**Area needs assessment to implement livelihoods and water projects in Ninawa, Iraq**



# Abbreviations

|  |  |
| --- | --- |
| FGD | Focus group discussions |
| KII | Key informant interviews |
| HH | Household |
| ODK | Open Data Kit  |
| IDP | Internally displaced people |
| ISIS | Islamic State of Iraq and Syria |
| ISIL | Islamic State of Iraq and the Levant  |
|  |  |

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# Executive Summary

This report covers the needs of the targeted area (three districts in Mosul Ninawa/ the conflict affected area Tel Kaif, Shekhan and Tel Afer districts) for agricultural livelihoods projects and the kind of intervention to alleviate the dire needs of the locals and ameliorate their vulnerability suffering. The area needs were assessed according to various parameters listed within the annex 1. The assessment was conducted for two weeks through focus group discussions (FGD), key informant interviews (KII) with and comprehensive desk review. The data were collected through pre-formed questionnaire designed to fit with the scope and objectives of the work by using ODK mobile data technology with tablets that facilitated the data collection process. The focuses of the parameters were on economic statuses of the villagers in generals, sources of family incomes, their households’ assets, their desire and skills in doing agribusiness (raising livestock and agricultural practicing), their needs for the potable water and water networks and evaluation of their capability in implementing the type of the project activities in effective and productive way. The collected data revealed that the visited villages were in poor economic and are relying on the agribusiness for living. The recent crises resulted in looting and destruction of agricultural livelihoods, collapse of government support in providing inputs and high price of agricultural input remain as the major form of vulnerability of the locals who are mixed people (host communities, IDP, and returnees). The locals are in experience in raising animals and farming agricultural lands; the presence of the required interventions and supports will be helpful in securing their livelihood and reducing their sufferings. This can be achieved through providing them with the required in kind supports regarding agribusiness including conducting condensed and comprehensive training courses for increasing their skills on proper farming, farm management, post harvesting. Restoring agricultural activities and agricultural based livelihoods for the locals in these areas is important livelihood project and will be helpful in ameliorating the insecure livelihood needs of the locals.

# Organisational profile

**ZSVP:**

- ZSVP (Zakho Small Villages Projects) as a local NGO established in 1991, is interested on community development to promote the ability of vulnerable groups of rural communities and help them for fair sustainable life.

 - In 1991, after the First Gulf War, ZSVP took part in the relief efforts for the refugees and internally displaced people and in reconstructing of infrastructure of rural areas of Dohuk governorate through rebuilding (shelters, water projects, schools, clinics, irrigation channels, and roads) to enable people to return back to their villages and start their life.

- After the UN resolution 1996, ZSVP moved away from relief oriented approach to a more developmental approach. Since 1998, ZSVP has disseminated environmental information and conducted workshops and training courses for diffusing sustainable agriculture methods and environmentally sound technologies, integrated pest management techniques, nutrition methods water and environmental health care to various groups’ (farmers, rural women, extension agents, students and NGOs).

- Since 2003, ZSVP has changed its interests and activities to respond to new conditions in Iraq because of the last Gulf War – ZSVP Contributed in managing refugees camps in emergency program prepared by international agencies and local administration to provide required needs to displaced people and fled families from fighting area post the war.

- In April 2003, ZSVP was the first organization to be established in the liberated areas of Mosul and focus on IDPs issues to assist them to improve their living conditions and reporting their problems and needs to the relevant parties.

- Since April 2003, ZSVP has implemented hundreds of projects and activities in the new liberated area of Mosul, Erbil and Kirkuk, by providing clinic centers with medical equipment, distributing food and other materials to IDPs and returnees, building capacity activities for IDPs and health awareness program, cash for work and income generation project for refugees.

- Due to the last crises raised in 2014 after control of ISIS to more than 30% of Iraq which was the reason behind of displacement of more than 4 million peoples from different governorates of middle and south of Iraq to KRI, ZSVP to follow up the changes and the crises conflicts have seen a big role through support of IDPs and refugees with Food aid assistance and NFI to save peoples and contribute toward the development and reintegration of crises affected groups (IDPS, returnees and Host community with women and youth) into their communities through supporting small agro-income generating activities and women empowerments in Duhok and Ninawa province area through:

- Improved long term income generation, job creation and other related livelihood initiatives for IDPs, Returnees and host communities, especially women, youth and other vulnerable groups ,through supporting the following scheme of small income generating projects that are including but not limited to:

* Micro- and SME businesses strengthening for the most vulnerable groups who are affected by the crises
* Vocational and technical, financial and administrative skills enhance of families to respond to market needs, as well as facilitates self-employment and on-the job training;
* Increase access to productive resources among IDPs, Returnees and Host community including women and youth in livelihood sectors

- ZSVP has a membership with IFOAM (International Federation of Organic Agriculture Movement, Germany, since 1997), IIRD (International Institute of Rural Development – South Asia, 1998), Avalon Network for Sustainable Rural Development-Holland, 2007, ANND (Arabic NGOs network for environment), DNN Network and Civil Society Forum and EIN (Iraqi Election Information Network).

# Introduction

## Purpose of the study

Area needs Assessment was conducted in Nineveh plain (Tel Kaif , Shekhan and Tel Afar districts), to determine the gaps in livelihood sectors to identify priority needs and interventions for implementation livelihood and water projects in conflict affected area to alleviate the dire needs of the locals and ameliorate their vulnerability suffers. This assessment was conducted for two weeks through comprehensive desk review, focus group discussions (FGD) and key informant interviews (KII) with stakeholders, namely villages’ leaders. The collected data were done through pre-formed questionnaire designed to fit with the scope and objectives of the work by using ODK mobile data technology with tablets that facilitated the data collection process.

## Background

The recent crisis (ISIL crisis) in Iraq has led to widespread displacement, economic disruption and threats to agricultural production and food security. The crises resulted in almost 4.4 million people need of food security assistance. This group of people includes: IDPs, host communities, returnees and other people who remained in the affected areas during the conflict[[1]](#footnote-1). In addition, agriculture-based livelihoods face severe constraints across the value chain, from production, post-harvest handling and processing to marketing. Where, crop production is currently severely hindered due to lack of subsidies and support from the government in terms of seeds, fertilizer and pesticides. This has resulted in a decrease in production which is made worse by a lack of machineries. Most of the tools and machineries used by the farmers have either been damaged or looted during the fighting and the higher prices in relation to the pre-crisis situation prevents many farmers from replacing their equipment.

Livestock was another important contributor to household incomes and food security in many areas; as a result of the crisis, livestock related livelihoods and food supply suffered major disruptions[[2]](#footnote-2). Additionally, farmers currently lack income and cash to buy back animals previously sold under stress. Accordingly, the present study is an area needs assessments, vulnerable groups profiling and the studying of livelihood adaptation practices in conflict affected area of Ninawa, Iraq; the study was carried out by ZSVP to determine the most needs and required interventions to alleviate the dire needs of the locals and ameliorate their vulnerability suffers.

# Methodology

ZSVP undertook this assessment in Nineveh plain over a two week period from the 1st of April 2020. The objectives of the assessment were to identify the gaps and opportunity for implementing agricultural based livelihood and to determine the locals’ needs for potable water to formulate clear recommendations for future livelihood projects. The assessment applied a mix of analysis tools and approaches adapted to the context and time constraints, with a focus on both desk and field research. The field research was carried out by a team of two skilled data collectors/ monitors well trained on data collection tools and techniques. The following data collection methods were utilized:

• Focus Group Discussions (FGD) with men and women

• Key Informant Interviews (KII)

• Literature review

A total of 35 KIIs and FGDs were carried out with key actors (Villages leaders/ representatives) within the target areas to determine the needs of the area regarding to livelihood sectors in Ninawa/ Iraq. The collected data were the locals information regarding to their locations, their status (host community, IDPs, returnees or Refugees), their vulnerability status, children age and sex who are not attending schools, current villagers assets, primary occupation of the villagers, agribusiness practicing and their needs for skills improvement for a better improvement of their living conditions and securing their livelihoods and their sources and quantities of the potable water; besides, the suitability of their location for implementing of what kinds of agricultural livelihood projects, for model detail see annex 1, p27.

## Study area (Target Area)

Three districts (Tel Kaif , Shekhan and Tel Afar) were chosen for conducting the assessment, the target areas in Nineveh plain were covered 35 villages located within the sub districts (Alqush, Zelkan and Zummar and Rabai belonging to Tel Kaif, Shekhan and Tel Afar, respectively), Table (1).

### Tel Kaif

It is an Assyrian town in northern Iraq. It is located in the Nineveh Governorate, less than 8 miles north east of Mosul. The town is a historic farming town consisting of a densely populated core, surrounded by farm land outside the city. On 6 August 2014, the town was taken over by the Islamic State of Iraq and the Levant (ISIL), along with nearby Assyrian towns. A very large percentage of the agricultural areas within Tel Kaif and its affiliated cities were abandoned by their farmers due to ISIS's control of the province, ISIS militants disrupted the city cultivation and deprived the country of its production, especially strategic crops such as wheat and barley, as well as the loss of very large numbers of herds of livestock that were stolen and fled to outside Iraq[[3]](#footnote-3).

### Shekhan

The district is a district in the Nineveh Governorate with its capital at Ain Sifni, Shekhan District within Nineveh Governorate is bordered by the Amadiya and Dohuk Districts of the Dohuk Governorate to the north, the Akre District to the east, Al-Hamdaniya District to the south, and the Tel Kaif District to the west.

### Tel Afar

It is a city in the Nineveh Governorate of north-western Iraq, located 63 km west of Mosul and 52 km east of Sinjar. Tal Afar is the district with the highest rate of multi-sectoral need among its population compared to the rest of the country. ISIL took control of Tal Afar on June 16, 2014. Returns started in Tal Afar in August 2017 when the Iraqi government re-established control and after the district was partially cleared of explosive hazards. As of May 2018, 311,394 people have returned to Tal Afar district. Most of returnee households lost a major part of their belongings and found their house destroyed and looted. Tel Afar has repeatedly experienced conflict since the US-led invasion of Iraq in 2003. However, the security situation in Tel Afar city in the aftermath of ISIL occupation has stabilised, with large areas destroyed. Before the ISIL occupation period, the two primary sources of employment for Tel Afar residents were the government and agricultural sectors. In January 2018, the World Bank estimated US$ 655 million worth of damages to the agricultural sector in Ninawa governorate, impeding residents from cultivating land. Moreover, an estimated US$ 39 million in damages to municipal assets[[4]](#footnote-4), with over 70% of basic infrastructure in cities like Mosul and Tel Afar being destroyed[[5]](#footnote-5).



Figure 1: map of the targeted areas (Tel Kaif, Shekhan and Tel Afar districts) during the assessment

The target areas were selected due to the high level of needs in regards to livelihoods programming combined with a strong background in the agricultural sector. Besides, the three districts (Tel Kaif , Shekhan and Tel Afar) of the Nineveh plain are representing the districts most affected by the recent conflict and score high on the humanitarian needs overall severity index in Iraq[[6]](#footnote-6) with significant density of internally displaced people (IDP) population and a high density of host community population who have recently returned.

Table 1: Location and names of villages with their numbers of households involved with this assessment

|  |  |  |  |
| --- | --- | --- | --- |
| **District**  | **Sub district**  | **Village Names** | **No of HHs** |
| Tel Kaif  | Alqush | Shewirch Kabeer | 40-50 |
| Tel Kaif  | Alqush | Kelata Ferhan | 50 ≥ |
| Tel Kaif  | Alqush | Shwerch Sagheer | 20-30 |
| Tel Kaif  | Alqush | Chaqelo | ≤10 |
| Tel Kaif  | Alqush | Karke | 50 ≥ |
| Tel Kaif  | Alqush | Pirozawa | 40-50 |
| Tel Kaif  | Alqush | Sharafia | 20-30 |
| Tel Kaif  | Alqush | Kirenjok | 20-30 |
| Tel Kaif  | Alqush | Ain baqara | 40-50 |
| Tel Kaif  | Alqush | Sindank | 50 ≥ |
| Shekhan  | Zelkan | Glashin | 50 ≥ |
| Shekhan | Zelkan | Taq Hama | 10-20 |
| Shekhan | Zelkan | Qaymawa | 40-50 |
| Shekhan | Zelkan | Chamarash | 40-50 |
| Shekhan | Zelkan | Misaka Islam | 10-20 |
| Shekhan | Zelkan | Barazi Mazin | 40-50 |
| Shekhan | Zelkan | Brazi Bjek | 20-30 |
| Shekhan | Zelkan | Shekh Malwan | 50 ≥ |
| Tel Afar | Rabia | Amjalaja | 20-30 |
| Tel Afar | Rabia | Bohar | 30-40 |
| Tel Afar | Rabia | Eska | 50 ≥ |
| Tel Afar | Rabia | Kalhe | 30-40 |
| Tel Afar | Rabia | Masaka | 50 ≥ |
| Tel Afar | Rabia | Walid | 50 ≥ |
| Tel Afar | Rabia | Assriya Seeha | 50 ≥ |
| Tel Afar | Rabia | Seeha alfadhilya | 50 ≥ |
| Tel Afar | Rabia | beershofik | 50 ≥ |
| Tel Afar | Rabia | bseebaye | 50 ≥ |
| Tel Afar | Rabia | Bezone Kebeere | 50 ≥ |
| Tel Afar | Zummar | Gozgeran | 50 ≥ |
| Tel Afar | Zummar | ChokhIre | 20-30 |
| Tel Afar | Zummar | Khanatahtk | 50 ≥ |
| Tel Afar | Zummar | Shebana | 50 ≥ |
| Tel Afar | Zummar | Shlkya | 50 ≥ |
| Tel Afar | Zummar | sihela | 50 ≥ |

# Results and findings

## Locals within the assessment targeted areas

The assessment was carried out in three districts in Ninawa Government. The involved locals within the assessment were mixed of host communities, IDP and the returnees (Table 2).

Table 2: Statuses of the villager (locals) whether are host community or IDP or returnees or refugees

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Sub-District** | **Status of the respondent** | **Total** |
| **Host community** | **DP** | **Returnee** | **Refugee** |
| **Tel Kaif** | **Alqush** | 10 | 2 | 1 | 0 | **13** |
| **Shekhan** | **Zelkan** | 8 | 0 | 0 | 0 | **8** |
| **Tel Afer** | **Zummar** | 12 | 0 | 3 | 0 | **15** |
| **Rabia** | 5 | 0 | 0 | 0 | **5** |
|  | **Total** | **35** | **2** | **4** | **0** | **41** |

## Economic status of the villagers

The economic statuses of the involved villagers are poor and they are in needs for humanitarian aids and livelihood supports (Table 3), where the majority of them are relying on the agribusiness including semiarid crop produce, livestock husbandry and the waged employed as the main source of their incomes (Table 4).

Table 3: Vulnerability status of the villagers

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Sub-District** | **Economic status of the villagers** | **Total** |
| **vulnerable**  | **poor** | **Affordable**  | **Good**  |
| **Tel Kaif** | **Alqush** | 0 | 10 | 0 | 0 | **10** |
| **Shekhan** | **Zelkan** | 0 | 8 | 0 | 0 | **8** |
| **Tel Afer** | **Zummar** | 0 | 12 | 0 | 0 | **12** |
| **Rabia** | 0 | 5 | 0 | 0 | **5** |
|  | **Rabia** | **0** | **35** | **0** | **0** | **35** |

Table 4: Respondent source of the monthly incomes

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Sub-District** | **Source of the respondents monthly incomes** | **Total** |
| **Agriculture own production** | **Salary / Employment** |  **Animal husbandry** | **labour (waged employed)** |
| **Tel Kaif** | **Alqush** | 8 | 0 | 10 | 2 | **20** |
| **Shekhan** | **Zelkan** | 6 | 1 | 8 | 0 | **15** |
| **Tel Afer** | **Zummar** | 9 | 1 | 12 | 2 | **24** |
| **Rabia** | 5 | 0 | 5 | 2 | **12** |
|  | **Rabia** | **28** | **2** | **35** | **6** | **71** |

## Students’ poor school attendance

The data also revealed that number of the boys and girls at ages 6-18 who are not attending the schools are 585 (269 boys and 316 girls) (Table 5) students’ poor school attendance are reflecting the economic situation and the households’ food security of their families[[7]](#footnote-7); the main reasons are that the families need them for work to get their basic needs.

Table 5: numbers of the boys and girls at ages 6-18 who are not attending the schools

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **How many children from 6 to 18 do not go to school?**  | **Total** |
| **No. of Boys** | **No. of Girls** |
| Tel Kaif  | Alqush | Ain baqara | 3 | 0 | **3** |
| Tel Kaif  | Alqush | Chaqelo | 10 | 10 | **20** |
| Tel Kaif  | Alqush | Karke | 5 | 5 | **10** |
| Tel Kaif  | Alqush | Kelata Ferhan | 0 | 0 | **0** |
| Tel Kaif  | Alqush | Kirenjok | 0 | 0 | **0** |
| Tel Kaif  | Alqush | Pirozawa | 5 | 6 | **11** |
| Tel Kaif  | Alqush | Shewirch Kabeer | 5 | 5 | **10** |
| Tel Kaif  | Alqush | Shwerch Sagheer | 10 | 15 | **25** |
| Tel Kaif  | Alqush | Sindank | 20 | 15 | **35** |
| Tel Kaif  | Alqush | Sharafia | 2 | 6 | **8** |
| Shekhan | Zelkan | Barazi Mazin | 20 | 10 | **30** |
| Shekhan | Zelkan | Brazi Bjek | 3 | 2 | **5** |
| Shekhan | Zelkan | Chamarash | 0 | 0 | **0** |
| Shekhan | Zelkan | Misaka Islam | 0 | 0 | **0** |
| Shekhan | Zelkan | Qaymawa | 7 | 20 | **27** |
| Shekhan | Zelkan | Shekh Malwan | 15 | 10 | **25** |
| Shekhan | Zelkan | Taq Hama | 0 | 0 | **0** |
| Shekhan  | Zelkan | Glashin | 12 | 10 | **22** |
| Tel Afar | Rabia | Amjalaja | 0 | 0 | **0** |
| Tel Afar | Rabia | Bohar | 0 | 0 | **0** |
| Tel Afar | Rabia | Eska | 0 | 0 | **0** |
| Tel Afar | Rabia | Kalhe | 2 | 2 | **4** |
| Tel Afar | Rabia | Masaka | 4 | 3 | **7** |
| Tel Afar | Rabia | Walid | 15 | 10 | **25** |
| Tel Afar | Rabia | Assriya Seeha | 0 | 25 | **25** |
| Tel Afar | Rabia | Seeha alfadhilya | 10 | 25 | **35** |
| Tel Afar | Rabia | beershofik | 15 | 20 | **35** |
| Tel Afar | Rabia | bseebaye | 8 | 12 | **20** |
| Tel Afar | Rabia | Bezone Kebeere | 10 | 20 | **30** |
| Tel Afar | Zummar | Gozgeran | 30 | 10 | **40** |
| Tel Afar | Zummar | ChokhIre | 0 | 0 | **0** |
| Tel Afar | Zummar | Khanatahtk | 30 | 50 | **80** |
| Tel Afar | Zummar | Shebana | 15 | 12 | **27** |
| Tel Afar | Zummar | Shlkya | 5 | 6 | **11** |
| Tel Afar | Zummar | sihela | 8 | 7 | **15** |
| Total | **269** | **316** | **585** |

## Households’ assets

The assessment also covered the households’ assets regarding to the agricultural lands and the type and number of livestock’s/ villages.

### Agricultural land

The analysed data presented in (Table 6) showing the area of the agricultural land in acre belonging the villagers/ village. Almost all of the visited villages are having enough lands (100≥) acre that can be used for cultivation and livestock raising purposes. The presences of the required supports will be helpful for revitalization and practicing the professions of their ancestors, cultivation and raising livestock’s.

**Table 6**:The area of the agricultural land in acre belonging the villagers/ village

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **Do you have enough land?**  | **if (Yes)? What is the area of the land used by the HHs in Acre**  |
| **Yes** | **No** | **≤50** | **50-70** | **70-90** | **90-100** | **100≥** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Chaqelo | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Karke | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Kelata Ferhan | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Kirenjok | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Pirozawa | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Shewirch Kabeer | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shwerch Sagheer | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Sindank | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Chamarash | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Qaymawa | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Shekh Malwan | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Taq Hama | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan  | Zelkan | Glashin | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Amjalaja | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Bohar | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Eska | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Kalhe | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Masaka | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Walid | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Assriya Seeha | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Seeha alfadhilya | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | beershofik | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | bseebaye | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Bezone Kebeere | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Gozgeran | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | ChokhIre | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Khanatahtk | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Shebana | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Shlkya | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | sihela | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 33 | 2 | 0 | 1 | 0 | 1 | 31 |

### Livestock and other animals

Due to the suitability of the target areas for raising livestock, different animals’ species (sheep, goats and cattle) as a source of livelihood and income generation are raised by the locals; however, the number and the species of the animals found differences from the village to village (Table 7, 8 and 9). Besides, the locals showed their interests in raising livestock, namely sheep as they have the required skills and pastures for sheep (Table 10).

 Table 7: Number of sheep raised/ village

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **No. of Sheep** |
| **≤50** | **50-100** | **100-150** | **150 -200** | **200-250** | **250 ≥** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Chaqelo | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Karke | 0 | 0 | 0 | 1 | 0 | 0 |
| Tel Kaif  | Alqush | Kelata Ferhan | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Kirenjok | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Pirozawa | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shewirch Kabeer | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Shwerch Sagheer | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Sindank | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Kaif  | Alqush | Sharafia | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Barazi Mazin | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Brazi Bjek | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Chamarash | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Misaka Islam | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Qaymawa | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Shekh Malwan | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Taq Hama | 0 | 0 | 0 | 0 | 0 | 1 |
| Shekhan  | Zelkan | Glashin | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Amjalaja | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Bohar | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Eska | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Kalhe | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Masaka | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Walid | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Assriya Seeha | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Seeha alfadhilya | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | beershofik | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | bseebaye | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Bezone Kebeere | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Gozgeran | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | ChokhIre | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Khanatahtk | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Shebana | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Shlkya | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | sihela | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | **3** | **1** | **0** | **1** | **2** | **28** |

Table 8: Numbers of Goats raised/ village

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **No. of Goats** |
| **≤50** | **50-100** | **100-150** | **150 -200** | **200-250** | **250 ≥** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Chaqelo | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Karke | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Kelata Ferhan | 0 | 0 | 1 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Kirenjok | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Pirozawa | 0 | 0 | 0 | 1 | 0 | 0 |
| Tel Kaif  | Alqush | Shewirch Kabeer | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shwerch Sagheer | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Sindank | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Barazi Mazin | 0 | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Chamarash | 0 | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Misaka Islam | 0 | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Qaymawa | 0 | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Shekh Malwan | 1 | 0 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Taq Hama | 0 | 1 | 0 | 0 | 0 | 0 |
| Shekhan  | Zelkan | Glashin | 0 | 0 | 0 | 1 | 0 | 0 |
| Tel Afar | Rabia | Amjalaja | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Bohar | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Eska | 0 | 0 | 0 | 1 | 0 | 0 |
| Tel Afar | Rabia | Kalhe | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Masaka | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Walid | 0 | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Rabia | Assriya Seeha | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Seeha alfadhilya | 0 | 0 | 0 | 1 | 0 | 0 |
| Tel Afar | Rabia | beershofik | 0 | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Rabia | bseebaye | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Bezone Kebeere | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar  | Zummar | Gozgeran | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | ChokhIre | 1 | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Khanatahtk | 0 | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shebana | 0 | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shlkya | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | sihela | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | **10** | **12** | **4** | **4** | **4** | **1** |

Table 9: Number of cattle raised/ village

|  |  |  |  |
| --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **No. of Cattle** |
| **≤50** | **50-70** | **70-90** | **90-100** | **100 ≥** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Chaqelo | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Karke | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Kelata Ferhan | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Kirenjok | 0 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Pirozawa | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shewirch Kabeer | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shwerch Sagheer | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Sindank | 0 | 1 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Brazi Bjek | 0 | 1 | 0 | 0 | 0 |
| Shekhan | Zelkan | Chamarash | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Qaymawa | 0 | 0 | 0 | 0 | 1 |
| Shekhan | Zelkan | Shekh Malwan | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Taq Hama | 1 | 0 | 0 | 0 | 0 |
| Shekhan  | Zelkan | Glashin | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Rabia | Amjalaja | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Rabia | Bohar | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Eska | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Kalhe | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Masaka | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Walid | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Assriya Seeha | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Seeha alfadhilya | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | beershofik | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | bseebaye | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Bezone Kebeere | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Gozgeran | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Zummar | ChokhIre | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Khanatahtk | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shebana | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shlkya | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | sihela | 0 | 0 | 0 | 1 | 0 |
| Total | **21** | **5** | **0** | **4** | **1** |

Table 10: presence of the required skills for raising livestock and animal husbandry within the targeted areas of the assessment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **Do you have required skill to do animal husbandry?** | **Total** |
| **Yes** | **No** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Chaqelo | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Karke | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Kelata Ferhan | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Kirenjok | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Pirozawa | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Shewirch Kabeer | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Shwerch Sagheer | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Sindank | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | **1** |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | **1** |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | **1** |
| Shekhan | Zelkan | Chamarash | 1 | 0 | **1** |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | **1** |
| Shekhan | Zelkan | Qaymawa | 1 | 0 | **1** |
| Shekhan | Zelkan | Shekh Malwan | 1 | 0 | **1** |
| Shekhan | Zelkan | Taq Hama | 1 | 0 | **1** |
| Shekhan  | Zelkan | Glashin | 1 | 0 | **1** |
| Tel Afar | Rabia | Amjalaja | 1 | 0 | **1** |
| Tel Afar | Rabia | Bohar | 1 | 0 | **1** |
| Tel Afar | Rabia | Eska | 1 | 0 | **1** |
| Tel Afar | Rabia | Kalhe | 1 | 0 | **1** |
| Tel Afar | Rabia | Masaka | 1 | 0 | **1** |
| Tel Afar | Rabia | Walid | 1 | 0 | **1** |
| Tel Afar | Rabia | Assriya Seeha | 1 | 0 | **1** |
| Tel Afar | Rabia | Seeha alfadhilya | 1 | 0 | **1** |
| Tel Afar | Rabia | beershofik | 1 | 0 | **1** |
| Tel Afar | Rabia | bseebaye | 1 | 0 | **1** |
| Tel Afar | Rabia | Bezone Kebeere | 1 | 0 | **1** |
| Tel Afar | Zummar | Gozgeran | 1 | 0 | **1** |
| Tel Afar | Zummar | ChokhIre | 1 | 0 | **1** |
| Tel Afar | Zummar | Khanatahtk | 1 | 0 | **1** |
| Tel Afar | Zummar | Shebana | 1 | 0 | **1** |
| Tel Afar | Zummar | Shlkya | 1 | 0 | **1** |
| Tel Afar | Zummar | sihela | 1 | 0 | **1** |
| Total |   |   | **35** | **0** | **35** |

### Beekeeping

The visited targeted villages were also asked about their interest and skills in raising of beehives as source of the income generation and the suitability of their areas (location/ water availability) for keeping beehives, the respondents analysed data are listed below in (Table 11).

Table 11: Involvement of the villagers/ villages in beekeeping projects with their skills

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **Are you involved in beekeeping?** | **If (Yes) , how many beehives do you have?** | **Do you have required skill to do beekeeping project?**  |
| **Yes** | **No** | **10-30** | **30-50** | **50- 80** | **80-100** | 100≥ | **Yes** | **No** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Chaqelo | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Karke | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Kelata Ferhan | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Kirenjok | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Pirozawa | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Shewirch Kabeer | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Shwerch Sagheer | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Sindank | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Chamarash | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Qaymawa | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Shekh Malwan | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Taq Hama | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Shekhan  | Zelkan | Glashin | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Amjalaja | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Bohar | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Eska | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Kalhe | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Masaka | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Walid | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Assriya Seeha | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Seeha alfadhilya | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | beershofik | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | bseebaye | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Bezone Kebeere | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Tel Afar | Zummar | Gozgeran | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | ChokhIre | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | Khanatahtk | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | Shebana | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | Shlkya | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | sihela | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| Total | **23** | **11** | **13** | **7** | **2** | **0** | **1** | **30** | **3** |

### Kitchen garden agricultural practice

As a source of the income generation livelihood, villagers were asked about their capability and desires for Kitchen garden agricultural practicing as the land and the required water are present; however, all of the visited villages are practicing this agribusiness (Table 12) to cover their daily kitchen needs of the greenery, but on the larger scales for living on, it is hard to cover their needs as almost all villagers are relying on themselves; besides, delivering of the products to the locals markets is costly and the prices are usually under the ambitions.

Table 12: practicing of kitchen garden agriculture as source of income by locals’ in assessment conducted areas

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **Do you practicing Kitchen garden agriculture?** | **If (No) , why?** |
| **Yes** | **No** | **lack of Irrigation water**  | **lack of land**  | **lack of tools and seeds** |
| Tel Kaif  | Alqush | Ain baqara | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Chaqelo | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Karke | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Kelata Ferhan | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Kirenjok | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Pirozawa | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shewirch Kabeer | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Shwerch Sagheer | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Sindank | 1 | 0 | 0 | 0 | 0 |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Chamarash | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Qaymawa | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Shekh Malwan | 1 | 0 | 0 | 0 | 0 |
| Shekhan | Zelkan | Taq Hama | 0 | 1 | 0 | 1 | 0 |
| Shekhan  | Zelkan | Glashin | 0 | 1 | 1 | 0 | 0 |
| Tel Afar | Rabia | Amjalaja | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Bohar | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Eska | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Kalhe | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Masaka | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Walid | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Assriya Seeha | 0 | 1 | 1 | 0 | 0 |
| Tel Afar | Rabia | Seeha alfadhilya | 0 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | beershofik | 0 | 1 | 1 | 0 | 0 |
| Tel Afar | Rabia | bseebaye | 0 | 1 | 1 | 0 | 0 |
| Tel Afar | Rabia | Bezone Kebeere | 0 | 1 | 1 | 0 | 0 |
| Tel Afar | Zummar | Gozgeran | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | ChokhIre | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Khanatahtk | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shebana | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shlkya | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | sihela | 1 | 0 | 0 | 0 | 0 |
| Total | **28** | **6** | **5** | **1** | **0** |

## Area needs for potable water and water network

The needs for potable water and establishing of water network were assessed, that data found that villages located within the Rabia/ Tel Afar complaining and suffering from a lack of water suitable for human consumption and the majority of the villagers suffers from unstable living conditions and need support with permanent livelihoods. Currently, the quantities of water are insufficient due to the productivity of the existing artesian wells which does not meet the demand of the village and there is no internal network, which forces the villagers either buying water from water tankers at high prices in amid deteriorating economic conditions, or bearing the hardships of bringing water is usually carried out by women/ children from nearby wells which is exhausting and tiring, and time consuming. Likewise, villagers complain about their inability to create orchards, home farming, and take care of livestock because there is not enough water. Also, the outages in national electricity to extract water have exacerbated the problem.

## Suitability of the targeted areas and possibility of implementing type of the activity within the area

The conducted assessment also included a section for the evaluation of the suitability of the targeted areas for the kind of the project activity per the required pre formed tailored selection criteria to be used by the assessment team; below listed criteria were followed to see whether the selected village was fit for implementing project activities relating to raising livestock and another animals projects.

### Selection criteria:

* Presence of pasture and water suitable for raising animals
* Experience of the household (presence of the required skills)
* Good source for income generation
* Increases locals demand on the produce

While for water project, the following criteria were followed

* Source of the water (artesian well, springe water, river, stored water/ water dam, water project and others) either used for drinking or irrigation purposes.
* Does the potable water sufficient?
* Does the water network available?

 If (No), your demands

* digging of the new artesian well
* improving the current well
* installing of water network

The possibility for implementing the kind of the project activity was varied between the targeted villages, where some villages were found to be suitable for livestock raising and some others for beekeeping projects, whereas, most of the area found to be suitable for implementing more than one project activity (Table 13).

The needs for potable water and establishing of water network were found within the villages located within the Rabia/ Tel Afar (Table 14,15).

**Table 13**: Suitability and possibility of the targeted areas for implementing type of the activity based on the tailored adopted criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **District** | **Sub-district** | **Village** | **Livestock husbandry** | **Beekeeping project** | **Kitchen garden agricultural practice** | **Poultry management project** | **Yogurt production project** |
| Tel Kaif | Alqush | Ain baqara | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif | Alqush | Chaqelo | 1 | 0 | 0 | 1 | 1 |
| Tel Kaif | Alqush | Karke | 0 | 1 | 0 | 0 | 0 |
| Tel Kaif | Alqush | Kelata Ferhan | 0 | 0 | 1 | 0 | 0 |
| Tel Kaif | Alqush | Kirenjok | 0 | 0 | 0 | 1 | 0 |
| Tel Kaif | Alqush | Pirozawa | 1 | 1 | 1 | 1 | 0 |
| Tel Kaif | Alqush | Shewirch Kabeer | 0 | 1 | 1 | 0 | 0 |
| Tel Kaif | Alqush | Shwerch Sagheer | 0 | 0 | 1 | 0 | 0 |
| Tel Kaif | Alqush | Sindank | 0 | 1 | 0 | 1 | 0 |
| Tel Kaif | Alqush | Sharafia | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Barazi Mazin | 0 | 1 | 0 | 1 | 1 |
| Shekhan | Zelkan | Brazi Bjek | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Chamarash | 0 | 1 | 1 | 0 | 0 |
| Shekhan | Zelkan | Misaka Islam | 0 | 0 | 1 | 0 | 0 |
| Shekhan | Zelkan | Qaymawa | 0 | 1 | 1 | 0 | 0 |
| Shekhan | Zelkan | Shekh Malwan | 0 | 0 | 0 | 1 | 0 |
| Shekhan | Zelkan | Taq Hama | 0 | 1 | 0 | 0 | 0 |
| Shekhan | Zelkan | Glashin | 0 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Amjalaja | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Bohar | 1 | 0 | 1 | 0 | 0 |
| Tel Afar | Rabia | Eska | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Kalhe | 1 | 0 | 0 | 0 | 1 |
| Tel Afar | Rabia | Masaka | 1 | 1 | 0 | 0 | 0 |
| Tel Afar | Rabia | Walid | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Rabia | Assriya Seeha | 1 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Seeha alfadhilya | 1 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | beershofik | 1 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | bseebaye | 1 | 0 | 0 | 1 | 0 |
| Tel Afar | Rabia | Bezone Kebeere | 1 | 0 | 0 | 1 | 0 |
| Tel Afar | Zummar | Gozgeran | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Zummar | ChokhIre | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Zummar | Khanatahtk | 1 | 0 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shebana | 1 | 1 | 0 | 0 | 0 |
| Tel Afar | Zummar | Shlkya | 0 | 1 | 0 | 0 | 0 |
| Tel Afar | Zummar | sihela | 1 | 0 | 1 | 0 | 0 |
| Total |  |  | **16** | **13** | **9** | **15** | **3** |

Table 14: Area needs for potable water projects

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| District | Sub-district | village | Does the potable water sufficient? | **Total** |
| Yes | No |
| Tel Kaif | Alqush | Ain baqara | 1 | 0 | **1** |
| Tel Kaif | Alqush | Chaqelo | 1 | 0 | **1** |
| Tel Kaif | Alqush | Karke | 0 | 1 | **1** |
| Tel Kaif | Alqush | Kelata Ferhan | 1 | 0 | **1** |
| Tel Kaif | Alqush | Kirenjok | 1 | 0 | **1** |
| Tel Kaif | Alqush | Pirozawa | 1 | 0 | **1** |
| Tel Kaif | Alqush | Shewirch Kabeer | 1 | 0 | **1** |
| Tel Kaif | Alqush | Shwerch Sagheer | 1 | 0 | **1** |
| Tel Kaif | Alqush | Sindank | 1 | 0 | **1** |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | **1** |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | **1** |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | **1** |
| Shekhan | Zelkan | Chamarash | 1 | 0 | **1** |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | **1** |
| Shekhan | Zelkan | Qaymawa | 1 | 0 | **1** |
| Shekhan | Zelkan | Shekh Malwan | 1 | 0 | **1** |
| Shekhan | Zelkan | Taq Hama | 1 | 0 | **1** |
| Shekhan  | Zelkan | Glashin | 1 | 0 | **1** |
| Tel Afer | Rabia | Amjalaja | 1 | 0 | **1** |
| Tel Afer | Rabia | Bohar | 1 | 0 | **1** |
| Tel Afer | Rabia | Eska | 1 | 0 | **1** |
| Tel Afer | Rabia | Kalhe | 1 | 0 | **1** |
| Tel Afer | Rabia | Masaka | 1 | 0 | **1** |
| Tel Afer | Rabia | Walid | 1 | 0 | **1** |
| Tel Afer | Rabia | Assriya Seeha | 1 | 0 | **1** |
| Tel Afer | Rabia | Seeha alfadhilya | 0 | 1 | **1** |
| Tel Afer | Rabia | beershofik | 0 | 0 | **1** |
| Tel Afer | Rabia | bseebaye | 0 | 0 | **1** |
| Tel Afer | Rabia | Bezone Kebeere | 1 | 0 | **1** |
| Tel Afer | Zummar | Gozgeran | 1 | 0 | **1** |
| Tel Afer | Zummar | ChokhIre | 1 | 0 | **1** |
| Tel Afer | Zummar | Khanatahtk | 1 | 0 | **1** |
| Tel Afer | Zummar | Shebana | 1 | 0 | **1** |
| Tel Afer | Zummar | Shlkya | 1 | 0 | **1** |
| Tel Afer | Zummar | sihela | 1 | 0 | **1** |
|  | Total |   | **31** | **2** | **33** |

Table 15: Area needs for water projects and or water network

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| District | Sub-district | village | Does the water network available? | **Total** | If (No) , your demands | **Total** |
| Yes | No | digging new artesian well | improving current well | installing water network |
| Tel Kaif | Alqush | Ain baqara | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Chaqelo | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Karke | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Kelata Ferhan | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Kirenjok | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Pirozawa | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Shewirch Kabeer | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Shwerch Sagheer | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif | Alqush | Sindank | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Kaif  | Alqush | Sharafia | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Barazi Mazin | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Brazi Bjek | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Chamarash | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Misaka Islam | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Qaymawa | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Shekh Malwan | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan | Zelkan | Taq Hama | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Shekhan  | Zelkan | Glashin | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Amjalaja | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Bohar | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Eska | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Kalhe | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Masaka | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Walid | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Rabia | Assriya Seeha | 0 | 1 | **1** | 0 | 0 | 1 | **1** |
| Tel Afer | Rabia | Seeha alfadhilya | 0 | 1 | **1** | 0 | 0 | 1 | **1** |
| Tel Afer | Rabia | beershofik | 0 | 1 | **1** | 1 | 0 | 1 | **2** |
| Tel Afer | Rabia | bseebaye | 0 | 1 | **1** | 1 | 0 | 1 | **2** |
| Tel Afer | Rabia | Bezone Kebeere | 0 | 1 | **1** | 0 | 0 | 1 | **1** |
| Tel Afer | Zummar | Gozgeran | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Zummar | ChokhIre | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Zummar | Khanatahtk | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Zummar | Shebana | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Zummar | Shlkya | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
| Tel Afer | Zummar | sihela | 1 | 0 | **1** | 0 | 0 | 0 | **0** |
|  | Total |   | **30** | **5** | **35** | **2** | **0** | **5** | **7** |

# Conclusion:

Taken together, the cumulative analyzed data revealed that the locals are in dire needs for urgent supports in terms of the effective durable income generation livelihood projects ( agribusiness/ agricultural and livestock) to mitigate their untold suffer regarding in secure living livelihood. Besides, installing of the water projects for the needed people will not only ameliorate their hardship in bringing water from the nearby area, but also will be helpful in saving money in mid of their deteriorated economic situation

# Recommendations:

1. Restore crop production as a source of income generation for the families who are interested and skilled agricultural crop production.
* Providing required in-kind supports (seeds, fertilizers, pesticides and tools and machinery access) to help restore crop production.
* Provide irrigation measures such as digging wells and installing irrigation system.
1. Restore Livestock production.
* Provide animals to support restocking, especially sheep
* Providing sheep feed
* Provide emergency veterinary services including medicines
* Establishing of the product value chain as initiative for employment and support the marketing of the farmer at better prices
1. Support cash for work schemes as an immediate source of income
* Employment (waged employment) of the most vulnerable households based on the tailored professional selection criteria adopted in determining vulnerability
* Help rebuild small and micro businesses through grants, affordable loans, market access measures
1. To alleviate the locals needs for potable water, water projects need to be implemented through
* installing artesian well
* improving the existing well
* installing water network

# Annex 1

**Tools and questionnaires for Area needs assessment to implement Livelihoods projects in Ninawa, Iraq**

|  |
| --- |
| **Questions for Key informant Interview (KII) and Focus group discussion** |
| 1. **Interviewee Description**
 |
| Name of interviewee | Location | Number of HHs  | Public services  |
|  | Village-------------Sub district----------District-------------Government -------- | ☐≤10☐ 10-20☐20-30☐30-40☐40-50☐50 ≥ | ☐ Electricity☐ Roads☐ Water potable☐irrigation water  |
| 1. **Status of the respondents**

☐ Host community ☐ IDP ☐ Returnee ☐ Refugee1. **Vulnerability status of the villagers**

☐ vulnerable ☐ poor ☐Affordable ☐ Good  |
| 1. **Respondent monthly incomes**
2. **What is primary occupation of the villagers?**

 ☐Agriculture own production ☐Salary / Employment ☐ Agriculture/ Animal husbandry  ☐ labour (waged employed) ☐ Other( specify)1. **How many children from 6 to 18 do not go to school?**

 Boys Girls  |
| 1. **HOUSEHOLD ASSETS**
2. **LAND ASSETS**
3. **Do you have enough land?**  ☐yes ☐ No
4. **If yes, Please state the area of the land used by the HHs in Acre**

 ☐≤50 ☐50-70 ☐70-90 ☐90-100 ☐100≥1. **LIVESTOCK AND OTHER ANIMALS**
2. **Type and number of animal/ HH**

**Sheep**☐≤50 ☐50-100 ☐100-150 ☐150 -200 ☐200-250 ≥ ☐250 ≥**Goats** ☐≤50 ☐50-100 ☐100-150 ☐150 -200 ☐200-250 ≥ ☐250 ≥**Cattle**☐≤50 ☐50-70 ☐70-90 ☐90-100 ☐100 ≥1. **Do you have required skill to do animal husbandry?**  ☐Yes ☐No
2. **BEEKEEPING**
3. **Are you involved in beekeeping?**  ☐Yes ☐ No
4. **If yes, how many beehives do you have?**

 ☐10-30 ☐30-50 ☐50- 80 ☐80-100 ☐100≥1. **Do you have required skill to do beekeeping project?**  ☐Yes ☐No
 |
| 1. **kitchen garden agricultural practice**
	1. **Do you practicing Kitchen garden agriculture?** ☐ Yes ☐ No

**If no, why?**☐lack of water for agricultural practice ☐lack of land ☐lack of required tools and seeds |
| 1. **Suitability of the location**
2. **livestock husbandry due to**

 ☐presence of pasture and water suitable for raising animals ☐ experience of the house hold ☐ good source for income generation ☐ increased locals demand on the produce1. **beekeeping project**

 ☐ presence of pasture and water suitable for raising bee ☐ experience of the house hold ☐ good source for income generation ☐ increased locals demand on the produce1. **Kitchen garden agricultural practice**

 ☐presence of agricultural land and water suitable for agro business and kitchen garden practicing  ☐ experience of the house hold ☐ good source for income generation ☐ increased locals demand on the produce1. **Poultry management project**

 ☐presence of pasture and water suitable for raising free range local chickens ☐ experience of the house hold ☐ good source for income generation ☐ increased locals demand on the produce1. **Yogurt production project**

 ☐ presence enough milk within the area to be used for yogurt production ☐ experience of the house hold ☐ good source for income generation ☐ increased locals demand on the produce  |
| 1. **Possibility of implementing type of the activity within the area**

☐**Livestock husbandry** ☐**Beekeeping project** ☐**Kitchen garden agricultural practice**☐**Poultry management project** ☐**Yogurt production project** |
| 1. **Potable water**
2. **What is the current source of potable water?**

☐**artesian well** ☐**springe water** ☐**river** ☐**stored water/ water dam** ☐ **water project** ☐**other/ specify** 1. **Does the potable water sufficient?**  ☐Yes ☐ no
2. **Does the water network available?** ☐Yes ☐ no

**If no, your demands**☐digging of the new artesian well ☐ improving the current well ☐ installing of water network |

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7. Tamiru, D., Belachew, T. (2017). The association of food insecurity and school absenteeism: systematic review. Agric & Food Secur 6, 5 https://doi.org/10.1186/s40066-016-0083-3 [↑](#footnote-ref-7)