefits for the population are still limited. Farmers' organizations as long term development mechanisms are mostly used to add value to established production and to address specific production issues. Their effectiveness in a situation of severely contracting agricultural production is limited.

Recommendations for recovery

This survey assesses the economic impact of the conflict on the livelihoods of the affected population and – based on feedback from the respondents – it identifies the recovery needs for sustainable improvement of the economic and food security situation and easing of the ongoing monetary poverty.

The feedback from the beneficiaries points to an urgent need to mobilize and support income generating and food production activities, mainly through modalities for improving access to agricultural inputs and in some cases agricultural markets.

Key Needs: As a result of the conflict, incomes fell but have since slightly recovered, and the onset of monetary poverty has forced significant out migration. The generally stagnant situation adversely affected the access to credit, directly limiting the ability of respondents to engage in agricultural income generation and food production, further strengthening the feeling of hopelessness and the already set dependence on food aid and government benefits. This is more than evident by comparing the Government to the Non-Government controlled area, where agricultural production has developed (in value, size and contribution to household income), in line with the modest external support and distributions provided.

Agricultural production in rural areas protects food security by providing a safety net for the producers themselves and the population they support. The conflict has affected the commerce and logistics of agricultural inputs and their prices have continued to increase, further increasing food prices. The affected cost benefit of agricultural production and in particular of combinable crops, has resulted in a significant reduction in the area planted per household, with a vast majority of rural residents reducing their investments to a fraction of the original agricultural production.

As result of reduced agricultural production (mainly combinable fodder crops), livestock populations have decreased and agricultural production has adapted and changed cropping patterns (moves towards high value crops in backyards). The first impact of this is that it erodes the sustainability of the rural-agricultural complex and the second impact is increased food prices and food security. It has also contributed to monetary poverty, completing the vicious cycle of poverty.

Objective: Support productive capacities and help the target groups engage and restart their agricultural production through support programs that recover, maintain and improve the production and productivity of the evolved agricultural production patterns and add to their income generation and food production capacity. These activities would need to enable more permanent solutions beyond the current status quo delivered through food distributions.

Target areas: The economic recovery support for the rural areas should use a geographic focus on the Lugansk and Donetsk oblasts, with a priority given to the NGCA. Given the wider geoFigureical impacts, and the movement and need for resettlement of IDPs, the adjacent oblasts of Kharkiv, Zaporizhzhia, and Dnipropetrovsk should also be considered.

Target groups: Supporting the agricultural activities for rural residents should be a priority, as this can help them to cope with ongoing monetary poverty.

The main target groups for support considerations should be 1) the small holder farmers that engage in subsistence production and

that have abandoned their agricultural land 2) commercial smallholders who outsource and cultivate significant shares of land and keep the local market supplied, and by so doing, defend against further increases in food and fodder prices, 3) farmers' organizations that experience a trend of development and can unify small farmers in conceptualizing their developing small and fragmented production of high value crops.

Bearing in mind the agricultural profiles of the target population, the type of agricultural holdings in question and the constraints identified, interventions targeting the following aspects of the agricultural sector are recommended as an immediate response:

1. Implement support programmes for recovering agricultural production through improving access to agricultural inputs and "engagement" of the households, through utilization of various opportunities provided by the production and the marketing of high value crops (fruits and vegetables) on small farms, thus increasing the self-reliance and incomes;
2. Support improved access to turnover capital or agricultural inputs for smallholders through cost-sharing investments in agricultural production, contract farming modalities and joining of farmers.
3. Implement programs aimed at the recovery of agricultural activities of commercial oriented producers, contributing to increasing the market supply and stabilization of food market prices;

The overall cost for support for immediate assistance to the most affected population is provided in the Tables below.

On basis of the above, the proposed comprehensive Agricultural Recovery Plan for the conflict affected areas is based on:

4. Immediate response to address urgent needs to recover and support agricultural production and sustainability of incomes of the affected population, by optimizing opportunities to strengthen livelihoods;
5. Support the transition from the extended period of relief to development interventions, by strengthening people's capacity to utilize available potentials;
6. Provide development opportunities and work with communities to maximize the benefits of the changes in cropping patterns, building their resilience through addressing their main challenges in support to income generation and use of local resources, by strengthening local knowledge and cooperation.

VALUE OF SUPPORT NEEDED PER HOUSEHOLD

Area		GCA	NGCA	Total
Agricultural production	Households in need	20.000	7.000	27.000
	Persons in need	45.000	21.000	66.000
	Value of support needed	USD 4,400.000	USD 1,540.000	USD 5,940.000
	Cost of support per household			USD 220
				USD 90

Source: FAO, 2017

AGRICULTURAL RESPONSE PLAN

Area	Short/Medium-Term 2018-2020	Medium/Long-Term- 2010-2022
	Recovery and rehabilitation	**Towards development**
Crops	• Facilitating access to seeds, fertilizers, tools and plant protection for food and cash crops; • Cost shared grants for re-establishment of production of cash crops (vegetables in green-houses, fruits etc.) • Improving access to agricultural tools and small individual mechanization in to address changes in cropping patterns; • Support the establishment of joint community based seed production / storage schemes; • Development of capacities for joint services of small farmers (land preparation, harvesting, silage making etc.) • Subsidized credit for more commercial farmers and input credits for subsistence farmers. • Promotion and support to producer organizations and inter-professional organizations • Support to post-harvest processing activities adding value to vegetables (pickles) and fruits (jams), especially for elderly and women headed households	• Crop diversification • Climate Change Adaptation • Strengthening Producers organizations • Foster added value in agriculture through processing, improved supply chains, marketing, and sales. • Improved technology for larger farms
Livestock	• Cost shared restocking support, animal feed production and animal health services (medicaments and vaccines) aimed at livestock herd increase; • Subsidized credit for more commercial farmers and input credits for subsistence farmers. • Provision of start-up kits for poultry and rabbits (animals, animal feed, pens, etc.) • Promotion and support to the production and storage of high nutritional value feed / silage. • Support to processing and adding value to animal products, especially for elderly and women headed households • Promotion and support to producer organizations and inter-professional organizations	• Strengthening Producer organizations • Foster added value in agriculture through processing, improved supply chains, marketing, and sales. • Improved technology for larger farms

Annex 1.
Target population

Annex 1.

Region	Rayon	Control	Population total	Rural population	Rural population share
Donetsk	Amvrosiivskiy	NGCA	44529	21100	47%
Donetsk	Artemivskiy	NGCA / GCA	61675	31380	51%
Donetsk	Velikonovosilkivskiy	GCA	40080	34124	85%
Donetsk	Volnovaskiy	NGCA / GCA	104060	48672	47%
Donetsk	Volodarskiy	NGCA / GCA	28946	20553	71%
Donetsk	Dobropilskiy	GCA	16153	14243	88%
Donetsk	Konstyantynivkiy	NGCA / GCA	18622	18622	100%
Donetsk	Krasnoarmiyskiy	GCA	31175	23941	77%
Donetsk	Krasnolimanskiy	GCA	21426	10463	49%
Donetsk	Mariinskiy	NGCA / GCA	83206	28004	34%
Donetsk	Novoazovskiy	NGCA / GCA	28207	13911	49%
Donetsk	Olexandrivskiy	GCA	18978	15368	81%
Donetsk	Pershotravnevy	GCA	26938	13401	50%
Donetsk	Slovyanskiy	GCA	33518	18918	56%
Donetsk	Starobeshivskiy	NGCA	49882	22968	46%
Donetsk	Telmanivskiy	NGCA	14418	9957	69%
Donetsk	Shakhtarskiy	NGCA	19180	19180	100%
Donetsk	Yasinuvatskiy	NGCA / GCA	27416	19024	69%
Lugansk	Antratsytivskiy	NGCA	30492	13791	45%
Lugansk	Bilovodskiy	GCA	24160	15968	66%
Lugansk	Bilokurakinskiy	GCA	19386	11814	61%
Lugansk	Krasnodonskiy	NGCA	29318	19393	66%
Lugansk	Kreminskiy	GCA	40868	16620	41%
Lugansk	Lutuginskiy	NGCA	66614	17566	26%
Lugansk	Markivskiy	GCA	15347	9258	60%
Lugansk	Milovskiy	GCA	15415	9504	62%
Lugansk	Novoaydarskiy	NGCA / GCA	42484	21499	51%
Lugansk	Novopskovskiy	GCA	34709	20883	60%
Lugansk	Perevalskiy	NGCA	64411	4034	6%
Lugansk	Popasnyanskiy	NGCA / GCA	79036	9286	12%
Lugansk	Svativskiy	GCA	36311	16213	45%
Lugansk	Sverdlovskiy	NGCA	11776	7788	66%
Lugansk	Slovyanoserbskiy	NGCA / GCA	49359	13996	28%
Lugansk	Stanichno-Luganskiy	NGCA / GCA	49555	30858	62%
Lugansk	Starobilskiy	GCA	45695	27979	61%
Lugansk	Troitskiy	GCA	20432	12654	62%

Source of data: State Statistics Committee 2015

Emergency Operations Team, Ukraine
Food and Agriculture Organization
of the United Nations (FAO)
115 Office, 1 Borysa Grinchenka str.
Kyiv, 01001, Ukraine

Tel.: +30 8093 738 0730
e-mail: FAO-UA@fao.org

ISBN 978-92-5-130035-0

9 789251 300350

I8171EN/1/12.17