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| --- | --- |
| **Research Terms of Reference**  **Area-Based Assessment (ABA) and**  **Area-Based Risk Assessment (ABRA) Anenii Noi**  **MDA2302**  **Moldova** | |
| **[20/04/2023]**  **[1]** | **C:\Users\Megan\AppData\Local\Microsoft\Windows\INetCache\Content.Word\REACH logo white (for a coloured background).jpg** |

# Executive Summary

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Country of intervention** | Moldova | | | | | | | |
| **Type of Emergency** | □ | Natural disaster | X | Conflict | | | □ | Other *(specify)* | |
| **Type of Crisis** | X | Sudden onset | □ | Slow onset | | | X | Protracted | |
| **Mandating Body/ Agency** | United Nations High Commissioner for Refugees (UNHCR)  Agence Française de Développement (AFD) | | | | | | | |
| **IMPACT Project Code** | 67AYH | | | | | | | |
| **Overall Research Timeframe** *(from research design to final outputs / M&E)* | ABA: 01/04/2023 to 31/08/2023  ABRA: 01/04/2023 to 30/09/2023 | | | | | | | |
| **Research Timeframe**  *Add planned deadlines (for first cycle if more than 1)* | 1. Pilot/ training:  ABA: 05/05/2023 | | | | 8. Preliminary presentation sent for validation: ABA: 30/06/2023 | | | |
| 2. Start collecting data:  ABA: 08/05/2023 | | | | 9. Preliminary presentation:  ABA: 07/07/2023 | | | |
| 3. Data collected:  ABA: 26/05/2023 | | | | 10. Outputs sent for validation:  ABA: 31/07/2023  ABRA: 01/09/2023 | | | |
| 4. Data analysed (quantitative):  ABA: 16/06/2023  ABRA: 01/08/2023 | | | | 11. Outputs published:  ABA: 15/08/2023  ABRA:30/09/2023 | | | |
| 5. Data sent for validation (quantitative):  ABA: 16/06/2023  ABRA: 01/08/2023 | | | | 12. Final presentation:  ABA: 15/08/2023  ABRA: 30/09/2023 | | | |
| 6. Data analysed (qualitative):  ABA: 23/06/2023  ABRA: 15/08/2023 | | | |  | | | |
| 7. Data sent for validation (qualitative):  ABA: 23/06/2023  ABRA:15/08/2023 | | | |  | | | |
| **Number of assessments** | □ | Single assessment (one cycle) | | | | | | |
| X | Multi-assessment (more than one cycle):   1. Area-Based Assessment 2. Area-Based Risk Assessment | | | | | | |
| **Humanitarian milestones**  *Specify* ***what*** *will the assessment inform and* ***when***  *e.g. The shelter cluster will use this data to draft its Revised Flash Appeal;* | **Milestone** | | | | **Deadline** | | | |
| X | Donor plan/strategy | | | 30/09/2023 | | | |
| □ | Inter-cluster plan/strategy | | | \_ \_/\_ \_/\_ \_ \_ \_ | | | |
| X | Cluster plan/strategy | | | 30/09/2023 | | | |
| □ | NGO platform plan/strategy | | | \_ \_/\_ \_/\_ \_ \_ \_ | | | |
| X | Other (Specify): partner NGO (ACTED) plan/ strategy | | | 30/09/2023 | | | |
| **Audience Type & Dissemination** *Specify* ***who*** *will the assessment inform and* ***how*** *you will disseminate to inform the audience* | **Audience type** | | | | **Dissemination** | | | |
| X Strategic  X Programmatic  □ Operational  X [Other, Specify]: Package of preparedness related information (maps and development-related documentations) and capacity building for local authorities to support community preparedness to disasters | | | | X General Product Mailing (e.g., mail to NGO consortium; HCT participants; Donors)  X Cluster Mailing (Education, Livelihoods, Shelter, Healthcare, Protection, and Water, AAP, Sanitation and Hygiene)  X Presentation of findings (e.g., at IMWG and RCF meetings)  X Website Dissemination (Relief Web & REACH Resource Centre)  X Distribution to relevant ministries (e.g., agriculture, environment) and local authorities | | | |
| **Detailed dissemination plan required** | □ | Yes | | | X | No | | |
| **General Objective** | ABA Objective: To inform an area-based response and the local socio-economic contingency planning of local government institutions and humanitarian actors with regards to the conditions and access to basic services of the refugee and host populations, and to identify potential opportunities for collaboration and collective response structures.  ABRA Objective: To strengthen the emergency response capacity of local communities to natural disasters and improve use of evidence-based disaster preparedness planning by local authorities through risk identification and natural disaster emergency response mapping support to local authorities and State emergency service units. | | | | | | | |
| **Specific Objective(s)** | SO1. Provide information to local authorities and humanitarian actors about refugees in Anenii Noi in terms of movement intentions, priority needs, barriers to accessing basic services, protection concerns and social cohesion between refugees and the host community, as well as demographic profiling to map population vulnerabilities.  SO2. Evaluate the impact of refugee arrival on the assessed area, in terms of the economy and basic service provision.  SO3. Evaluate the conditions of smallholder farmers in terms of available resources, challenges, and needs, as well as assess the impact of natural and anthropogenic shocks, the energy crises and the refugee influx on smallholder farmers' activities.  SO4. Map the local and external response actors engaged in the refugee crisis and assess the capacities and needs of the local response, including identifying potential gaps in the response structure and assistance provision.  SO5. Conduct an area-based risk assessment on the raion level to inform local authorities, development actors, and humanitarian actors on main hazards, vulnerability profiles, risk hotspots, and priority communities for disaster risk reduction programming.  SO6. Identify and map local emergency response capacity for the priority communities, based on drive-time analysis of distance from relevant emergency services and support to the development of preparedness planning for local authorities.  SO7. Build local authorities’ GIS capacity to strengthen the local emergency response (i.e. training sessions and consultations on emergency service access mapping, geodata collection and/or bomb shelter accessibility mapping, evacuation-route mapping, etc.) | | | | | | | |
| **Research Questions** | 1. Where are the refugee households located within the assessed area? What are the movement intentions and integration plans of the refugees living in the assessed area?  2. What are the priority needs of the refugee population in the areas in terms of access to basic services, economic needs, accommodation, and information on humanitarian assistance? How do needs vary within the refugee population?  3. What are the protection concerns faced by refugees and the key vulnerable groups?  4. What are the barriers to access to basic services (education, health, mental health, Water, Sanitation and Hygiene, employment) for the refugee population?  5. What is the nature of the relationship between the refugee and host communities? What factors currently foster and/or inhibit social cohesion between refugees and the host community?  6. What has been the impact of the refugee crisis on basic service provision and the local economy for the host community?  7. What are the conditions of smallholder farmers in Anenii Noi in terms of available resources, challenges, and needs? How did the energy crises and refugee influx impact smallholder farmers' activities? How did natural and anthropogenic shocks impact smallholder farmers' activities?  8. Which are the local and external actors engaged in the refugee crisis response and basic service provision in the assessed area? What collaboration and coordination mechanisms exist among the external and local actors? How can it be improved and expanded?  9. What are the capacities and needs of local actors (service providers, local authorities, NGO/CSOs) to respond to refugee and host community needs? What are the remaining response gaps? Which gaps can be met by humanitarian actors?  10. What are the potential natural hazards in the area that may need an immediate or mid-term emergency response and might have an adverse impact on the environment and local population?  11. What are the potentially hazardous facilities located in the area and the risks associated with the hazardous substances?  12. What are the consequences and risks in case of destruction/damage to selected hazardous facilities or critical infrastructure on the local level?  13. What are the cascading effects of key hazards in the area?  14. Which communities are the most exposed and the most vulnerable to hazards?  15. What are the recommendations for disaster risk mitigation and disaster preparedness on the local level?  16. What are the available key local emergency services (emergency healthcare facilities, fire department facilities, state emergency services, etc.) in local communities and where are they located?  17. What are the response areas of the emergency response services (healthcare services, fire department facilities, state emergency services, etc.)?  18. What is the response capacity of emergency services and what are the gaps and needs in response area coverage within the local community?  19. What capacity-building training, and mapping support are needed to enhance the effectiveness of emergency response?  20. What resources are missing for the local authorities for collecting and disseminating information about existing hazards and risks?  21. What type of mapping support is needed to increase local authority emergency response capacity?  22. What GIS-related skills would local authorities/stakeholders like to develop in the emergency response sphere? | | | | | | | |
| **Geographic Coverage** | Within Anenii Noi raion:   1. Urban: Anenii Noi city 2. Rural: three villages in Anenii Noi raion, namely, Gura Bacului, Floreni and Bulboaca | | | | | | | |
| **Secondary data sources** | ABA sources:   * Republica Moldova Consiliul Raional Anenii Noi, [Populatie](https://anenii-noi.md/populatie/) * National Bureau of Statistics, [Moldova resident population by sex and areas](https://statbank.statistica.md/PxWeb/pxweb/en/20%20Populatia%20si%20procesele%20demografice/20%20Populatia%20si%20procesele%20demografice__POP__POP010/POP010100.px/?rxid=9a62a0d7-86c4-45da-b7e4-fecc26003802) * REACH, Area Monitor Factsheet * REACH, [MSNA Findings](https://data.unhcr.org/en/documents/download/95884) * War Child, CCF Moldova, [Baseline needs assessment - Anenii Noi and Donduseni Rayons, Moldova](https://reliefweb.int/attachments/ccd80e92-6fa5-4bbf-9f73-7a3763a59fac/Baseline%20needs%20assessment%20-%20Anenii%20Noi%20and%20Donduseni%20Rayons%2C%20Moldova.pdf) * War Child, CCF Moldova, [Endline Report Food security for refugee and host communities Anenii Noi and Donduseni Districts, Moldova](https://reliefweb.int/attachments/a18e6bb3-54cf-441f-a6e7-033c1922407e/Moldova%20voucher%20baseline%20War%20Child%20CCF%20.pdf) * Helpage, [Moldova: Needs Assessment of Older Ukrainian Refugees](https://app.powerbi.com/view?r=eyJrIjoiYWE3OThiNGUtMTZhZC00NThhLWFlOWYtM2Q3MjJkNjE0NGU5IiwidCI6ImQ4NmM1M2NhLWUwODctNGY5Ny05Yzk3LWRmYWJkMTFkMDI4MiIsImMiOjh9) * UNHCR, [The 2022 Participatory Assessment Report for refugees, asylum seekers and stateless persons in the Republic of Moldova](https://data.unhcr.org/en/documents/download/99285) * Oxfam, [Ukraine situation: Moldova - Seeking safety: Roma refugees in Moldova](https://data.unhcr.org/en/documents/download/96902) * UNHCR, [5W Dashboard](https://app.powerbi.com/view?r=eyJrIjoiNDJiNGVkZmUtZGFiMS00YmNmLWJhZmYtNjgxZTIwMGVmODMyIiwidCI6ImU1YzM3OTgxLTY2NjQtNDEzNC04YTBjLTY1NDNkMmFmODBiZSIsImMiOjh9&pageName=ReportSection) * CDAC Network[, Ukraine situation: Moldova Accountability to Affected Population Task Force - The state of communication, community engagement and accountability across the Ukraine response - ANNEX (30 Sep 2022)](https://data.unhcr.org/en/documents/download/97807)   ABRA sources are located in **Annex 1**. | | | | | | | |
| **Population(s)** | □ | IDPs in camp | | | □ | IDPs in informal sites | | |
| *Select all that apply* | □ | IDPs in host communities | | | □ | IDPs [Other, Specify] | | |
|  | □ | Refugees in camp | | | □ | Refugees in informal sites | | |
|  | X | Refugees in host communities | | | X | Refugees Ukrainians, third-country nationals | | |
|  | X | Host communities | | | X | Families hosting refugees | | |
| **Stratification**  *Select type(s) and enter number of strata* | X | Geographical #:2  (Urban: Anenii Noi city, Rural: Gura Bacului, Floreni and Bulboaca)  Population size per strata is known? X Yes □ No | X | Group #: 2  1.) Refugee families living outside of RACs 2.) Host community  Population size per strata is known?[[1]](#footnote-2)  X Yes □ No | | | □ | *[Other Specify]* #: \_ \_  Population size per strata is known?  □ Yes □ No |
| **Data collection tool(s)** | X | Structured (Quantitative) | | | X | Semi-structured (Qualitative) | | |
|  | **Sampling method** | | | | **Data collection method** | | | |
| **Structured data collection tool # 1**  *Household interviews with refugees* | X Purposive  □ Probability / Simple random  □ Probability / Stratified simple random  □ Probability / Cluster sampling  □ Probability / Stratified cluster sampling  X Snowballing | | | | □ Key informant interview (Target #):\_ \_ \_ \_ \_  □ Group discussion (Target #):\_ \_ \_ \_ \_  X Household interview (Target #): 15 in the urban area, 31 in the rural area  □ Individual interview (Target #): \_ \_ \_ \_ \_  □ Direct observations (Target #):\_ \_ \_ \_ \_  □ [Other, Specify](Target #):\_ \_ \_ \_ \_ | | | |
| **Structured data collection tool # 2**  *Household interviews with the host population* | □ Purposive  □ Probability / Simple random  X Probability / Stratified simple random  □ Probability / Cluster sampling  □ Probability / Stratified cluster sampling  □ Snowballing | | | | □ Key informant interview (Target #):\_ \_ \_ \_ \_  □ Group discussion (Target #):\_ \_ \_ \_ \_  X Household interview (Target #): 153 in the urban area, 157 in the rural area  □ Individual interview (Target #): \_ \_ \_ \_ \_  □ Direct observations (Target #):\_ \_ \_ \_ \_  □ [Other, Specify](Target #):\_ \_ \_ \_ \_ | | | |
| **Data collection tool # 1**  *Key Informant Interviews* | X Purposive  X Snowballing  □ [Other, Specify] | | | | X Key informant interview (Target #):18 (3 from each target group: education, local authority, health, NGO/CSO, smallholder farmers, business)  □ Individual interview (Target #):\_ \_ \_ \_ \_  □ Focus group discussion (Target #):\_ \_ \_ \_ \_  □ [Other, Specify](Target #):\_ \_ \_ \_ \_ | | | |
| **Data collection tool # 2**  *Focus Group Discussions with refugees and hosts* | X Purposive  X Snowballing  □ [Other, Specify] | | | | □ Key informant interview (Target #):\_ \_ \_ \_ \_  □ Individual interview (Target #):\_ \_ \_ \_ \_  X Focus group discussion (Target #): 8 (4 in the urban area: 2 with refugees and 2 with hosts; 4 in the rural area: 2 with refugees and 2 with hosts)  □ [Other, Specify] (Target #):\_ \_ \_ \_ \_ | | | |
| **Target level of precision if probability sampling** | 95% level of confidence | | | | 8+/- % margin of error | | | |
| **Data management platform(s)** | X | IMPACT | | | □ | UNHCR | | |
|  | □ | [Other, Specify] | | | | | | |
| **Expected ouput type(s)** | X | Situation overview #: 2 | □ | Report #: \_ \_ | | | □ | Profile #: \_ \_ |
|  | X | Presentation (Preliminary findings) #: 1 | X | Presentation (Final) #: 2 | | | □ | Factsheet #: \_ \_ |
|  | □ | Interactive dashboard #:\_ | □ | Webmap #: \_ \_ | | | □ | Map #: \_ \_ |
|  | □ | [Other, Specify] #: \_ \_ | | | | | | |
| **Access** | X | Public (available on REACH resource centre and other humanitarian platforms) | | | | | | |
| □ | Restricted (bilateral dissemination only upon agreed dissemination list, no publication on REACH or other platforms) | | | | | | |
| **Visibility** *Specify which* ***logos*** *should be on outputs* | ***REACH*** | | | | | | | |
| ***Donor:*** *UNHCR, AFD* | | | | | | | |
| ***Coordination Framework:*** *UNHCR* | | | | | | | |
| ***Partners:*** *Local authorities* | | | | | | | |

# Rationale

* 1. Background

The escalation of hostilities in Ukraine since 24 February 2022 has caused mass displacement of people internally and across international borders.[[2]](#footnote-3) As of 23 April 2023, a total of 107,480 refugees remained on the territory of the Republic of Moldova, which represents about 4% of the host population.[[3]](#footnote-4) Available estimates indicate that 517 refugees had been residing in Anenii Noi as of 25 April 2023.[[4]](#footnote-5),[[5]](#footnote-6) The Moldovan government greatly relied on international assistance to deliver the refugee response, and its capacity to respond to an increase in refugee inflow is limited.[[6]](#footnote-7) Should there be a further escalation of hostilities in Ukraine, the refugee numbers in Anenii Noi could rise sharply, which would put further pressure on the international and local refugee response. Additionally, an influx of a vulnerable population may not have been accounted for in disaster preparedness, increasing the likelihood of more severe consequences, such as shortages of resources or a higher demand on emergency systems, in an adverse event.

Within the Republic of Moldova, Anenii Noi region is particularly vulnerable to climate effects, such as droughts and floods, and has faced high levels of heat stress in 2022.[[7]](#footnote-8) The region is characterised by predominant climate-sensitive livelihood activities, primarily agriculture, which comprises 75 percent of land use in Anenii Noi.[[8]](#footnote-9) Moreover, the secondary data review revealed that there is limited information about understanding at the more granular level the impact of refugee arrival on the local economy and basic service access for the host community. We also lack an understanding of the recovery priorities and basic service gaps for refugees, and the capacities and needs of service providers and local and international actors working in the refugee response. This information is key to promoting integrated and durable solutions at the local level and strengthening the preparedness of local actors to respond more effectively to potential shocks, such as an influx of refugees or climate-related disasters in the Anenii Noi region.

REACH aims to respond to these needs with an ABA and an ABRA at the Anenii Noi raion level. The ABA will produce a multi-sectoral, area-based analysis of urban and rural areas within the raion, including analysing the social cohesion dynamics, and will create a map of local and external actors working in the refugee response. The ABRA is focused on a raion level and will produce an area-based analysis of climactic variables across the raion, identifying hazards related to natural processes and anthropogenic factors, with case studies at select community levels to assess the vulnerability and response capacity of urban and rural areas.

* 1. Intended impact

The ABA is intended to provide a situation overview of refugees living outside of Refugee Accommodation Centres (RACs) and host communities in Anenii Noi raion, understanding their priority needs, the availability and access of basic services, the social cohesion among refugees and their hosts and to map the local and external response to the refugee crisis identifying potential opportunities for collaboration and collective response structures. The situation overview will help inform an area-based refugee response and support the local socio-economic contingency planning of local government institutions and humanitarian actors in Anenii Noi.

The ABRA is intended to compile and analyse information on major hazard risks in the target area (raion), population hazard exposure, and vulnerability. The ABRA will provide a comprehensive picture of the risks of anthropogenic and natural hazards that the area is prone to, the population’s exposure and vulnerability to them, and the exposure to the most relevant hazards to inform preparedness and risk mitigation planning by national and local authorities, communities, and international/development organizations. These results will help to a) expand the development of a strong body of evidence on hazard and disaster risk at a local scale and its impact which can then be used to inform planning, policy-making, legislation, and investment and b) focus on strengthening community and civil society engagement and preparedness to risks.

# Methodology

* 1. Methodology overview

The ABA will use a **mixed-methods approach**, secondary data will be collected from online sources (see 3.1 Secondary data review below), and primary quantitative and qualitative data will be collected from refugees, host community members and key informants, via quantitative surveys, key informant interviews (KIIs) and focus group discussions (FGDs). The initial phase of the assessment will comprise a stakeholder mapping to help identify the key institutions and organisations within the assessed area, including local authorities, basic service providers, Non-governmental Organizations (NGOs)/Civil Society Organisations (CSOs) and external actors to provide an understanding of the structures of the refugee response and service provision.

The ABRA is predominantly data-driven: it uses secondary data from online sources and the approach is quantitative. Data sources are remotely-sensed images and GIS datasets. However, data from secondary sources, such as the Multi-Sector Needs Assessment (MSNA) and the ABA that is done concurrently support the vulnerability portion of the research. A more detailed methodology for hazards can be found in **Table 3**.

Both the ABA and the ABRA will have a **strong participative component**, as humanitarian actors and local authorities will be consulted in the research design process, to ensure the informativeness of the findings and their relevancy in the local context. The participatory component involves two stages, first feedback will be gathered in the research design phase on the planned methodology and research questions, whereas the second stage entails a participatory workshop where preliminary findings of the assessment will be presented and discussed.

Key steps in the ABA:

1. **Engagement with local authorities and the humanitarian actors in the assessed area:** Feedback will be gathered from humanitarian actors, as well as local authorities on the planned methodology and research questions, and to identify potential key informants.
2. **Secondary data review:** Secondary data, such as government statistics regarding population, displacement, basic services and the local economy will be part of the ABA and will be utilized to understand the refugee and host community situation in Anenii Noi raion.
3. **Stakeholder mapping:** using secondary data and KI sources a list of local authorities, basic service providers and external and internal actors involved in refugee response will be created.
4. **Quantitative survey of the refugee and host population:** a representative sample of the host population and a non-representative sample of the refugee population will be surveyed regarding their priority needs, social cohesion, and access to basic services.
5. **Focus group discussions with the refugee and host population:** semi-structured FGDs will be conducted with refugees and members of the host community for a more in-depth understanding of topics such as social cohesion, the impact of refugee arrival and barriers to access to services.
6. **Key informant interviews with education and health service providers, humanitarian actors, local authorities,** smallholder **farmers, and businesses**: KIIs will be conducted with 3 representatives from each targeted service/sector (health, education, local authorities, humanitarian, smallholder farmers and business) to understand the impact of the refugee arrival on their respective service/sector, the service provision and potential gaps, as well as the conditions of smallholder farmers in Anenii Noi raion.
7. **Data processing and analysis:** the quantitative data will be cleaned, and statistical analysis will be conducted on the cleaned data set. The qualitative interviews will be recorded, transcribed and analysis will be conducted through the construction of data saturation and analysis grids.
8. **Output production:** the analysed data will be assembled in a situation report and preliminary and final presentations.

Key steps in the ABRA:

1. **Engagement with local authorities and the humanitarian actors in the assessed area:** Feedback will be gathered from humanitarian actors, as well as local authorities on the planned methodology and research questions, and to identify potential key informants.
2. **Secondary data review:** Secondary data, such as previous environmental assessments, weather and air quality reports, local energy resources, and water processing will be part of the ABRA and will be utilized to understand the current natural hazards situation in Anenii Noi raion.
3. **Hazards identification, risk and vulnerability indices:** Climactic hazards relevant to Anenii Noi will be identified, along with indices that will be developed to rank areas in terms of “high” and “low” risks. Indices for vulnerability within the population will be identified and developed with regard to relevant demographic variables.
4. **Data processing:** The remotely-sensed data will be processed to represent the spatial distribution of the natural or anthropogenic hazard to determine its risk and exposure to the population.
5. **Report production:** Analysed data will be assembled in a report to contextualize and explain the hazard, risk, and vulnerability components of the study.

Key definitions:

* **Refugees:** persons or groups of persons with a place of habitual residence within Ukraine who have left Ukraine since the escalation of hostilities which began on 24 February 2022. In this assessment, refugees only include refugees living outside of RACs.
* **Host population/communities:** Moldovan population who live in areas where refugees live including those who share their own accommodation with refugees and the general population who live where refugees reside.
* **Household (HH):** all individuals living together in a housing unit which includes both Moldovan individuals and refugee individuals who travelled to Moldova since the escalation of hostilities on 24 February 2022.
* **Family:** a group of individuals who are related and acquaintances who habitually live together. The refugee family refers to all individuals who travelled together from Ukraine to Moldova and lived together.
* **Local/national actor:** an organisation, group, or institution, with a permanent presence in Moldova, which aims to respond to the crisis-related needs of the refugee and host population.
* **External actor:** an organisation, group, or institution, which does not have a permanent presence in Moldova, and aims to respond to the crisis-related needs of the population.
* **Raion:** Level 1 territorial-administrative unit. There are 35 raions in Moldova, including the Transnistrian region.
* **Village/sector/city/town (terms are used interchangeably):** Level 2 territorial-administrative unit. There are approximately 900 units in Moldova, including the Transnistrian region.
* **Hazard:** A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation ([UNGA, 2016](https://www.preventionweb.net/files/50683_oiewgreportenglish.pdf)).
* **Vulnerability:** the susceptibility to damage of the assets exposed to the forces generated by the hazard. Fragility and vulnerability functions estimate the damage ratio and consequent loss respectively, and/or the social cost (e.g., number of injured, homeless, and killed) generated by a hazard, according to a specified exposure.
* **Exposure:** The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas ([UNGA, 2016](https://www.preventionweb.net/files/50683_oiewgreportenglish.pdf)).
* **Risk:** The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity ([UNGA, 2016](https://www.preventionweb.net/files/50683_oiewgreportenglish.pdf)).
  1. Population of interest

**Geographical area**: The assessment will be conducted in Anenii Noi raion, in two areas, one urban and one rural to ensure a comprehensive picture of the situation is attained. For the urban area, the sole city in the raion was selected, namely Anenii Noi city. For the rural area, a group of three villages were selected Gura Bacului, Floreni and Bulboaca to represent the rural area assessed. These villages were prioritized as they have the highest number of refugees in the raion, according to REACH’s Area Monitoring figures that were provided by the Directorate of Social Assistance and Family Protection Anenii Noi.[[9]](#footnote-10) Moreover, they have a key geographical position in the raion which gives an indication of the differences in needs, access to services and response across the rural areas in the raion.

*Map 1. Map of assessed geographical areas in Anenii Noi*



**Population**: The assessment will focus on the refugee populations living outside of RACs in Anenii Noi raion and the host population; including hosts who share their own accommodation with refugees. As of 4 April 2023, there are an estimated 298 refugees residing outside of RACs in Anenii Noi, according to REACH’s Area Monitoring figures.[[10]](#footnote-11) The total host population figures stand at 78.996 individuals according to the 2014 government census.[[11]](#footnote-12)

Unit of measurement:

* Quantitative survey of refugee and host populations: Household
* Key informant interview: Sector
* Focus group discussion: Rural/Urban

* 1. Secondary data review

The following sources were used for the research design:

*1. Where are the refugee households located within the assessed area? What are the movement intentions and integration plans of the refugees living in the assessed area?*

* UNHCR Refugee Coordination Forum, [Daily trends](https://app.powerbi.com/view?r=eyJrIjoiM2UyYWRhYmMtNGEwOC00NWQxLWEyZjctNjgxYTk2ZGQ0ZmUzIiwidCI6ImU1YzM3OTgxLTY2NjQtNDEzNC04YTBjLTY1NDNkMmFmODBiZSIsImMiOjh9&pageName=ReportSection3a075953f464903fc875)
* REACH, [MSNA Findings](https://data.unhcr.org/en/documents/download/95884)
* Ministry of Internal Affairs, [Bureau for Migration and Asylum, General Information](http://bma.gov.md/en/content/general-information-0)
* War Child, CCF Moldova, [Baseline needs assessment - Anenii Noi and Donduseni Rayons, Moldova](https://reliefweb.int/attachments/ccd80e92-6fa5-4bbf-9f73-7a3763a59fac/Baseline%20needs%20assessment%20-%20Anenii%20Noi%20and%20Donduseni%20Rayons%2C%20Moldova.pdf)
* War Child, CCF Moldova, [Endline Report Food security for refugee and host communities Anenii Noi and Donduseni Districts, Moldova](https://reliefweb.int/attachments/a18e6bb3-54cf-441f-a6e7-033c1922407e/Moldova%20voucher%20baseline%20War%20Child%20CCF%20.pdf)
* IOM, Republic of Moldova — [Displacement Surveys with Refugees from Ukraine and TCNs Crossing to Ukraine - 2022 trends](https://dtm.iom.int/reports/republic-moldova-displacement-surveys-refugees-ukraine-and-tcns-crossing-ukraine-2022)

*2. What are the priority needs of the refugee population in the areas in terms of access to basic services, economic needs, accommodation, and information on humanitarian assistance? How do needs vary within the refugee population?*

* REACH, [MSNA Findings](https://data.unhcr.org/en/documents/download/95884)
* Regional Refugee Response for the Ukraine Situation, [Ukraine Situation: Regional Refugee Response Plan - January-December 2023](https://data.unhcr.org/en/documents/details/97958)
* War Child, CCF Moldova, [Baseline needs assessment - Anenii Noi and Donduseni Rayons, Moldova](https://reliefweb.int/attachments/ccd80e92-6fa5-4bbf-9f73-7a3763a59fac/Baseline%20needs%20assessment%20-%20Anenii%20Noi%20and%20Donduseni%20Rayons%2C%20Moldova.pdf)
* War Child, CCF Moldova, [Endline Report Food security for refugee and host communities Anenii Noi and Donduseni Districts, Moldova](https://reliefweb.int/attachments/a18e6bb3-54cf-441f-a6e7-033c1922407e/Moldova%20voucher%20baseline%20War%20Child%20CCF%20.pdf)
* Helpage, [Moldova: Needs Assessment of Older Ukrainian Refugees](https://app.powerbi.com/view?r=eyJrIjoiYWE3OThiNGUtMTZhZC00NThhLWFlOWYtM2Q3MjJkNjE0NGU5IiwidCI6ImQ4NmM1M2NhLWUwODctNGY5Ny05Yzk3LWRmYWJkMTFkMDI4MiIsImMiOjh9)
* UNHCR, [The 2022 Participatory Assessment Report for refugees, asylum seekers and stateless persons in the Republic of Moldova](https://data.unhcr.org/en/documents/download/99285)
* Oxfam, [Ukraine situation: Moldova - Seeking safety: Roma refugees in Moldova](https://data.unhcr.org/en/documents/download/96902)

*3. What are the protection concerns faced by refugees and the key vulnerable groups?*

* UN Women, [Brief analysis on the gendered impacts of the crisis in Ukraine: a focus on Moldova](https://moldova.unwomen.org/sites/default/files/2022-07/Brief%20analysis%20on%20the%20gendered%20impacts%20of%20the%20crisis%20in%20Ukraine%20-%20a%20focus%20on%20Moldova_0.pdf)
* HelpAge, [Situation of older persons with disabilities in Moldova](https://reliefweb.int/report/moldova/situation-older-persons-disabilities-moldova)
* Oxfam, [Seeking Safety: Roma Refugees in Moldova – Challenges and humanitarian needs](https://reliefweb.int/report/moldova/seeking-safety-roma-refugees-moldova-challenges-and-humanitarian-needs)

*4. What are the barriers to access to basic services (education, health, mental health, Water, Sanitation and Hygiene, employment) for the refugee population?*

* War Child, CCF Moldova, [Baseline needs assessment - Anenii Noi and Donduseni Rayons, Moldova](https://reliefweb.int/attachments/ccd80e92-6fa5-4bbf-9f73-7a3763a59fac/Baseline%20needs%20assessment%20-%20Anenii%20Noi%20and%20Donduseni%20Rayons%2C%20Moldova.pdf)
* War Child, CCF Moldova, [Endline Report Food security for refugee and host communities Anenii Noi and Donduseni Districts, Moldova](https://reliefweb.int/attachments/a18e6bb3-54cf-441f-a6e7-033c1922407e/Moldova%20voucher%20baseline%20War%20Child%20CCF%20.pdf)
* Inter-agency refugee Health Working Group, Ministry of Health, [Ukraine Situation - Moldova : Health system response to the Refugee emergency in the Republic of Moldova (18 Jan 2023)](https://data.unhcr.org/en/documents/download/98342)
* Dopomoga, [Lista instituțiilor de învățământ general identificate pentru încadrarea copiilor din familiile refugiate din Ucraina](https://dopomoga.gov.md/images/companies/1/All-schools%20and%20kindergardens.pdf)
* Directia Generale Educatie, Cultura si Turism Anenii Noi, [Instituțiile de educație preșcolară din raionul Anenii Noi](http://aneniinoi.educ.md/prescolar-2/)
* Directia Generale Educatie, Cultura si Turism Anenii Noi, [Lista instituţiilor de învăţământ primar, secundar general din raionul Anenii Noi](http://aneniinoi.educ.md/primar-si-secundar-general-2/)

*5. What is the nature of the relationship between the refugee and host communities? What factors currently foster and/or inhibit social cohesion between refugees and the host community?*

* No secondary sources are available.

*6. What has been the impact of the refugee crisis on basic service provision and the local economy for the host community?*

* National Bureau of Statistics, [Education in the republic of moldova statistical publication 2021/2022](https://statistica.gov.md/files/files/publicatii_electronice/Educatia/Educatia_editia_2022.pdf)
* Consiliul raionul Anenii Noi, [Planul de dezvoltare socio-economică a raionului Anenii Noi (2020-2023)](https://anenii-noi.md/planul-de-dezvoltare-socio-economica-a-raionului/)
* Consiliului Local al orașului Anenii Noi, [Planul strategic de dezvoltare socio-economică a orașului anenii noi 2022- 2026](https://anenii-noi.com/wp-content/uploads/2022/04/PDSE-Anenii-Noi.pdf)

*7. What are the conditions of* smallholder *farmers in Anenii Noi in terms of available resources, challenges, and needs? How did the energy crises and refugee influx impact* smallholder *farmers' activities?*

* FAO, [FAO crop and food supply assessment mission (CFSAM) to the republic of Moldova](https://www.fao.org/3/cc3043en/cc3043en.pdf)
* JICA, [Data Collection Survey on Agriculture Sector in Moldova](https://openjicareport.jica.go.jp/pdf/1000041538.pdf)
* ILO, [A synergy of growth and employment opportunities](https://www.ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---sro-budapest/documents/publication/wcms_789901.pdf)
* The World Bank, [Climate-Smart Agriculture in Moldova](https://climateknowledgeportal.worldbank.org/sites/default/files/2019-06/CSA%20Moldova.pdf)

*8. Which are the local and external actors engaged in the crisis response and basic service provision in the assessed area? What collaboration and coordination mechanisms exist among the external and local actors? How can it be improved and expanded?*

* UNHCR, [5W Dashboard](https://app.powerbi.com/view?r=eyJrIjoiNDJiNGVkZmUtZGFiMS00YmNmLWJhZmYtNjgxZTIwMGVmODMyIiwidCI6ImU1YzM3OTgxLTY2NjQtNDEzNC04YTBjLTY1NDNkMmFmODBiZSIsImMiOjh9&pageName=ReportSection)
* CDAC Metwork, [Ukraine situation: Moldova Accountability to Affected Population Task Force - The state of communication, community engagement and accountability across the Ukraine response - ANNEX (30 Sep 2022)](https://data.unhcr.org/en/documents/download/97807)

*9. What are the capacities and needs of local actors (service providers, local authorities, NGO/CSOs) to respond to refugee and host community needs? What are the remaining gaps? Which gaps can be met by humanitarian actors?*

* No secondary sources are available.

The following sources were used for designing the sampling framework and for the selection of assessed areas:

* Republica Moldova Consiliul Raional Anenii Noi, [Populatie](https://anenii-noi.md/populatie/)
* National Bureau of Statistics, [Moldova resident population by sex and areas](https://statbank.statistica.md/PxWeb/pxweb/en/20%20Populatia%20si%20procesele%20demografice/20%20Populatia%20si%20procesele%20demografice__POP__POP010/POP010100.px/?rxid=9a62a0d7-86c4-45da-b7e4-fecc26003802)
* REACH, Area Monitor Factsheet

The data table for the ABRA can be found in Annex 1.

* 1. Primary Data Collection

Primary data will be collected through:

Stakeholder mapping:

**Method:** Multiple approaches will be taken to produce a list of local and external organisations, institutions and service providers involved in the refugee response in Anenii Noi raion. An initial list will be created using secondary data and additional actors will be identified through key informant interviews.

**Tool:** Identification of actors and information about their activities will be gathered using the following approaches:

* + 1. Using secondary data, an initial list will be created outlining the actors in Anenii Noi, including the sectors they are active in.
    2. Additional actors will be identified through the key informant interviews.

Quantitative survey administered to refugee households outside of RACs and host population:

**Method:** Household surveys with refugee households and the host population will be conducted through face-to-face interviews.

**Sampling:**

* + - 1. Host population: A stratified simple random sampling approach will be used for the sampling of the host population. From the total host population of 8358 individuals in the urban area and 12235 in the rural area, as reported in the 2014 government census, the total household numbers were calculated using the average family size of 4.3, as reported in a recent study conducted in Anenii Noi by War Child and CCF Moldova.[[12]](#footnote-13) This resulted in a total of 1944 host population households in the urban area and 2845 in the rural area. The sample of the host population surveys was calculated with a confidence interval of 95% and a margin of error of 8% at the target area (rural, urban) level, resulting in 153 host population household interviews in the urban area and 157 interviews in the rural area, including a 10% buffer[[13]](#footnote-14). Table 1 shows the sample size in each targeted location calculated with probability proportional to size.

*Table 1. Sampling frame covering the host population HHs in the targeted areas*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Target Area** | **City/Village** | **Host Population** | **Host HHs** | **Target Host  HH Surveys**  **(with 10% buffer)** |
|  |
|  |
| Urban | Anenii Noi | 8358 | 1944 | **153** |  |
| Rural | Gura Bacului | 3427 | 797 | **44** |  |
| Rural | Floreni | 3713 | 863 | **48** |  |
| Rural | Bulboaca | 5095 | 1185 | **65** |  |

The second stage consists of randomly selecting host community respondents. A set of random geo-points will be generated, and a map will be provided to enumerators through the Maps.me app. The eligible host community respondent nearest to each point will be interviewed.

* + - * + Areas where households would not be present will be removed from the map before the generation of random geo-points, including airports, military bases, etc.
        + A large buffer of geo-points will be drawn per sector. In the event that a respondent is not willing to participate in the survey, the nearest eligible host community respondent will be approached for the survey, within a radius of 100 meters. If no other eligible individual is present at the same point, the enumerator will continue to the next randomly assigned geo-point.
      1. Refugee population: according to REACH’s Area Monitoring figures, the estimated total refugee population living outside of RACs in the targeted areas was an estimated 298 individuals as of 4 April 2023.[[14]](#footnote-15) These refugee number estimates are provided by According to the Directorate of Social Assistance and Family Protection Anenii Noi. To calculate the household numbers, the average family size of 3.1 was used, as reported in a recent study conducted in Anenii Noi by War Child and CCF Moldova.[[15]](#footnote-16) This resulted in a total of 95 refugee households in the assessed locations. Table 2 illustrates the refugee population and household numbers per city and village. The assessment will aim to survey 50% of the refugee households with the exception of Bulboaca where 30% of the refugee households will be surveyed due to the lower number of refugee population. This results in a target of 31 surveys conducted in the rural area and 15 in the urban area. In case this target cannot be met in the rural area, additional villages will be considered for the study.

*Table 2. Estimated refugee HHs living outside RACs in the targeted areas*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Target Area** | **City/Village** | **Refugee Population** | **Refugee HHs** | **Target Refugee**  **HH Surveys** |
|  |
|  |
| Urban | Anenii Noi | 94 | 30 | **15** |  |
| Rural | Gura Bacului | 130 | 42 | **21** |  |
| Rural | Floreni | 43 | 14 | **7** |  |
| Rural | Bulboaca | 29 | 9 | **3** |  |

**Tool:** Enumerators will use a structured questionnaire on Kobo Toolbox with an active GPS to collect the coordinates of each survey.

Focus group discussions with the refugee and host population:

**Method:** Semi-structured focus group discussions will be conducted, concerning the relationship between refugees and the host population, priority needs and barriers to access basic services (refugee FGDs), the economic and service access impact of the arrival of refugees (host population FGDs), and the natural and anropological socks the population experinced in the assessed locations.

**Sampling:** in total eight FGDs will be conducted, four in each population group. Two FGDs will be conducted with the refugee population and two with the host population in each target area, urban and rural. In order to ensure representativity, the host community focus group with have equal representation of men and women and the refugee focus group will include 60% of adult women and 40% of adult men as the Refugee Coordination Forum Daily Trends Dashboard shows.[[16]](#footnote-17)

**Tool:** A semi-structured discussion guide will be used to guide the discussion. The conversations will be recorded when consent is given by all FGD participants. During the discussion, the interviewer will take notes to facilitate the discussion and record the information when no consent is given for recording. After the completion of the discussion, the interviewer and notetaker will fill a debrief form to assess how the discussion went.

Key informant interviews with education and health service providers, humanitarian actors, local authorities, smallholder farmers and businesses:

**Method:** Semi-structured discussions will be conducted, regarding the refugee and host relationship, basic service provision capacities, needs and gaps, smallholder farmers conditions in Anenii Noi and the impact of the refugee arrival on the various services and the area in general. Six types of sector respondents will be consulted:

* + 1. Local authorities
    2. Education service providers
    3. Health service providers
    4. Business representatives
    5. NGO/CSO representatives
    6. Smallholder farmers

**Sampling:** Key informants will be identified through secondary sources and snowballing.

**Tool:** A semi-structured interview guide will be used to guide the interviews. The interviews will be recorded when consent is given by the key informant and notes will be taken by the interviewer. After the completion of the interview, the interviewer will fill a debrief form to assess how the interview went.

Data collection will be carried out from 8 May to 26 May 2023. Before data collection, enumerators will be trained on the tools to ensure a clear understanding of all questions and how to administer these questions in face-to-face surveys, FGDs and KIIs. Enumerators will be also trained on and made aware of the Emergency Inter-Agency Referral Channels (general protection, gender-based violence, child protection) and procedures to follow if they encounter any particular cases of vulnerability during the interviews.

Mapping local emergency response capacity:

The assessment will be based on the participatory action approach involving engagements, consultation and un-official interview of local authorities, particularly head and/or deputy head of the raion, responsible persons for civil protection and land management, and local State emergency unit representatives.

**Initial meeting with the representatives of selected raion:**

* Introductory online meetings also will be organized to inform the head of raion about our activities and determine the priority hazards in their hromadas. Preliminary discussion is important at the initial stage of the assessment to determine the real needs and product’s practical utility, since the analysis of secondary data may not fully reflect the real needs of the raion. Head of raion or vice head of raion should express an interest in project participation before moving to the next step.
  + During the first meeting also will regard such issues as:
    - Complete contact information of local actors;
    - Organizational issues and the procedure for exchanging information
    - Current disaster preparedness problems and needs.

**Information request from raion:**

* After the introductory meeting, IMPACT will send the official letter to the community, which expresses the interest in participation of the project, along with a request for information needed for the emergence response mapping. Since local authorities and emergency services belongs to state bodies, official correspondence is a necessary condition for interaction with them. Official correspondence will also avoid the use of sensitive information.

**Data analysis and mapping**:

* From the analysis of the specific information from local authorities, indicators and data important for research will be determined for the emergency response system:
  + Bodies responsible for the organization (coordination) of the emergency response system and population evacuation
  + Key emergency services that take part in emergency response
  + Order of an interaction of bodies and emergency services, and the informational support necessary to improve such interaction
  + Normative zones of availability of emergency services
  + Gathering places for centralized evacuation in each settlement, and availability of developed evacuation routes
  + Additional equipment, which is an important component of emergency response (e.g., fire reservoirs, fire hydrants, etc.)
  + The number of populations in each settlement, including vulnerable groups of people

These indicators and information will be used to map the location of emergency response facilities and their relevant accessibility zones. In addition, points of current/potential transportation disruption will be included in the analysis.

**Mapping of emergency service availability zones** will make possible to identify critical areas and plan the creation of additional emergency response units (or take other measures to improve response, e.g., improvement of road surfaces or increasing the number of specialized transport).

Strengthening emergency response capacity:

In order to support local authorities, IMPACT will organise consultations, training, and technical support, namely

* Training/technical support for representatives of local authorities and other interested parties on the use of GIS technologies to support planning and response to emergency situations, as well as inventorying and visualization of information
* Generalization of disaggregated information and creation of information products (maps), for example, regarding the availability zones of emergency services, as well as protective structures civil protection; -
* Creating and editing an online data collection tool, as well as using it for other needs of the community in the field of civil protection

Pprovision of consulting support in developing and using proposed products (at the request of interested parties, and consultations, training, and technical support can be conducted in offline and online formats)

* Technical consultations for local professionals from hromadas for GIS data collection and aggregation, mapping and support with civil protection tasks.

IMPACT can prepare and share a geodatabase for the raion and teach people how to use it with free and open source software QGIS. This database can help raions update maps and add new data for it. Consultations will be organized by the request from the raion, with the possibility for online participation. Consultation and technical meetings can be organized for other stakeholders or partners.

* Other maps printing and producing requests from the raion (for example, evacaution map production or locations of hydrants, etc.).

IMPACT will support hromadas with printing materials which will improve civil protection sphere there.

**Key definitions:**

* *Local actor*: local authorities and organisation, group or institution, with a permanent presence in the hromadas, which aims to respond to the crisis-related needs of the population (or a group therewithin);
* *Emergency services*: emergency healthcare facilities, fire department facilities, state emergency services, etc Local authorities (communities): elected and other bodies of territorial communities empowered to resolve issues of local importance (village, settlement, city council);
* *Raion*: an association of all citizens of a first-level administrative-territorial unit (including villages, settlements, cities, and neighborhoods within a city) clearly defined in space which is the primary subject of local self-governance
  1. Data Processing & Analysis

The primary quantitative data for the ABA will be collected using Kobo Platform. Once collected, the Assessment Officer will clean the raw data daily to account for any duplicates or issues during data collection, as well as to ensure the correct methodology was followed. The data will be anonymised and cleaned in accordance with REACH's [Data Cleaning Minimum Standard](https://www.reachresourcecentre.info/wp-content/uploads/2020/03/IMPACT_Memo_Data-Cleaning-Min-Standards-Checklist_28012020-1.pdf) and the [Management of Personally Identifiable Information](https://www.reachresourcecentre.info/wp-content/uploads/2020/03/SOP_data_protection_PII1.pdf). Following the data cleaning process, the Data Officer and the Assessment Officer will conduct statistical analysis on the cleaned data set in line with the data analysis plan created during the research design phase using relevant software such as R and Excel. The host population household survey data analysis will be conducted in compliance with REACH’s [Minimum Standards Checklist for Quantitative Data Analysis](https://www.reachresourcecentre.info/wp-content/uploads/2022/05/IMPACT_Guidance_Prob-Sample-Data-Analysis-Checklist_V3_TO-SHARE1.pdf).

The qualitative KIIs and FGDs will be recorded (when consent is given), and interviewers will take notes during the interviews. The recordings will be transcribed by the interviewers and translated into English for data analysis. All qualitative data will be processed in accordance with REACH’s [Management of Personally Identifiable Information](https://www.reachresourcecentre.info/wp-content/uploads/2020/03/SOP_data_protection_PII1.pdf). The analysis of the qualitative data will be conducted through the construction of data saturation and analysis grids in order to identify patterns across the FGDs and KIIs. The analysis will be conducted in accordance with REACH’s [Minimum Standards Checklist for Semi-Structured (Qualitative) Data Processing and Analysis](https://www.reachresourcecentre.info/wp-content/uploads/2020/11/IMPACT_Guidance_Qualitative-Data-Analysis-Checklist_October2020_FINAL.pdf).

The primary data for the ABRA will be processed in ArcGIS Pro. The datasets used are global datasets that are precleaned and preprocessed and do not require any additional cleaning before analysis. The data adheres to the standards set by the [IMPACT Remote Sensing Guidance and Related Resources](https://acted.sharepoint.com/:b:/r/sites/IMPACT-Research/Shared%20Documents/GIS/GIS%20documents/guidelines/RS01-IMPACT-Remote-Sensing-Guidance-v1-with-Annex.pdf?csf=1&web=1&e=H0Vh3b). As there is no identifiable information in these datasets, they are not anonymized or generalized.

All data cleaning and analysis will be reviewed by the IMPACT HQ Research Design and Data (RDD) Unit before the output production.

Geospatial data will be processed and analysed within each section of the Area-Based Risk Assessment (see **Table 3**). It must be noted that these are the proposed methods, and they may need to be adjusted based on available techniques and the suitability of different methods.

*Table 3: Summary of data processing and analysis*

|  |  |
| --- | --- |
| **Section name** | **Process / Analysis** |
| Population density (exposed population) | Calculate from OSM buildings layer – using OCHA settlement population estimates, extract areas of settlements that are residential, and analyse types of buildings present (houses/apartments, etc.) to delineate discrete parcels and estimate population density. |
| Exposure to air pollution | Yearly averaged Sentinel-5P data on atmospheric SO₂, NO₂, CO, CH₄ and aerosols concentrations, highlighting the stationary pollution sources in 2021 or 2022. Multiplied by the population density dataset to get an estimate of exposure. |
| Exposure (and risk) to fires | FIRMS dataset for the months of June-August 2001-2022 will be aggregated into 1 sq.km. bins, and then the mean frequency and intensity of fires per season will be calculated for each bin. Locations of critical infrastructure and assets as well as settlements will be overlaid to understand exposure. A risk index can also be calculated for this hazard, using available vulnerability data determined from the ABA data collection (e.g.: households with IDPs, households with three or more children, disabled head of household, etc.). |
| Climate change and meteorology trends | Use data from Giovanni on area-averaged climatic trends or from specific weather stations from RP5 data to create graphs of long-term precipitation, temperature, soil moisture and wind speed trends, plus predominant wind directions. |
| Drought risk | Calculate drought exposure based on accumulated vegetation condition index in spring and summer over a long time period (calculated from MODIS NDVI or Sentinel 2 NDVI data, with non-agricultural land masked out). Then calculate risk by multiplying exposure by drought vulnerability component (reliance on agriculture, diversity of crops) |
| Land cover change and land degradation | Determine percentage of change over time using ESA-CCI-LC from 2001 to 2022, MODIS data products, and the Harmonized World Soil Database (HWSD), Version 1.2,23 to determine a binary indicator (degraded/not degraded), according to the “One Out, All Out” (1OAO) standard. Risk is determined by proximity to agricultural land. |
| Erosion | Calculate potential topsoil erosion loss with the use of the Revised Universal Soil Loss Equation (RUSLE), using the global R dataset, ESA Worldcover 2020, and Shuttle Radar Topography Mission (SRTM). Risk is determined by overlaying agricultural areas to evaluate the potential topsoil loss. |
| Heat wave risk | Extract periods of extremely high temperatures that have occurred recently. For the map, calculate zonal statistics for land surface temperatures for April-October 2001-2022: minimum, maximum, mean, standard deviation. Calculate mean number of days per season with temperatures above (mean -1 standard deviation), per pixel. Calculations carried out in Google Earth Engine with MODIS LST product. Then multiply the exposure index (mean LST in settlement) by population density in that settlement to get measure of risk. |
| Cold wave risk | Extract periods of extremely low temperatures that have occurred recently. For the map, calculate zonal statistics for land surface temperatures for December-February 2001-2022: minimum, maximum, mean, standard deviation. Calculate mean number of days per season with temperatures below (mean -1 standard deviation), per pixel. Calculations carried out in Google Earth Engine with MODIS LST product. Then multiply the exposure index (mean LST in settlement) by population density in that settlement to get measure of risk. |
| Seismic risk | Identify seismic zones and historical epicentres with datasets from The Common Seismic Monitoring System Romania – Moldova, from 1900 to 2022. Risk is determined by population density in affected epicentres, road density, and distance to nearest hospital. |
| Road infrastructure | Clean and display OSM data from roads layer, calculate response areas and estimated response time based on location of emergency services. |
| Electricity | Clean and display OSM data from buildings layer, digitize data from state documentation |
| Emergency services | Clean and display OSM data from buildings layer, calculate response areas based on drive-time and population density. |
| Hazardous facilities | Create potentially-hazardous facilities dataset from OSM buildings layer, IMPACT sources, identify chemical hazards from FEAT methodology. |
| Loss / damage disaster case study | Case study of potential or actual loss/damage from an accident at a selected hazardous facility or critical infrastructure. Overlay a buffer zone based on FEAT methodology for specific chemical hazards around a facility to identify the population, buildings, and infrastructure that could be exposed/ was impacted. |
| Flood risk | Display digital elevation data, OSM water objects, potentially-dangerous facilities (chemical, FEAT methodology), calculate runoff direction |
| Natural and anthropogenic multi-hazard exposure | Based on the existing data, natural hazard risk will be calculated (based on zonal statistics of proximity/frequency of natural hazard occurrence). Technological multi-hazard risk will be calculated based on the proximity of hazardous objects, industrial waste, and frequency of failures in the past. These will include demographic data from the ABA interviews, identifying vulnerable populations (e.g.: households with IDPs, households with three or more children, disabled head of household, etc.) and will consider factors such as distance from nearest medical facility or emergency services, to develop the multi-hazard ranking list. |

As a result of data analysis, a multi-hazard ranking list of communes with the level of summarised hazards (from minimum 0 to 100 points in maximum) was developed. Thus, the communes most in need of assistance in the development of emergency response potential, including technical support, were determined. IMPACT will offer help to these raions with creating maps, conducting training etc. (described in more detail in the next sections).

**Emergency services response area mapping in raion**

The Geographic Information System (GIS) is a platform for organising many spatial data created and generated during an emergency. The ArcGIS Network Analyst research tool will be used to determine the service area of emergency services. Based on the road’s traffic, each service in hromada will be assigned time zones based on appropriate response times defined by emergency services.

Areas outside of these response times zones should be considered critical areas. The area accessibility by emergency services calculates using Euclidian distance and/or travel time as proxies.

A *network service area* is a region that encompasses all accessible streets (that is, streets that are within specified impedance). These service areas help us to evaluate accessibility from the emergency service in different directions. To identify the fire and medical service station’s service area, travel time zones, i.e. within 5, 10, 15, and 20 minutes were defined by adopting assumed drive time. For the study, drive time was calculated based on traffic speed requirements, i.e.80 km/hour for highways and 50 km/hour for urban roads. For instance, the 5-minute service area for a station includes all the streets that can be reached within five minutes of that fire service station. In this regard, a drive time-based service area provides a better result. The identification of critical areas by network analysis tool is necessary to determine the best locations for the deployment of additional emergency services. Both a critical and a risk-related area is created to determine the optimal locations for new emergency services using a network analysis tool.

# Key ethical considerations and related risks

The proposed research design meets/does not meet the following criteria:

|  |  |  |
| --- | --- | --- |
| ***The proposed research design…*** | ***Yes/ No*** | ***Details if no (including mitigation)*** |
| … Has been coordinated with relevant stakeholders to **avoid unnecessary duplication** of data collection efforts? | Yes |  |
| … **Respects respondents, their rights and dignity** (*specifically by: seeking informed consent, designing length of survey/ discussion while being considerate of participants’ time, ensuring accurate reporting of information provided*)? | Yes |  |
| … Does not **expose data collectors to any risks as a direct result** of participation in data collection? | Yes |  |
| … Does not **expose respondents / their communities to any risks as a direct result** of participation in data collection? | Yes |  |
| … Does not involve **collecting information on specific topics which may be stressful and/ or re-traumatising** for research participants (both respondents and data collectors)? | No | Some topics covered might be sensitive to some respondents.  Respondents will be reminded at the beginning of the interview/ FGD that their participation is voluntary, and that they can withdraw their consent at any time.  Enumerators will receive training on how to react if a respondent becomes upset and will end the interview.  They will be also trained on and made aware of the Emergency Inter-Agency Referral Channels (general protection, gender-based violence, child protection) and procedures to follow if they encounter any particular cases of vulnerability. |
| … Does not involve **data collection with minors** i.e. anyone less than 18 years old? | Yes |  |
| … Does not involve **data collection with other vulnerable groups** e.g. persons with disabilities, victims/ survivors of protection incidents, etc.? | No | As respondents are randomly selected, they might be survivors of protection incidents.  Enumerators will receive training on how to react if a respondent becomes upset and will end the interview.  They will be also trained on and made aware of the Emergency Inter-Agency Referral Channels (general protection, gender-based violence, child protection) and procedures to follow if they counter any specific vulnerable cases. |
| … Follows IMPACT SOPs for management of **personally identifiable information**? | Yes |  |

# 

# 5. Roles and responsibilities

Table 4: Description of roles and responsibilities

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task Description** | **Responsible** | **Accountable** | **Consulted** | **Informed** |
| Research design | *Assessment Officer*  *GIS Officer* | *Research Manager* | *HQ Research design and data unit (RDDU)* | *Country Coordinator*  *UNHCR*  *AFD* |
| Supervising data collection | *Field Team Lead*  *GIS Officer* | *Assessment Officer* | *RDDU* | *Research Manager Country Coordinator*  *UNHCR*  *AFD* |
| Data processing (checking, cleaning) | *Assessment Officer*  *Data Officer*  *GIS Officer* | *Research Manager* | *RDDU* | *Country Coordinator*  *UNHCR*  *AFD* |
| Data analysis | *Assessment Officer*  *Data Officer*  *GIS Officer* | *Research Manager* | *RDDU* | *Country Coordinator*  *UNHCR*  *AFD* |
| Output production | *Assessment Officer*  *GIS Officer* | *Research Manager* | *HQ reporting unit* | *Country Coordinator*  *UNHCR*  *AFD* |
| Dissemination | *Assessment Officer*  *GIS Officer* | *Research Manager* | *HQ Research department*  *HQ Communication department* | *Country Coordinator*  *UNHCR*  *AFD* |
| Monitoring & Evaluation | *Assessment Officer*  *GIS Officer* | *Research Manager* | *HQ Research department* | *Country Coordinator*  *UNHCR*  *AFD* | |
| Lessons learned | *Assessment Officer*  *GIS Officer*  *Field Team Lead* | *Research Manager* | *HQ Research department* | *Country Coordinator*  *UNHCR*  *AFD* |

***Responsible:*** *the person(s) who executes the task*

***Accountable:*** *the person who validates the completion of the task and is accountable of the final output or milestone*

***Consulted:*** *the person(s) who must be consulted when the task is implemented*

***Informed:*** *the person(s) who need to be informed when the task is completed*

# 6. Data Analysis Plan

The Data Analysis Plan (DAP) is separately published, click [here](https://www.impact-repository.org/document/reach/a4bcfc40/REACH_MDA2302_DAP_ABA_ABRA_April2023.xlsx) to view the DAP.

# 7. Monitoring & Evaluation Plan

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **IMPACT Objective** | **External M&E Indicator** | **Internal M&E Indicator** | **Focal point** | **Tool** | **Will indicator be tracked?** |
| **Humanitarian stakeholders are accessing IMPACT products** | Number of humanitarian organisations accessing IMPACT services/products  Number of individuals accessing IMPACT services/products | # of downloads of x product from Resource Center | Country request to HQ | User\_log | X Yes |
| # of downloads of x product from Relief Web | Country request to HQ | □ Yes |
| # of downloads of x product from Country level platforms | Country team | □ Yes |
| # of page clicks on x product from REACH global newsletter | Country request to HQ | □ Yes |
| # of page clicks on x product from country newsletter, sendingBlue, bit.ly | Country team | X Yes |
| # of visits to x webmap/x dashboard | Country request to HQ | □ Yes |
| **IMPACT activities contribute to better program implementation and coordination of the humanitarian response** | Number of humanitarian organisations utilizing IMPACT services/products | # references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies) | Country team | Reference\_log | X Yes  # of situation overviews and maps that has been disseminated to WGs  # references in HPC documents (HNO, SRP, Flash appeals, Cluster/sector strategies) |
| # references in single agency documents |  |
| **Humanitarian stakeholders are using IMPACT products** | Humanitarian actors use IMPACT evidence/products as a basis for decision making, aid planning and delivery  Number of humanitarian documents (HNO, HRP, cluster/agency strategic plans, etc.) directly informed by IMPACT products | Perceived relevance of IMPACT country-programs | Country team | Usage\_Feedback *and* Usage\_Survey template | Usage survey to be conducted at the end of the research cycle related to all outputs, targeting at least 20 partners. |
| Perceived usefulness and influence of IMPACT outputs |  |
| Recommendations to strengthen IMPACT programs |
| Perceived capacity of IMPACT staff |  |
| Perceived quality of outputs/programs |
| Recommendations to strengthen IMPACT programs |
| **Humanitarian stakeholders are engaged in IMPACT programs throughout the research cycle** | Number and/or percentage of humanitarian organizations directly contributing to IMPACT programs *(providing resources, participating to presentations, etc.)* | # of organisations providing resources (i.e.staff, vehicles, meeting space, budget, etc.) for activity implementation | Country team | Engagement\_log | X Yes |
| # of organisations/clusters inputting in research design and joint analysis | X Yes |
| # of organisations/clusters attending briefings on findings; | X Yes |

**Annex 1:**

*Table 1: List of data sources to be utilized*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data source** | **Short description** | **Area** | **Available data and comment** | **Risk data type** |
| **HAZARD** | | | | |
| [ECAD](https://www.ecad.eu/dailydata/index.php) | Meteorological datasets | Europe | Air temperature, air pressure, precipitation | Hydro-meteorological |
| [European Severe](https://www.eswd.eu/) [Weather Database](https://www.eswd.eu/) | Web-portal with information about severe weather events | Europe | Meteorological  data: severe wind, large hail, heavy rain, heavy, snowfall/snowstorm | Hydro-meteorological |
| [Climate Data Online](https://gis.ncdc.noaa.gov/maps/ncei/summaries/global) | Archive of global  historical weather and climate data | Global | Archive on climatological data (wind speed) | Hydro-meteorological (dry winds) |
| [Giovanni NASA](https://giovanni.gsfc.nasa.gov/giovanni/) | Meteorological datasets: temperature, precipitation, soil  moisture | Global | Atmospheric chemistry, precipitation, evaporation rate | Hydro-meteorological |
| [WorldClim](https://www.worldclim.org/data/index.html) | Historical and future projected climate datasets | Global | Precipitation, temperature and bio-climate indicators | Hydro-meteorological |
| [MODIS land surface](https://developers.google.com/earth-engine/datasets/catalog/MODIS_006_MOD11A1) [temperature](https://developers.google.com/earth-engine/datasets/catalog/MODIS_006_MOD11A1) | LST, 2001-2020 | Global | Data on historical land surface temperatures | Hydro-meteorological |
| [FIRMS](https://firms.modaps.eosdis.nasa.gov/map/#d%3A2021-05-05..2021-05-06%3B%400.0%2C0.0%2C3z) fire data | Near real-time active fire data | Global | Active fires | Environmental (wildfires) |
| [The Sentinel-5 Precursor](https://developers.google.com/earth-engine/datasets/catalog/sentinel-5p) [mission](https://developers.google.com/earth-engine/datasets/catalog/sentinel-5p) | RS | Global | Atmospheric SO2, NO2, Aerosol index,  CO concentration | Environmental (air pollution) |
| [Global Forest Watch](https://www.globalforestwatch.org/map/) | Forest cover, loss and gain | Global | Forest cover, forest loss, forest gain | Environmental (biodiversity loss, wildfires) |
| [Sentinel 1](https://developers.google.com/earth-engine/datasets/catalog/COPERNICUS_S1_GRD?hl=en) | RS (radar) | Global | C-band radar images | Environmental (land cover change,  biodiversity loss, land subsidence) |
| [Copernicus global land](https://land.copernicus.eu/global/products/lc) [cover](https://land.copernicus.eu/global/products/lc) | Green areas within settlements | Global | Data on green areas within settlements | Hazard/Exposure |
| [WWF Hydrosheds](https://www.hydrosheds.org/) | Hydrological data and maps based on Shuttle Elevation Derivatives at multiple Scales | Global | Hydrographic information for regional and global-scale, river networks, watershed boundaries, drainage directions, and flow accumulations | Hazard/Exposure |
| [Water resources web](https://www.eea.europa.eu/data-and-maps/data/european-catchments-and-rivers-network) [map](https://www.eea.europa.eu/data-and-maps/data/european-catchments-and-rivers-network) | Web-map with basins | European | Available borders of main river basins and subbasins | Hazard, exposure |
| [Global surface water explorer](https://global-surface-water.appspot.com/) | Web-map with possibility to download data | Global | Present state and changes of surface water bodies (Landsat-based) | Hazard/Exposure |
| [INFORM](https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk/Country-Profile/moduleId/1767/id/419/controller/Admin/action/CountryProfile) country risk profiles | Web-portal with risk estimation on country level | Global | Ranked hazard, exposure on country level | Hazard, exposure |
| [Moldova Digital Seismic Network](https://www.fdsn.org/networks/detail/MD/) | Web-portal with historical seismic activity | Moldova | Seismic activity, intensity, and date on country level | Environmental (earthquakes) |
| [Landsat 8](https://developers.google.com/earth-engine/datasets/catalog/landsat-8) | RS (multispectral) | Global | Multispectral imagery (15-30 meters) | Exposure |
| [Sentinel 2](https://developers.google.com/earth-engine/datasets/catalog/COPERNICUS_S2_SR) | RS (multispectral) | Global | Multispectral imagery (10-30 meters) | Exposure |
| [Protected Planet](https://www.protectedplanet.net/country/UKR) | Web-map on protected areas | Global | Terrestrial and marine protected areas | Exposure |
| **EXPOSURE** | | | | |
| [ESRI land cover](https://livingatlas.arcgis.com/landcover/) | Land use and land cover data | Global | 10m resolution land  cover raster Sentinel based) | Exposure |
| [OSM](https://www.openstreetmap.org/) buildings network (building type, residential areas, pop.  Density proxy) | Vector layer | Global | Raw OSM | Exposure |
| [OSM](https://www.openstreetmap.org/)  river network | Vector layer | Global | Raw OSM | Exposure |
| [OSM](https://www.openstreetmap.org/)  road network | Vector layer | Global | Raw OSM | Exposure |
| [GHS built environment](https://data.jrc.ec.europa.eu/dataset/jrc-ghsl-10008) [raster](https://data.jrc.ec.europa.eu/dataset/jrc-ghsl-10008) (radar-based) | Global map of built- up areas | Global | Data on build-up areas | Exposure |
| [GHS population raster](https://ghsl.jrc.ec.europa.eu/ghs_pop.php) | Geospatial data on population distributions,  demographic | Global | Population raster, RS- based | Exposure |
| [OCHA](https://data.humdata.org/dataset/cod-em-mda) settlement and admin boundaries | Administrative boundaries and associated population estimate | Moldova | Administrative boundaries: country, oblasts, raion, community | Exposure |
| The [Flash Environmental Assessment Tool](https://eecentre.org/resources/feat/) 2.0 | Methodology to apply spatial dimensions to chemical hazards | Global | Table of chemicals and their estimated impact | Exposure |
| **VULNERABILITY** | | | | |
| [National Bureau of Statistics](https://statistica.gov.md/en) | Complex regional statistics | Moldova | Statistic data | Economic capacity |
| The International Organization for Migration (IOM) 2023. | IDP estimates | Raion level data | IDP, migrant or returnee population presence in a defined administrative area of the country. | Vulnerability |
| Shelter Cluster | Number of collective centers per raion | Moldova | IDP | Vulnerability |
| OSM data on location of schools, hospitals, IDP centers etc. | Vector layer | Moldova | density of vulnerable groups location | Vulnerability |

1. Only estimates are available for the refugee population living outside of RACs. [↑](#footnote-ref-2)
2. United Nations, Ukraine Crisis: [Protecting civilians ‘Priority Number One’; Guterres releases $20M for humanitarian support](https://news.un.org/en/story/2022/02/1112662)  [↑](#footnote-ref-3)
3. UNHCR, [Operational Data Portal, Republic of Moldova](https://data.unhcr.org/en/country/mda) [↑](#footnote-ref-4)
4. REACH, Moldova: Refugee Accommodation Centres (RACs) Monthly Needs Monitoring Factsheet [↑](#footnote-ref-5)
5. REACH Area Monitoring Factsheet [↑](#footnote-ref-6)
6. Refugees International, [Ensuring the protection and inclusion of Ukrainian refugees in Romania and Moldova](https://www.refugeesinternational.org/reports/2022/10/5/preparing-for-the-unpredictable-ensuring-the-protection-and-inclusion-of-refugees-from-ukraine-in-romania-and-moldova) [↑](#footnote-ref-7)
7. FAO, [Special Report: FAO Crop and Food Supply Assessment to the Republic of Moldova](https://www.fao.org/3/cc3043en/cc3043en.pdf) [↑](#footnote-ref-8)
8. Agenţia “Moldsilva” Institutul De Cercetări Şi Amenajări Silvice, [Raport privind practicele agro-forestiere aplicate pe raionul Anenii Noi](http://icas.com.md/wp-content/uploads/2016/03/Practici-agroforestiere-r.-Anenii-Noi-final.pdf) [↑](#footnote-ref-9)
9. REACH, Area Monitoring Factsheet [↑](#footnote-ref-10)
10. REACH, Area Monitoring Factsheet [↑](#footnote-ref-11)
11. Republica Moldova Consiliul Raional Anenii Noi, [Populatie](https://anenii-noi.md/populatie/) [↑](#footnote-ref-12)
12. War Child, CCF Moldova, [Endline Report Food security for refugee and host communities Anenii Noi and Donduseni Districts, Moldova](https://reliefweb.int/attachments/a18e6bb3-54cf-441f-a6e7-033c1922407e/Moldova%20voucher%20baseline%20War%20Child%20CCF%20.pdf) [↑](#footnote-ref-13)
13. Republica Moldova Consiliul Raional Anenii Noi, [Populatie](https://anenii-noi.md/populatie/) [↑](#footnote-ref-14)
14. REACH, Area Monitor Factsheet [↑](#footnote-ref-15)
15. War Child, CCF Moldova, [Endline Report Food security for refugee and host communities Anenii Noi and Donduseni Districts, Moldova](https://reliefweb.int/attachments/a18e6bb3-54cf-441f-a6e7-033c1922407e/Moldova%20voucher%20baseline%20War%20Child%20CCF%20.pdf) [↑](#footnote-ref-16)
16. UNHCR, Refugee Coordination Forum, [Daily Trends Dashboard - Republic of Moldova](https://app.powerbi.com/view?r=eyJrIjoiM2UyYWRhYmMtNGEwOC00NWQxLWEyZjctNjgxYTk2ZGQ0ZmUzIiwidCI6ImU1YzM3OTgxLTY2NjQtNDEzNC04YTBjLTY1NDNkMmFmODBiZSIsImMiOjh9&pageName=ReportSection3a075953f464903fc875) [↑](#footnote-ref-17)