HABITABLE

Qualitative Research on the Climate-Migration Nexus: Methods, Tools, and Practical Guidance

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The **HABITABLE** project – Linking Climate Change, Habitability and Social Tipping Points: Scenarios for Climate Migration – aims at significantly advance our understanding of the **current interlinkages between climate change impacts and migration** and displacement patterns, and to **better anticipate their future evolution**.

Running for **4 years** (2020-2024), HABITABLE brings together **21 partners:** University of Liège, University of Vienna, Potsdam Institute for Climate Impact Research, University of Exeter, the IDMC, Lund University, Sapienza Università di Roma, adelphi, Université de Neuchâtel, Institut de Recherche pour le Développement, Council of Scientific and Industrial Research, UNESCO, University of Ghana, CARE France, University of Twente, Université Cheikh Anta Diop, Stockholm Environment Institute Asia, Raks Thai Foundation, Addis Ababa University, Institut National de la Statistique du Mali and Samuel Hall.

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Please visit www.habitableproject.org for more information about the project.

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3.	23.03.2022	Edits and modifications to the ethics guidance to incorporate HABITABLE guidance from WP12 and additional guidance from Ethics Advisory Board.
4	08.07.2022	In view of EC's request for revision, the following items were addressed: (i) clarifications to gender equality and social inclusion guidance; (ii) precisions regarding intersections and complementarity with other WPs; (iii) inclusion of considerations related to conflict sensitivity; and (iv) inclusion of the final version of Annex 4 "Migrant in destination" set of questions.
5	28.02.2023	The document was modified with further information about gender and social equity, recommendations around informed consent, as well as considerations about conflict-sensitive approaches.
6	09.01.2024	In view of lessons learned from the fieldwork, database design, and initial analyses, this document was restructured to serve as a practical guide for a broader audience outside of the HABITABLE consortium partners. It was further modified to include information on the database.
7	15.01.2025	Additions were made to further illustrate the database design and privacy protection measures undertaken.

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Summary

The following text aims to serve as a valuable resource for qualitative research on environment-migration linkages. It describes ways to design and execute qualitative research on the climate-migration nexus, from initiating and designing the study to developing a database of the results.

Through bibliographic resources, concrete examples, and field-tested tools, this handbook provides practical guidance on:

- Designing qualitative interviews, including example sets of questions;
- Developing and training a research team;
- Choosing a sampling strategy;
- Select interview partners, including example criteria;
- Mainstreaming gender, social equity, and conflict considerations in all steps of the research, including by fostering a comfortable and safe interview setting;
- Ethical considerations including data privacy;
- Possible steps for qualitative content and thematic analysis;
- Designing a qualitative database; and
- Many more tips and bibliographic references.

This handbook is intended for a wide audience, to foster an exchange of experiences and further refinement in methodologies for studying the interactions of environmental change and human mobility.

This practical handbook is intended for students, researchers, educators, and practitioners, offering a practical reference for conducting fieldwork in this domain. Many of the tools presented below are intended to be implemented in multiple case study country with a view to producing cross-country analysis with some level of comparability.

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Part I: Qualitative Research for the Climate-Migration Nexus

1.2 Introduction: Why this guide?

The field of research investigating the linkages between climate change and human mobility is already substantial and burgeoning. Yet, results are often mixed or weak. There remains a lack of scholarly consensus on the impacts of climate change on migration, contributing to a gap between research and policy on the topic. Some researchers suggest that one reason for this is that current research is divided into two, parallel streams: one that seeks quantitative, future projections of 'climate migrants' or 'climate refugees', and one that seeks qualitative understanding of current migration dynamics through empirical case studies (Gemenne, 2018).

To date, research on climate change and human mobility phenomena is largely context-specific. Qualitative methods are the third most commonly used method to study climate-mobility phenomena, and have been favoured for at least ten years. Piguet counts 51 articles using qualitative methods in 2010, the majority being ethnographic cases studies, rising to 192 in 2020. Studies with this research design use interviews, small sample questionnaires, contacts with privileged informants, focus groups, text and image analysis, and participatory mapping, *inter alia* (Piguet et al., 2018).

This choice of method can be due to limited secondary data concerning the study area, necessitating the researcher or group of researchers to spend time *in situ* gaining insights into the social systems in which target groups are embedded. These approaches are logistically costly, time-intensive, and often disconnected from quantitative understandings of the wider populations at hand.

Moreover, context-specific findings from case studies are typically fragmented and have limited comparability across countries. Inadequate attention has been placed on cross-country studies with shared research design. Notable exceptions include the *projects HABITABLE: Linking Climate Change, Habitability and Social Tipping Points: Scenarios for Climate Migration* (lead by the Hugo Observatory at the University of Liège, see: www.habitableproject.org); East Africa Peru India Climate Capacities (EPICC, at the Potsdam Institute for Climate Impact Research, or PIK, see Blocher, Bergmann, et al., 2021); *Migration, Environment and Climate Change: Evidence for Policy* (MECLEP, led by the International Organization for Migration (IOM), see: Melde et al., 2017) and *Where the Rain Falls* (at the United Nations University Institute for Environment and Human Security (UNU-EHS), see, for example: Warner & Afifi, 2014). These multi-country projects, which were mixed methods in nature, are complementary to a very limited number of meta-analyses of findings across countries (Hoffmann et al., 2020, 2021, 2024).

The examples offered in this text can be seen as contributions to the next generation of qualitative methodologies for field research on climate-related mobility, taking lessons from these projects. We encourage others to use our research protocol as a template, and refine this methodology to create comparative data in different cases worldwide.

This handbook for qualitative interviews intends to provide a practical guide for applying qualitative interview methods for the climate-human mobility nexus. It was developed in

consultation with in-country research partners to ensure local relevance and develop ways to reduce logistical burdens common to field research. It intends to serve to foster exchange of experience and further refinement in methodologies to research the interactions of environmental change and human mobility.

This handbook is intended for wide application for qualitative research on environment-migration linkages and can be a reference point for students, researchers, and practitioners.

2.1 Why qualitative research?

Qualitative interviews make it possible to gain information that is not accessible through the analysis of quantitative data. Quantitative methods like surveys are useful for many different research questions, like better understanding in- and out-migration rates. and their relationships to different household or environmental variables However, qualitative methods are often better for uncovering causal mechanisms and exploring complex dynamics.

Qualitative methods are best suited for understanding the perceptions and experiences of people. This is particularly relevant to environment- and climate-related human mobility phenomena, which may be better tested by exploring perceived environmental changes that would affect human behavior rather than traditionally measured changes in environmental stimuli. Households have been shown to misperceive the severity and frequency of shocks or may face challenges with recalling certain events . A growing stream of climate migration research emphasizes the actual experience of households and their perceptions of environmental conditions as main determinants of migration decisions (De Longueville et al., 2020; Parsons and Nielsen, 2020; Zander et al., 2013).

Moreover, in many countries, data availability on migratory movements and displacement is strongly limited and highly dispersed. In many contexts, survey data is not of sufficient quality or temporal consistency to draw meaningful conclusions, particularly about causal mechanisms.

To better understand the strengths and complementarity of qualitative and quantitative methods, see Table 1.

Table 1. Complementarity Between Qualitative and Quantitative Approaches

Approach	Strengths	Application	Ideal Level of Analysis
Qualitative Methods	In-depth and contextual insights, including understanding social systems, exploring nuance	Generating hypotheses	Individual or household
Quantitative Methods	Exploring population- or group-level attributes, trends, and patterns	Testing hypotheses	Group or population

Source: Developed by the authors, 2024.

In comparison with other subjects of investigation, such as climate impacts on coral reefs or glacier ecosystems, the analysis of human-environment interactions can and should make use of the unique circumstances which humans can communicate (Vinke, 2019). As Bertaux (1981) puts it bluntly, "*If given a chance to talk freely, people appear to know a lot about what is going on.*" This underscores the richness and relevance of qualitative approaches, as demonstrated in Figure 1 below, which details their unique benefits in climate-migration studies.

Figure 1. Benefits of Qualitative Research in Climate-Migration Studies

Rich contextual detail	Qualitative methods explore the lived experiences of individuals, highlighting for instance how migration decisions are made in response to environmental changes.
Data gap bridging	Qualitative research fills scarcity or fragmentation of data on climate-induced migration in many regions with in-depth and context-specific findings.
Hypothesis generation	Qualitative findings can inspire new hypotheses, enhancing overall research process.
Human-environment interactions	Unlike environmental studies focused on ecosystems, qualitative methods leverage humans' ability to articulate their experiences and perspectives.

Source: Developed by the authors, 2024.

Interviewing migrants themselves, sending and receiving communities will add information and nuance that is not reflected in the current literature. Qualitative interviews to explore the climate-human mobility nexus specifically has served as the foundation for the richness of this field, and is perhaps the approach most valued by scholars (Vinke, 2019). According to Piguet (2022), ethnographic approaches have remained among the most-used methodologies in the climate-human mobility field for over a decade.

In his book on *Interviewing as Qualitative Research,* Seidman (2013) describes the reason for this method as follows: "*At the root of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience.*" Qualitative interviews provide the opportunity to capture migration experiences and perceptions.

An approach that includes views of migrants and displaced people themselves adds to the current debate in which this perspective on the issue is often underrepresented. While a small or medium number of qualitative interviews may not be adequate to test hypotheses deducted from existing theory (Seidman, 2013), they can be an important tool to generate hypotheses out of the newly acquired information. Nevertheless, high-quality, well-designed,

and well-executed interview data requires a number of considerations addressed in the subsequent sections.

2.2 Why qualitative interviews?

Using qualitative interviews leaves the possibility of asking additional questions or probing for more information if a new relevant issue is addressed that has not been included in the set of questions. Each interview partner is representative of the social system in which he or she lives. To understand the complementarity of various research methods, see Table 2 below, which outlines their strengths and how they bolster each other.

Table 2. Why Qualitative Interviews? Complementarity of Research Methods

Method	Strengths	Complementarity
Semi-Structured Interviews	In-depth individual insights.	Facilitates triangulation.
Focus Group Discussions	Group dynamics and consensus.	Supports the identification of patterns.
(Longitudinal) Surveys	Population- or group-level data.	Provides broader context, attributes, and tends.

Source: Developed by the authors, 2024.

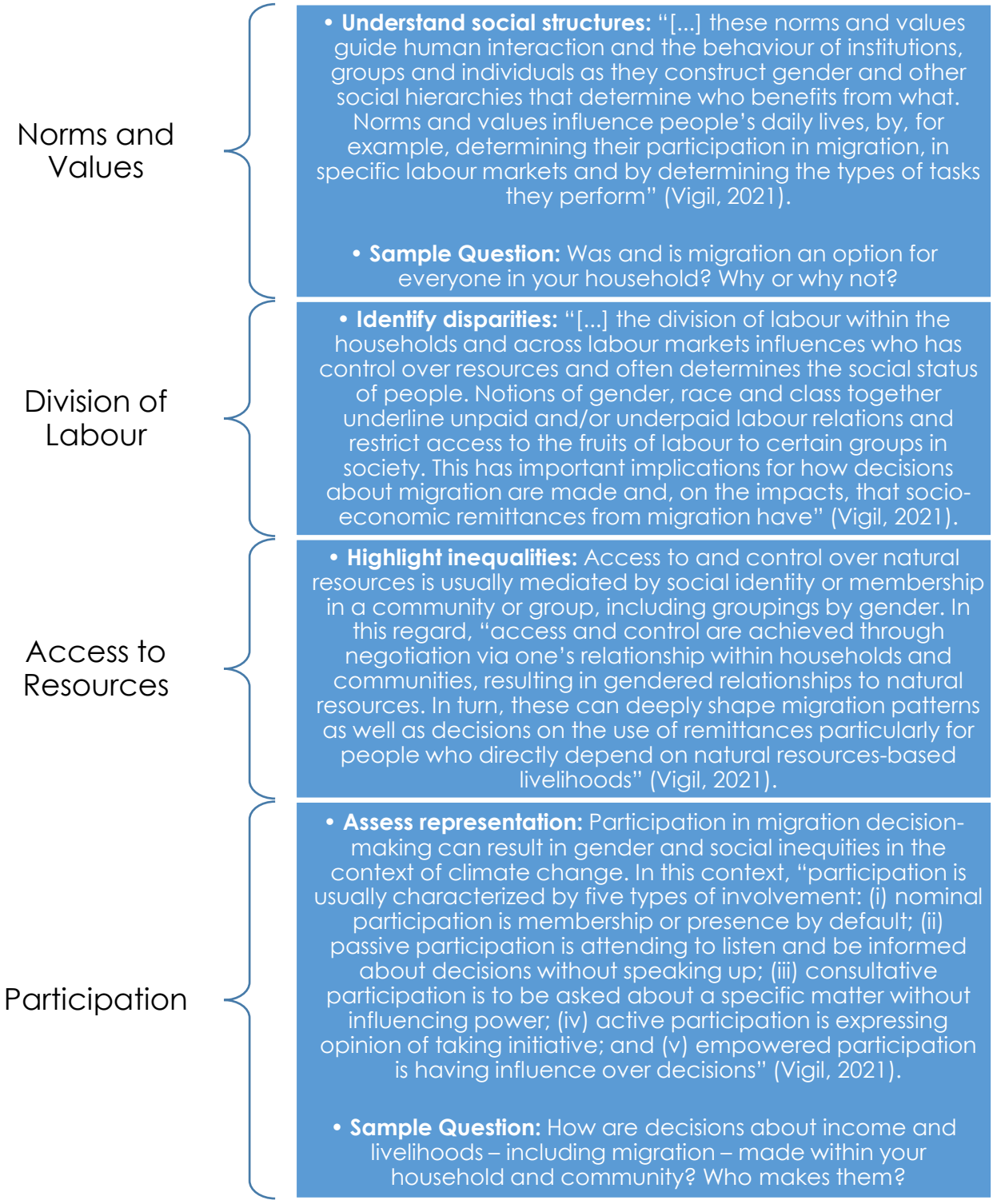
For example, migrants who share their experience have followed their own rational logic of action within their realm of the system in which they operate. The information they provide can, if contextualized, represent a part of the system to be analyzed. Expert or key informant interviews can contribute to the systemic analysis of the phenomenon, by adding viewpoints of practitioners who work on solutions for migrant integration, planned relocation or *in situ* adaptation. Following the iterative process of interviewing and henceforth adjusting probing questions or design, additional interviews may be conducted to complement or verify the knowledge derived from the previous interviews.

Semi-structured interviews add nuance and depth to other research tools, both quantitative and qualitative. Moreover, they can help triangulate findings from other approaches. In particular, there is a high level of complementarity between semi-structured interviews and focus group discussions in both aims and practical considerations (Longhurst, 2016), they should ideally be developed together. For example, when several people migrate together, focus group interviews and discussions can complement semi-structured interviews. Interviewers should note particular patterns/similarities as well as diverging opinions of interviewees.

Additionally, semi-structured interviews allow in-depth exploration of individual-level factors, making it possible to uncover personal experiences, motivations, and impacts, such as exploitation or gender-based violence. This method is particularly effective in exploring sensitive or complex topics, as it enables interviewees to share their stories in a more private and trusting environment. Widely applied in research seeking to unpack inequities, the method facilitates a better understanding of how – or why – an episode and/or distinct

factors influence gender and social equity aspects locally. To explore the integration of gender and social equity into qualitative research, Figure 2 below highlights key components and provides sample questions used in HABITABLE's semi-structured interviews.

Figure 2. Components of Gender and Social Equity in Climate-Migration Research



Source: Developed by the authors, 2024.

While gender and social equity related topics may expose participants to vulnerability in group settings (i.e. Focus Group Discussions), semi-structured interviews provide a more private and adaptable format to explore questions of intra-community power and inequalities. Nevertheless, that depends on the trust relationship established between the interviewer and interviewee. Lastly, given the sensitive nature of the data collected, data on the topic should be stored in an anonymized way.

Methods can be found in Section 8.2, which specifically describes the procedures developed by the authors, or consult the following helpful reviews of theoretical and practical considerations for anonymizing interview transcripts, from Stam & Diaz (2023) and Werner et al. (2023); using verbatim quotations in reporting qualitative social research, for example, from Corden (2007); digital archiving and repositories, for example from Antes et al. (2018) or Cliggett (2013); and guidance on informed consent, in general from Corti et al. (Corti et al., 2000) and from the European Data Protection Board (2020) specifically in relation to consent in the European Regulations.

It is worth noting that some scholars argue that anonymization practices for qualitative research has gone too far, leading to the silencing of some social groups and their concerns (Mondada, 2014) or the erasure of place-based social problems (Seelig, 2021). While the authors acknowledge the importance of context in qualitative data analysis, verification, and reproducibility (c.f. DuBois et al., 2018), we urge extra precautions be taken in regards to marginalized and often politically commodified groups like migrants, displaced people, and refugees. Nevertheless, further engaging in this scholarly debate is beyond the scope of this text.

2.4 Background for interview procedures

Site selection and target population

Site selection is based on criteria directed by the research question(s). In general, site selection should be at the level of specificity of the communities' level where the target population resides, keeping in mind that "communities" may refer to neighborhoods, villages, or even districts, depending on the context. To illustrate some criteria for site selection, refer to Figure 3 which summarizes key environmental social, and demographic considerations.

Source: Developed by the authors, 2024.

Figure 3. Criteria for Site Selection

For most environment and migration research, considerations for site selection can include: the presence of identified (environmental) hazard(s); existence or dominance of targeted population group(s) (e.g., farmers and/or pastoralists); observed changes in migration or displacement patterns, recent, over time, or both; marked inequality between environment- and climate-prone groups as compared to others; and historical analogues of environmental impacts, for example, experience of a previous severe drought that can shine light on possible impacts of future droughts and dryness. Given that HABITABLE aims to go beyond environmental deterministic explanations of migration drivers and impacts, the site selection process also includes social dimensions, such as gender and social equity.

Census information, especially at the village and district level can be useful to identify changing migration patterns. National governments, the International Organization for Migration, and IPUMS international have repositories for census and survey data relevant to migration. Global databases, indices, and knowledge hubs, such as the World Bank Data Catalog, the Human Development Index (HDI), and the IPCC Assessment Reports chapters for each region can be useful sources of data and reports on target populations and environmental stressors.

Sampling procedures

The sampling strategy is generally chosen according to your research question, theoretical underpinning, and study design. Whatever sampling strategy you choose, make sure you choose it *before* you start interviewing people and stick to it. It is also useful to take into consideration which groups you need to interview in order to answer your research question. It is advisable to do a quick group review with colleagues and local partners before beginning field research, to make sure you are not missing out on crucial interview partners, which could lead to an omitted variable bias in your study. A detailed description of the sampling process should be included in your methods section of your research outputs. Meticulous documentation of field work and the thought-process behind it will help you avoid problems in analysis and with potential questions of reviewers of your work.

Table 3 below provides an overview of common sampling methods and their key features.

Table 3. Features of Sampling Methods

Method	Key Features	When to Use	Key Benefit	Drawbacks
Theoretical Sampling	Purposive; evolving concepts drive sample selection.	Developing hypotheses, flexible and iterative research.	Reaches theoretical saturation where no new themes emerge.	Time and resource intensive. Susceptible to researcher bias and incompleteness,
Snowball Sampling	Purposive; begins with a core group of interviewees, expanding through their personal network and advice.	Accessing hard-to-reach or minority populations, expanding understandings through their perspectives.	Driven by the target population, ideal for reaching hidden or marginalized populations.	Susceptible to participant and selection biases and incompleteness.
Critical Case Sampling	Purposive; focuses on cases that are particularly rich in information.	Testing conditions or critical points in a system, especially those needed for a specific research question or underrepresented groups.	Logical generalization and explores extremes of phenomena.	Time and resource intensive. Susceptible to researcher and selection biases.
Convenience Sampling	Non- purposive; participants are accessible and willing to participate.	A diversity of perspectives and experiences are needed, accessibility is key (e.g, during a conflict or pandemic).	Efficiency plus lower time and resource investment.	Lower scientific power and highly susceptible to selection bias.
Representative Sampling	Probability-based; a group or subset of a population is chosen according to specified characteristics; used in quantitative studies.	To accurately represent the characteristics of the larger population, exploring nuanced insights within a quantitative research framework.	Representative of a larger group or population, nuanced understanding of survey findings.	Time and resource intensive, Can overlook nuance.
Random Sampling	Random; Individuals are chosen from a larger statistical	A sample is needed to generally reflect the overall population or group,	Reflects a larger group or population, minimizes bias.	Hidden or marginalized populations are

	population in a random manner; used in quantitative studies but does not guarantee representativity.	but representativity and unrepresented subgroups are not of key importance.	Lower time and resource investment.	less likely to be included.

Source: Developed by the authors, 2024.

Theoretical sampling

In a Grounded Theory approach, theoretical sampling is used to gather data which would inform emerging concepts and hypotheses (Corbin & Strauss, 2015). Theoretical sampling requires data analysis and concept development throughout the research process. The evolving concepts drive the selection of the interviewees. The sample size for each case study does not have to be predetermined. Interviews can be held until a point of theoretical saturation is reached, in which sufficient evidence was accumulated to generate hypotheses and no new patterns or themes emerged from interviews. Other helpful and practical resources to learn about grounded theory include: Bowen, 2006; Bryant & Charmaz, 2010; Charmaz, 2006; Cho & Lee, 2014; Lingard et al., 2008; Robrecht, 1995; Strauss & Corbin, 1997.

Snowball sampling

Snowball sampling is a purpose, non-probability based approach that follows a simple procedure. After identifying a first group of interview partners that seem core to your analysis, respondents are asked for other potential interview partners that could add information. From the first set of interviews, the next set of interviewees is then selected. Snowball sampling can also follow the concept of theoretical saturation. This approach requires additional considerations to privacy protection, as the contact details of all respondents must be kept for longer periods of time than for many other approaches, and the consent of the persons they identify must be obtained before proceeding with the research. Moreover, due to in-group bias, the researcher must make additional considerations to the gender, social equity, and conflict dimensions of the social group. Snowball sampling can be especially helpful to include members of hard-to-reach or marginalized target groups in the research.

However, there is a risk that the sample is incomplete and biases can be introduced by the researcher and participants. For more on snowball sampling, see Biernack et al. (1981), Goodman (1961), and Naderifar et al. (Naderifar et al., 2017).

Convenience sampling

Convenience sampling is the practice of announcing the study or inviting people to take part in the research, and participants self-select. It can lead to a diverse pool of participants with different experiences and opinions. It is commonly used in a number of different settings, especially in education or health, as the target population is readily available. It may also be used in the case that the researcher has limited time in resources, or if practical or security matters prevent them from other approaches. For example, during the Covid-19 pandemic and related travel restrictions, qualitative researchers were able to gain important insights by announcing the research online or in health centers. People who self-select into the research

may be more motivated to express their points of view. However, there is a risk of limited cases and low participation rates. Nevertheless, this is an important method in climate-migration research as it is commonly used in post-disaster settings, in which it is often not possible to collect data or information from the entire population *or* the members of the target population cannot all be identified. For more on this, see Stratton (2021).

Critical case sampling

Critical case sampling, related to selective case sampling, refers to the analysis of a number of cases which are seen as critical and therefore permits logical generalization. It follows the approach: "*If it happens there, it will happen anywhere*" or "*if it doesn't happen there, it won't happen anywhere*" (Patton, 2002, p. 236). Critical cases are those which cover key dimensions and are particularly information- rich, and often vividly illustrate the phenomenon under investigation – or key aspects of it. If a theory is to be tested, selecting an atypical or critical case can be a useful strategy. This approach is also particularly helpful for sampling hard-to-reach groups like marginalized mobile pastoralists, migrants, displaced persons, and refugees. For a helpful overview of how to define a "case" and principles of case selection in migration research, see Barglowski (2018).

It is worth noting that critical case sampling can affect the qualitative content analysis approach, as the data produced will tend to be more helpful for within-case analysis than for across-case analyses. In short, within-case analysis is the approach by which the research analyzes the interviewee account in depth, while across-case analysis seeks to compare accounts of different people within a social system. For more on these approaches, see Ayres et al. (2003).

Representative & Random Sampling

The goal of qualitative research design is generally not to produce a representative sample, but rather to uncover information that enables an understanding of the social system at hand necessary to explore the research question(s). This is in line with the principle of saturation. Nevertheless, semi-structured interviews can accompany quantitative research projects using representative sampling techniques, for example, to add nuance on top of the results of a survey. In such an instance, interview partners may be chosen on the basis of established criteria ('critical case' sampling) or randomly (for example, the head of every tenth household surveyed is also asked to take part in a qualitative interview).

Box: The incorporation of gender and social equity aspects in sampling strategies

The sampling strategy to be applied should be tailored to capture the differences between groups (i.e. men and women), as well as within specific groups (i.e. Indigenous and non-indigenous women). Data disaggregated by sex enables a better understanding of the roles and respective responsibilities between men and women in a particular location. Data disaggregation by sex is a part of the indicator framework for the Sustainable Development Goals (SDGs) – where possible, by income class, gender, ethnicity, geographic location, disability status, migration status, and other relevant dimensions – and is considered best practice for ethical research.

Moreover, the sample should also take different social identities into account when capturing gender and social equity considerations (i.e. economic and educational status)

Interview guide

Each case study should use an interview guide that allows for greater coherence between interviews. Interview guides need to be translated into the respective language. Here is an **example** of an interview guide, which helped inform Vinke (2019) and Vinke et al. (2020). **Points below in [] should be adapted according to the overarching research question(s). Here the HABITABLE research questions, plus a limited set of WP-specific research question(s), are used as an example:**

Interview Guide

- Introduction of interviewers and project, state name, affiliation, and position.
- Explanation of scope: [To investigate perceptions of how and to what extent climate change affects the habitability of socio-ecological systems and transforms current and future migration patterns]
- Goals of the interview: [Learning about interviewee's migration history and experiences, getting to know what pushed them to migration, and whether or not the migration has helped them to make up for losses of livelihood caused by climate stress. Analyzing under which circumstances migration is effective or ineffective in terms of acquiring access to additional income as well as keeping or improving one's living standard on the whole, including aspects of wellbeing, education, health, etc.]
- Technical Aspects: Interviews will be audiotaped and later on transcribed.
- Informed Consent: Interviewers are required to read the informed consent form out loud in the language of the interviewee. To this end, the informed consent forms are also available in the local languages. They ask whether everything was understood by the potential respondents and whether they wish to participate in the study. If yes, the respondent is asked to sign the form and agree to audiotaping, the use of transcriptions. If not, the interviewers say that this is fine and thank the respondent for their time. Interviews cannot proceed without informed consent given. In the case that a person cannot or does not want to sign the form, verbal consent can be given and must be certified by the interviewing team (see HABITABLE Deliverables 12.1 and 12.4 for detailed instruction and hereunder, "informed consent").
- Questions should be asked in sequence. However, if some questions are already answered as part of a reply to a previous question, the questions are not repeated. Probing and additional questions for understanding and elaboration of new insights are possible.
- At the end of each interview the interviewer thanks the respondents for their time and participation.

Set of questions

Semi-structured interviews are guided by a set of questions. The topics for the interviews are chosen in line with the research question. Generally, they should include a brief biographical part, covering age, gender, and occupation (before and after migration). The sets of questions asked are specific to the group that is to be interviewed (migrant and household/city or village representative / international expert) and to the case study. While the topics of questions should be similar across case studies, some questions need to be adjusted to fit the regional context. In semi-structured interviews, a set of questions is pre-defined but can be expanded through additional questions that may arise from the course of the interview.

When necessary, probing questions should be used for clarifications or more detailed analysis. In these cases, the additional probing questions should be included in the transliterations. It can help to do a test run of a set of questions and an interview guide and then adapt any terminology and expressions that are unclear, or cause confusion with participants. Introductions should not be recorded.

Interview setting

Interviews should take place in a quiet setting where the interview participant feels comfortable to speak freely. Ideally, the location should be quiet enough to enable a quality recording to transcribe later.

Care should be taken that others, especially family members, do not eavesdrop or participate in the interviews (unless it is a group interview settings), as this can change the interview participant's answers and therefore invalidate the interview exercise. If it is not possible to ensure appropriate conditions and the comfort of the interviewee, it may be best to come back later or move on to the next interview. If so, reasons why should be recorded in the field notes (see below), for example, if social hierarchies or gender roles are possible culprits.

Interview teams should consider context-specific social hierarchies and gender roles in advance of the field study to mediate potential issues. For example, in some contexts, it may not be considered culturally appropriate for male interviewers to be alone with female interview partners. This can be mediated in some cases by ensuring there are female interviewers and/or translators, or a mix of men and women. How well interviews will be able to dig into questions of intra-community power and gender inequalities will also depend on the trust relationship built between the interviewer and interviewee.

Field note taking

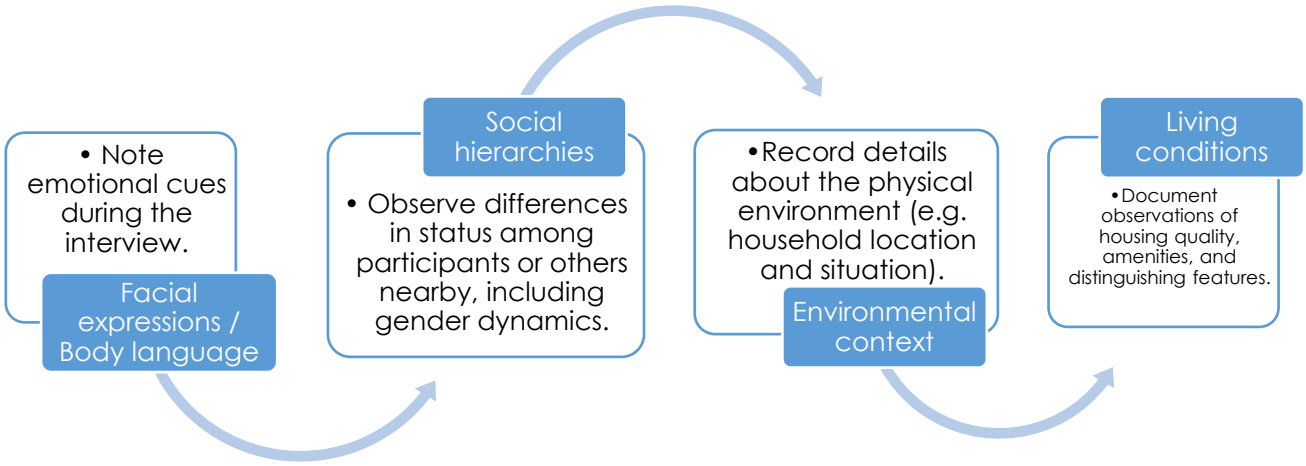
Notes should be taken of observations made during the course of the interview(s) to provide information about the setting and conditions that will be critical for the analysis of the interview data. This is relevant to understanding the socio-economic setting of the community and household, social hierarchies, and overall living conditions in the community. Moreover, notes on the specific physical attributes of the household's primary dwelling and surrounding area can help the interviewers return to the interview participants, if needed.

Note, for example: facial expressions or body language of interviewees; differences in status of interviewees and surrounding people, especially those related to gendered power dynamics (see Deliverable 8.1 – "Gender and Social Equity Guidance Note for HABITABLE

Researchers"); environmental factors in the place where they are interviewing; current livelihoods in the household and community; physical location of the household's primary dwelling and attributes such as roofing, flooring, type of toilet, and distinguishing marks or nearby landmarks.

To guide note-taking, see Figure 4 outlining a structured framework for recording key observations during interviews.

Figure 4. Field Notes Framework



Source: Developed by the authors, 2024.

2.5 Ethical considerations

Two decades ago, explicit attention to ethical considerations among methodology texts was considered to be rare (Perecman & Curran, 2006). Today, consideration to research ethics in a broad sense as well as specific and detailed attention to ethical guidelines are required by all major research bodies and funders.

The authors firmly believe that research ethics are of the utmost importance to uphold the dignity and safety of research participants as well as to ensure the success and relevance of the research. As field work becomes more complex and concerns about human subjects' security increase, the specificity and diligence required of ethical considerations and documentation of efforts to protect human subjects have necessarily grown in parallel.

Primarily, one should follow the "do no harm" principle: the conduct of the research and publishing of results should not have a negative effect on the lives of the target population. Data protection and security are of paramount importance to ensure the privacy of the interview participants. Moreover, it is important that the community involved is supportive of the research and sees its benefits. This may include, *inter alia*, presenting research results and policy recommendations to the community at the end of the project; engaging local people in the research process, as enumerators and/or research assistants; offering in-kind compensation such as meals or phone cards to research participants; and supporting the local community by purchasing local goods and services.

Be mindful that whole interviews can easily reveal a person's identity, even if they are anonymized. Therefore, particular attention must be paid regarding the sharing of interview

data. Moreover, sensitive information – like health status, ethnicity, sexual orientation, or political party affiliation – warrant additional risk reduction measures.

Informed Consent

Most universities and European-funded research institutions require consent forms in line with European data protection laws (GDPR) in a language and terms understandable to participants. [1] Before all interviews, the participants need to be informed about the intent of the study, the time frame for the study, and that they would not receive any direct benefits from participation. The consent form needs to be read out loud and also handed to the participants in a local language. If direct quotations or photographs will be used in the final research products, specific consent needs to be given to this effect.

Each individual interviewee must volunteer to participate, receive an information sheet about the project and their rights (see HABITABLE Deliverable 12.1, Annex 1; and/or Annex 1 of this Handbook), and sign an informed consent form or provide verbal consent (see part 2. in the box "Excerpt from HABITABLE D12.1", below). Three elements of the informed consent are of utmost importance and need to be conveyed by the researcher. These are: (i) communication of information, (ii) comprehension of information, and (iii) voluntary participation (see Box on "Excerpt from HABITABLE D12.1" below; and/or Deliverable 12.1). Consent from the head of household is not sufficient to cover other household members. If participants cannot or would prefer not to provide a signature, alternatives are acceptable in many cases. For instance, if the interviewee wants to protect his/her identity, the researcher will read the script for oral consent and provide a written/signed statement highlighting that oral consent has been given. In cases in which the interviewee is illiterate and/or unable to read, his/her oral consent will be recorded by two witnesses who are not part of the research team (see details in HABITABLE Deliverable 12.1). In the case of a minor under the legal age of 18, the legal guardians must be asked for their consent. In general, voices and photographs of minors should only be taken with the utmost consideration to their protection, as they may not understand the reach of the implications of their inclusion in the research and are not considered able to provide informed consent. In the case of the HABITABLE project, minors are not included in the research (see box below). Unaccompanied minors must be excluded from the research and any photographs.

It should be clearly stated that if interviewees do not wish to answer a particular question or do not wish to continue the interview, the process can be stopped at any time. If the situation allows, the researchers can provide some snacks and refreshments during the interview, in order to create a more relaxed atmosphere of dialogue. Signed consent forms and/or signed statements certifying verbal consent of individual participants should be saved and filed for a limited period of time. These may be provided by the author on request, as is sometimes the case for scientific publishing.

[1] Oral consent may be valid alternative when certified by interview teams, but only with the knowledge and approval of a competent Research Ethics Committee and the Project Coordinator. For HABITABLE, see project guidance, including the information sheet and consent form in Annex 1: Example informed consent form and information sheet.

Data Protection & Security

All interview data needs to be stored, transferred and analyzed according to the project's data protection guidelines, as required by the HABITABLE project and European data protection laws (GDPR). Moreover, anonymization and password protection of interview data, among other measures, are necessary and tailored to the risk presented by the site/country context.

In addition to transliterations of interviews, a tabular excel overview of all interviews with basic data (anonymized by interview number) should be produced. *If* sensitive or identifying information must be kept (e.g. name, location in some cases) for a limited period of time, a key of the interview codes should be kept in a separate encrypted folder and never be saved or shared together with the interview material. To be safe, identifying information should be deleted as soon as it is no longer needed. In some high-risk areas – where concern for the possibility of government actors intervening to confiscate data at border areas is warranted, for example – this may mean processing the data on a separate, secure hard drive and deleting identifying information before departing the study area. Data security risk assessments should be conducted for each study country.

Conflict sensitivity

Research participants for migration research in general may include displaced persons and survivors of human rights violations, as these are unfortunately common parts of the migration experience. To ensure their safety and privacy, additional considerations must be taken in the overall research approach, content of interviews, and establishment of a safe and comfortable interview setting.

Many research projects exclude areas currently affected by large-scale conflict or by conflict displacement in the past two to five years from site selection for three main reasons: (1) the safety and security of the research team; (2) the conflict dimension in motivating population movements may mute or otherwise dilute the climate and/or environmental signals and peoples' responses to them that are the focus of this research; and, importantly: (3) there are ethical implications of conducting research. Beyond the fact that the research may have limited relevance to the current situation of these persons, and it may endanger them further or force them to relive traumas. The "do no harm" and data minimization principles apply here.

People internally displaced by natural hazard-induced disasters may be part of the interview partner selection criteria, as is the case for a number of current research projects like HABITABLE. While it may not be explicit in the interview partner selection, many migrants and displaced persons may also be survivors of conflict, of different forms of violence, or of other human rights violations. For example, people previously affected – possibly displaced – by large-scale conflict *may possibly* be part of the interview and focus group discussions and are not purposely excluded from the sample. Should these persons be interviewed, research teams are instructed to take extra care to ensure their safety and security. In terms of research approach, the qualitative research approach outlined in this Handbook emphasizes ensuring a safe and comfortable interview setting. While questions do not explicitly ask about experiences with large-scale conflict or domestic violence as this is not part of the primary research questions, these experiences may emerge in the discussions. If at any time the interviewee is uncomfortable with a particular line of questioning, questions

can be skipped. If the interviewee is still uncomfortable, the interview should not be continued or can be rescheduled.

Table 4. Interview Guide Checklist

Phase	Activity	Check
Pre-Interview Preparation	Develop an interview guide for coherence across interviews.	
	Conduct test runs of the interview guide and refine unclear terminology.	
	Translation of interview guide to the local languages.	
Interview	Interview setting (selection of a quiet and comfortable place, ensure privacy, address cultural sensitivities, build trust). ** If conditions are unsuitable, reschedule the interview and document the reasons.*	
	Introduce interviewers (name, affiliation, and position) and state the purpose of the project.	
	Explain the study's objectives (scope).	
	Describe the objectives of the interview (goals).	
	Inform participants that interviews will be audiotaped and transcribed (technical aspects).	
	Read the consent form aloud in the participant's language and ensure forms are signed or verbal consent is recorded and certified.	
	Ask questions in sequence but skip previously answered ones and use probing questions for clarification or additional insights.	
	Thank participants for their time and input.	
	Field note-taking (record observations during interviews, including facial expressions and body language, social hierarchies, environmental context, living conditions, and others).	
Post- Interview Documentation	Anonymize and encrypt interview data.	
	Store interview data securely and comply with data protection requirements.	
	Delete identifying information as soon as it is no longer needed.	
	Conduct data security risk assessment for each study site.	

Source: Developed by the authors, 2024.

3. Digital tools in the field

Qualitative research can be supported in the field by many different tools for every step, from selecting interview partners to taking notes and conducting initial analysis. Sophisticated digital helpers like KoboToolbox help to reduce human error in data entry and can make knowledge management easier, especially for large teams.

Smartphones and tablets are helpful for recording field notes, but steps should be taken to ensure data remains encrypted and strong passwords or multi-factor authentication are used. Ideally, these devices should never be connected to the internet. Simple softwares like VeraCrypt can be used to encrypt drives and folders. Useful resources to review: T. Paulus et al., 2013; T. M. Paulus & Lester, 2021; Thunberg & Arnell, 2022.

Smart devices and simple cell phones can be used for real-time communications between researchers and team members, which can be especially helpful in piloting and testing. Debriefing after pilots are very important to ensure the research materials are adapted to the local context. Whatsapp, Zoom, and Skype can bridge gaps to connect members of the research team.

Methods guidance and trainings are helpful to get the research team on the same page, and these can be conducted via Zoom or uploaded onto Youtube. In the case of the latter, it is possible to use the closed captions and auto-translate functions to help bridge language gaps between research partners.

Part III: Analysis & database design

3.1 Qualitative content analysis

It is often said that qualitative analysis is part science, part art. Unlike much quantitative analysis that often relies on established statistical models, qualitative analysis is a process that is often subjective, iterative, and collaborative. It offers a powerful lens through which researchers can explore the nuances and complexities of socially constructed phenomena, behaviors, identities, and lived experiences. Entire volumes have been written on this topic that can be illuminating to novice and experiences analysts alike (Ayres et al., 2003; Billups, 2019; Corbin & Strauss, 2015; Patton, 2002; Saldaña, 2013; Vanover et al., 2021), and this text can only summarize some possible initial considerations for deciding how to approach a qualitative data set to explore climate-migration linkages. This text also focuses on content analysis – the practice of reducing and analyzing texts and other media (like interviews, speeches, documents) in replicable ways through deductive and inductive reasoning and interpretation – as compared to discourse analysis.

A meaningful distinction can be drawn between deductive and inductive approaches to qualitative data analysis (Bingham & Witkowsky, 2021). Using them together iteratively can strengthen the analysis, as deductive approaches help both organize the data and provide the boundaries for further exploration while the inductive approaches can allow for findings and new hypothesis to emerge from the data. Together, it becomes possible to apply existing theories and findings to interpret a new dataset, allowing for a grounded exploration of new themes and topics that emerge from qualitative content.

Deductive strategies generally mean applying predetermined codes (themes, topics, key words – see Saldaña, 2013) to the data. Inductive strategies allow the codes to emerge from detailed readings of the data, whether done by individual researchers or in group analysis settings.

Deductive practices involve:

- Sorting the data into organizational characteristics like: data type, participant number or participant type (key informant v. migrant v. stayer), or time period.
- Organizing the data into categories to maintain alignment with the research questions, like: type of migration, whether based on motivation, length of time, or spatial dimensions (e.g. disaster displacement versus slow-onset event-related migration; household type, based attributes like socio-economic status, location, dominant time occupation/ livelihood; individual type, based on attributes like prior experience with migration, age, gender, or disability.
- Applying theoretical or conceptual frameworks.

Inductive practices involve:

- Interpreting the data based on the experiences of the researcher;
- Developing multiple levels of codes, themes, and highlighting segments of the data like particular experiences, anecdotes, or opinions;

- Identifying representative data or segments of data that support the research question(s) and findings;
- Explaining findings using existing literature and experiences of the research team.

It can be helpful to approach the data in an iterative manner in which deductive approaches allow for a first organization of the data – for example, by topic, question, or theme determined prior to the data collection. This can include auto-coding for the key topics identified as related to the research question or theoretical framework. The initial codebook can be developed from the interview set of questions or interview guide. Already, some hypothesis informed by existing literature and theoretical frameworks can be tested. For example: how many persons distinguished or defined different climate impacts and related them to motivations for migration or causes of displacement?

An inductive approach involving manual coding of interview segments can then follow for a deeper dive of different themes, topics, examples, and representative stories from the qualitative data. The researcher can generate new hypothesis that can be tested by re-organizing and re-coding the data – for example, by subsetting the data according to different categories than those used in the first iteration. For example: do the results change if we modify the parameters of key variables, such as for migrant "type"? Are there biases or implicit meanings embedded in types of community members?

For concrete examples, see: the coding approach used to explore seasonal risks to smallholder farmers, based on the Sustainable Livelihoods Framework (Ellis et al., 2003), employed by Blackmore et al. (2021); the two-cycle coding approach to key informant interviews with policy actors working on the climate migration nexus employed by Vinke et al. (2020).

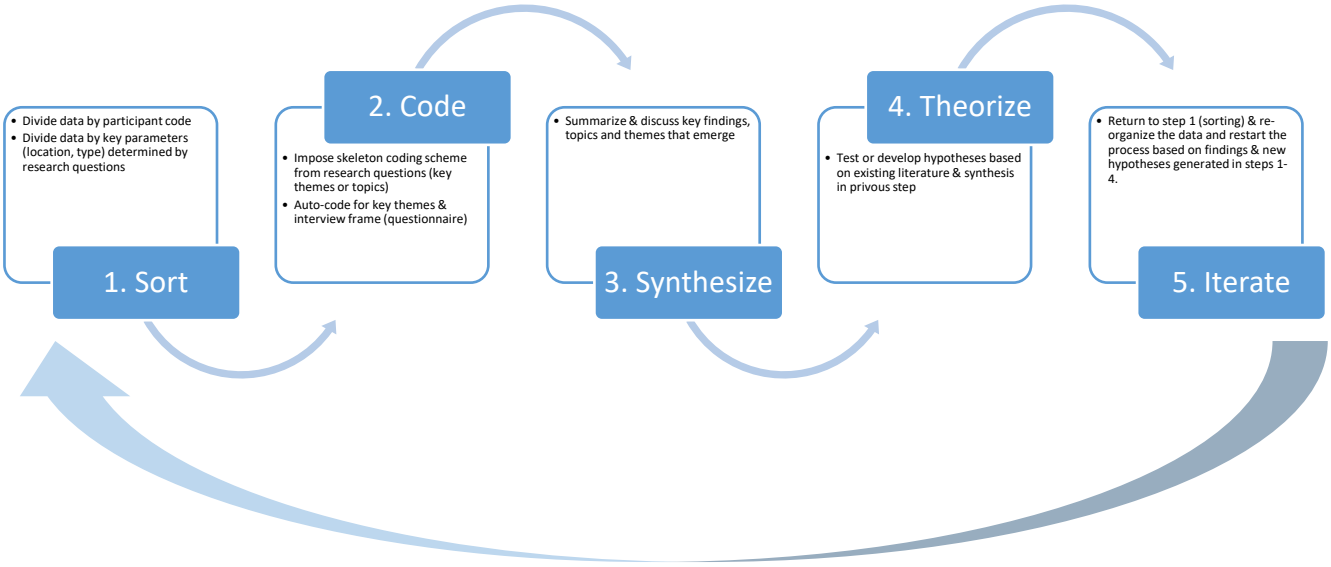


Figure 5: Example process for two-cycle coding combining deductive and inductive approaches. Developed by the authors, 2025.

3.2 Qualitative content analysis software

Qualitative content analysis software offers powerful tools to systematically organize, code, and interpret large volumes of qualitative data. These programs allow researchers to assign thematic codes to text, audio, or visual materials, making it easier to identify patterns, relationships, and trends across interviews or documents.

MaxQDA, for example supports a wide range of mixed methods features, such as linking qualitative codes with demographic variables, visualizing code co-occurrence, and exporting coded segments for further analysis. It enhances transparency and rigor in qualitative research by helping maintain a clear audit trail and enabling collaboration across research teams.

Figure 6: Example qualitative coding word map: changes in overall well-being over the past 10 years, by coded responses reported by HABITABLE project interview participants in Kenya[2]

3.3 Database design

When designing a database for qualitative interviews, the key is to create a structure that is both systematic and flexible, allowing future researchers to explore their own research questions with ease. One approach is to organize numeric variables (e.g., age, land size, years of residence) by case, where each interview partner is assigned a unique, anonymized identifier. This allows for straightforward visualization and comparison across cases. Text

[2] Separate sentiment analysis shows negative associations: struggle, poor, challenge, lack, problem, inadequate. Positive associations: support, family, depend. Data source: Serraglio & Blocher, 2025.

responses, particularly from in-depth or open-ended questions, may be better structured by question asked, grouping responses thematically to enable cross-case analysis.

Regardless of the approach, careful attention must be paid to anonymization to protect participant identities. Direct identifiers (such as names and locations) should be removed, and indirect identifiers (such as unique dwelling characteristics or unusually large livestock holdings) should be categorized rather than reported verbatim. In cases where responses contain sensitive details, manual redaction may be necessary. Finally, all privacy protection measures should be clearly documented to ensure transparency and replicability in future research.

See some practical examples in section 8, page 49.

Part IV: HABITABLE Project Guidance

4.1 About the HABITABLE project

The project **HABITABLE**: Linking Climate Change, Habitability and Social Tipping Points: Scenarios for Climate Migration – aims at significantly advance our understanding of the **current interlinkages between climate change impacts and migration** and displacement patterns, and to **better anticipate their future evolution**.

Running for **4 years** (2020-2024), HABITABLE brings together **21 partners:** University of Liège, University of Vienna, Potsdam Institute for Climate Impact Research, University of Exeter, the IDMC, Lund University, Sapienza Università di Roma, adelphi, Université de Neuchâtel, Institut de Recherche pour le Développement, Council of Scientific and Industrial Research, UNESCO, University of Ghana, CARE France, University of Twente, Université Cheikh Anta Diop, Stockholm Environment Institute Asia, Raks Thai Foundation, Addis Ababa University, Institut National de la Statistique du Mali and Samuel Hall.

HABITABLE is the **largest research project on climate change and migration** to have ever been funded by the European Commission's Horizon 2020 programme.

HABITABLE posits that taking qualitative and quantitative approaches in isolation of each other hampers progress because neither can provide a sufficiently comprehensive understanding of the climate-migration nexus. HABITABLE proposes a systemic approach to reconcile this divide, in part by using quantitative (Work Package 1) and qualitative methods (Work Packages 2, 4 and 5, which are developed collaboratively). Taken together, the project is designed to enable appropriate and sustainable policy responses to the climate-migration nexus (data from Work Package 4 will feed in Work Package 6, which aims to develop policy recommendations, *inter alia*). Please visit www.habitableproject.org for more information about the project.

3.1. Elaborating the HABITABLE approach

This part describes specific guidance for the research project HABITABLE: Linking Climate Change, Habitability and Social Tipping Points: Scenarios for Climate Migration.

Taking together the lessons from previous generation of qualitative methods for cross-country studies of climate-migration nexus,

Our research protocols should be looked at as a next generation effort to develop qualitative methodologies for field research on climate-related migration, following on previous projects in which members the PIK team participated (namely, the EPICC (PIK), MECLEP (IOM), and the *Where the Rain Falls* (UNU-EHS) project. See, respectively: Blocher et al., 2021; Melde et al., 2017; Warner & Afifi, 2014). We encourage others to use our research protocol as a template, and refine this methodology to create comparative data in different cases worldwide.

3.2. General objectives of the interviews

The goal of the qualitative interviews for the HABITABLE Project is to gain qualitative insight into **past and current** local-level climate change adaptation solutions by investigating **individual, household, and community-level strategies** that contribute positively to household resources and capabilities, reducing displacement pressures by extension, as well as how government-led strategies support these goals [Key objective (KO) 2, KO 4; see more in the HABITABLE proposal page 21, 30, 44]. The ultimate goal of this research is to **strengthen migration's potential for adaptation** and **sustainable local development planning**, informed by a systems-based approach [HABITABLE proposal pg. 21].

3.3. Guiding research questions

In line with the core research questions of the HABTABLE project, the semi-structured interviews support specific research questions under Work Package 4, "Micro- and Meso-Level Coping Strategies and Adaptation Solutions". These are:

1. Under which conditions do in-situ coping and adaptation strategies, taken at the household and/or community level, contribute positively to a household's capabilities to withstand climate change impacts?

2. What is the place of migration in those strategies, and under which conditions does migration lead to adaptive outcomes for the household, the community of origin, and the community of destination?

3. What are the roles of different groups within the community and different household members in implementing and supporting coping and adaptation strategies? Are some more accessible to some than others, and if so, why and what are the barriers to strategies' success?

Scope

Semi-structured interviews will be carried out primarily with people in areas of origin from migrant households as well as their migrant family members in areas of transit or destination (HABITABLE proposal pg. 44). Interviews with people from non-migrant (immobile) households are also important as counter-examples, but should be underrepresented among participants.

Attention is paid to migration 'corridors', connecting communities involved in the target migration system (for e.g., pastoralists at their homesteads as well in dry season pasture areas; people in the origin village and their family members in primary destination town/city).
In coordination with WP5 (migration impacts), key informants may be identified in areas of transit and destination that add to our understandings of migration impacts and their effects on adaptation and migration decision making (HABITABLE proposal pg. 30). Since methods from Work Package 4, Work Package 2, and Work Package 5 were developed in close collaboration, data collected will complement each other, contributing to a better understanding of migration context, decisions, and impacts.

Expected Outcomes

In addition to support the key objectives and research goals of the HABITABLE project overall, expected outcomes of Work Package 4 –supported by the interviews- are:

- Create an inventory of local-level response strategies, considering medium and long-term effects;
- Identify feasible and culturally appropriate policies for climate change adaptation and for human mobility/migration, with a view to enhancing the positives and minimizing potential negatives;
- Embedded in a systems approach, holistically considering different vantage points in the migration experience – the migrant household, the community of origin, and the community of transit and of destination – identify conditions under which migration/mobility contributes positively to climate change adaptation (and better understand the counterfactual, the conditions under which migration/mobility/displacement leads to maladaptation). The gender and equity (e.g. gendered power dimension, equal access to resources for migration) dimensions will be considered, in line with Work Package 8 Gender Analysis Guidance for HABITABLE researchers.
- Identify strengths and weaknesses of policies and programmes related to migration/mobility/displacement in the context of climate change, with a focus on the local and sub-national levels (WP4 contributions to WP6 and WP7).

3.4. Gender and Social Equity considerations

The interviews integrate Gender and Social Equity dimensions (HABITABLE KO 3) following the **Gender Analysis Guidance for HABITABLE researchers** and with feedback from Work Package 8 (gender and social equity). To ensure meaningful integration, gender and social equity considerations must be embedded from the outset of the research and consistently incorporated into all critical aspects of the project, including its objectives, research questions, methodologies, data analysis, and the dissemination of findings.

The HABITABLE SSIs and Work Package 4 approach to gender equality and social inclusion (GESI) has three main components:

- **Inclusion of GESI in the research questions**: Incorporating gender and social equity into the research questions ensures that the diverse realities of underrepresented and marginalised groups are not just included but are central to the analysis. Rather than treating these considerations as an afterthought, the research questions actively interrogate the power dynamics, inequalities, and systemic barriers that shape migration experiences. For instance, the research explicitly explores how intersecting identities such as gender, ethnicity, and socioeconomic status influence access to resources, decision-making processes, and migration outcomes. This targeted

approach ensures that the voices of those most vulnerable are not only heard but are pivotal in shaping the research narrative.

Moreover, flexible and adaptive questioning allows for nuanced exploration of lived experiences, enabling the research to uncover hidden inequities and structural obstacles that standard approaches might overlook. By also engaging participants outside these groups, the research gains a holistic understanding of the broader social and cultural dynamics at play, enriching its insights into inclusion and exclusion within communities. For the HABITABLE project, these objectives are reflected in the SSI origin and destination questionnaire, Section III, Part 2 "Equity and inclusion" (Annex 3 and 4), as well as in the focus group tools (see D5.1).

- **Data collection methods**: The **sampling** procedure and interview partner selection duly include a GESI approach. Purposive sampling, as planned for Work Package 4 per the approach outlined in this Handbook, is one means to ensure underrepresented groups are included in the research (see Deliverable 8.1 – "Gender and Social Equity Guidance Note for HABITABLE Researchers"). Purposive sampling ensures underrepresented groups relevant to our climate-migration research questions can be over-selected for.

- **Intersectionality** is central to this approach, requiring researchers to recognize and address overlapping systems of disadvantage and privilege that influence individuals' experiences. Key to this process is selecting which intersections of identity to prioritise—such as gender, age, immigration status, class, or ethnicity—and reflecting on how these choices shape results and their interpretation. Researchers must explicitly justify the inclusion of certain social identities and the exclusion of others across sites, ensuring that the selected identities align with the research questions and context. This acknowledges that some identities, such as religious affiliation, may be more salient in specific times and places.

  Specifically, care should be taken in site and sample selection to ensure that underrepresented groups are not excluded by focusing on dominant groups, whether ethnicity (e.g., over-selecting the political majority over other groups) or time occupation (e.g., over-selecting farmers and excluding pastoralists). Moreover, interview partners selected for the SSIs must respect a balance of age groups, gender, ethnicity, and different types of occupations (farmer/herder/small business owner; see the sets of questions in annex). Moreover, intersectionality-informed strategies must ensure participant diversity across social identities, reflecting the power dynamics and lived experiences unique to different contexts**.** This includes balancing age groups, gender, ethnicity, and different types of occupations (e.g., farmer/herder/small business owner; see the sets of questions in annex).

- **Data analysis:** HABITABLE partners employ an intersectional lens in the qualitative data analysis, ensuring that overlapping social identities—such as gender, ethnicity, socioeconomic status, and migration status—are carefully considered. This is

achieved both by directly analysing relevant questions in the interviews and by segmenting and comparing data subsets drawn from different groups.

Importantly, the information that can be subset includes the interview data as well as interviewer observations made in the field notes (see above page 10 "Field note taking" and origin and destination questionnaire, Annex 3 and 4, Interview site and interviewee details, Part 1c, "Setting notes"; as well as notes for the interviewer), other field notes, and from the survey. While some questions directly ask participants about gender and social inclusion, the primary means for WP4 to analyze these factors and intersectionality as they relate to mobility is by analyzing subsets of the interview data.

By applying advanced qualitative analysis techniques, such as thematic coding and comparative analysis, insights from purposive intersectional sampling contribute to a multidimensional understanding of mobility drivers and outcomes, forming the basis for equitable and transformative policy recommendations.

3.4.1 Conflict sensitivity

Conducting research in areas recently affected by large-scale conflict or by conflict displacement requires additional considerations for the research design and logistics, including: (1) more care must be taken to ensure the safety and security of the research team; (2) more care must be taken to ensure the safety, security, and privacy of the research participants; and (2) the conflict dimension in motivating population movements may mute or otherwise dilute the climate and/or environmental signals and peoples' responses to them that are the focus of this research.

People face overlapping or intersecting social identities and related systems of oppression, domination, or discrimination that are all also often related to the reasons why people find themselves in situations of displacement or migratio. This implies that study participants for migration research in general may include – even if it was not explicit in the interview partner selection – persons who are survivors of conflict, survivors of human trafficking, survivors of interpersonal violence, or survivors of other human rights violations. Additional considerations must be taken in the overall research approach, content of interviews, and establishment of a safe and comfortable interview setting.

Bringing a conflict lens into climate-migration research also means conducting research in a way that does not reinforce or entrench existing inequalities and inequitable power structures. Site selection, participant selection, and planning for the interview – location, timing, and creating a comfortable setting.

Even if not intended, conflict- and tension-related information may emanate from open-ended questions about the individual's migration history and experience. Again, the approach of the research team is to emphasize the comfort of the interviewee and the safety of the setting.

In terms of the analysis, the specific climate-related mobility drivers, needs, and outcomes observed of marginalized or underrepresented groups may be part of the overall approach to intersectionality, namely to analyze subsets of interview data. Should answers to open-

ended questions be evaluated by the research team to interfere with the assurance of the safety and security of the interview partners, the relevant content may be redacted. In serious cases, the entire interview may be removed from the sample and deleted from record. See also HABITABLE Deliverable 8.1 on approaches to ensuring meaningful participation of marginalized or excluded groups, which also applies to displaced persons and survivors of human rights violations.

3.4.2 Example informed consent procedures (including oral consent procedures)"

The text below is an excerpt from HABITABLE deliverable 12.1, "Informed consent procedures (including oral consent procedures)"

"…Informed consent will be sought from all research participants during all data collection activities in the framework of the HABITABLE project, in order to ensure that data collection is based on the **voluntary, and free** participation of respondents. In most cases, **written consent** will be sought.

However, when conducting research with vulnerable individuals or groups, **verbal consent** will be used in order to protect their identity. In these instances, the researcher will read the script for oral consent and provide **a written/signed statement stating that oral consent has been given.** In the case when interviewees would be illiterate and unable to read the statement, their oral consent will need to be recorded by two witnesses who are not part of the research team (see template for verbal consent in Annex 1.B of this handbook).

The three elements of informed consent: 1) **communication of information,** 2) **comprehension of information,** and 3) **voluntary participation** must always be present and conveyed by the researcher who gathers either a formal written consent or informal or oral consent.

1. Informed consent forms and information sheets

In order to facilitate and homogenize the inform consent procedures within the project, an **informed consent form template** to be used by HABITABLE researchers has been designed (see Annex 1.A for written consent and Annex 1.B for oral consent of this handbook).

This template contains the most important elements to be included when preparing informed consents, but **should also be adapted by researchers** according to the specific characteristics of participants and the data collection method to be used.

Along with the consent form, the project provides a **GDPR-compliant template of information sheet.** This information sheet should be explained to participants prior to data collection, and provides the following information:

- Describe the aims, methods and implications of the research, cite the funding institution as well as the institutional partners leading the particular research activity.
- Explicitly state that participation is voluntary and that anyone has the right to refuse to participate and to withdraw their participation or data at any time – including during the interview – without any consequences.
- Data processing procedures,
- Measures to protect sensitive personal data.
- Explain how the data will be processed, the duration of the project and the contact of the interviewer and/or of the project researcher for further needs/questions regarding data protection rights.
- State that original qualitative personal data will not be shared within the project nor with a broader audience.
- Inform participants of the possibility to opt-in/out to being recorded.
- Provide information on the ethics committee that approved the research in the country, and contact information.

It is important to note that, as HABITABLE does **not directly cover areas where incidental findings cause primary concern** – such as medicine or clinical trials – the procedures to be implemented in the event of unexpected or incidental findings will not be included in these documents. **HABITABLE's policy on incidental findings** will be described in detail in D12.1 (Annex 1) and D12.7.

Both of these templates are currently in English and will be **translated to a language intelligible to research participants** by lead researchers. Furthermore, prior to undertaking fieldwork, customized informed consent forms and information sheets must be sent the project Coodinator (ULiège) for **verification and approval**.

2. Verbal consent

Under specific circumstances, verbal consent will be elicited **for participants clearly expressing fears for their security** or where there is a legacy of human rights abuses creating an atmosphere of fear. Verbal consent will also be elicited from participants when **interviewing vulnerable individuals or groups,** in line with the European Union's General Data Protection Regulation which states that consent can be provided through an oral statement (*GDPR Consent Must Be Actively given by the Data Subject*, 2020).[3] Lastly, verbal consent will be used **when research participants are illiterate**.

Informants requesting verbal consent will be **additionally protected** by having their number erased from interviewers' telephones, and by having the place of interview unidentified both in fieldwork notes and in further research.

Verbal consent must be **formally documented** by the researcher. The researcher must provide **a written/signed statement stating that oral consent has been given**

[3] See more about GDPR key concepts at : https://www.gdpreu.org/the-regulation/key-concepts/consent/

(see template in Annex 1.B of this handbook). Furthermore, the **three elements of informed consent: communication of information, comprehension of information, and voluntary participation** should be present and conveyed by the researcher when gathering verbal consent.

More importantly, **an interview cannot begin before confirming that participant has provided their consent.** If participants do not explicitly consent to participate, interviews must be immediately ended.

It is worth to notice that **participants with diminished autonomy** who are unable to consent to the participation in the research – such as unaccompanied minors, children and adults unable to provide informed consent – will not take part in any of HABITABLE's research activities. "

4. HABITABLE interview procedures

4.1. HABITABLE site selection

Country Leads have informed the criteria established by the HABITABLE consortium, replicated in the box below, and chosen sites, primarily at the third-tier administrative level (district). Villages or sub-villages (called i.a. *kebele* and/or commune depending on the context/ country) in these districts can be chosen on the basis of the presence of critical cases, as explained in the sampling procedure in the next section. The sites for the fieldwork of Work Package 4 (also of Work Package 2 and 5) were selected based on the following criteria and are chosen from the enumeration areas defined by Work Package 1. This enhances the complementarity between collected data from Work Package 1 and qualitative data from Work Packages 2, 4 and 5.

Overall guidance for site selection – further detailed in Box X: Overall site selection guidance for HABITABLE Study Countries – is that sites should include:

- People exposed to, recovering or recovered from severe climate impacts and extremes, such as agriculturalists facing repeated severe droughts;
- People who additionally are exposed to other forms of fragility (e.g. post- conflict situations, situation of farmer/ herder conflicts, post- displacement)
- A balance of people from different socio-economic groups, genders, age groups, and ethnicities/identity groups (see overall project guidance and gender analysis guidance note);
- Members of particularly vulnerable communities, in particular, mobile pastoralists and sedentarized pastoralists (i.e. former mobile pastoralists);
- Beneficiaries of NGO or government supported climate resilience-building projects like e.g. food for work programs, participatory scenario planning, climate "proofing" of agriculture)

Box: Overall site selection guidance for HABITABLE Study Countries

The following text is taken from the document "Selection of sites for the HABITABLE fieldwork", produced by the Hugo Observatory and agreed on by Consortium members.

Sites should, whenever possible, refer to a migration system, i.e. include a place of origin and of common place of destination. The sites should be comparable across all countries, on the basis of the broad criteria set out below.

Criterion 1: Exposure to environmental stressors

The sites should have some level of exposure to climate stressors, combined if possible with some evidence of change over time.

Possible main environmental stressors to be considered for the countries for primary site data collection include:

In **Mali, Ghana, Ethiopia, and Kenya**: droughts, climate variability, floods, soil degradation and/or desertification.

In **Thailand**: floods, climate variability.

While other environmental stressors relevant to these countries (e.g. sea level rise) may not be analysed for primary sites (due to the difficulty to compare them across countries)- these will be considered in supplementary research conducted in secondary sites (e.g. research with small-scale coastal fishing communities in Senegal in WP3). The different sites selected will ideally show different climate characteristics between them.

Criterion 2: Third-tier administrative level (district/sub-district)

The sites selected should be rural areas at third-tier administrative level. This will allow to better discern patterns and trends, which would be more difficult if the population of the site is too large.

Criterion 3: Vulnerability to environmental stressors

Populations at the site are particularly vulnerable to the impacts of environmental stressors. This can be due to **socio-economic factors** (such as a relatively lower human development at the site – see e.g. the Global Data Lab's Subnational Human Development Index) or a **high reliance on agricultural resources** and related food insecurity, among other reasons. Because of this greater vulnerability, environmental stressors have an increased chance of leading to a tipping point.

Criterion 4: Similar destination from origin point

The sites should ideally encompass a migration system, i.e. the migrants surveyed at the origin point should have a similar or common destination, which will require determining some destination patterns during the site selection.

This set of criteria **does not include specific migration criteria.** This is a deliberate choice, acknowledging that climate stressors may cause non-linear shifts in migration (i.e. they may lead to an increase in migration but could also lead to a reduction of migration where people's choice to migrate is restricted).

Ideally the data collected would be from two similar sites with different patterns of migration (e.g. one site with high migration rates, one site with low migration rates). This would allow for an innovative comparison of effects on migration in similar sites.

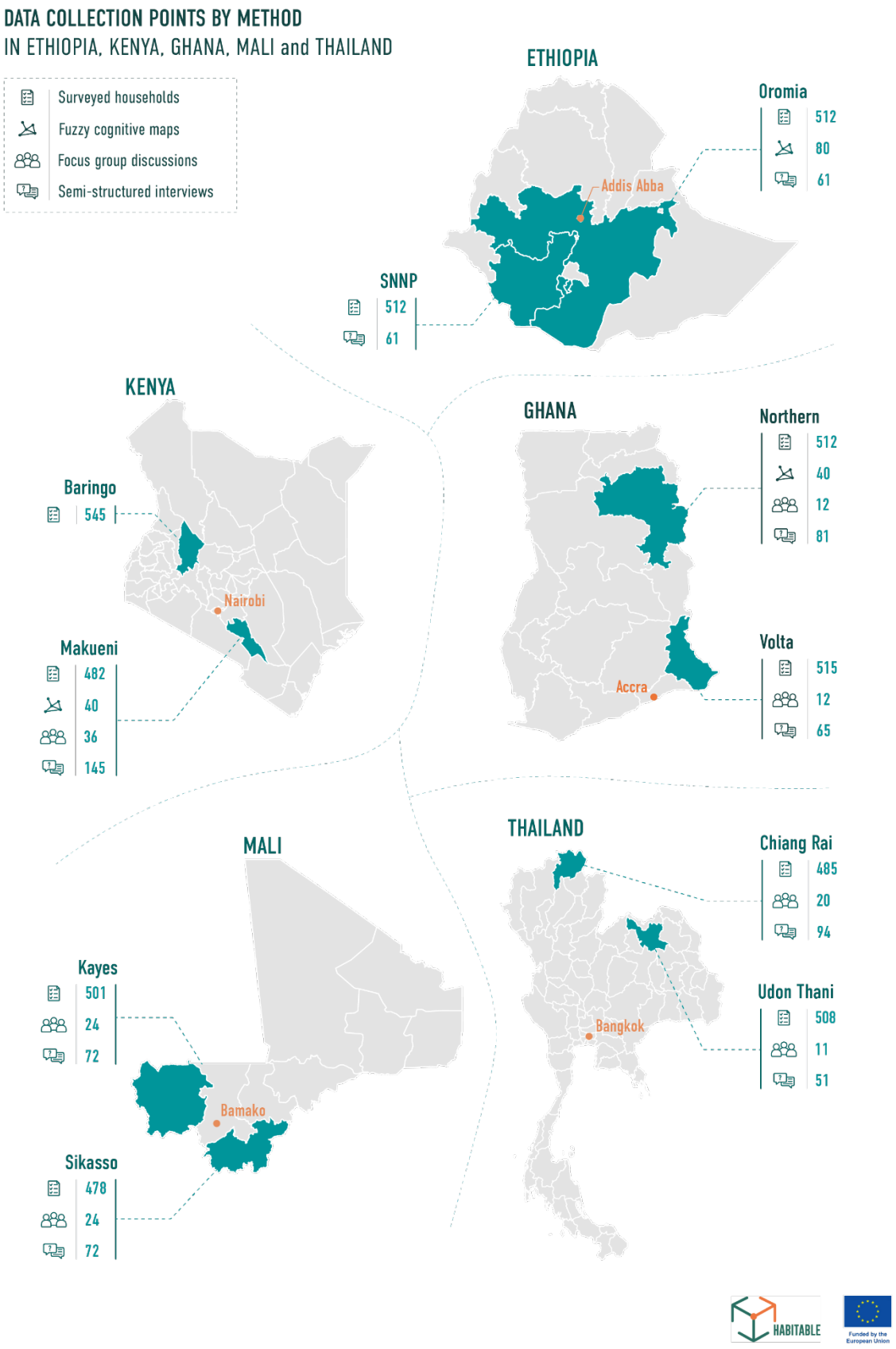


Figure 7: Data collection points for HABITABLE; includes all primary methods

4.2. Sampling procedure

Sampling strategy

A combination of snowball sampling and "critical case" sampling will be used. The criteria and approach will be further discussed between PIK and individual country teams (see overall Habitable project guidance).

Critical case sampling refers to the analysis of a number of cases which are deemed important analysis and therefore permits logical generalization. Practically speaking, these interviewees are chosen (non-randomly) on the basis of tightly defined criteria because they cover key dimensions and are particularly information- rich. For the origin area interviews, this was the way in which interview partners were identified.

Snowball sampling was used to identify – thanks to the interview partners in origin areas – migrant in destination areas that are family members and friends of our origin area interview partners. Snowball sampling is commonly used in qualitative research (Biernacki & Waldorf, 1981; Goodman, 1961; Patton, 2002). It follows a simple procedure: After identifying a first group of interview partners that are core to the analysis (see criteria below), respondents are asked for other potential interview partners that could add information. Often, a few potential interview partners are recommended repeatedly. From the first set of interviews, the next set of interviewees is then selected. For the purpose of the HABITABLE project, the main criteria for identifying migrants in destination was that they were connected to the origin areas, thus less attention was paid to gender and social equity considerations for the destination interviews. Nevertheless, people of different genders and social strata were ultimately interviewed in destination.

Importantly, the SSIs seek to include an intersectional approach in data collection methods by ensuring a balance of age groups, gender, ethnicity, and different types of occupations (farmer/herder/small business owner) in participants for semi-structured interviews and FGDs. In countries where social exclusion may be, or is known to be, related to mobility patterns, country teams are asked to ensure interview participants from pastoralist and other marginalized groups are adequately represented in the interview partner selection. For example, in areas with pastoralist populations, efforts are made to include pastoralists in interviews and FGDs. These considerations help to ensure that the social and power relations are observed and represented in the data collected. Moreover, FGDs take part with different groups to both reduce bias introduced by privileged groups dominating conversation (see also Deliverable 8.1, page 14) and to observe in-group power dynamics. In addition, components of the SSI set of question directly ask participants about gender and social inclusion (see origin and destination questionnaire, Annex 3 and 4, Sections III, Part 2 "Equity and inclusion").

Procedure & criteria for identifying interview partners

Suitable interviewees in the origin area with given critical case criteria (see below) can be identified via community leaders, during the survey enumeration, or during the focus group discussion by Work Package 5. For the identification of suitable interviewees in destination area from the same household as in origin area, snowball sampling will be used (i.e., interview

partners are asked in question 22b to identify migrant family members and these interviewees can identify others).

For community leader interview:
A community leader should be selected from each site for a specialized interview. This may be a village head/authority or traditional leader – or the Country Lead may deem both necessary. The goal of this interview is to fill gaps in secondary data on community-level information and climate impacts. Therefore, in the case that village heads have not been in the community for many years or are not able to answer many of the questions, an additional interview with a local thought leader can be helpful to gain contextual knowledge. It may be that, for reasons of formality or cultural reverence, that multiple interviews or a group interview is required. Please see a special set of questions in Annex 2.

For origin area interviews (critical case sampling):

In the course of the quantitative data collection and the focus groups discussions, a "roster" of potential individual interview partners should be developed by the field team(s). This is in line with data protection protocols as long as identifying information is only held for a reasonable period of time; hand-written contact details can later be destroyed, for example. The community leader can also contribute to identifying potential interview partners based on a number of critical case criteria. These individuals can be then asked for an individual interview.

Those critical case criteria are:

- A majority of interviewers should be from migrant households with both strong exposure to climate risks *and* a high dependency on agriculture (farming, fishing, pastoralism)
- Migrant households with memorable (<10 years) highly positive adaptation outcomes / livelihood & wellbeing changes *as a result of migration* e.g. much higher income, much improved housing and assets, etc.
- Migrant households with memorable (<10 years) highly negative adaptation outcomes / livelihood & wellbeing changes *as a result of migration* e.g. unable to complete harvest, social disassociation
- Migrant households with recent (<5 years) highly negative adaptation outcomes / livelihood & wellbeing changes *as a result of climate change* e.g. repeated crop failure, severe herd loss
- Mobile pastoralist/livestock herders (with some household members migrating e.g. for work or study)
- International migrants in <10 years
- A few interviewees should be from non-migrant households with both strong exposure to climate risks *and* dependency on agriculture (farming, fishing, pastoralism). A balance of poor and wealthy is ideal; an informal, relative scale of wealth will be established by one of the focus group discussions and via the relevant questions 23-27 of the Community Leader interview)
- Beneficiaries of resilience-building interventions or projects, whether supported by the government or non-governmental organizations (some such climate-resilience

and climate-forecasting projects have been carried out by CARE; see examples HABITABLE proposal pg. 30).

Interview partners *may also* identify as the following, but only in combination with other criteria above, and it should be noted if so (i.e., persons from migrant households *that are also*)

- Internally displaced persons
- Migrant returnees
- Former refugees (survivors of conflict) and/or survivors of human trafficking (people from this area that went abroad have returned to the origin area)
- Survivors of geological hazard-induced disasters (e.g. landslides, earthquakes, wildfires)
- People recovering from biological hazards (e.g. cholera, rift valley fever)

For destination area interviews (snowball sampling):

Migrant family member(s) from the origin areas can identify migrant family members and friends living in destination areas. This is reflected in origin area interview question 22b. The destination area does not have to be the primary migrant destination of the country. Nearby urban areas e.g. district capitals and agricultural areas that attract a significant number of migrants from the origin areas. In addition, migrants in destination areas can identify other migrants from the origin areas to be interviewed (snowballing).

4.3. Location of the interview

Origin areas

Interviews in origin areas were held in the case study areas in informal, comfortable settings (see section X on interview settings, above), which varied by study site. In most cases, the interviews took place in or outside of the home of the interviewee and away from potential eavesdroppers. In some cases, especially for target populations that live far from the town center – like pastoralists – the interviews took place in a shared village/community area. The latter also facilitated the provision of a meal by the research team, which served as compensation for taking part in the research project, where appropriate. In particular, research participants that were involved in focus group discussions were provided a meal due to the lengthy nature of the group discussions. A number of focus group discussion participants were identified to then complete an individual interview.

Destination areas

The research team was flexible on the location of interviews in destination areas. The key criteria for selection in a destination interview was the person's connection to the origin area, usually identified via snowball sampling, and thus flexibility was needed to tack down interviewees in different locations. Nevertheless, quiet, private, and comfortable settings had to be identified for good quality interviews.

Telephone interviews were used in destination areas in a number of cases. While these are often considered to be less attractive than face-to-face interviewing in most qualitative studies, as they lack the visual cues via telephone that provide contextual and nonverbal data, there is limited evidence that they produce lower quality data (Novick, 2008). However, interviews via telephone have advantages as they allow respondents to feel relaxed and disclose potentially sensitive information, such as migration intentions or participation in informal work. In Accra and Bangkok, in particular, difficulties accessing

interviewees was particularly pronounced, as many migrants in these locations work very long hours or are involved in the informal economy. As such, we consider these handful of telephone interviews as equal to those conducted in person in destination areas.

5. HABITABLE interview questions

5.1. Guidance for interviewers

Overall conduct of interviews

Please see guidance in the "Background for Interview Procedures" sub-section "Interview Guide" (above) for details on how to create an appropriate interview setting and flow of interviews.

Two questionnaires are available for the HABITABLE project: one for origin areas (Annex 3) and one for transit/destination areas (Annex 4). Strictly speaking, there is a limited difference between the two and the origin questionnaire should be taken as the default. Screening questions at the beginning of the questionnaire helps the interviewer to determine the primary livelihood(s) of the interviewee and whether the origin or destination questionnaire is more appropriate.

Each block of questions represents the key research themes of exploration. Sticking to the exact phrasing of questions is helpful, but the most important point is for the interviewee to express themselves on the key theme, which often requires repeating or rephrasing questions as well as asking probing questions. However, the line of questioning should remain within the comfort boundaries of the interviewee; the interviewer should not breach their trust.

Questions should be asked in sequence, however: if some questions are already answered as part of a reply to a previous question, the questions are not repeated. Again, probing and additional questions for understanding and elaboration of new insights are beneficial.

At the beginning of each interview – for example, while one interviewer fills out the interview site details – the interviewers should introduce themselves and the project.

At the end of each interview the interviewer thanks the respondents for their time and participation.

Timing of interviews

The start and end times of the interview should always be noted down, as in the set of questions in Annex 2-4.

As a rule, there is no set timing for the interviews, as the discussion can last as long as needed for the core research questions to be addressed by the interviewee. The goal is always to gain valuable insight on the key research themes of exploration represented by each block of questions. Interviewees should be encouraged to speak at length and not cut off. The interviewee is likely to need to use probing questions and points of clarification. Most interviews are likely to last between 60-90 minutes. It is good to inform the interviewee in advance that this is the likely timing so that they can make time for it.

On the other hand, if the interviewee appears rushed or otherwise uncomfortable with the interview, it may be good to move on to the next interviewee. In this case, make a note to this effect, as the interview data may not be used in these cases.

5.2. Informed consent

HABITABLE consortium lead has provided guidance in deliverable D12.1 and D12.4; the latter refers specifically to low and lower-middle income countries.

For each case study site, the project information sheet and consent form (Annex 1, 1.A, 1.B) should be translated into the local language and printed to hand out to interview participants. Interviewers are required to read the informed consent form out loud in the language of the interviewee. Interviewers must ask whether everything was understood by the potential respondent and whether they wish to participate in the study. If yes, the respondent is asked to sign the form and answer the questions regarding audiotaping, use of transcriptions and anonymity. If no, the interviewers say that this is fine and thank the respondent for their time. Interviews cannot proceed if signed consent or certified verbal consent is not given, as this would be a breach of research ethics.

6. Complementarity with other research tools

Semi-structured interviews can be important nuance and richness to other research tools, both quantitative and qualitative. Moreover, they can help triangulate findings from other approaches. In particular, there is a high level of complementarity between semi-structured interviews and focus group discussions in both aims and practical considerations (Longhurst, 2016), they should ideally be developed together. For example, when several people migrated together, focus group interviews and discussions can complement semi-structured interviews. Interviewers should note particular patterns/similarities as well as diverging opinions of interviewees.

The HABITABLE project, for example, brings together specialists from a variety of social and physical science disciplines, including geography, political science, feminist political ecology, sociology, social anthropology, economics, climatology, agronomy. In addition to this, HABITABLE adopts an interdisciplinary, mixed-methods approach. Some quantitative and qualitative methodological tools are designed to answer research questions for specific work packages – for example, using Fuzzy Cognitive Mapping to explore perceptions (Work Package 2) – while others – such as approaches to gender and social equity (developed by Work Package 8) – will be shared across work packages. Importantly, Work Package 8 has developed a Gender Analysis Guidance for HABITABLE researchers, which is also reflected in this Handbook. Work Package 4 integrates the gender equality and social inclusion (GESI) perspective not only in its data collection but also in its data analysis (see "General objectives of the interviews", page 15, this handbook).

HABITABLE brings together qualitative and quantitative methods. The data collected in the longitudinal quantitative surveys from Work Package 1 helps to understand i.a. migration trends under climate change, as well as contribute to the understanding of social tipping points (see Deliverable 1.1 – "A Conceptual Model of Social Tipping Points"). These understanding will be sharpened by the data collected and analyzed by Work Package 4, which facilitates to situate the place that migration has among other adaption strategies

(see HABITABLE Proposal, page 44). There is a high level of complementarity between Work Package 1 and Work Package 4, since quantitative and qualitative data collection will happen in the same enumeration areas.

Besides, Work Package 4 intends to identify strengths and weaknesses of policies and programmes related to human mobility in contexts of climate change. Such results will feed into the development of policy options under Work Package 6 (see HABITABLE Proposal, page 47).

For HABITABLE, it is important to highlight that the methods from Work Package 2, Work Package 4, and Work Package 5 were developed in close collaboration (see, in particular, note on focus group discussions, HABITABLE Deliverable 5.1). The household questionnaire of Work Package 4 presents questions that address the impacts of migration on households (Work Package 5) and, more specifically, on migrants. The results will thus be of value for Work Package 5 data analysis (see Annex 3 and 4, Section II, Part 2b entitled "Impacts of migration"). Site selection and interview criteria for the qualitative empirical Work Packages (2, 4, and 5) were established together for practical and methodological reasons. This can reduce research fatigue of target populations, reduce logistical costs, and help ensure that information from different work packages emanate from the same socio-ecological systems, and thus interview and focus group discussion data can be better analyzed together. Origin interview sites and interview partners will overlap in origin areas for Work Packages 2, 4, and 5 as well as for destination sites for Work Packages 2 and 4.

7. Quality control procedures

7.1. Pre-testing and piloting

As with quantitative data, the tools for research should be evaluated by pre-testing and by the debriefing of the interviewers regarding and problems that may arise during the interviews (Saris & Gallhofer, 2007, p. 173).

The sets of questions in Annex 2-4 should be translated, pre-tested, and revised, together with PIK, before the field work commences. Pre-testing can be done with migrants in the Country Lead's institution or similar. This allows the researchers to identify terminologies, wording, or concepts that need to be re-written for clarity or adapted to the local context. The goal is to ensure that the set of questions are relevant and understandable to the target population.

For the HABITABLE project, the interview questions were read between the PIK colleagues before sending to the country teams. The country teams all reviewed the research tools prior to Methods Workshops held by PIK with each of the country teams. These workshops provided a critical space for discussion of the tools and overall qualitative approach, after which the PIK team further refined the tools before a second round of review and adjustments by the country team. Follow-up methods workshops were held with each of the country teams prior to piloting and field work.

Country teams pre-tested/piloted, among themselves and/or in a pre-research visit to the study sites. When feasible, a pilot in study sites that included the qualitative interviews and the other HABITABLE data collection methods was preferred.

In the case of South Africa, the remoteness of the study sites precluded a full pilot. A simple pilot was completed and the research tools adjusted while in the field.

7.2 Subjectivity

Subjectivity is inherent to qualitative inquiry (Ogden, 2008) and this was considered throughout the research process on the level of the country team, PIK research team, and through triangulation and validation methods (below).

7.3 Data recording and processing

7.3.1 Interview recordings

All interviews were recorded. If informed consent was not given for a recording by a potential interview participant, they were thanked for their time and another participant was identified.

Recordings were checked and validated by the country team lead or field supervisor before transcription (see below). Country teams created code sheets so that recordings would be identified by the interviewee code. This pseudonymization was ultimately used for the transcriptions. Recordings were securely kept by the country teams in encrypted folders until the transcriptions could be made.

7.3.2 Field notes

During all interviews, a note taker was present to write down observations about the setting, power dynamics at play, the main points of the interview, and any other pertinent observations that may inform the interpretation of the interview.
These notes are usually taken by hand, in bullet points. They are coded according to the interviewee code in order to be matched to the coded transcription without personally identifiable information attached. Once the notes were coded and electronic versions were made, if needed, the personally identifiable information was deleted and/or the handwritten notes were destroyed. In some cases, this happened before the country teams left the field. When available, these field notes served as an input to the preliminary analysis.

7.3.3 Validation of data and preliminary analysis

Field validation

At the end of each working day, the field teams got together and debriefed to the field supervisors. In a limited number of circumstances, questions or concerns were sent to the PIK team to adjust the approach.

After completing the field work, the country teams reviewed the main findings and logistical challenges with the PIK team in order to identify any potential gaps in the in the information collected.

The completed interviews were checked for consistency and validated by the country team leads before submitting them to transcribers. The audio files were transcribed into local languages. The transcriptions were, in most cases, done without personally identifiable information and the file is only identified via the interviewee code. In other cases, the personally identifiable information was deleted after the transcript was checked and

validated by the country team leadership. All audio files were deleted after an appropriate time, usually after the transcripts were validated by the PIK team.

Transcriptions were translated into English in four of the six case study countries (Ghana, Kenya, South Africa, Thailand), into French *and* English in the case of Mali, and in Amharic in the case of Ethiopia.

Data validation & triangulation

Initial analyses were completed together with the design of the database (see below). A Research Validation and Triangulation kick-off workshop was held at PIK in Potsdam on 5 July 2024. This workshop included the in-person participation from almost all country teams – the Kenya and Thailand teams participated online – as well as from the other HABITABLE Work Package and Methods Leads' teams. A participation list is included in annex 5.

This workshop served to begin the validation and triangulation of WP4 findings with the respective teams and other methods. A preliminary analysis was presented by the PIK team and additional information was shared by the national researchers based on the information gathered in the field. A number of gaps or areas for further investigation were identified that informed a deeper exploration and analysis in the subsequent months.

Follow-up workshops were held with each country team in early 2024. These served to fill gaps in the analysis and advance deeper understanding of interviews

7.3.4 Data entry

Qualitative data derived from semi-structured interviews and expert interview (community leader interviews) are cleaned in written format (Word software) for checks and a preliminary analysis run by the PIK research team. Once transcripts were revised, if needed, the interviews were grouped by country and sub-grouped by study site. These were uploaded into MaxQDA (qualitative content analysis software) for further organization and analyses. To organize the data, each transcript was manually coded by question so that respondent answers to comparable questions could be analysed side by side.

The PIK team also developed a simple coding scheme to autocoding for themes, phrases, and topics.

7.3.5 Final analyses

PIK took the lead on drafting scientific articles, background briefs, and technical descriptions of the database based on the research findings of the case study countries, in collaboration with the respective country teams. This includes providing quality control to the research outputs.

8. Database design

8.1. Data processing

The final HABITABLE qualitative interviews database can be visualized in an extended table format, in which each column corresponds to a question from the core set of questions (origin or destination), and each row corresponds to an interviewee. The database is available here:

Serraglio, D., Blocher, J. et al. (2025). *HABITABLE Qualitative Interviews Microdata: Migration Histories, Coping Strategies, and Adaptation Solutions* [Dataset]. Zenodo. https://doi.org/10.5281/zenodo.15050303

The internal version of the database used for initial analysis is grouped by country and sub-grouped by study site (village or community, i.e. the third-tier administrative level).

Text editing of the interview answers was done in very few cases when necessary for spelling or clarity.

The fully pseudononymized database was made available to HABITABLE consortium members by special request only and shared with reviewers ahead of submission to the Consortium Lead and European Commission on 28 June 2024.

8.2. Anonymization procedures

Following the research validation and triangulation phase and final analysis phase, further anonymization was taken:

a. Interviews are grouped by province/state level (i.e., second-tier administrative level) and pseudonyms are given for the study sites (i.e. site 1, site 2);
b. A number of sensitive answers were manually redacted (e.g. ethnicity);
c. A number of questions (columns) were selected for categorization to avoid any risk of indirect identification of the interviewee (e.g., appearance, land holding, and livestock holdings), which are explained in the "categorization" tab of the microdata sheet.

The anonymized version was made available to the public on 20 March 2025.

Part IV: Research Methods and Tools

Annex 1: Example informed consent form and information sheet

The below example information sheet and consent form was shared by the HABITABLE consortium lead in December 2021as Deliverable 12.1.

It is shared only as an example that may inspire similar tools for other research projects, but will not be adaptable to all projects. This would include, but is not limited to projects that: include children/minors; explicitly ask about ethnicity, sexual orientation, political affiliation and/or other potentially sensitive subjects; refugees and asylum seekers; survivors of trafficking; and minority groups in certain contexts. The HABITABLE project consortium agreed to exclude minors from the research and took steps to minimize the risks to members of the other groups listed above if they were to emerge in the research, but these groups were not specifically targeted for the research. Research projects must take careful consideration of the need to include such groups (minimization principle) and take steps to minimize the risks to the safety and privacy of research participants, with special consideration to extra risks posed by their identity and context.

Information sheet – participation in the HABITABLE Project

European Commission funded research project (No. 869395)

You are invited to take part in a research as part of the HABITABLE project.

The HABITABLE project
HABITABLE aims at significantly advance the understanding of the current interlinkages between climate change impacts and migration and displacement patterns, and to better anticipate their future evolution. The project runs for 4 years and is coordinated by the University of Liège (Belgium). More information available at: www.habitableproject.org

Aim and duration of this [method (e.g. interview)]
The present [method (e.g. interview, survey)] is conducted by [Partner, country] with the objective of [specific objectives in terms and language intelligible to the participants]. This [method (e.g. interview, survey)] is expected to last approximately [time].

Participation in the project
- Your participation in this research is voluntary.
- The processing of your personal data is based on your consent
- Answers to the questions are optional. If you want to, for any reason, at any time, to stop the [method (e.g. interview, survey)] or skip questions, you may do so without having to explain and without any consequence.

Protection of personal data
- Personal data provided to the researchers will be treated with confidentiality: no personal data will be shared within the project nor with a broader audience (unless otherwise indicated in the informed consent form).

- Any personal information that could identify you will be removed or changed before files are shared with other researchers or results are made public.
- Personal data collected throughout the project will be completely destroyed at the end of the project.
- [NAME] from the University of Liège is the Data Protection Officer of the HABITABLE project. You can contact him at [EMAIL] if you have any further questions regarding the project's protection policy for personal data.
- No names, surnames, phone numbers or any other personally identifiable information is to be collected nor recorded during this [method (e.g. interview, survey)] *To be included when conducting research with vulnerable individuals or groups.*
- There is a possibility that unexpected findings can be unintentionally discovered, including human rights violations. Disclosure of these findings will be decided on **a case-by-case basis** weighing the potential consequences' intervention may have in participant. The wellbeing of research participants will be a priority in this decision.

Data processing

- Confidentiality will be guaranteed throughout the collection, analysis and exploitation of data. You will not be identified in any publication from this study.
- The information in this study will be used only for [remind the specific research purposes in terms and language intelligible to the participants] as specified above and in ways that will not reveal who you are. *To be included when conducting research with vulnerable individuals or groups.*
- Qualitative data will be pseudonymized, transcribed and stored on encrypted devices.
- Non-identifiable qualitative data can be shared with HABITABLE research members.
- Un-useful data (going beyond the research purposes specified above) will be destroyed by the researcher immediately after fieldwork as to minimize any misuse and in line with the data minimization principle.
- Personal qualitative data will be kept on file both for the time of the project and for a period of 5 years after the end of the project (after which data will be purged).

As provided for in the GDPR (Art. 15 to 23), you can exercise a series of rights:

- to obtain, free of charge, a copy of the personal data concerning you processed in the context of this study and, where appropriate, any available information on their purpose, origin and destination;
- to obtain, free of charge, the rectification of any inaccurate personal data concerning you and to obtain that incomplete data be completed;
- to obtain, subject to the conditions laid down by the regulations and free of charge, the deletion of personal data concerning you;
- to obtain, subject to the conditions provided for by the regulations and free of charge, the limitation of the processing of personal data concerning you;
- obtain, free of charge, the portability of the personal data concerning you meaning to receive, free of charge, the data in a commonly used structured format, provided that the processing is carried out using automated processes;
- to withdraw your consent, without any justification being necessary. This withdrawal automatically entails the destruction, by the researcher, of the personal data collected;

- to lodge a complaint with a Data Protection Authority (website and email of Data Protection Authority, ex for Belgium: https://www.dataprotectionauthority.be/, contact@apd-gba.be).
- To contact the data protection authority in *[country]*, you can contact (information required):

Contact person for raising a concern about the project
If you have concerns or complaints regarding the project, you may contact the following:

Name:	
Role:	
Contact details:	

Information on the ethics committee
Please find below information on the ethics committee that has granted approval for the research to be conducted:

- Name of body that granted the ethics approval:
- Contact person:
- Date of approval:

Before you agree to take part in this research, please feel free to ask any question that might arise from this Information Sheet or the explanation provided by the researcher.

If you decide to participate, you will receive a signed copy of this document.

A. Consent form – participation in the HABITABLE project (written consent)

European Commission funded research project (No. 869395)

I confirm that my participation in this research, undertaken by [Researcher, institution], is a voluntary contribution.

I confirm that:

- I understand the purpose of this research.
- I have had the opportunity to ask questions and I have received satisfactory answers.
- I understand that if I want, for any reason, at any time, to stop interviewing or delete selected questions, I may do so without having to explain and without any consequence.
- I understand that my personal information collected in this study will be processed as stated in the information sheet.
- I understand that my personal information collected in this study will be confidential and anonymous in the published material.
- I understand that non-identifiable qualitative data can be shared with HABITABLE research members and external stakeholders.

- I understand that I can opt-in/out to being recorded.
- I understand that I can contact [researcher, Institution] at [email] to ask any additional question or to withdraw from the study without penalty at any time.
- I have been informed about the project's Data Protection Officer and his contact details have been shared with me.
- I have been offered a copy of this approval form and the information sheet which are mine to keep.

Optional: ☐ I agree to be personally identified in the results and publications to be produced from this study *To be included when personally identifying respondents is necessary for the research.*

Optional: ☐ I agree to be contacted at a later stage by the members of the HABITABLE project to be invited to participatory workshops, interviews or surveys. I will still be able to refuse to take part in these other activities at any time. My contact details are:

Email:
Phone/WhatsApp:

Signature of the participant, Date and Place:

B. Consent form – participation in the HABITABLE project (oral consent)

Instructions to the researchers:
Oral consent might be used instead of a written consent. This might be necessary e.g. in cases where the participants are illiterate, or in a less safe environment. In cases where the participants are illiterate, two independent witnesses shall record their oral consent and sign the form. In these cases, the researcher should:

- *Read out the information sheet (see Annex I of this Handbook) to the research participant, including the background to the project and the participant's rights.*
- *Read out the consent form.*
- *Tick the boxes to mark confirmation.*
- *Provide his/her own signature at the bottom of the form.*

- **Objectives and purpose of the research:**

- ☐ Do you confirm that you (participant) have understood the purpose of this research?
- ☐ Have you (participant) had the opportunity to ask questions and received satisfactory answers?

- **Rights and data protection:**

- If for any reason, at any time, you wish to stop interviewing or delete selected questions, you may do so without having to explain and without any consequence.

- Personal information collected in this study will be processed as has just been explained *(as read out from the information sheet)*.
- Personal information collected in this study will be confidential and anonymous in the published material.
- Non-identifiable qualitative data can be shared with HABITABLE research members and external stakeholders.
- You may opt-in to being recorded, but you can also refuse to opt-in.
- **Complaints/ concerns procedure:** you can contact [researcher, Institution] at [email] to ask any additional question or to withdraw from the study without penalty at any time.

Optional: ☐ Do you (participant) agree to be personally identified in the results and publications to be produced from this study *To be included when personally identifying respondents is necessary for the research.*
Optional: ☐ Do you (participant) agree to be contacted at a later stage by the members of the HABITABLE project to be invited to participatory workshops, interviews or surveys? You can still refuse to take part in these other activities at any time.

Contact details of research participant:

Email:
Phone/WhatsApp:
Name and signature of the researcher:
Date and Place:

Or names, contact details and signatures of two witnesses.

Annex 2: Community Leader interview questions[4]

INTERVIEW SITE AND INTERVIEWEE DETAILS	
Part 1a: Interview Details	
Interviewee number/code:	Respondents full name(s). *Note to country teams: interviewee names and identifying details should be kept in a separate codebook to ensure pseudononymized data.*
Date _ _ / _ _ / _ _	Respondent's identity/role in the community *(Is the respondent a leader/official in a local institution, community leader of another sort, elder, head of a community/local association?):*
Time: _ _: _ _ to _ _ : _ _ *(if time is unknown, please note the length of the interview in minutes)*	Respondent's primary livelihood or occupation:
Location of interview *(please note village name and administrative information)* :	Respondent's gender *(if unclear, ask for respondent's gender identity)*
Respondent's ethnicity/ group identification *(note to interviewer: this should be noted based on name and/or other identifying characteristics, and asked if necessary).*	Respondent's age *(This should be asked; if exact age is not known, estimate range of 5 years e.g. 18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80+)*
Part 1b: Selection criteria	
The interview partner should be a top official or elder capable of speaking about the historical context and development of the village/ commune/ kebele. In some cases, it may be necessary to interview more than one person, for example, if the village head has not been living in the community for a very long time. Please note any additional information relevant to identifying the person as a community leader.	
Part 1c: Setting notes	

[4] This set of questions was developed by UniVie/WP5.

Location of the interview: Contact details of the community leader, in case follow-ups are needed:	
Part 1d: Discussion Write-Up/ Transcription and Notes	
Date of completion: _ _ / _ _ / _ _	Name of note takers/interpreters/transcribers:

GENERAL QUESTIONS
How old is the village [*Village/ Commune/ Kebele*]?
Roughly when founded:
Date officially registered/ incorporated:

POPULATION
How many people live in the village?
Total population:
Rough number of households:

MIGRATION
I want to ask you about migration: when people move away, temporarily or permanently, for work, to study, for marriage, and other reasons. This does NOT including people commuting or moving on a daily basis. In the case of pastoralists, we are interested in their movement that has changed from their regular movement with livestock.

Have there been periods in which people who left the village in order to work or to live outside or in other places?
If yes, where do they tend to go and what type of work do they tend to do?
Currently:
In the past (please also say when):
Please describe any other general migration history or trends for this area.

Roughly how many current households have members who have moved away in approximately the past 10 years for a few months or more? Again, for example, to work or study? If a number is not possible, please estimate a percentage (%) of households.

LIVELIHOODS
What are the most important sources of income in the village (e.g. farming, off-farm income, salary, remittances)?
In general, what crops do people grow here and what livestock do they raise (please list)?
Have there been any changes in the past decades in the crops and livestock that are successful here?
What is the average size of land people in the village own? What is the biggest/smallest portion of land or farm?
Are there other land-related issues? E.g. tenure conflicts?
Are there people without land? If yes, who and why?
Please describe what you would consider a "wealthy" household in terms of amount of land, livestock, etc. and what you would consider a "poor" household.

AGRICULTURAL PRODUCTION
How is labor for agricultural production organized?
family labor
labor exchange among villagers
paid labor, if yes: hired labor migrants or hired local labor and/or service providers?
How much (agricultural) land is irrigated and which kind of system/ facilities do people in the village tend to use?
Roughly what percentage of households pay someone with machinery for the field work?

RISKS
Describe common weather-related risks (drought, heavy rain, uncertain rainfall) which affect the agricultural production, especially the main crop people grow here? Please include how severe, frequent and strong are such impacts on the community.
Are there any other problems people have to deal with?

How do you perceive weather-related risks mentioned above (Q15) in comparison to these other difficulties/ problems (which were just mentioned, Q16)? For example, are these minor, severe, or very severe.

RESPONSE/ADAPTATION AND SUPPORT
How did/do people deal with such difficult situations that you described above?
Where/from whom do they get help? (friends, neighbors, government, …)
Have there been public (government/ NGO) or private development projects in which your village was involved and/or have there been any research projects in your village during the last 10 years? (If yes, please specify.)

VILLAGE LOCATION AND INFRASTRUCTURE
Which is the next bigger (district) town or market people usually go to?
Describe the public or private transportation system connecting your village to the next town/market? If there is a network, how frequently are connections and how long does it take (in hrs.) to nearest markets or urban areas?
Roughly how many households have access to a mobile phone (in estimated % of households; if % is not possible, estimate, for example: few/ about half/ most)?
Roughly how many households have access to internet (in estimated % of households; if % is not possible, estimate, for example: few/ about half/ most)?
Roughly how many households own a car/pick-up (in estimated % of households; if % is not possible, estimate, for example: few/ about half/ most)?
Roughly how many households have a motorcycle (in estimated % of households; if % is not possible, estimate, for example: few/ about half/ most)?
Roughly how many households have improved housing such as improved roof, floor, or latrine (in estimated % of households; if % is not possible, estimate, for example: few/ about half/ most)?

Annex 3: "Origin area" set of questions

INTERVIEW SITE AND INTERVIEWEE DETAILS *(Note to interviewer: this part (1a-1d) is to be noted based on your own observations. Try to not directly ask the interviewees.)*	
Part 1a: Interview Details	
Interviewee number/code:	Respondents full name(s). *Note to country teams: interviewee names and identifying details should be kept in a separate codebook to ensure pseudononymized data.*
Date _ _ / _ _ / _ _	Description of the location of the household/place of residence *(any identifying characteristics, to come back later if needed)*:
Time: _ _: _ _ to _ _ : _ _ *(if time is unknown, please note the length of the interview in minutes)*	Respondent's identity/role in the community *(Is the respondent a leader/official in a local institution, community leader of another sort, elder, head of a community/local association?):*
Location of interview *(please note village name and administrative information)* :	Respondent's gender *(if unclear, ask for respondent's gender identity)*
Respondent's ethnicity/ group identification *(note to interviewer: this should be noted based on name and/or other identifying characteristics, and asked if necessary).*	Respondent's age (*This should be asked; if exact age is not known, estimate range of 5 years e.g. 18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80+*)
Part 1b: Critical case criteria	
Which of the critical case criteria does this interviewee meet? Please note all that apply from the list and note other key characteristics in "other".	

Migrant HH with strong exposure to climate risks & dependency on agriculture
Migrant HH with memorable (<10 years) highly *positive* adaptation outcomes / livelihood & wellbeing changes as a result of *migration* e.g. much higher income, much improved housing and assets, etc.
Migrant HH with memorable (<10 years) highly *negative* adaptation outcomes / livelihood & wellbeing changes as a result of *migration* e.g. unable to complete harvest, social disassociation
Migrant HH with recent (<5 years) highly *negative* adaptation outcomes / livelihood & wellbeing changes as a result of *climate change* e.g. repeated crop failure, severe herd loss
Migrant HH with recent (<5 years) highly *positive* adaptation outcomes / livelihood & wellbeing changes as a result of *climate change* e.g. repeated crop failure, severe herd loss
Mobile pastoralist/livestock herder with migrating family member (for 3 months or more work, study, etc.)
International migrant in <10 years
Non-migrant HH with strong exposure to climate risks & dependency on agriculture (1 poor and 1 wealthy)
Other notable characteristics (e.g. former refugee, returnee, survivor of trafficking, etc.): _____

Part 1c: Setting notes

Location of the interview
Description of the conditions of the household/ place of residence, e.g. Type of flooring? Type of roof? Type of latrine? Rented or shared? Type of cooking area and fuel? Water access nearby?
Describe the interviewee´s appearance, e.g. type and condition of clothes and shoes.
Description of power relations within households (please avoid having a male person present during interviews with a female). Was interviewee interrupted during the interview from other household members? Do you have the feeling the interviewee could speak freely? Why or why not?

Part 1d: Discussion Write-Up/ Transcription and Notes

Date of completion: _ _ / _ _ / _ _	Name of note takers/interpreters/transcribers:

NOTE TO INTERVIEWER:
If we are in an origin area, for both migrants and non-migrants (see key terminologies sheet) □ skip to "origin" questionnaire (A).
If the interviewee is a migrant in destination area □ skip to "destination" questionnaire (B).

SECTION 1: LIVELIHOODS
Part 1: Household details
How many adults (=people older than 18), how many children (=younger than 18), and how many older dependents (= older than 65) are currently part of the household? Where were you born? In the past ten years, where have you moved to for three months or more? - *Note to interviewer: Probing questions should ensure we include the first migration experience and other major movements in the past 10 years.* How many people in the household have moved for three months or more in the past 10 years (including children)? Where have they gone? What is your education level? How would you describe your wealth *in relation to others* in the community? Very poor, moderately poor, moderately wealthy, or very wealthy?
Part 2: Primary livelihood/ activities
What are your predominant time occupations and how many hours do you dedicate to each per day? Activity 1: Activity 2 (if applicable): Activity 3 (if applicable): Are there seasonal changes to your activities e.g. months of the year that you farm or not? How many months per year do you dedicate to each of your different activities? (*E.g., 3 months May-August for planting, September for harvest, and a list of other main activities in the dry season)* In regards to your MAIN agricultural activity. For farmers:

What is the main crop you are producing?
How much would you produce in a good year - for example, in number of bags or kilograms - and on how much land?–
Note to interviewer: it would be ideal to know the number of bags of the crop or some other volume estimate, but in some contexts the interviewee can formulate their own estimates.
And in a bad year?
Did the productivity change over the last 10 years?
Do you own the land, rent, or have other use rights?
For livestock herders:
What is the main livestock you are raising?
How many would you have in a good year?
In a bad year?
Do you own these livestock yourself?
What type of land or land use rights do you have to graze them?
For workers:
What kind of work? On a farm, in another business?
Bridging statement: Please talk about your experiences with environmental problems and how you have adjusted your daily life to deal with them.

SECTION II: RESPONSES TO CLIMATIC HAZARDS AND RELATED EVENTS
Part 1: Hazard experiences and responses
1a: Experiences with slow-onset changes, hazards, and events
Please describe how the overall wellbeing of your household changed in the past ten years? – *Note to interviewer: only IF clarification on "wellbeing" is needed, the interviewee can describe changes in their ability to meet their needs; changes to their physical, mental, and emotional health as well as their relationship to their family and community.* How did the resource base for agriculture change in the past ten years (e.g. soil fertility, rainfall, water availability, labour, etc.)? What are the reasons for these changes? – *Probe, if needed: Are there important factors in these changes?* Please describe any severe environmental problems or events you have experienced in the past ten years? - *Note to interviewer: if clarification is needed, focus on shocks: like wildfires, floods, droughts, crop damage, livestock death)?* Which of these problems or events had the greatest impact on your household and why? How do you know (e.g. were there impacts on your food security, income, health, or personal ambitions)? Please describe other issues going on in at the time that made the situation worse? – *Note to interviewer: only IF examples are needed: conflict, rise in food prices, illness in the family, job loss, jailing of a family member, crime/theft, breakup of the household, cattle rustling, etc.?* Please describe other factors going on at the time that made the situation easier? – *Note: if clarification is needed, e.g. remittances from migrant family members or friends, adequate food stores, NGO or governmental assistance?*
1b: Coping strategies

Please think back to the time when the most severe climatic events occurred. Please describe how your household dealt with these events. In particular, what did you do to try to maintain the activities and health of your household members during or immediately after the problem or event (for example, within the first 6-8 weeks)?
Did you receive (1) government or (2) NGO support? What type (e.g. access to loans)? If yes, how did it help you and was it sufficient?
Are there any factors, such as social factors, that influence how you are able to respond during times of environmental shocks? – *Probing questions, if needed: did being a woman/ being a young person/ your education level/ your wealth/poverty mean that you received more or less support from others?*
Now please think about what you learned from coping with these events. Was your response successful for you? Why or why not?
What have you done/ are you doing to prepare if one of these environmental problems or events to happen again? Please explain why you chose this preparation (or why you have no preparation).
How did the way that you do agriculture change following a severe event? How do these changes relate to other changes your household experienced around that time? – *Probe, if necessary: crop choices, amount or type of livestock, irrigation, use of inputs, intensity of land use, size of land cultivated / used.*

Part 2: Migration

1a: Migration 'tipping point' responses and opportunities

Did you or a family member consider migrating after one of the events discussed above?
What were the key reasons for each migration decision?
If a family member has already migrated: Can we may contact the person in the destination area to also meet him/ her for an interview? What are the contact details?
Now please think about if environmental or climatic issues got much worse or persisted for many years. – *Note to interviewer: if quantification is needed in the questions below, minor refers to roughly 10 %, medium 20%, and severe >50% loss.)*
(For farmers) If you would experience a minor/ medium/ severe decrease change in your crop yield in the next harvest, would you be able to compensate this loss to maintain your household activities and consumption? For example, through crop stores, savings, or other sources of income or support? Please describe for each level of loss.
Minor loss
Medium loss
Severe loss
(For herders) If you would lose minor/ medium/ severe amount of your livestock due to drought or other adverse conditions, would you be able to compensate this loss to maintain your household activities and consumption? For example through crop stores, savings, or other sources of income or support? Please describe for each level of loss.
Minor loss
Medium loss
Severe loss
(For wage workers) If you would experience a minor/ medium/ severe decrease in your payments, would you be able to compensate this loss to maintain your household activities and consumption? For example, through crop stores, savings, or other sources of income or support? Please describe for each level of loss.
Minor loss
Medium loss
Severe loss

What would be the likely outcomes for your household of each level of loss? – *Note to interviewer: Please probe; ask them to describe possible outcomes, such as food shortages, having to skip meals, certain children could no longer go to school, inability to afford medicine, etc.*
Would one or more members of your household migrate in response to such a loss described above?
At which level of loss: minor, medium or severe?
If yes, who within the household would migrate (young men, women, household head, or the whole household)?
If yes, where would they go to and what type of work would they engage in?
If no, why would they stay?

2b: Impacts of Migration
In question 9, we asked what type of land use rights (land holdings) you have, if any, either to farm or to graze livestock. What would happen to it if you migrated? – *Note to interviewer: this applies if the person farms or grazes on rented land, government-allocated plots, stocking routes etc.* *IF someone from the household migrated*: After people from your household migrated, how do they or did stay connected with you? *IF someone from the household migrated*: What are positive impacts of migration, and what are negative impacts of migration for your household and you individually? – *Note to interviewer: Possible probing questions For example, who takes on the jobs and tasks of household members who migrated?* *IF someone from the household migrated*: How do you think migration influences your attachment to the place here, and the way you think about the future of living here? *All interviewees:* Do the ideas and knowledge you get from migrants and return migrants help you to deal with livelihood challenges? How? *All interviewees:* Do financial remittances help you to deal with livelihood challenges? How do you use remittances, including what is the biggest typical expense? – *Note to interviewer: Possible probing question: For example, do you invest more in agricultural inputs or in land or machinery? Are you able to save more money thanks to remittances? Alternative phrasing for "remittances": money or other forms of support received from migrant family members and friends.*
Part 3: Tensions and conflicts

Have you or your family members disagreed over which adaptation strategies to respond to the changes or events discussed above (e.g. how to use remittances, adopting irrigation, dams, adopting drought-resistant crops, sustainable agriculture projects, etc.)? Have you or your family members been affected by conflicts in the community over which adaptation to the changes or events discussed above (see above)? If yes, please describe why they occurred, who the conflicts occurred between, and what happened. Have you or your family members been affected by conflicts in this area over resources like water or land? If yes, please describe why they occurred, who the conflicts occurred between, and what happened. *If conflicts over resources occurred*, how were they resolved? *If no conflicts occurred*, how are conflicts prevented? For example, how are conflicting interests balanced?
SECTION III: ENVIRONMENT FOR RESPONSE STRATEGIES
Part 1: Community mechanisms

Please describe an experience when your village or community has helped yourself or a family member cope with challenges. What means of support/assistance did you receive from the community, such as ways to share resources or any money-raising efforts? In this case, "community" means people not including family members and close friends. – *Note to interviewer: when probing, an example can be in the case of crop or herd loss; will the community members share crops or livestock with the affected party? Will the community share in funeral payments? Who leads these support efforts and how do others know to help (e.g. does the affected family ask a community leader call a meeting? How do people find out that others need help?)* How did events over the past 10 years change: The mutual sense of trust in this village/community? The sense of belonging here?
Part 2: Equity and inclusion

How are decisions about income and livelihoods - including migration - made within your household and who makes them?
Was and is migration an option for everyone in your household? Why or why not? – *Note to interviewer: if the person doesn't respond in-depth because examples are needed, please probe: are young women able to migrate to help their families? Are poor families? Are non-dominant ethnicities? Are tenure-insecure households?*
Considering household responses to environmental changes and events as well as the means of support we discussed above (*questions 16, 17*), do you think these options are available to everyone in your household and community? If not, who is left out and why? How do you know? – *Note to interviewer: please probe if the respondent can provide examples of widowed women, poorer people, or marginalized groups receiving community-based support assistance (not just NGO/government assistance, but significant help from neighbors and villagers), and why or why not.*

-END-

Annex 4: "Migrant in destination" set of questions

INTERVIEW SITE AND INTERVIEWEE DETAILS *(Note to interviewer: this part (1a-1d) is to be noted based on your own observations. Try to not directly ask the interviewees.)*	
Part 1a: Interview Details	
Interviewee number/code:	Respondents full name(s). *Note to country teams: interviewee names and identifying details should be kept in a separate codebook to ensure pseudononymized data.*
Date _ _ / _ _ / _ _	Description of the location of the household/place of residence *(any identifying characteristics, to come back later if needed)*:
Time: _ _: _ _ to _ _ : _ _ *(if time is unknown, please note the length of the interview in minutes)*	Respondent's identity/role in the community *(Is the respondent a leader/official in a local institution, community leader of another sort, elder, head of a community/local association?):*
Location of interview *(please note village name and administrative information)* :	Respondent's gender *(if unclear, ask for respondent's gender identity)*
Respondent's ethnicity/ group identification *(note to interviewer: this should be noted based on name and/or other identifying characteristics).*	Respondent's age (*This should be asked; if exact age is not known, estimate range of 5 years e.g. 18-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80+*)
Part 1b: Critical case criteria	
Which of the critical case criteria does this interviewee meet? Please note all that apply from the list and note other key characteristics in "other".	

Migrant HH with strong exposure to climate risks & dependency on agriculture Migrant HH with memorable (<10 years) highly *positive* adaptation outcomes / livelihood & wellbeing changes as a result of *migration* e.g. much higher income, much improved housing and assets, etc. Migrant HH with memorable (<10 years) highly *negative* adaptation outcomes / livelihood & wellbeing changes as a result of *migration* e.g. unable to complete harvest, social disassociation Migrant HH with recent (<5 years) highly *negative* adaptation outcomes / livelihood & wellbeing changes as a result of *climate change* e.g. repeated crop failure, severe herd loss Migrant HH with recent (<5 years) highly *positive* adaptation outcomes / livelihood & wellbeing changes as a result of *climate change* e.g. repeated crop failure, severe herd loss Mobile pastoralist/livestock herder with migrating family member (for 3 months or more work, study, etc.) International migrant in <10 years Non-migrant HH with strong exposure to climate risks & dependency on agriculture (1 poor and 1 wealthy) Other notable characteristics (e.g. former refugee, returnee, survivor of trafficking, etc.): _____
Part 1c: Setting notes
Location of the interview Description of the conditions of the household/ place of residence, e.g. Type of flooring? Type of roof? Type of latrine? Rented or shared? Type of cooking area and fuel? Water access nearby? Describe the interviewee´s appearance, e.g. type and condition of clothes and shoes. Description of power relations within households (please avoid having a male person present during interviews with a female). Was interviewee interrupted during the interview from other household members? Do you have the feeling the interviewee could speak freely? Why or why not? *NB: if the person seems uncomfortable or cannot speak freely, it may be better to postpone the interview.*
Part 1d: Discussion Write-Up/ Transcription and Notes

Date of completion: _ _ / _ _ / _ _	Name of note takers/interpreters/transcribers:

NOTE TO INTERVIEWER:

If we are in an origin area, for both migrants and non-migrants (see key terminologies sheet) □ skip to "origin" questionnaire (A).
If the interviewee is a migrant in destination area □ skip to "destination" questionnaire (B).

DESTINATION QUESTIONNAIRE

SECTION 1: LIVELIHOODS
Part 1: Household details
How many adults (=people older than 18), how many children (=younger than 18), and how many older dependents (= older than 65) are part of the household? Where were you born? In the past ten years, where have you moved to for three months or more? - *Note to interviewer: Probing questions should ensure we include the first migration experience and other major movements in the past 10 years.* How many people in the household have moved for three months or more in the past 10 years? Where have they gone? What is your education level? How would you describe your wealth *in relation to others* in the host community/ area of destination? Much better, better, similar, worse, much worse? How would you describe your wealth status? Very poor, poor, moderately wealthy, or very wealthy?
Part 2: Primary livelihood/ activities
What are your most important activities for livelihood/ income and how many hours do you dedicate to each per week/ month? Please describe your activities (e.g. kind of work). Activity 1: Activity 2 (if applicable): Activity 3 (if applicable): Are there seasonal changes to your activities e.g. months of the year that you farm or not? How many months per year do you dedicate to each of your different activities? (*E.g., 3 months May-August for planting, September for harvest, and a list of other main activities in the dry season)* What was your predominant time occupation before you migrated (in your origin community)?

What are the predominant time occupations of your household back in your origin community (e.g. farming, livestock herding or other wage labor? In how far did this change after you migrated?

Bridging statement: We would like to talk to you about your experiences with environmental problems and how you have adjusted your daily life to deal with them.

SECTION II: RESPONSES TO CLIMATIC HAZARDS AND RELATED EVENTS

Part 1: Experiences with and impact of environmental hazards and slow-onset changes

Please think about the situation of your household back in the origin area.
Please describe how the overall wellbeing of your household changed in the past ten years? – *Note to interviewer: only IF clarification on "wellbeing" is needed, the interviewee can describe changes in their ability to meet their needs; changes to their physical, mental, and emotional health as well as their relationship with their family and community.*
What are the reasons for these changes?
Please describe any severe environmental problems or events you or your relatives at the place of origin have experienced on the household level in the past ten years? How did you and your household react to these experiences? - *Note to interviewer: if clarification is needed, focus on shocks: like wildfires, floods, droughts, crop damage, livestock death)?*
Were environmental changes in your place of origin part of the reason you migrated?

Do you send more remittances to people in your place of origin during periods of environmental stress or after environmental events (floods, storms)?
How are the resources or information you send to your family and friends in your place of origin used to respond to environmental issues they face?

Are there any environmental/ climatic impacts that influence you now in the destination area? How do you experience them?- *Please probe: Do they pose any challenges/ problems?*

Part 2: Migration

2a: Migration experiences and migration history

Please think about your current migration experience:
What were the key reasons for this migration decision? – *Note to interviewer: if not mentioned, please probe: Were there reasons such as violence, tension and conflict? If conflicts occurred: what were they about? Were there conflicts over resources? Please describe.*
If the person migrated alone: Why did not the whole household migrate? Please describe what happened if so, or why not.
We would like to know more about your migration history. You have told us already about past migration experiences (*Question 3*). For every past out-migration, could you tell me (1) when you migrated, (2) where you migrated, and (3) what the main reasons for migrating were? What were you doing at your migration destinations?

Do you have any type of land holdings to farm or graze livestock in your place of origin? What happens/ed to them when you migrated?

2b: Impact of Migration

We would like to understand in how far the migration changed your life situation:
How would you describe your economic situation at the moment? How has this developed since you arrived at this place?
In how far do you feel well embedded or disconnected in social relations and access to social services (e.g. access to education, health and housing) at this place? How did this change since you arrived?
If you have been to another destination area before, in how far were these developments (your economic situation, your social relations and health situation) different from this most recent (current) migration?

How has migration changed your positioning within your family, kin, household, or community at the place of origin? How has it influenced your participation in agricultural and financial decision-making?

How do you stay in touch with your family/ household in your place of origin?
What role does your household/ family at the place of origin play in your own life?
Have such roles and the contact to your family/ household changed since you migrated?

How would you describe the role that you have for the wellbeing of your household/family at the place of origin? How much do you feel you are able to contribute to the livelihoods of your household at the place of origin? – *Note for interviewer: For instance, based on remittances sent to origin area, knowledge transfer etc. For probing: whether this applies to coping with and adapting to climate risks.*

How much of an effort does it mean to you to support your household at the place of origin in the way you do so? – *Note for interviewer: if the situation allows, for probing: In how far would you say that you take a "sacrifice" for them / the overall household/family?*
What keeps you motivated to support your household at the place of origin?

What are the positive impacts of migration, and what are the negative impacts of your migration for you as a migrant, and for your household at the place of origin? Overall, would you rate your migration as successful?

2c: Migration "tipping point" responses and opportunities

Above, we asked you about environmental and climatic impacts on your livelihood and your household's wellbeing. Now please think about the situation in your origin area and about the main livelihood activity there (farming/ herding/ wage work). Imagine environmental or climatic issues get much worse or persisted for many years: Up to what extent could you (as a supporting migrant) and your household at origin area cope with losses e.g. in yield or income. For example, through crop stores, savings, or other sources of income or support? Please describe for a minor, medium and severe loss. – *Note to interviewer: if quantification is needed, minor refers to roughly 10%, medium 20%, and severe >50% loss.*

Minor loss
Medium loss
Severe loss

What would be the likely outcomes for you or your household of each level of loss? – *Note to interviewer: Please probe; ask them to describe possible outcomes, such as food shortages, having to skip meals, certain children could no longer go to school, inability to afford medicine, etc.*

Would more members of your household migrate in response to such a loss described above?
At which level of loss: minor, medium or severe?
If yes, who within the household would migrate (young men, women, household head, or the whole household)?
If yes, where would they go to and what type of work would they engage in?
If no, why would they stay?

SECTION III: COMMUNITY ENVIRONMENT FOR RESPONSE STRATEGIES

Part 1: Community mechanisms

Please think about an experience when your "new" community/ social network in the destination area has helped you cope with challenges.
Who provided support/ assistance you received in the destination area (e.g. municipal departments/agencies, migrant associations, civil society organizations etc.)
What means of support/assistance did you receive from them?
Which role did social networks (e.g. contact with other migrants, relatives in the destination area) play in (1) the migration decision but also (2) during the process of migrating and settling in the destination area? How did these contacts help you (e.g. finding a job, accommodation in the destination area?)

Part 2: Equity and inclusion

How were and are decisions about migration made within your household and who makes them?
Was and is migration an option for everyone in your household? If not, who is left out and why? How do you know? – *Note to interviewer: if the person doesn't respond in-depth because examples are needed, please probe: are young women able to migrate to help their families? Are poor families able to migrate? Are non-dominant ethnicities able to migrate? Are tenure-insecure households able to migrate?*

- END -

Annex 5: Database from the HABITABLE Qualitative Interviews

The dataset emanating from the work of HABITABLE Work Package 4 ("Adaptation Solutions"), aimed at investigating the place of climate-related migration among micro- and meso-level coping strategies and adaptation solutions, is publicly available. The authors encourage students and researchers to make use of this resource to investigate their own research questions.

Suggested citation. Serraglio, D., Blocher, J. et al. (2025). *HABITABLE Qualitative Interviews Microdata: Migration Histories, Coping Strategies, and Adaptation Solutions* [Dataset]. https://doi.org/10.5281/zenodo.15050303

Annex 6: Research Validation and Triangulation kick-off workshop participant list

Held at Potsdam Institute for Climate Impact Research (PIK), Telegrafenberg
Wednesday, 5 July 2024

First name	Last name	Organisation	Country of expertise
Daouda	Aba Fané	INSTAT-MALI	Mali
Mumuni	Abu	University of Ghana	Ghana
Julia	Blocher	PIK (WP4)	various
Sidy	Boly	INSTAT-MALI	Mali
Samuel	Codjoe	University of Ghana	Ghana
Florian	Debeve	Uni Liege	various
Dula	Etana	AAU Addis Abba University	Ethiopia
Eshetu	Gurmu	AAU Addis Abba University	Ethiopia
Rachel	Keeton	Uni Twente	various
Boonthida	Ketsomboon	RTF	Thailand
Hervé	Nicolle	Samuel Hall	Kenya
Gianfranco	Nucera	UniRoma	Various
Jared	Owuor	Samuel Hall	Kenya

Fanny	Petitbon	CARE	Various
Etienne	Piguet	Uni Neuchatel	Various
Diana	Reckien	Uni Twente	various
Sarah	Redicker	Exeter (WP1)	Ghana
Ricardo	Safra de Campos	Exeter (WP1)	various
Jacob	Schewe	PIK	Various
Diogo	Serraglio	PIK (WP4)	various
Harald	Sterly	Uni Vienna	various
Sara	Vigil	SEI	Thailand
Kira	Vinke	DGAP	various
Lena	Winter	PIK (WP4)	
Karim	Zantout	PIK	Various
Caroline	Zickgraf	Uni Liege	various
Kristina	Petrova	PIK (WP3)	Various

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