

An aerial photograph of a refugee settlement in a dry, hilly landscape. The sun is low on the horizon, creating a warm, golden glow over the scene. The settlement consists of numerous small, simple dwellings, some with corrugated metal roofs, clustered together. A dirt road winds through the settlement. The background shows rolling hills under a hazy sky.

THE MASTER PLAN APPROACH TO SETTLEMENT PLANNING

Guiding Principles

DIVISION OF PROGRAMME SUPPORT
AND MANAGEMENT
SHELTER AND SETTLEMENT SECTION



UNHCR
The UN Refugee Agency

The Master Plan Approach to settlement planning provides a framework for the spatial design of humanitarian settlements. It establishes a unique response vision aligned to national, sub-national and local development plans and acknowledges the contributions that humanitarian responses can make toward long-term development efforts



Myanmar refugee settlement

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Front cover picture: Aerial view from Shimelba refugee settlement, Ethiopia 2019



Thousands of Rohingya cross border from Myanmar, October 2017

PART ONE: INTRODUCTION

1 - PURPOSE OF GUIDING PRINCIPLES

Data indicates that the average lifespan of a refugee camp is between 17 and 26 years with such settlements developing gradually, and usually organically, from an emergency settlement into what is fundamentally a new town. While this reality has shaped UNHCR's policy framework, with the Policy on Alternatives to Camps¹ asserting the importance of avoiding the creation of camps wherever possible, in some situations, there is simply no alternative to the establishment of a camp (or camp-like settlement). As such, camp-like settlements remain, and will continue to be, an important feature of the humanitarian response landscape.

With this in mind, these guiding principles provide an overview of UNHCR's efforts, undertaken in collaboration with Stanford University and Ennead Lab, to re-think humanitarian settlement planning within the context of displacement crises. These Guidelines seek to further this work, while ensuring the centrality of protection in the design and development of humanitarian settlements in response to situations of forced displacement.

The structure of this guide

PART 1: Introduces the Master Plan Approach and contextualizes this approach within the broader humanitarian response landscape and UNHCR's policy framework.

PART 2: Outlines the Guiding Principles of the Master Plan Approach to settlement planning providing guidance on critical actions and outputs in relation to each principle.

PART 3 (ANNEXES): Includes settlement planning templates to guide field actors in the development of settlement Master Plans, while providing links and references to other resource materials.

Target Audience

These Guiding Principles have been conceived to support the work of Settlement Planners. They are however also intended to facilitate the improved understanding of other UNHCR personnel, and external stakeholders, with regard to the design and development of humanitarian settlements within the context of situations of forced displacement.

These Guiding Principles seek to facilitate the active participation of displaced populations, and the communities which support them, in settlement planning and development with the objective of linking, and ultimately facilitating integration of, humanitarian settlements within the broader hosting environment.

¹ UNHCR Policy on Alternatives to Camps, UNHCR, Geneva (2014) <https://cms.emergency.unhcr.org/documents/11982/45535/UNHCR+-+Policy+on+alternatives+to+camps/005c0217-7d1e-47c9-865a-c0098cfdada62>



Chad refugee settlement, June 2006

2 - HUMANITARIAN SETTLEMENTS: THE RIGHT TO SHELTER AND BEYOND

Shelter is a critical factor affecting the survival of displaced people during the initial stages of a crisis. Beyond survival, shelter is necessary for safety and security, protection from the elements (climate), and to promote resistance to ill health and disease. Shelter also plays an important role in ensuring human dignity, sustaining family and community life, and in supporting people to recover from the impact of displacement.

As such, access to adequate housing is a fundamental human right recognized under Article 11 of the Covenant on Economic Social and Cultural Rights², and is reflected in UNHCR's Global Strategic Priorities. The right to shelter was acknowledged by UNHCR's Executive Committee in 1981, when internationally recognized basic standards of treatment applicable in refugee emergencies were produced and affirmed that;

*“Refugees and asylum seekers should receive all necessary assistance and be provided with the basic necessities of life including food, **shelter** and basic sanitary and health facilities³”.*

The Sphere Handbook also asserts the right to shelter within the context of humanitarian responses. The Handbook notes that, while shelter assistance within the context of humanitarian responses is not a complete expression of the right to adequate housing, emergency standards continue to reflect the core content of the right to adequate housing and thus contribute to the progressive realization of this right.⁴

In 2016, the United Nations General Assembly unanimously adopted the New York Declaration for Refugees and Migrants, and its Comprehensive Refugee Response Framework (CRRF), reaffirming the commitment of member states to the international refugee regime and to strengthening and enhancing mechanisms to protect people on the move. This Declaration included a commitment by member states “to ensure essential support in key life-saving sectors, such as health care, **shelter**... [And] supporting host countries and communities in this regard, including by using locally available knowledge and capacities.”⁵

² *Covenant on Economic Social and Cultural Rights*, New York (1991), UN Committee on Economic, Social and Cultural Rights

³ UNHCR Executive Committee (1981), conclusion no. 22

⁴ Sphere Handbook (2011), <http://www.sphereproject.org/handbook/>

⁵ *New York Declaration for Refugees and Migrants*, United Nations, New York (2016), [A/RES/71/1](#), paragraph 80

The draft text of the Global Compact on Refugees (GCR) reiterates, and expands, the requirement to ensure access to adequate housing for displaced people referring to action needed to “improve the quality of human settlements, including the living and working conditions of both urban and rural dwellers”⁶.

This guide builds on organisational commitments to supporting access to adequate housing for displaced people, and, in line with the GCR, adopts a comprehensive approach to addressing shelter needs through a wider ‘settlement’ optic. It considers that shelter responses – whether emergency, transitional or durable – cannot be considered in isolation but instead must take into account the settlement (geographical area) in which households are sheltered, and the transformation requirements of settlements over time.

Defining settlement planning

Settlement refers to the context (geographical area) in which households exist, and how one shelter relates to another. In structural terms, a settlement is to a community what a shelter is to a household or family. Settlements shape how households relate to one another to form communities, and therefore must respond to needs and aspirations of communities, including the specific and differing needs of individuals within these communities, with regard to safety and security, access to services, economic opportunities, and socio-cultural life.

A settlement can vary in size from a small number of dwellings grouped together, to the largest of cities. Settlement typologies cannot be rigidly defined since they depend on, and respond to, community needs. **Settlements can however be urban or rural, formal or informal**; the Sphere Handbook provides more information regarding the different types of settlement.⁷

Humanitarian settlement planning is the process by which the spatial allocation of land is decided in support of the protection, access to basic services, livelihoods, and socio-cultural life of displaced people and the host community.

The proper planning of settlements is crucial as it provides a basis for the sustainable development of communities; facilitating the integration of displaced populations, contributing to the peaceful coexistence of communities and defining land use to meet the needs of those displaced within the wider national governance and development framework.

⁶ *Global compact on refugees*, United Nations, New York (2018), [A/73/12](#) (part II), paragraph 79

⁷ *Sphere Handbook* (2018)

New access road to Kutapalong refugee settlement, Bangladesh 2017



Settlement planning in humanitarian contexts

Any humanitarian intervention which addresses a shelter or settlement need should support the affected population in a way that provides **the best possible living conditions in a safe location**, taking into consideration specific needs of individuals and with the aim of ensuring protection standards are met. Such interventions also need to be forward looking and support the development of solutions and resilience amongst displaced and host communities living conditions in a safe location.

While UNHCR's Policy on Alternatives to Camps promotes the pursuit of alternatives to camps whenever possible, the reality is that globally over 10 million displaced people are reported to be living in humanitarian settlements. Furthermore, in refugee emergencies, the establishment of planned settlements (camps) continues to be the solution of last resort especially when operating in rural areas. Shelter and settlement support in camps can be provided within:

- **Formal settlements**, in which the land has been allocated by relevant authorities for humanitarian settlement purposes;
- **Informal “spontaneous” settlements** in which shelters have been constructed on land which has not been allocated for such purposes, or which displaced persons occupy illegally.

Typically, shelter and settlement responses in camps gradually evolve from meeting the initial needs of displaced persons, to addressing a wide range of medium-term requirements generated by protracted crises, and ultimately to supporting solutions. Within the context of a phased response, shelter or settlement interventions should support of the well-being of displaced persons, and broader community development, through an emphasis on:

- Supporting girls, women, boys and men to achieve **the best possible living conditions in a safe location**, while taking into consideration the specific needs of certain individuals;
- **Linking humanitarian responses to recovery and development** through ‘forward-looking’ and ‘solutions-focused’ design and development of humanitarian settlements;
- **Identifying risks** to the sustainable development of settlements, and taking proactive steps to **strengthen local resilience capacities**.

To ensure sustainability settlements, and mitigate the potentially negative consequences of camp creation, an emphasis on solutions and development from the onset of a settlement response is essential. In line with the provisions of the Comprehensive Refugee Response Framework (CRRF), this includes the involvement of development actors and relevant national, sub-national and local authorities from the various sectors. The Master Plan Approach to settlement planning seeks to provide a framework for the design and development of humanitarian settlements which will facilitate the evolution of camps into sustainable communities, and ultimately facilitate their integration into the wider hosting environment.

Where camps must be established, or where they already exist, UNHCR will capitalise upon the Master Plan Approach to enable camps to be phased out at the earliest possible stage. Where this is not possible or practical, UNHCR will pursue the progressive removal of restrictions on the ability of refugees to exercise their rights. Linkages will be formed between the displaced and host communities, while the camp settlements will be anchored within the local economy, infrastructure and national social protection and service delivery systems, with a view to transforming camps into sustainable settlements.



Kambioos refugee settlement, Kenya 2016

3 - THE MASTER PLAN APPROACH

The Master Plan Approach to settlement planning provides a **framework for the spatial design of humanitarian settlements**. It establishes a unique response vision aligned to national, sub-national and local development plans and facilitates efforts to link humanitarian responses with long-term development efforts.

While the principles outlined in this guide are applicable to humanitarian settlement responses in a range of contexts, they can be most concretely applied in rural humanitarian settlements (camps). They can be used to **(a) guide the development of new humanitarian settlements (b) develop a framework for the upgrading or consolidation of existing humanitarian settlement** in support of improved living conditions and inclusion.

Through effective settlement design, the Master Plan Approach seeks to:

(1) Facilitate the achievement of long-term, area-based, development priorities through the development of humanitarian settlement plans which are in alignment with national development plans and policies.

In today's world, displacement situations are increasingly protracted with humanitarian settlements often transitioning into new towns. In response, the Master Plan Approach emphasizes the development of forward-thinking settlement plans which are in alignment with national development and sub-national plans and priorities. Through the adoption of the Master Plan Approach, settlement plans provide a collective vision for development including options for the incremental upgrading of settlement infrastructure to meet the needs of future populations.

(2) Provide an enabling environment for the sustainable integration of displaced populations within host communities through improved, equitable and safe access to basic services, including comprehensive health, education, and economic opportunities.

For displaced individuals, the loss of home and community can be hugely traumatic. Therefore, in the first instance, the Master Plan Approach seeks to facilitate access to the basic services and livelihood opportunities required by displaced persons to begin the process of rebuilding their lives. Settlements must be both life-saving and life-enabling.

The Master Plan Approach also promotes the equitable provision of basic services through the upgrading of existing infrastructure, and the strategic positioning of new facilities in geographical locations which serve the needs of displaced and host populations.

(3) Mitigate risks to the protection of displaced people, peaceful coexistence of communities and sustainable local development

Displacement crises have a disproportional impact on the most impoverished, and often resource depleted, areas. As such, the Master Plan Approach facilitates the design of settlement infrastructure (size, location etc.) in a manner which will serve the needs of both displaced and host populations thus minimizing protection risks, potential sources of conflict and encouraging peaceful coexistence.

Outputs of the Master Planning Process

A Master Plan denotes the set of settlement planning documents – technical drawings and associated narratives - that illustrate an integrated vision for humanitarian settlement development.

Following their initial completion, these documents should remain **living documents**. Plans should be routinely reviewed and revised to respond to contextual shifts, changes in needs, and to integrate the conclusions of implementation monitoring. Actions taken to monitor implementation should include opportunities for displaced people and members of the host community to provide feedback on settlement development.

Work in Progress

The Master Plan Approach is nevertheless a work in progress with the principles outlined in this Guide drawn from a review of initial Master Plan experiences within the context of refugee responses in; Chad, Kenya, Malawi, Nepal and Uganda. This guide will be revisited following further practical application of these principles.

Community meeting in Kwale, Kenya 2017





Aerial view from Kobe refugee settlement, Ethiopia

PART TWO: GUIDING PRINCIPLES

Spatial planning scales

The Guiding Principles outlined in this document relate to considerations at three spatial scales relevant to the design and development of humanitarian settlements; macro, meso and micro. An understanding of these spatial planning scales, and how considerations at each level drive settlement design, is an essential element of the Master Plan Approach to settlement planning.

(1) MACRO-LEVEL refers to the largest scale of study, and considers settlement design in relation to the territory in which the humanitarian settlement is located.

At this level of study, the settlement should be considered in relation to the national and sub-national context. Key considerations will include; national road networks, trading routes and commercial centres, amongst others. These reflections will shape decisions related to where a new humanitarian settlement should be located, and as such, macro-level assessment and decision-making should be undertaken within the context of preparedness and/or the assessment stages of the operations management cycle.

Macro-level analysis can help the host region to fulfill their own development plans as well as the needs of the incoming displaced population.

(2) MESO-LEVEL refers to the intermediate scale of study, and considers settlement design in relation to the locality in which the settlement exists.

At this level of study, the settlement should be considered in relation to neighbouring host community settlements with a view to ensuring harmony between the design of the humanitarian settlement and the wider hosting environment. Key considerations include; existing basic services (such as health and education); access to food and livelihoods; and existing infrastructure (including roads, stormwater networks, water supply, energy grids and systems, waste and sewage networks) and local building practices. These reflections will shape decisions regarding the development and positioning of basic service facilities and infrastructure, as well as plot arrangements and the type of shelter construction. Macro-level assessment and decision-making should be undertaken within the context of the assessment and planning stages of the operations management cycle.

(3) MICRO-LEVEL refers to the smallest scale of study, and considers the design and development of the settlement itself.

At this level of study, settlement planners need to define the spatial organization of the settlement at community/neighbourhood, village/block and plot/shelter level. Infrastructure and basic services requirements also need to be defined with an emphasis on the number, profile and geographical distribution of the people requiring access.



Macro-level scale

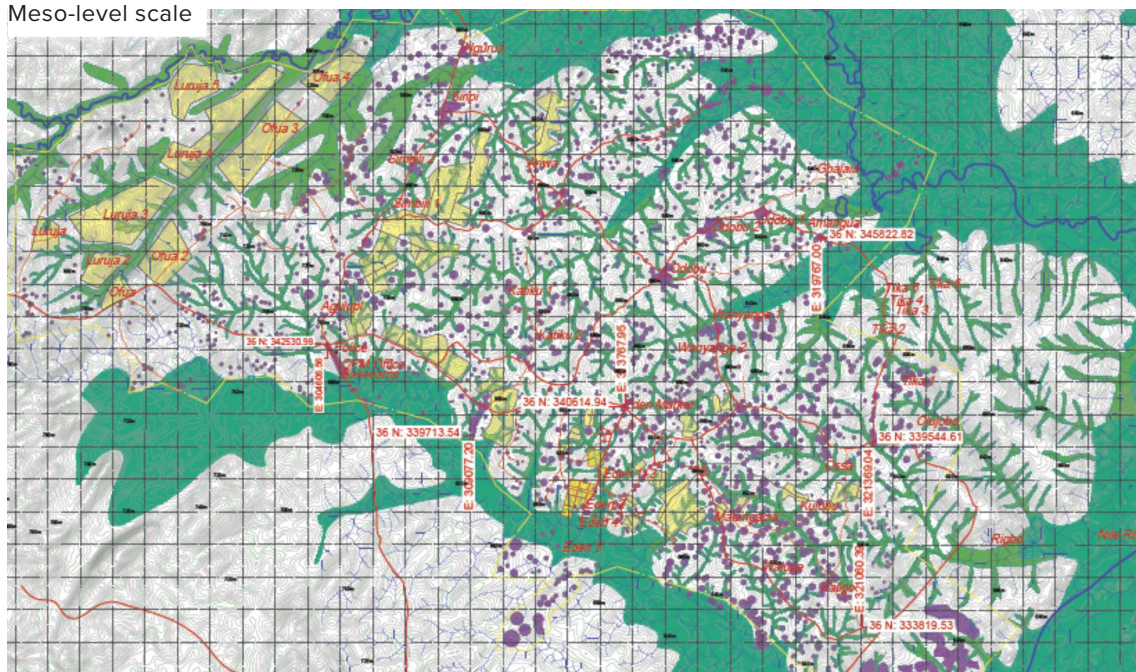
SETTLEMENT LOCATION

The choice of settlement location is a critical decision which will have significant impact on the protection and well-being of displaced people, as well as broader local development. While a well-positioned settlement can have multiple protective benefits and contribute to local development, a settlement in the wrong geographical location can threaten the protection and assistance of displaced persons and have negative consequences for local development and the peaceful coexistence of communities. As such, site selection must ensure:

- Access of displaced persons to existing services (such as health and education facilities);
- Access of displaced persons to land, markets and transportation infrastructure required to maintain viable livelihoods;
- Risks of natural disaster (such as flooding & landslide) are not present and/or can be effectively mitigated;
- Humanitarian settlements are not established in geographical locations which could threaten peaceful coexistence of communities (e.g. areas with important cultural value, grazing land).

Further guidance on site selection is provided in the subsequent Guiding Principles.

Meso-level scale





Dadaab refugee settlement, Kenya

1

PRINCIPLE 1

NATIONAL LEGISLATION, POLICIES & PLANS PROVIDE A FRAMEWORK FOR SETTLEMENT DESIGN

Many humanitarian settlements eventually serve as the footprint for new towns. Given the implications of poor planning decisions in the initial stages of a response on the long-term development of a geographical area, it is important to recognize that humanitarian settlements do not occur in a vacuum but within the wider national, sub-national and local development context.

As such, settlement design should be guided by, and support, national legislation and policies, as well as relevant minimum standards for emergency response as detailed in the Sphere Handbook and UNHCR's Emergency Handbook.⁸ When developing a settlement Master Plan, prior to defining site carrying capacity and reflecting on spatial layouts, settlement planners should first collect and analyse relevant documentation which will provide a framework for settlement design and the coordination of settlement development. The following documents are of specific importance:

- **Domestic legislation and policies pertaining to asylum and displacement.** Settlement planners should, in particular, ascertain who is the responsible authority for the management of refugee and other displacement issues, as well as the extent to which refugees have the right (and ability) to access nationally provided rights and services (e.g. right to access national education, housing, employment, justice services).
- **Domestic legislation and policies on development planning.** This is relevant to understanding who is responsible for overall development planning (including political, economic, social, environmental and spatial dimensions) at national, sub-national and local levels. Generally, the legal framework for development planning finds a basis

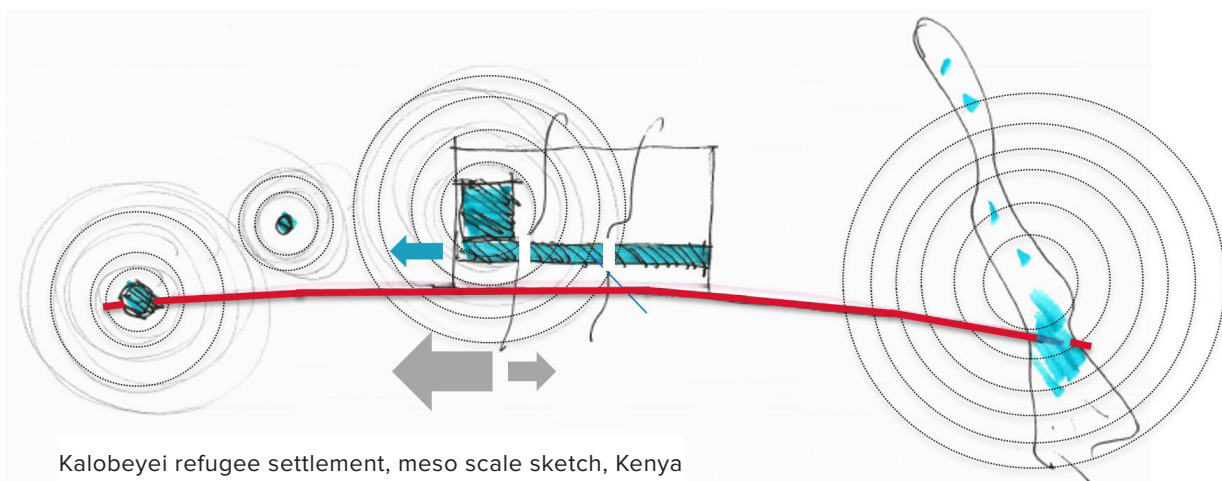
⁸ UNHCR Emergency Handbook, *UNHCR*, <https://emergency.unhcr.org/>

in the constitution or national planning legislation, which assigns and defines the responsibilities of the authority for national level planning. Legislation on the decentralization of government functions may also exist and provide details of planning responsibilities at the sub-national levels. Legislation, and its level of implementation, will differ from country to country.

- **Legislation and policies on decentralization.** Decentralization legislation is not only relevant to understand the planning responsibilities of sub-national government, it is also important in understanding the service delivery responsibilities of different spheres of Government. This will give an idea whether, for instance, water and sanitation or housing services are the delivery responsibility of the national government, or sub-national government (e.g. district, urban or village councils). In some countries, traditional chiefs have formally assigned responsibilities under the decentralization legislation. Often housing and town planning is the full responsibility of sub-national government. It should be noted that the extent to which service delivery responsibilities are decentralised will vary both from country to country, but also between government ministries and departments within any one country.
- **National and sub-national development plans.** These are policy, not legislative, documents that are the result of development planning. They are relevant to understanding the government's development priorities (for instance, significant planned improvements to national and sub-national road networks or specific objectives related to land use) for the area of the settlement within a certain timeframe.
- **National and local planning regulations.** The spatial design of humanitarian settlements must also comply with national and local planning regulations and building codes. Planned infrastructure, and basic service provision, should be in line with national standards and support the initiatives and priorities outlined in national development plans.

Given the linkages between humanitarian settlements and local development, the process of humanitarian settlement design and development should be undertaken in close collaboration with national technical agencies and services responsible for planning and development. Field teams should be aware that, within the context of national governance systems, these technical services are likely to report to a different line ministry than the one responsible for the management of refugee and other displacement situations.

Also take this opportunity to identify and engage other actors with existing or planned area-based engagement such as development actors (e.g. European Union, World Bank), UN agencies or NGOs.



Kalobeyei refugee settlement, meso scale sketch, Kenya



Informal settlement with displaced population in Soacha, Colombia

PRINCIPLE 1

KEY MESSAGES

- Many humanitarian settlements eventually serve as the footprint for new towns, and therefore the implications of poor initial decisions regarding settlement design and development can be significant.
- Before embarking on the design of a humanitarian settlement, take steps to understand relevant national legislation and policies. Understanding policies and roles and responsibilities within the national and sub-national governance systems will provide a framework for the design and development of the settlement.
- Closely coordinate with national and sub-national, regional and local planning authorities throughout the settlement design process, and engage other actors where relevant.
- Ensure that the spatial design of the settlement is in compliance with national and local planning regulations, national building codes and emergency response minimum standards.
- Design infrastructural improvements with a view to supporting national and sub-national development plans and priorities.

OUTPUTS

- A consolidated list of national legislation, development plans, standards, parameters, and existing or foreseen engagement of other actors relevant to the development of a given humanitarian settlement with clearly indicated sources.
- A stakeholder analysis identifying key government stakeholders to be engaged in the next steps of humanitarian settlement design based on an analysis of mandated responsibilities provided by the national legislative framework.



Burundian refugee settlement, Tanzania 2015

2

PRINCIPLE 2

ENVIRONMENTAL CONSIDERATIONS DRIVE DESIGN

Exposure to natural disasters, environmental degradation and natural resource conflict pose serious risks to the protection and wellbeing of both displaced people and host communities, while threatening the long-term sustainability of settlements. Environmental considerations therefore must inform decisions with regard to the geographical location of humanitarian settlements, and the definition of site carrying capacity and layout.

An environmental assessment of a proposed humanitarian settlement site should be undertaken to inform settlement design. Should time or resources for a complete environmental assessment not be available, settlement planners can use the [UNHCR Master Plan Assessment Template \(MPAT\)](#) and/or conduct a [Rapid Environmental Assessment \(REA\)](#), this exercise must consider:

- **Natural resource assets:** which natural resources are available in and around the proposed settlement site? What is the current condition of natural resources? Are there natural resource assets of notable local, regional or global importance? Are the natural resources protected under any international, national or local conventions or laws? Will the selection of the proposed site endanger or enhance any of these natural resources? If the proposed site is selected, can any negative impacts be effectively mitigated? If the proposed site is selected are there opportunities to enhance any of these natural resources? What are the natural resource requirements of displaced and host communities (land, water, fuel)?

Example: a new settlement near forest or woodlands is likely to result in (or exacerbate) problems of deforestation due to requirements for firewood or shelter construction. If this occurs at a rate faster than the forest is able to replenish itself;

- Irreversible deforestation could occur, as could water pollution, flooding and landslides;
 - Displaced populations, in particular women and girls, would need to travel longer distances to access fuel/wood thus elevating protection risks, including sexual and gender-based violence;
 - Over-exploitation of the forest would result in depleted resources to serve host community needs thus exacerbating intercommunal conflict between host and displaced populations.
- **Natural resource threats:** how are communities currently managing natural resources in and around the proposed settlement site? Are resources already scarce or over-exploited? What are the main drivers of resource scarcity or abundance at the site? How are regional or global environmental trends like climate change expected to impact local resource availability? Is the selection of the proposed site likely to engender conflict for resources between displaced people and/or members of the host community now or in the future?

Example: the development of a humanitarian settlement in an area used by pastoralists to graze livestock, is likely to result in hostile relations between displaced and host populations. These inter-communal tensions are likely to have a negative impact on both self-reliance and the long-term integration of displaced populations within the wider host community.

- **Risk of natural disaster:** is the proposed site a safe place for a humanitarian settlement? Is the proposed site in an area which is historically affected by natural disasters (such as floods or landslides)? Do climate change projections indicate that local natural disasters will become more frequent or intense? Would the development of a humanitarian settlement in this area exacerbate the risk of natural disasters?

Example: the development of a humanitarian settlement in an area historically affected by floods would pose a risk to the physical safety persons of concern, as well as risking financial investments made in the development of the humanitarian settlement itself. Natural risks will also affect outside investment in the area and the long-term viability of the settlement.

The nature of negative environmental impact will be shaped by the local physical environment and regional and global environmental trends as well as the phase, and nature, of the response. In undertaking an environmental assessment of a proposed humanitarian settlement location, the settlement planner should work closely with environmental experts. This could include UNHCR environment specialists at country, regional or HQ level, and/or external experts.

Niger refugee settlement





Sudanese refugee in Chad

PRINCIPLE 2

KEY MESSAGES

- Always conduct an environmental assessment with the support of requisite expertise, and use of appropriate assessment tools.
- Never select sites which are historically affected by natural disasters and/or are less than 1 day's walk of a protected area (wildlife reserve).
- Actively consider the natural resource requirements (land, water, fuel) of the displaced and host populations, and design measures to mitigate environmental damage or potential resource conflict. Within this framework, consider potential shelter (construction) options over time, and their potential impact on the environment and natural resources.
- To the maximum extent possible avoid major land transformations. Maintain the existing ground cover (grass, shrubs, trees) of the proposed site, and prioritize sites that have sufficient ground cover as vegetation provides shade, protects from wind and reduces erosion and dust.
- Integrate 'green buffer zones' in settlement design to reduce problems of soil erosion, and help to recharge aquifers. Ideally, buffer zones should be next to rivers and water channels.

OUTPUTS

- Completed [UNHCR Master Plan Assessment Template \(MPAT\)](#)
- Completed Rapid Environmental Assessment (REA)
- Initial steps taken towards the development of an Environmental Action Plan (EAP)



3

PRINCIPLE 3

DEFINING SITE CARRYING CAPACITY

In rural contexts, site carrying capacity is understood as the maximum number of people, animals, or crops which a given territory can support. Site carrying capacity is therefore shaped in large part by the available natural resources, their quality, and competition to access them.

- ▶ When defining site carrying capacity, particular attention should be afforded to the availability of water, fuel, construction materials, food and land for livelihoods.
- ▶ The **carrying capacity of each of these resources should be expressed in terms of number of individuals/ per square kilometre. The results of this analysis should inform the spatial design (layout) of the humanitarian settlement.**
- **Water:** While assessment of available water sources is beyond the scope of this document, settlement planners must engage in discussions with appropriate experts regarding the quantity and quality of water available. Based on these consultations, settlement planners will need to estimate the number of people these water sources can serve. The following steps and minimum standards for water provision in emergency and post-emergency phases should be respected;
 - Calculate water demand ensuring that all minimum water needs are considered. National standards should be used for defining daily provision of potable water, in their absence refer to the [UNHCR WASH Manual](#);
 - Minimum standard for domestic use (~20 litres per day);⁹
 - Always conduct an integrated water resource management study to determine the sustainable volume of water available within the catchment, and the water demands from the host and displaced population;

⁹ UNHCR WASH Standards (2018), <http://wash.unhcr.org/unhcr-wash-standards-and-indicators-for-refugee-settings/>

- Calculate water supply in relation to the results of the catchment analysis which determines the sustainable volume of surface and groundwater available. Consider water quantity, quality, and cost of extraction/treatment;
- The sustainable **water supply volume must be more than or equal to the water demand**, otherwise, there will be a significant impact on the environment, and sustainability of the settlement.

The carrying capacity of the site in relation to water supply **is the maximum sustainable supply volume within the catchment area divided by the total water requirement per person within the catchment.**

Example: A catchment with accessible and sustainable groundwater and surface water volume of 1012m³ per day would have carrying capacity for 100 individuals (both host and displaced).

This is based on the standard of ~20 L/p/d for domestic use.

- **Fuel:** Access to fuel, most commonly firewood, is critical to the well-being of persons of concern. To ensure a sustainable supply, and mitigate the negative environmental impact, it is critical to assess fuel (firewood) supply, and to evaluate the probable rate of consumption vs. regeneration. It is strongly recommended to pursue alternative access to sustainable energy.
- **Land for livelihoods:** The concepts of site planning and self-reliance are intrinsically linked. Humanitarian settlements which are designed without adequate consideration of the land requirements of the productive activities of displaced people reinforce reliance on assistance and prevent self-sufficiency. Some displaced populations will be traditionally reliant on agriculture and pastoralism for livelihoods, and survival, more than others. This is often reflected in their social structures, gender roles and ultimately their requirements for land.

How to assess site carrying capacity for planning purposes?

Refer to the [UNHCR Absorption Capacity Profile Template](#).

Burundian Nyarugusu refugee settlement, Tanzania





Nduta refugee settlement, Tanzania

PRINCIPLE 3

KEY MESSAGES

- The surface area used for the calculation of the site carrying capacity should be determined by the Usable Land Area (ULA) of the site.
- Particular attention should be given to the required resources and availability of water, fuel and land for livelihoods.
- Calculate water balance (supply vs demand) based on principles of sustainable integrated water resource management at the catchment level taking into consideration demand from both displaced and host populations.
- Pursue alternative access to sustainable energy where possible.
- Humanitarian settlements which are designed without adequate consideration of the land requirements of the productive activities of persons of concern reinforce reliance on assistance and prevent self-sufficiency.

OUTPUTS

- Completed [UNHCR Absorption Capacity Profile Template](#).
- Integrated water resource management study to determine the sustainable volume of water available.



Refugee settlement, Chad 2009

4

PRINCIPLE 4

DECISIONS ABOUT DENSITY MUST BE TAKEN IN CONTEXT

Population density refers to the number of people per square kilometre.

While high population density within a humanitarian settlement could be considered to be more efficient, given the potential to centralize and optimize services and infrastructure, high population density within humanitarian settlements has been shown to increase pressure on resources and services, increase the likelihood of communal conflict, increase risk of fire, and also to elevate protection and health risks.

As such, where possible, **high population density should be avoided in the design of rural settlements**, while spatial decisions should be guided by local planning regulations (see principle 1). In addition to planning regulations, density and spatial layouts need to be defined with adequate consideration of the local context;

- How have settlements in the hosting area been designed? Consider their form, morphology and local architecture.
- What is the population density in these settlements?
- What type of settlements are these – rural, peri-urban or urban?
- How are they structured?

The responses to these questions will guide the settlement planner in the development of a spatial concept which is in harmony with the wider hosting environment. A clear distinction should however be made between urban and rural environments, as **in urban areas densification is considered to support sustainable settlement development through the creation of urban centres facilitating efficient service provision.**



Aerial view from Nayapara refugee settlement, Bangladesh

The density of 216 humanitarian settlements from the Mediterranean area and sub-Saharan Africa has been analyzed to estimate the median square meters per person⁹. The findings outline the following results:

- The median from 121 humanitarian settlements in West, Central, East and Horn of Africa is approximately **78 square meters per person** (12,800 persons per square kilometer)
- The median from 79 humanitarian settlements in Middle East and North Africa is approximately **24 square meters per person** (41,200 persons per square kilometer)
- The median from 16 humanitarian settlements in Greece, Europe is approximately **56 square meters per person** (17,750 persons per square kilometer)

PRINCIPLE 4

KEY MESSAGES

- Use the [UNHCR Master Plan Assessment Template \(MPAT\)](#) to assess the density of humanitarian settlements.
- Avoid, where possible, high population densities in rural humanitarian settlements.
- Spatial decisions must be guided by local planning regulations.
- Look outwards, and seek harmony, when defining settlement density; what is the density of the neighbouring host community? What forms do host community settlements take?
- High density has a direct impact on the carrying capacity of a given site. In humanitarian responses, high density is commonly related to protection concerns, risk of fire, gender-based violence and promiscuity.
- High density could have positive connotation when safety standards are respected, protection principles are ensured and sustainability is guaranteed. Within an existing settlement, the densification of certain well-served areas could help to absorb the decongestion of less favourable ones.

OUTPUTS

- Completed [UNHCR Master Plan Assessment Template \(MPAT\)](#)

⁹Data extracted and analyzed from the Atlas of Refugee Camps. Juana Canet Roselló. Assoc. Professor Polytechnic University of Madrid 2019



Somalian returnees at school

5

PRINCIPLE 5

SUPPORTING SAFE AND EQUITABLE ACCESS TO BASIC SERVICES

Access to adequate basic services for displaced people living within humanitarian settlements is essential. Access to basic services which are lifesaving and/or required on a daily basis, such as health, water, food and education, is an absolute requirement of settlement design and development. In addition to these lifesaving services, settlement planners should consider the full range of services that displaced people require in order for protection and solutions to be achieved. The services include those related to; the rule of law (such as police and courts), other emergency services (such as fire service), civil registration & documentation (such as birth registration offices), religious facilities and those which facilitate the pursuit of sport and other leisure activities.

- **Assessment:** Basic service requirements vary from settlement to settlement, as they are largely defined by the profile and needs of the displaced population. Given this reality, participatory assessments and approaches undertaken in collaboration with protection colleagues are essential in defining the basic service requirements of a given settlement. Assessments should include the analysis of gender differences within communities, including an analysis of the socio-cultural dynamics that prevent or encourage women, men, girls and boys in accessing basic services. Further specific information on gender integration into shelter/settlement design and planning, refer to the [IASC gender handbook](#).¹⁰

Settlement planners should also be aware that in many countries there are legal requirements for community involvement in the development of new services and/or infrastructure. These obligations are typically outlined in local government and decentralization legislation. In addition to ensuring the active engagement and participation of displaced people, it is recommended to work with local decentralised service authorities in relation to activities pertaining to their areas of jurisdiction.

¹⁰ Gender Handbook, IASC, http://www.who.int/hac/network/interagency/b8_shelter.pdf

- **Mapping of existing basic services:** While existing basic services in proximity to humanitarian settlements are often under-resourced, and therefore already struggling to meet the needs of the host population, they are nevertheless the building blocks for equitable access and integrated service provision for displaced and host populations. Settlement planners should therefore map existing basic services, their capacity and how they compare with national guidelines and standards prior to defining basic service provision for the settlement.

How to assess basic services for planning purposes?

Refer to [UNHCR Basic Services Mapping Template](#).

- **Defining gaps:** Settlement planners should be aware of, and respect, minimum standards in relation to travel time to basic service centres (particularly schools and health centres). Travel time/ distance between shelters and basic service facilities requiring access by children should not be more than half an hour, which represents a maximum distance of 2.5 Km. While travel time/ distance between those services required by adults should not exceed one hour, which represents a maximum distance of 5 Km.

The respect of maximum distances/ travel time is essential in mitigating risks of gender-based violence for women and children who are at increased risk when the travel time to basic service facilities is increased. The proximity of basic services also frees up time for women, men, girls and boys to undertake other useful activities such as attend school, engage in productive activities and participate in community life.

- **Supporting inclusion & integration:** Increased pressure on basic services resulting from displacement crises can result in conflict between displaced and host communities. As such, the development of basic service facilities should seek – as far as possible – to establish, reinforce and develop existing national basic services to provide improved services to both displaced and host communities.

Where displaced people cannot access existing national basic services, due to distance or other factors, the construction and geographical positioning of new basic services facilities should seek to facilitate the shared use of the new facilities by both displaced and host communities.

It is also important to consider that basic service facilities will, now or in the future, be managed and/or resourced by the government, and their resourcing will be in line with national guidelines and standards. The definition of capacity gaps and the design of basic service provisions should therefore be undertaken by the local authorities responsible for basic service, and in relation to national standards guiding the service provision in a given sector.

- **Access:** Settlement planners often define access to basic services exclusively in terms of spatial perspectives of travel time and distance; this however overly simplifies the question of access.

Access, and barriers to accessing, basic services are shaped by a broad range of physical, social, economic and environmental factors, which must be considered in the definition of social service provision. Practical examples of the barriers that displaced people may face in accessing basic services facilities (which are within specified time/ distance parameters) include; risks to personal safety (such as land mines and other unexploded ordnance, crime and/or sexual and gender-based violence), intercommunal conflict (such as ethnic or resource conflicts between communities), and economic barriers (such as the requirement to pay for services).



Water facility in North Lebanon

PRINCIPLE 5

KEY MESSAGES

- The primary objective when defining basic service provision is to ensure safe and equitable access to basic services.
- Settlement planners must engage protection officers in the design of basic service provision to; (1) define basic service requirements of the displaced population and (2) identify barriers to access.
- Existing basic services are the building blocks for equitable access and integrated service provision for displaced and host populations. Work with local authorities and colleagues to map existing services and identify gaps in relation to national standards.
- The development/ upgrading of existing basic services is always preferable to the creation of parallel systems or services.
- The shared use basic services by displaced and host communities should be considered as one of the primary objectives of the settlement design process given its role in facilitating peaceful co-existence and ultimately integration.

OUTPUTS



Zaatari refugee settlement, Jordan 2013

6

PRINCIPLE 6

Completed [UNHCR Basic Services Mapping Template](#)

PROVIDING AN ENABLING ENVIRONMENT FOR LIVELIHOODS AND ECONOMIC INCLUSION

Improving livelihoods and ensuring economic inclusion is key to achieving protection and solutions outcomes for displaced people. Supporting displaced people to provide for themselves, and their families, mitigates problems of aid dependency and negative coping strategies while building resilience.

UNHCR experiences working within a range of humanitarian settlements, have however underlined the impact of poor settlement planning choices on the livelihoods, economic inclusion and self-reliance of displaced populations. Specifically, humanitarian settlements which are located in isolated areas, or which do not support productive and/or economic opportunities, ultimately weaken the ability of displaced persons to respond to their own needs.

Within the context of reduced humanitarian funding and increasingly protracted displacement situations, which often result in displaced people remaining within humanitarian settlements for over 10 years, the impact of poor decision-making is significant. As such, settlement planners must actively consider the livelihoods and economic inclusion of displaced population in site selection and settlement design processes.

In line with Core Standard 1 of the Minimum Economic Recovery Standards, humanitarian programmes should be market aware.¹¹ As such, in the design and development of humanitarian settlements, settlement planners should:

Ensure that socio-economic and market information informs settlement design

- ▶ Understanding market realities, and how market systems work, is essential to the geographical positioning, design and development of humanitarian settlements.
- ▶ Consider the main livelihoods and economic activities in the area and the skills and productive assets displaced people possess which would allow them to engage in these activities.

Ensure access to livelihoods capital, which could be social, natural, physical, financial or human.

- ▶ In a context where the host economy relies largely on agriculture, and where displaced people are herders and farmers, the availability of and access to land for grazing, rain-fed agriculture and irrigation agriculture would be a priority consideration in selecting and developing a site.
- ▶ In some contexts informal livelihoods may be more valuable, or used to complement agricultural activities, and displaced people often have skills in running small businesses. In this case, appropriate spaces and infrastructure that support informal livelihoods should be allocated/ established. The proximity of the settlement, and/ or access, to existing urban-rural market centres would also be of critical importance in supporting formal and informal livelihoods.

Work with livelihoods colleagues consider access to available services, and support functions, required for livelihoods

- ▶ To facilitate economic inclusion, displaced people will need to access services such as financial services (loans, saving accounts, etc.), training (vocational, business, etc.), and infrastructure (internet, water, etc.). Thus, choices related to site location should not limit access to relevant service providers, infrastructure and technology.

Consider rules and regulations that support or limit the engagement of displaced people in economic activities

- ▶ Access to livelihoods is regulated by formal and informal rules and regulations that support, or limit, the engagement of displaced people in economic activities.
- ▶ As a result of these rules and regulations, which are sometimes dependant on the geographical location of the settlement, the engagement of displaced people in certain value chains, economic sectors or occupations might be allowed or forbidden.
- ▶ For example, displaced people residing in urban or peri-urban humanitarian settlements may not be permitted to engage in agricultural or livestock activities given the sites proximity to an urban centre.

Consider the impact of humanitarian settlement development on the local economy.

- ▶ The location and design of a humanitarian settlement can have positive and negative consequences for some value chains.
- ▶ Prices and production costs may increase or decrease, while the supply and demand of goods and services may also be affected.
- ▶ Take time with other members of the team to understand these dynamics, and take steps where possible to increase economic benefits and mitigate harmful consequences.



Vietnamese refugees in China

PRINCIPLE 6

KEY MESSAGES

- Poor choices related to the location and design of humanitarian settlements can have a negative impact on the livelihoods, economic inclusion, and self-reliance of displaced populations.
- Socio-economic, and market information, should inform settlement design to ensure access to livelihoods capital, support services, and economic opportunities.
- Consider the main livelihoods and economic activities in the area, and the skills and productive assets displaced people possess that would facilitate their engagement.
- Ensure displaced populations have access to the resources, and support services, needed to engage in livelihood activities. Specific attention should be paid to access to land for livelihoods from the onset of the response; this could be for agriculture, grazing, production or commerce.
- Do not develop humanitarian settlements in areas which are prohibitive to livelihoods. Specific attention should be paid to isolated areas with poor connectivity (roads) and geographical locations where rules or regulations prevent, or limit, the livelihood activities of displaced persons.

OUTPUTS

- Site plan including zoning (land allocation) for livelihoods
- Working with livelihoods colleagues, consider undertaking;
 - - Socio-economic Assessment
 - - Market System Analysis



IFO refugee settlement, Kenya 1992

7

PRINCIPLE 7

ADDRESSING HOUSING, LAND AND PROPERTY ISSUES THROUGH AN INCREMENTAL TENURE APPROACH

Security of tenure is best understood as a set of relationships with respect to housing and land, established through statutory or customary law, or a combination of the two, that enables a person to live in or on his/her home/land in security, peace and dignity. All persons should possess a degree of security of tenure, which guarantees legal protection against forced eviction, harassment, and other threats. Security of tenure is an integral part of the right to adequate housing and a necessary ingredient for the enjoyment of many other civil, cultural, economic, social and political rights.

Displaced people living within humanitarian settlements often face challenges in achieving security of tenure due to unclear arrangements regarding; the ownership of the land on which they are settled, the duration of their stay, what they can (and cannot) do with the allocated land and shelter/housing, and entities which can support them in cases of challenges or disputes.

Even if there is clarity on the rights of displaced people over their allocated parcels and/or shelter, these rights are often extremely limited. As a result of challenges in achieving security of tenure, displaced people living within humanitarian settlements are often among those most at risk of (forced) eviction; increasing their vulnerability and undermining the protection of rights and self-reliance.

While it may not be possible to completely resolve these issues, especially within the initial phase of a response, settlement planners must ensure a minimum level of security of tenure before proceeding with settlement design and development processes. Key actions include:

- ▶ Ensuring clear land demarcation and clarifying the status and ownership (which may be customary) of the land identified for a humanitarian settlement;
- ▶ Seek agreement on the purpose for which the land will be used, duration of the use, type of rights and conditions of residence (e.g. use or ownership rights over shelter, permissible shelter improvements) and other key issues;
- ▶ Document agreements with relevant (national, local, customary, etc.) authority or private landowners, and ensure these are signed;
- ▶ Following the initial emergency response, take action to increase the security of tenure for displaced populations. It should be noted that this should not be through the purchase or rental of land by UNHCR, as UNHCR neither purchases nor engages in rental agreements to secure land for humanitarian settlement development;
- ▶ Ensure a conflict-sensitive response by taking action to mitigate natural resource conflicts related to access to land. This is particularly important in areas where (arable) land is already scarce or in areas that host pastoralists who require communal land for the grazing of livestock;
- ▶ Consult local authorities and host communities, to agree on key entitlements of displaced populations such as their right to forage for food, collect firewood, collect timber, and other shelter materials such as grass or mud, gather fodder and graze animals.

Strengthening of Housing, Land and/or Property Rights in support of solutions.

Displaced people residing in humanitarian settlements usually have limited rights over the assigned parcel of land and shelter (e.g. they may use it as refugees for a certain period of time but are not allowed to make improvements, pass on to heirs upon their death, and so on). While such restricted rights may be acceptable at the start of an emergency, they limit self-reliance and chances of achieving durable solutions in protracted displacement situations.

It is therefore important, as part of phased response, that an appropriate tenure system (i.e. a set of communally or individually held rights) is agreed upon with relevant authorities (formal or customary). It should be noted that ownership is not necessarily the only type of right that would empower displaced persons. There are many different schemes that could be designed in accordance with local context and interests (e.g. long-term lease, compensation scheme). As such, settlement planners should work closely with protection and HLP experts to identify pathways for the incremental establishment of tenure through formal or customary means.

Draft proposal for refugee settlement in Nigeria





Community meeting in Kwale, Kenya

PRINCIPLE 7

KEY MESSAGES

- Due to challenges in achieving security of tenure, displaced people living within humanitarian settlements are often among those most at risk of (forced) eviction; increasing their vulnerability and undermining the protection of rights and self-reliance.
- To mitigate the aforementioned protection risks, settlement planners must achieve as much legal certainty regarding ownership, jurisdiction and other key issues as feasibly possible.
- Ensure documentation of any land agreements made with the Government or private landowners. This should include sketches detailing the demarcation of the site, copies of ownership documents (where applicable) and signed records of meetings.
- Consider other potential risks of threats or harassment, such as land conflict, and seek agreement on key entitlements of displaced populations.
- Never engage in the purchase or rental of land by UNHCR for the development of humanitarian settlements.
- Following the initial emergency response, take action to increase the security of tenure for displaced population through pathways for the incremental establishment of tenure using formal or customary means.

OUTPUTS

- Settlement Profile (including land survey/demarcation results, use agreements, minutes of key meetings and other relevant documentation)



Lusenda refugee settlement, Democratic Republic of Congo

8

PRINCIPLE 8

DEFINING LOCALISED CRITICAL DESIGN DRIVERS

In addition to the protection imperatives and other standard criteria used to inform settlement design, settlement planners should identify critical design drivers which will define the site layout of a given humanitarian settlement. Settlement planners should not adopt a 'one size fits all' approach to the layout of humanitarian settlements, as the contextual specificity of every humanitarian settlement requires innovative reflection to develop a site layout concept that responds to the contextual needs and reflects the identity of displaced and host populations.

While critical design drivers are context-specific - and can be related to physical determinants, socio-cultural life and/or market considerations – some of the most common design drivers are:

- **Topographical:** In sites with difficult topographical conditions (such as sloping sites), earthmoving and drainage works should be kept to a minimum. The site layout will be defined by the need to align road infrastructure to the topographical contours, as well as the availability of flatter areas for the development of sheltering pockets. On flatter sites, topographical conditions will be less critical in defining the site layout (see principle 9 for further information)
- **Environmental:** In areas affected by chronic environmental vulnerability, the protection of natural resources, such as protection of local vegetation, use of natural drainage systems and land stabilization, will play a key role in defining the site layout concept. The availability of water should be considered a priority in site selection and design. Notably, in arid and semi-arid regions, the location of water points will drive decisions around site layout.

- **Socio-cultural:** Site layout concepts should consider the traditional, social and culturally defined use of space by displaced populations and host communities. Are families large or small? Do extended families typically inhabit the same plot, block or share the same courtyard? Are plot configurations typically inward-looking for increased privacy or outward looking for social reasons? What are the gender dynamics within the family and the community? What are the roles and responsibilities within the family, for example, who is responsible for care-giving, fuel and water collection, livelihoods?
- **Livelihood-focused:** Site layout concepts will need to take into account the livelihood strategies of displaced and host populations. Populations dependent on subsistence agriculture, for example, will require access to adequate plots of arable land in close proximity to water sources. Female-headed households, where women have restricted mobility, may require space for vegetable gardens and permaculture possibilities to supplement the household income.
- **Access / physical connectivity:** Site layout concepts might also be oriented by the position and/or functionality of the existing road network allowing the humanitarian settlement to be connected to existing trading centres, towns and villages at a reduced cost, or with less impact on the environment. Road widths should reflect the road hierarchy (primary, secondary or tertiary), include adequate drainage and allow for upgrading should site expansion and/or densification result in increased traffic.
- **Open space requirements.** Access to quality safe open spaces is essential to the well-being of displaced populations as it facilitates the pursuit of socio-cultural (including sporting and recreational) and livelihood activities. As such, the settlement planner should include different scales of interconnected open spaces to address the communal, household and individual needs of displaced populations. Public spaces should be designed in a way recognises the different requirements of girls, women, boys and men, in addition to those of people with specific needs, and that promotes ownership by residents. This in turn will help to maintain the quality and safety of open spaces.
- **Transformation and growth over time.** As a result of natural population growth, humanitarian settlements grow by an average of 3-4% per year. Given this continuous expansion, it is critical that the site layout of humanitarian settlements allows for their growth, incremental upgrading and transformation over time. The initial footprint of a humanitarian settlement must strategically consider growth needs with attention to household plot size and land availability for the incremental upgrading for basic service centres. As a general rule, household plot sizes should be a minimum of two times the surface area of initially planned physical infrastructure, while land for basic service centres should always allow for physical expansion.

Refugees in their community block, Kakuma settlement, Kenya





Women discussing at Nyaragusu refugee settlement, Tanzania

PRINCIPLE 8

KEY MESSAGES

- There is not 'one size fits all' approach to the design of humanitarian settlements. Settlement planners should consider the context, including physical and social aspects, of the settlement and identify key localised design drivers.
- Rather than imposing a grid-layout, site layout concepts should consider how the use of space is traditionally and socio-culturally defined by displaced populations and host communities.
- Humanitarian settlements must be connected to neighbouring towns and villages. Site layout concept should therefore be considered in relation to the position and/or functionality of road networks.
- Access to quality safe open spaces is essential to the well-being of displaced people, and should not be neglected in settlement design. Remember that girls, women, boys and men have different requirements.
- Humanitarian settlements grow by an average of 3-4% per year. It is critical that the site layout concepts allow and plan for this growth by providing possibilities for incremental upgrading and transformation over time.

OUTPUTS

- Overall settlement layout (infrastructure, services and housing)
- Sector/ Community/ Block/ household-level plans



Opening an access road in Kutapalong refugee settlement, Bangladesh 2017

9

PRINCIPLE 9

FOLLOW NATURAL CONTOURS IN THE DESIGN OF ROAD AND DRAINAGE INFRASTRUCTURE

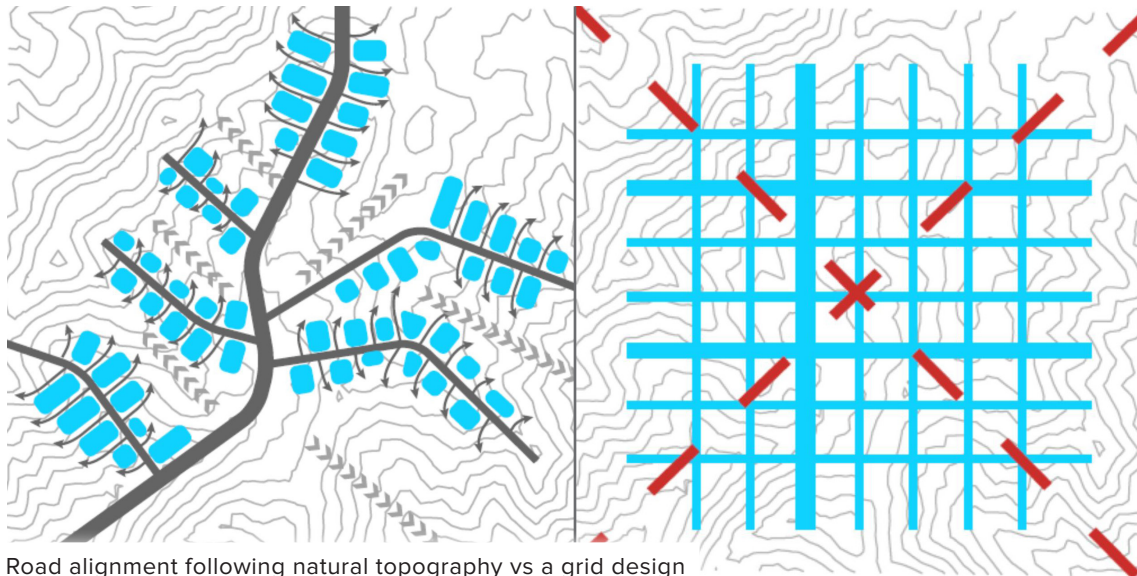
When designing road and drainage infrastructure within humanitarian settlements, it is important to consider the topographic contours of the site.

Grid-type road and plot alignments tend to ignore the natural topography of a given site, and therefore often require the construction of culverts, drifts and bridges at an additional cost. On the other hand, the positioning of roads along the ridgeline of a terrain allows for natural storm water run-off, which reduces the need for costly drainage works and also reduces future road maintenance costs. This principle is of particular importance in sites where road and access alignments need to cross steep ravine depressions and/or steep elevated crest levels.

Road widths, and setbacks from roads, should also allow for the future growth of the settlement. This includes possible requirements to widen roads due to increased traffic, or for retail or commercial development.

Settlement planners should consider the high cost of road and drainage works associated with infrastructure construction during the settlement design process. As such, the focus should be on:

- De-commissioning incorrectly aligned roads to avoid high long-term costs;



Road alignment following natural topography vs a grid design

- Constructing main roads to facilitate access to and from the humanitarian settlement. Depending on the topography, these roads should be aligned to connect with arterial roads at meso-scale;
- Supporting limited works on secondary, minor, roads in line with emergency standards;
- Where possible, the use of labour-intensive construction methods (including cash-for-work) with a view to improving the local skills-base and promoting self-reliance;
- Providing shade and natural windbreaks along roads and footpaths through tree planting;
- Site drainage works must also be comprehensively designed from the watershed down the ravines;
- This design should be complemented through the use of stormwater control interventions such as contour aligned swales, the use of in-situ soils, grass, shrub or tree planting.

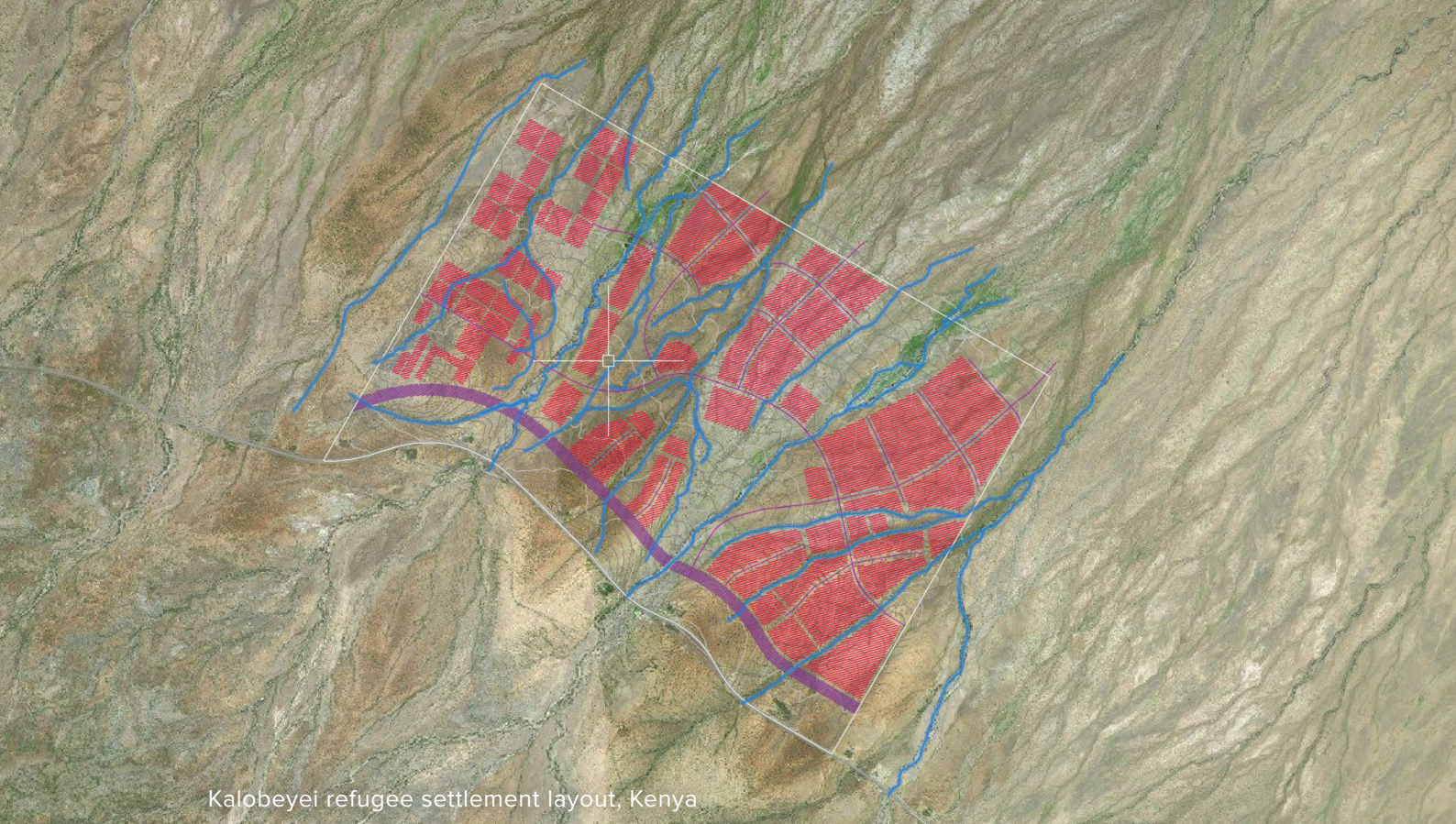
PRINCIPLE 9

KEY MESSAGES

- Consider the topographic contours of the settlement site when designing road and drainage infrastructure.
- Position roads on the ridge line of a terrain to facilitate natural drainage and mitigate the need for costly drainage works.
- De-commission incorrectly aligned roads and, where possible, use labour-intensive construction methods for works on secondary, or minor roads.
- Ensure that road widths, and setbacks from roads, allow for the future growth of the settlement.
- Ensure the comprehensive design of drainage works with integrated stormwater control measures.

OUTPUTS

- Topographical survey
- Modified topographical drawings (detailing cut and fill considerations)
- Overall settlement layout (detailing infrastructural works)



Kalobeyei refugee settlement layout, Kenya

10

PRINCIPLE 10

FINALIZING THE SETTLEMENT LAYOUT

The final settlement layout should:

- ▶ Show the overall configuration of the site, its surroundings, and its proximity to natural and existing features including other settlements;
- ▶ Provide options for incremental upgrading, expansion and indicative budget requirements for each phase of development;
- ▶ Take into account the social organization of the displaced population; particularly those of ethnic and religious groups and preferences of social groups to live, or not live, close to each other.

Site layouts typically adopted within the context of humanitarian settlements include the grid and the cluster design layout. In a grid layout, the land is demarcated in an orthogonal pattern, while in a cluster layout, roads are like branches that follow the ridges of the topography and the natural physical features of the site.

Grid layouts implemented without consideration of the site topography result in costly soil removal and drainage works. In some contexts, grid layouts can also undermine the socio-cultural identity of the displaced populations which typically lived in communal groupings in their country of origin.

UNHCR takes a modular approach to settlement planning starting with the family unit as the smallest planning 'module' and building up to larger units as follows:¹²

¹² UNHCR Emergency Handbook, UNHCR, <https://emergency.unhcr.org/>

MODULE	STRUCTURE	# PERSONS
1 Family	1 / family	4 - 6
1 Community	16 / families	80
1 Block	16 / communities	1,250
1 Sector	4 / block	5,000
1 Settlement	4 / sector	20,000

The modular approach helps to structure the sheltering pockets of the settlement, it also facilitates the management of the settlement development works, commonly developed in phases, from reception to plot allocation. Modular planning does not necessarily mean using a grid layout for the site.

Consider the allocation of water and sanitation facilities at household level. Communal sanitation facilities should be avoided as they represent high protection risks. Communal facilities are considered an option of last resort and should not be used beyond the first six months of an emergency response. Refer to [UNHCR WASH Manual](#) for more details¹³.

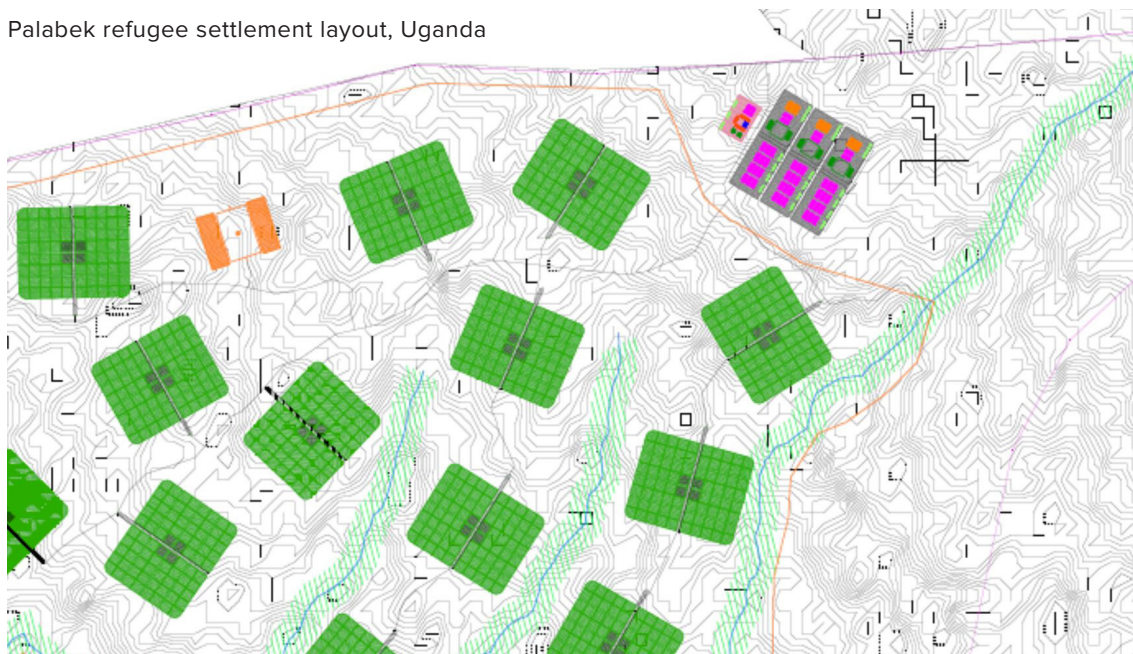
To reduce fire risks within humanitarian settlements, settlements planners should ensure the integration of specific mitigation measures in all settlement plans. Plans should always ensure:

- That there is a firebreak (area with no buildings) of 30 meters;
- The inclusion of firebreaks between blocks (neighbourhoods) in modular plans;
- That the distance between individual buildings is sufficient to prevent collapsing, burning buildings from impacting adjacent buildings;
- Conformity with national fire prevention legislation and coordination with fire officials.

Settlement planners should also consider, throughout the settlement design and development, risks of sexual and gender-based violence and how these risks can be mitigated in settlement design and development. Refer to [Global Shelter Cluster Site Planning Guidance to Reduce the Risk of Gender-Based Violence](#) for further guidance.

¹³ UNHCR WASH Manual, UNHCR, <http://wash.unhcr.org/unhcr-wash-manual-for-refugee-settings/>

Palabek refugee settlement layout, Uganda





Mantapala refugee settlement, Zambia

PRINCIPLE 10

KEY MESSAGES

- The final settlement layout should show the overall configuration of the site, possibilities for expansion and indicative budget requirements for each phase.
- The settlement layout should clearly define land use (infrastructure, services and housing).
- Settlement plans should start with the family unit as the smallest planning 'module' and build up to the largest unit (the settlement). Consider social and cultural aspects in the spatial definition of sheltering pockets.
- Avoid grid-layouts which do not adequately consider site topography and/ or undermine the socio-cultural identity of the displaced communities.
- Proactively identify and mitigate risks in the definition of site layouts. Critical risks pertain to sexual and gender-based violence and fire risks.

OUTPUTS

- Overall site layouts, conceptual drawings and technical drawings
- Indicative budget for each phase of site development
- Narrative settlement development strategy



Refugees in Kutapalong refugee settlement

PART THREE: ANNEXES

ANNEX 1

MASTER PLAN APPROACH PROCESS CHECKLIST

ANNEX 2

MASTER PLAN AND SITE ASSESSMENT TEMPLATE

ANNEX 3

MASTER PLAN ABSORPTION CAPACITY PROFILING TEMPLATE

ANNEX 4

MASTER PLAN BASIC SERVICES MAPPING TEMPLATE

The annexed templates can be downloaded at
<https://intranet.unhcr.org/en/protection-programme/shelter-settlement/settlement.html>



Master Plan Approach Process Checklist

Principle 1

National legislation, policies & plans provide a framework for settlement design.

Expected outcomes

- The spatial design of the settlement is in compliance with national and local planning regulations and emergency response minimum standards.
- Infrastructure improvements are designed to support national/regional development plans and priorities.

Checklist

Assessment

- ✓ Gathering of secondary data:
 - ✓ National, subnational development plans.
 - ✓ Spatial developments plans
 - ✓ Building regulations/standards
- ✓ Establish contact with relevant government counterparts:
 - ✓ Line ministries such as the ministry of works, land department, ministry of planning.
 - ✓ Municipality spatial planner or similar.
 - ✓ Municipality roads and infrastructure.
- ✓ Map key physical features
 - ✓ Identify and quantify the area of interest (AOI)
 - ✓ Identify distances to relevant settlements, major towns.
 - ✓ Identify road network
 - ✓ Identify key services and infrastructure.
 - ✓ Identify key features such as main rivers, hills, etc

Planning

- ✓ Ensure the spatial plan proposed aligns with existing regulations and supports existing development plans and priorities.
- ✓ Establish and facilitate technical coordination mechanisms, technical working groups, etc.

Implementation

- ✓ Ensure settlement layout, construction drawings and specifications are endorsed and signed by pertinent local authorities.
- ✓ Ensure quality assurance plans (QA) are in place.

NOTE: The actions above are not entirely the responsibility of the settlement planner but of the broader team. These actions are intended to trigger the design process, it is understood that all actions may not be possible in all contexts



Master Plan Approach Process Checklist

Principle 2

Environmental considerations drive design.

Expected outcomes

- Risk of natural disaster impact (e.g. due to floods, landslides) is identified and addressed.
- Risk of endangering natural resources (e.g. deforestation which can, in turn, increase the risk of natural disaster impact) is identified and mitigated.

Checklist

Assessment

- ✓ Never select sites historically affected by natural disasters.
- ✓ Never select sites that are less than 1-day walking distance from a protected area.
- ✓ Prioritize site locations that have sufficient ground cover.
- ✓ In collaboration with Environment Officer conduct Rapid Environmental Assessment (REA)
- ✓ Produce a topographic map: Slope analysis (0-2%, 2-6%, 6-8%, more than 8%)
- ✓ Produce a land cover map: Identify water springs, national reserves, erosion risk areas, forest, plantations, etc.
- ✓ Produce a risk map: Identify flood-prone areas, stormwater channels. Identify any other potential hazard and/or relevant condition, e.g. type of soil, bearing capacity, etc.
- ✓ Complete the Master Plan Assessment Template (MPAT) which includes the Site Assessment Form.

Planning

- ✓ To the maximum extent possible, avoid major land transformations. Promote the development of an Environmental Action Plan (EAP).
- ✓ Integrate 'green buffer zones' in settlement design to reduce problems of soil erosion and help recharge aquifers.

Implementation

- ✓ Avoid the use of heavy machinery.
- ✓ Ensure the undertaking of environmental degradation mitigation strategies such as protecting and marking of trees project, tree planting projects, etc.
- ✓ Continually monitor the impact of the use of local building materials and ensure mitigation strategies are identified as needed.

NOTE: The actions above are not entirely the responsibility of the settlement planner but of the broader team. These actions are intended to trigger the design process, it is understood that all actions may not be possible in all contexts

Master Plan Approach Process Checklist

Principle 3

Defining site carrying capacity.

Expected outcomes

- The capacity of the site has been defined taking into account sufficient access to water, fuel, and land for livelihoods.
- Risk of conflict between the displaced population and host community over access to natural resources is identified and mitigated.

Checklist

Assessment

- ✓ Identify and map the site's usable land area excluding no-build areas such as flood-prone, rocky, steep and agricultural areas.
- ✓ Site carrying capacity should be informed and calculated based on access to water, fuel, and land for livelihoods. Humanitarian settlements which are designed without adequate consideration of the land requirements of the productive activities of persons of concern reinforce reliance on assistance and prevent self-sufficiency.
- ✓ Complete UNHCR Absorption Capacity Profile Template.

Planning

- ✓ Establish a site calculation table defining land-use zoning. Refer to typical land-use allocation: Residential plots: 50% - 60%. Roads & walkways: 20% - 25%. Public facilities & open spaces: 15% - 20%
- ✓ Ensure the defined capacity is supported and evidenced in the drawings. Final estimates can only be done through the design and the drawing process.
- ✓ Take into account transformation over time and the subsequent need for land.

Implementation

- ✓ Develop an as-built drawing (map) of the constructed site, identify on its expansion and protected areas outlining maximum capacity.

NOTE: The actions above are not entirely the responsibility of the settlement planner but of the broader team. These actions are intended to trigger the design process, it is understood that all actions may not be possible in all contexts



Master Plan Approach Process Checklist

Principle 4

Decisions about density must be taken in context.

Expected outcomes

- Site density is in 'harmony' within the physical context.

Checklist

Assessment

- ✓ Identify existing host community density (No. of persons/Km²)
- ✓ Identify existing host community settlement type (rural, peri-urban, urban) and physical structure.

Planning

- ✓ Do a comparative analysis between pre and post intervention densities highlighting the potential impact (access to natural resources and potential conflict between host and displaced population). Ensure the physical layout is informed by this analysis.
- ✓ Ensure social long-term considerations including minimizing risk for conflict between host and displaced population.

Implementation

- ✓ Map or project settlement footprint over the years. Overlay these maps and establish settlement growth patterns. Establish interventions to decongest and densify critical areas.

NOTE: The actions above are not entirely the responsibility of the settlement planner but of the broader team. These actions are intended to trigger the design process, it is understood that all actions may not be possible in all contexts



Master Plan Approach Process Checklist

Principle 5

Supporting safe and equitable access to basic services.

Expected outcomes

- Equitable access to basic services for the displaced population and the host community is ensured.
- Development and upgrading of existing services and facilities have been prioritized over the creation of new parallel services.
- Travel distance to basic services is within the acceptable standards.

Checklist

Assessment

- ✓ Map existing services' location and capacity.
- ✓ Ensure the definition of services and the allocation of land is done following central and /or local decentralized legislation to activities pertaining to their areas of jurisdiction.
- ✓ Participatory assessments and approaches undertaken in collaboration with protection colleagues are essential in defining the basic service requirements and identifying potential barriers to access.
- ✓ Complete UNHCR Basic Services Mapping Template.

Planning

- ✓ Allocate space for the delivery of basic services (health, education) and other relevant services essential to achieve protection and solutions for the displaced population (e.g. civil registration, police, religious, sport and leisure facilities)
- ✓ The development/ upgrading of existing basic services is always preferable to the creation of parallel systems or services.
- ✓ The shared use of basic services by displaced and host communities should be considered as a primary objective of the settlement design process given its role in facilitating peaceful co-existence and ultimately integration. Strategically locate the new settlement and/or the new services to benefit from existing services.
- ✓ Travel time/ distance between shelters and basic service facilities requiring access by children should not be more than half an hour (maximum walking distance of 2.5 Km). While travel time/ distance between those services required by adults should not exceed one hour (maximum walking distance of 5 Km)
- ✓ Service centers could act as development nodes over time.

Implementation

- ✓ Consider that service facilities will be managed and/or resourced by the host government. Invest in new permanent structures only if is considered that the structure will be needed overtime avoiding the construction of 'white elephant' structures.

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Master Plan Approach Process Checklist

Principle 6

Providing an enabling environment for livelihoods and economic inclusion.

Expected outcomes

- Site location and layout represent a positive choice in terms of impact to livelihood, economic opportunities and self-reliance of displaced population and host community.

Checklist

Assessment

- ✓ Do not develop humanitarian settlements in areas which are prohibitive to livelihoods. Specific attention should be paid to isolated areas with poor connectivity (roads).
- ✓ Poor choices related to the location and design of humanitarian settlements can have a negative impact on the livelihoods, economic inclusion, and self-reliance of displaced populations.
- ✓ Consider the main livelihoods and economic activities in the area, and the skills and productive assets displaced people possess that would facilitate their engagement.

Planning

- ✓ The site location choice favors livelihoods and represents a clear opportunity for local development.
- ✓ Land is sufficiently allocated for the development of livelihoods and economic inclusion activities. For example: In the sub-Saharan region 1 family will commonly need 1 hectare of arable land for subsistence agriculture, if using traditional farming practices.
- ✓ The family plot area occupied by physical structures is equal or below 50%. This will not only allow for families to expand their constructions but is also an indication of the physical possibility for the family to develop supporting livelihoods activities.

Implementation

- ✓ Be extremely cautious in relocating existing functioning markets and vibrant economic centers to better suit a settlement upgrade project, rather use these functioning poles to inform the upgrade project.

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Master Plan Approach Process Checklist

Principle 7

Addressing housing, land and property issues, through an incremental tenure approach.

Expected outcomes

- Risk of conflict linked to land tenure has been addressed and mitigated.
- Following the initial emergency response, actions are taken to increase the security of tenure for the displaced population through pathways for the incremental establishment of tenure through formal

Checklist

Assessment

- ✓ Ensure documentation of land agreements made with the Government or private landowners is in place. This should include sketches detailing the demarcation of the site, copies of ownership documents (where applicable) and signed records of meetings.
- ✓ Consider potential risks of threats or harassment, such as land conflict, and seek agreement around key entitlements of displaced populations.
- ✓ Never engage in the purchase or rental of land by UNHCR for the development of humanitarian settlements.

Planning

- ✓ Ensure clear land demarcation and clarify the status and ownership (customary) of the land identified for the humanitarian settlement.
- ✓ An appropriate tenure system (i.e. a set of communally or individually held rights) is agreed upon with relevant authorities (formal or customary). It should be noted that ownership is not necessarily the only type of right that would empower displaced persons. There are many different schemes that could be designed in accordance with local context and interests (e.g. long-term lease, compensation scheme). As such, settlement planners should work closely with protection and HLP experts to identify pathways for the incremental establishment of tenure through formal or customary means.

Implementation

- ✓ Following the initial emergency response, take action to increase the security of tenure for displaced population through pathways for the incremental establishment of tenure through formal or customary means.
- ✓ Ensure a conflict-sensitive response by taking action to mitigate natural resource conflicts related to access to land. This is particularly important in areas where (arable) land is already scarce or in areas that host pastoralists who require communal land for the grazing of livestock.

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Master Plan Approach Process Checklist

Principle 8

Defining localized critical design drivers.

Expected outcomes

- Site layout is informed and responds to physical and social factors and the spatial needs over time.
- Residential areas, key services and infrastructures are not susceptible to the risk of natural hazards such as flash floods and landslides.

Checklist

Assessment

- ✓ Undertake community planning methodology to collectively identify needs, solutions and to prioritize the scope of the interventions. Participatory approaches include the creation of thematic focus groups to discuss issues such as risk areas, roads, access, SGBV, agricultural land, sanitation, access to water, etc.

Planning

- ✓ Define design strategic objectives that defines the site layout concept.
- ✓ The site layout concept should respond to the contextual needs and reflect the identity of displaced and host populations.
- ✓ Ensure the site layout design responds to topography, environment, livelihoods needs and socio-cultural aspects of the displaced and host populations.
- ✓ Ensure the allocation of quality and interconnected public, semi-public, and private open spaces. This increases social activities and livelihoods with direct impact on protection and well-being of displaced and host population.
- ✓ Allow for transformation and growth over time:
 - ✓ Sufficient plot size so services can be upgraded over time.
 - ✓ Household plot size is at least twice the total surface area of the shelter, kitchen, and toilet, to allow for expansion.
- ✓ Ensure access to water supply and sanitation follows standards and is guaranteed all year round (maximum distance for accessing water should be 500m, the maximum distance between shelter and sanitation should be 50 meters)
- ✓ Specify the type of intervention: new settlement and/or upgrade/consolidation/integration of existing settlement.

Implementation

- ✓ Map or project settlement footprint over the years. Overlay these maps and establish growth patterns. Establish interventions to de-congest and densify critical areas.
- ✓ Where possible, provide drawing evidence and arguments to articulate alignment to local development plans.

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Master Plan Approach Process Checklist

Principle 9

Follow natural contours in the design of road and drainage infrastructure.

Expected outcomes

- Site layout responds to the natural topography and drainage patterns of the site.
- An effort has been made to reduce construction and maintenance cost of road and drainage infrastructure.

Checklist

Assessment

- ✓ Undertake ridge and water catchment area analysis based on topographic information (contour lines).

Planning

- ✓ Consider the high infrastructure cost associated with road and drainage construction during the layout design process.
- ✓ As far as possible, position roads on the ridge line of the terrain to facilitate natural drainage and mitigate/minimize the need for costly drainage works.
- ✓ Ensure that road widths, and setbacks from roads, allow for the future growth of the settlement.
- ✓ Ensure the comprehensive design of drainage works with integrated stormwater control measures.

Implementation

- ✓ Ensure key primary roads are 'all weather' so the provision of humanitarian life-saving assistance is guaranteed all year round.

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Master Plan Approach Process Checklist

Principle 10

Finalizing the settlement layout.

Expected outcomes

- Site layout takes into account the social organization of the displaced population under the basis of an Age, Gender, and Diversity approach.
- The physical layout considers fire risk mitigation strategies and complies with standards for the provision of basic services.

Checklist

Assessment

- ✓ Consider the risks of sexual and gender-based violence and how these risks can be mitigated in settlement design and development.
- ✓ Consider the requirements of women, children, elderly people, and persons with specific needs when defining the site layout.
- ✓ Take into account the social organization of the displaced population; particularly those of ethnic and religious groups and preferences of social groups to live, or not to live, close to each other.

Planning

- ✓ Use a modular approach for the definition of residential areas (family, community, block, and sector)
- ✓ Ensure a logical construction chronogram relating the site development phases, from reception to plot allocation.
- ✓ Ensure firebreaks: spacing between shelters is from 1-2 times the height of the building; every 300 meters of the built environment has 30 meters firebreak.
- ✓ Provide options for incremental upgrading, expansion and indicative budget requirements for each phase of development.
- ✓ Develop a shelter strategy narrative document.

Implementation

- ✓ Show the overall configuration of the site, its surroundings, and its proximity to natural and existing features including other settlements.
- ✓ Develop an address system linking construction phases with the plot allocation process.

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Aerial view from Awbarre refugee settlement in Ethiopia



MPAT

Master Plan and Site Assessment Template

Part i – Master Plan Assessment

Host community related in green

Displaced population related in blue

i.1 Information

i.1.1 Response / Operation:	
i.1.2 Government counterpart:	
i.1.3 Assessment team:	
i.1.4 Date:	
i.1.5 Prepared by:	

i.2 Administrative / Government structure / Coordination

i.2.1 Technical central office of concern:	
i.2.2 Has there already been contact established with central office of concern: (Yes/No, if yes provide name, job title and contact detail)	
i.2.3 Technical local office of concern: (Specify District/County/Sub-county)	
i.2.4 Has there already been contact established with the local office of concern: (Yes/No, if yes provide name, job title and contact detail)	
i.2.5 Are there existing national local strategic development plans? (Yes/No; if so specify name and date)	
i.2.6 Are there existing local spatial development plans? (Yes/No; if so specify name and date)	
i.2.7 Are there established technical fora for discussion: (Yes/No; specify who chairs, location and frequency)	

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i.3 Area of interest (AOI) information

i.3.1 Area of Interest (AOI) profile: (Brief description of the site characteristics)	
i.3.2 GPS Coordinates:	
i.3.3 AOI area (m ² / Km ²):	
i.3.4 AOI boundaries:	
i.3.5 AOI distances from border / entry points (only if relevant)	
i.3.6 AOI distances to major towns, include the name of the town.	
i.3.7 AOI distance from a designated Regional, National or International Natural Protected Area	
i.3.8 AOI area classification under IUCN red list of Ecosystems (https://iucnrle.org/ assessments/) if no assessment exists use EN (Endangered) ¹	
i.3.9 Administrative division (include all sub-counties)	
i.3.10 District/s:	
i.3.11 Country:	

i.4 Planned intervention / response

i.4.1 Type of intervention envisaged: New settlement, existing settlement upgrade / consol- idation	
---	--

Settlement typology/ies:	Objective of intervention	Caseload
i.4.2 Planned settlement		
i.4.3 Collective accommodation		
i.4.4 Renting arrangement		
i.4.5 Hosting arrangement		
i.4.6 Self-settlement		

¹ The International Union for Conservation of Nature (IUCN)

The Red List of Ecosystems evaluates whether ecosystems have reached the final stage of degradation (a state of Collapse), whether they are threatened at Critically Endangered, Endangered or Vulnerable levels, or if they are not currently facing significant risk of collapse (Least Concern)

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i.5 Settlement information

i.5.1 Host community population: # of people	
i.5.2 # and name of existing host community settlements (towns/villages) within the AOI:	
i.5.3 # of HH from host community living in the AOI per settlement:	
i.5.4 Typical host community shelter typology: (Specify materials, size, construction practice)	
i.5.5 What is the Host community “profile”:	

i.5.6 What is the POC “profile”:	
i.5.7 # and name of refugee settlements within the AOI:	
i.5.8 # of HH from refugee population living in the AOI:	
i.5.9 # of emergency shelters:	
i.5.10 # of transitional shelters:	
i.5.11 # of permanent shelters:	

i.6 Access to services

i.6.1 List of existing facilities within the AOI: (Specify per type health, education and market facilities)	
---	--

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i.7 Feasibility criteria related to the envisaged type of intervention

<p>i.7.1 Political consideration: (Political will, overall. Are local authorities in destination settlement areas open to taking on responsibilities for refugees? What are their concerns, if any, and what are their priorities in terms of immediate and longer-term needs?)</p>	
<p>i.7.2 Refugee intentions and priorities: (What do refugees think about the possibility of changing their living conditions? What are their goals, concerns, and priorities?)</p>	
<p>i.7.3 Community openness: (Are host communities in destination settlement areas open to refugees living among them? What are their concerns, if any, and what are their priorities in terms of immediate and longer-term needs? Do these perspectives reflect all parts of host communities or are some less open than others?)</p>	
<p>i.7.4 Funding: (Are the expected funds required for the intervention attainable - high, med, low probability)</p>	
<p>i.7.5 Time framework: (Will the time needed for the implementation of the programme intervention be less than 3 years, 3-5 years, more than 5 years?)</p>	
<p>i.7.6 Security: (Are there significant security risks related to the settlement and/or the proposed intervention?)</p>	
<p>i.7.7 Law and policy: (Is the national and regional legal framework conducive to refugees enjoying the rights and responsibilities of nationals, with the exception of the right to vote in elections limited to nationals?)</p>	
<p>i.7.8 Local governance: (Are local authorities equipped to take on responsibility for refugee communities? - Consider human resources and physical/logistics challenges, as well as budget, administrative authority, the presence of oversight systems, etc.)</p>	
<p>i.7.9 National Development plans & International Support: (Are the populations in question (host, refugee, other) included in national development planning, including national adaptation plans, baseline data and prioritized in planning? Is the region prioritized? For which sectors?)</p>	

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<p>i.7.10 Access to services: (Is the location of expected settlement conducive to refugees accessing services, markets, other communities? Are the barriers related to distance, transport options, security, or other?)</p>	
<p>i.7.11 Access to water: Is access to a sustainable and sufficient water source(s) compromised? Is there an existing water provision system? (Boreholes, Open stream, Protected stream, River, other)</p>	
<p>i.7.12 Access to energy: Is there sustainable and sufficient cooking energy? Is there an existing energy infrastructure?</p>	
<p>i.7.13 Does historical data indicate that the area is prone to flooding? (Elaborate)</p>	
<p>i.7.14 What is the land tenure situation (i.e. who owns the land or has jurisdiction over it)? Is refugees' tenure secure (i.e. is anyone challenging the right of refugees to settle or continue their settlement)? (Elaborate)</p>	
<p>i.7.15 What evidence exists of income generating activities in the local area? (Elaborate)</p>	
<p>i.7.16 Is the site accessible by road? What is the surface type of road? e.g. paved, dirt, tarmac, etc</p>	

i.8 Site profile key facts – towards the definition of site carrying capacity

<p>i.8.1 AOI area: (Km² / Ha / m²)</p>	
<p>i.8.2 % of the estimated usable land area (ULA): (if already known)</p>	
<p>i.8.3 % of an area prone to flood or other related natural related hazard: (Specify which)</p>	
<p>i.8.4 % of land currently used for agriculture / another livelihood: (Specify which)</p>	
<p>i.8.5 % of land currently covered by forest lands</p>	
<p>i.8.6 % of land currently covered by grasslands</p>	

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i.8.7 % of the land with a steep slope not considered suitable/usable for construction of shelters	
i.8.8 What are the site drainage patterns?	

i.9 Graphical information of interest

Maps, Diagrams, layouts, etc.

i.10 Scenarios for settlement development

Hand sketches, diagrams, etc.

i.11 Images from the area of interest

Hand sketches, diagrams, etc.



Part ii – Site Assessment Template

Red lines are alerts flagging critical issues rendering the site unsuitable for development

Orange lines are alerts flagging that heavy mitigation activities will be required to enable the development of the site

ii.1 Information

ii.1.1 Response / Operation:	
ii.1.2 Government counterpart:	
ii.1.3 Assessment team:	
ii.1.4 Date:	
ii.1.5 Prepared by:	

ii.2 Key planning figures

ii.2.1 # of refugees / IDPs / Planning figures:	
ii.2.2 Average No. of people per HH:	

ii.3 Site map

(Identify site location and nearby villages or agglomerations)

ii.4 Site location

ii.4.1 Site name:	
ii.4.2 GPS Coordinates:	
ii.4.3 Administrative division:	
ii.4.4 District:	
ii.4.5 Province:	
ii.4.6 Country:	
ii.4.7 Site profile (Brief description of the site characteristics):	
ii.4.8 What is the Host community profile:	
ii.4.9 What is the PoC profile:	

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ii.5 Protection

ii.5.1 Is there any information about potential existence of land mines and UXOs within and/or near this site? Please expand in the remarks point 15	Yes ()	No ()	Explain:
ii.5.2 Is this site vulnerable to significant security risks? Please expand in the remarks point 15	Yes ()	No ()	Explain:
ii.5.3 What is the travel distance between the site and the refugees' country of origin? (preferably at least 50 Km of separation)	Less than 50Km ()	More than 50 Km ()	
ii.5.4 Are there military installations nearby?	Yes () No ()	Distance in Km:	
ii.5.5 What protection considerations should be made?	Explain:		

ii.6 Access to existing services and infrastructure (master plan principles considerations)

ii.6.1 What is the distance to major towns?	Town population: Travel distance in Km:	Core services available: Civil admin. () Banking () Post () Markets () Other () Which:	
ii.6.2 What is the proximity to functioning Health facilities?	Travel distance is more than 7Km Yes () No ()	Travel distance in Km:	Type of Facility: Capacity:
ii.6.3 What is the proximity to functioning primary Education facilities?	Travel distance is more than 2 Km Yes () No ()	Travel distance in Km:	Type of Facility: Capacity:
ii.6.4 What is the proximity to functioning secondary Education facilities?	Travel distance is more than 7Km Yes () No ()	Travel distance in Km:	Type of Facility: Capacity:

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ii.6.5 What is the proximity to functioning Markets and commercial centres?	Travel distance is more than 7Km		Travel distance in Km:	Type of Facility: Capacity:
	Yes ()	No ()		
ii.6.6 What evidence exists of income generating activities in the local area?	Explain:			
ii.6.7 What is the distance to the nearest police point?	Distance in Km:	Type:		
ii.6.8 Is the proposed site near to a public transport route?	Yes () No ()	Type:		
ii.6.9 What is the distance to national power grid?	Distance in Km:			
ii.6.10 What is the distance to any local or national sewage or stormwater system				
ii.6.11 Is there access to any local or national solid waste collection system				
ii.6.13 Does the site have a safe location for the collection and disposal of solid waste				
ii.6.14 Does the location favour physical integration between the host and displaced population? How?	Explain:			
ii.6.15 What is the potential positive impact in host population if the settlement was developed in this site?	Explain:			
ii.6.16 What local infrastructure could be developed to also service the new settlement?	Explain:			

ii.7 Accessibility

ii.7.1 Is access compromised for the provision of humanitarian life-saving assistance all year round? Please expand in the remarks point 15	Yes ()	No ()	Explain:
ii.7.2 Is the site accessible by road?	Yes ()	No ()	
ii.7.3 What is the surface type of the road? e.g. paved, dirt, tarmac, etc.			
ii.7.4 Is the road type considered "all weather"?	Yes ()	No ()	
ii.7.5 Any other access-related issues?			

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ii.8 Site capacity

ii.8.1 Site surface area? (Ha / m2) Indicate in sketch section ii.10	
ii.8.2 Potentially usable land area? (Ha / m2) Indicate in sketch section ii.10	
ii.8.3 What is the capacity of the site? Elaborate on critical considerations and assumptions for the capacity definition	

ii.9 Topography and drainage

ii.9.1 What is the slope percentage?	Flat 0% -2% ()	Steep 6% -10% ()	Severe > 10% ()	Ideal 2% - 4% ()	Moderate 4% - 6% ()
ii.9.2 What is the soil condition?	Sand ()	Rock ()	Clay ()	Silt ()	Gravel ()
ii.9.3 Is the soil type "black cotton" soil?	Yes ()	No ()	Any other type:		
ii.9.4 Are soils permeable?	Yes ()	No ()	Explain:		
ii.9.5 Are soils collapsible?	Yes ()	No ()	Explain:		
ii.9.6 What is the site elevation above sea level:	Elevation in meters:				
ii.9.7 What are the drainage patterns? Indicate in sketch section ii.10					
ii.9.8 Any other physical feature?					

ii.10 Site sketch

(Identify site characteristics such as crest areas, natural drainages, flood risk areas, other natural hazards risks areas, vegetation type, access, pockets for potential sheltering areas, existing infrastructure and other relevant features)
See example at the end of the document

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ii.11 Water source and environmental sanitation

ii.11.1 Is access to sustainable and sufficient water source(s) compromised? Please expand in the remarks p15	Yes ()	No ()	Explain:
ii.11.2 Is there an existing water provision system? (Boreholes, Open stream, Protected stream, River, other)	Surface water River () Lake () National pipeline ()		Groundwater Borehole () Spring ()
ii.11.3 Are there upstream water takes or discharges to water that could impact water quality?	Yes ()	No ()	
ii.11.4 Are there downstream water takes or discharge to water systems that may be disturbed?	Yes ()	No ()	
ii.11.5 Is water available year round?	Yes ()	No ()	Indicate the source of information:
ii.11.6 What is the distance to the nearest water source? (if boreholes indicate the depth)			Indicate the source of information:
ii.11.7 What is the water table depth?	Less than 3 m below the ground level () Indicate depth:		More than 3 m below the ground level ()
ii.11.8 Are hydro-geological and/or geophysical investigations available?	Yes () Please attach		No ()

ii.12 Climatic conditions, environment, public health, and natural hazards

ii.12.1 Does historical data indicate that the area is prone to flooding? Please expand in the remarks point ii.15	Yes ()	No ()	Source of information: Meteorological data () Anecdotic () Flood risk analysis ()
ii.12.2 Is there a rainy season?	Yes () Indicate the months of the year:		No ()

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ii.12.3 What is the average rainfall per season? (mm)	Season:	Rainfall in mm:	
ii.12.4 Does it snow?	Yes () Months of the year:	No ()	
ii.12.5 What are the maximum and minimum temperatures year round?	Max temperatures: Months of the year:	Min. temperatures: Months of the year:	
ii.12.6 Are there strong seasonal winds?	Average wind speed in mph: Months of the year:		
ii.12.7 Is the area significantly affected by climate changes?	Explain:		
ii.12.8 What is the existing type of vegetation? Indicate in sketch section ii.10	Explain:		
ii.12.9 What level of vegetation clearance will be required to enable construction (avoid indiscriminate bulldozing) Indicate in sketch section ii.10	Explain:		
ii.12.10 What is the distance from protected areas (e.g national parks, forest reserve, seasonal migration path, area under an international convention)	Less than 50Km ()		More than 50 Km ()
ii.12.11 Is there evidence of presence of any species with an IUCN red list category of vulnerable or higher? ²	Yes () Explain:		No ()
ii.12.12 Is there evidence of any major biological environmental health hazard? (e.g. malaria, cholera,)	Yes ()	No ()	Explain:
ii.12.13 Is there evidence of any major chemical environmental health hazard? (former waste dump or chemical spill, proximity to mineral mines, chemical or textile factories, refineries, industrial-scale agro-chemical use)	Yes ()	No ()	Explain:
ii.12.14 Is there evidence risk for landslides?	Yes ()		No ()
ii.12.15 Is the area prone to any other identified natural hazards?	Yes ()		No ()
ii.12.16 If the area is prone to natural hazards, can the connection be made to the national/ regional/local Early Warning System?	Yes ()		No ()

² <https://iucnrl.org/assessments/> The International Union for Conservation of Nature (IUCN)

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ii.13 Land use and land rights

ii.13.1 What is the current land use?				
ii.13.1.1 Is the land still vacant but allocated for urbanization/residential projects?	Yes (see ii.13.4)		No	
ii.13.1.2 Is the land being used for agricultural activities?	Yes (see ii.13.4)		No	
ii.13.1.3 Is the land part of any seasonal or rotational grazing system?	Yes (see ii.13.4)		No	
ii.13.1.4 Does the land have locally or internationally recognized cultural, religious or historical significance?	Yes		No	
ii.13.2 Who or what groups hold what type of rights (e.g. use, occupation, ownership) over the land?	Private ownership ()	Communal land use/ownership ()	Government ownership ()	Other () Explain:
ii.13.3 Which authority (or authorities) has/have jurisdiction over the land? Please bear in mind that there may be relevant traditional authorities that may or may not be formally recognised but should nevertheless be consulted if they enjoy social legitimacy.	Municipality ()	Ministry of Agriculture/Land/Rural Development/Etc ()	Traditional authority ()	Other () Explain:
ii.13.4 If the land is currently in use (see ii.13.1.1-3) but no feasible alternative land is available, are there just, effective and transparent procedures in place to compensate the users, occupiers and owners of the land (see ii.13.2) AND is there commitment of the relevant authorities (see ii.13.3) to follow these procedures?	No ()		Yes ()	
ii.13.5 Does the agreement to settle the refugees clarify duration of settlement, permissible land use, basic spatial information, is it in writing AND signed by relevant parties (which may or may not include UNHCR)?	Yes ()		No ()	
ii.13.6 What rights will the settlement population have over their plot/shelter (i.e. what tenure scheme applies)?	Upgrade shelter/housing ()	Receive compensation for improvements ()	Pass on to legitimate heirs ()	Leave unit vacant temporarily ()
ii.13.7 Is the settlement population properly informed (in writing if necessary) about what they can and cannot do?	Yes ()		No ()	

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ii.13.8 Do opportunities exist for settlement population to:	Access cooking fuel ()	Access construction materials ()	Graze animals ()	Grow crops ()	Other / Explain: ()
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ii.14 Summary of assessed red lines and orange lines

Red lines are alerts flagging absence of critical elements to enable the development of the site		
(From ii.5.1) Is there any information about the potential existence of land mines and UXOs within and/or near this site?	Yes ()	No ()
(From ii.5.2) Is this site vulnerable to significant security risks?	Yes ()	No ()
(From ii.7.1) Is access compromised for the provision of humanitarian life-saving assistance all year round?	Yes ()	No ()
(From ii.11.1) Is access to sustainable and sufficient water source(s) compromised?	Yes ()	No ()
(From ii.12.1) Does historical data indicates that the area is prone to floodings?	Yes ()	No ()
(From ii.13.1.4) Does the land have locally or internationally recognized cultural, religious or historical significance?	Yes ()	No ()
(From ii.13.4) Lack of clarity and transparency on land tenure	Yes ()	No ()
Orange lines are alerts flagging that heavy mitigation activities will be required to enable the development of the site		
(From ii.5.3) Is the travel distance between the proposed site and the refugees' country of origin less than 50Km?	Yes ()	No ()
(From ii.12.10) Is the travel distance between the proposed site and any protected area or reserve less than 50Km?	Yes ()	No ()
(From ii.6.2) Is the travel distance between the proposed site and existing health facilities greater than 7 Km?	Yes ()	No ()
(From ii.6.3) Is the travel distance between the proposed site and existing primary education facilities greater than 2 Km?	Yes ()	No ()

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(From ii.6.4) Is the travel distance between the proposed site and existing secondary education facilities greater than 7 Km?	Yes ()	No ()
(From ii.6.5) Is the travel distance between the proposed site and existing markets and commercial centres greater than 7 Km?	Yes ()	No ()
(From ii.9.1) Is the percentage of the slope indicating a flat (0%-2%), steep (6%-8%) or severe topography (> 10%)	Yes ()	No ()
(From ii.9.2) Is the soil assessed indicating sand or rock soil type?	Yes ()	No ()
(From ii.9.3) Is the soil assessed "black cotton" soil type	Yes ()	No ()
(From ii.11.3) Are there upstream water takes or discharges to water that could impact water quality?		
(From ii.11.4) Are there downstream water takes or discharge to water systems that may be disturbed?	Yes ()	No ()
(From ii.11.5) Is the water table less than 3 meters below the ground level?	Yes ()	No ()
(From ii.13.1.1) Is the land still vacant but allocated for urbanization/residential projects?	Yes ()	No ()
(From ii.13.1.2) Is the land being used for agricultural activities?	Yes ()	No ()
(From ii.13.1.3) Is the land part of any seasonal or rotational grazing system?	Yes ()	No ()

ii.15 Conclusions and recommendations

ii.15.1 Is this site suitable?	Yes ()	No ()
ii.15.2 Remarks:		

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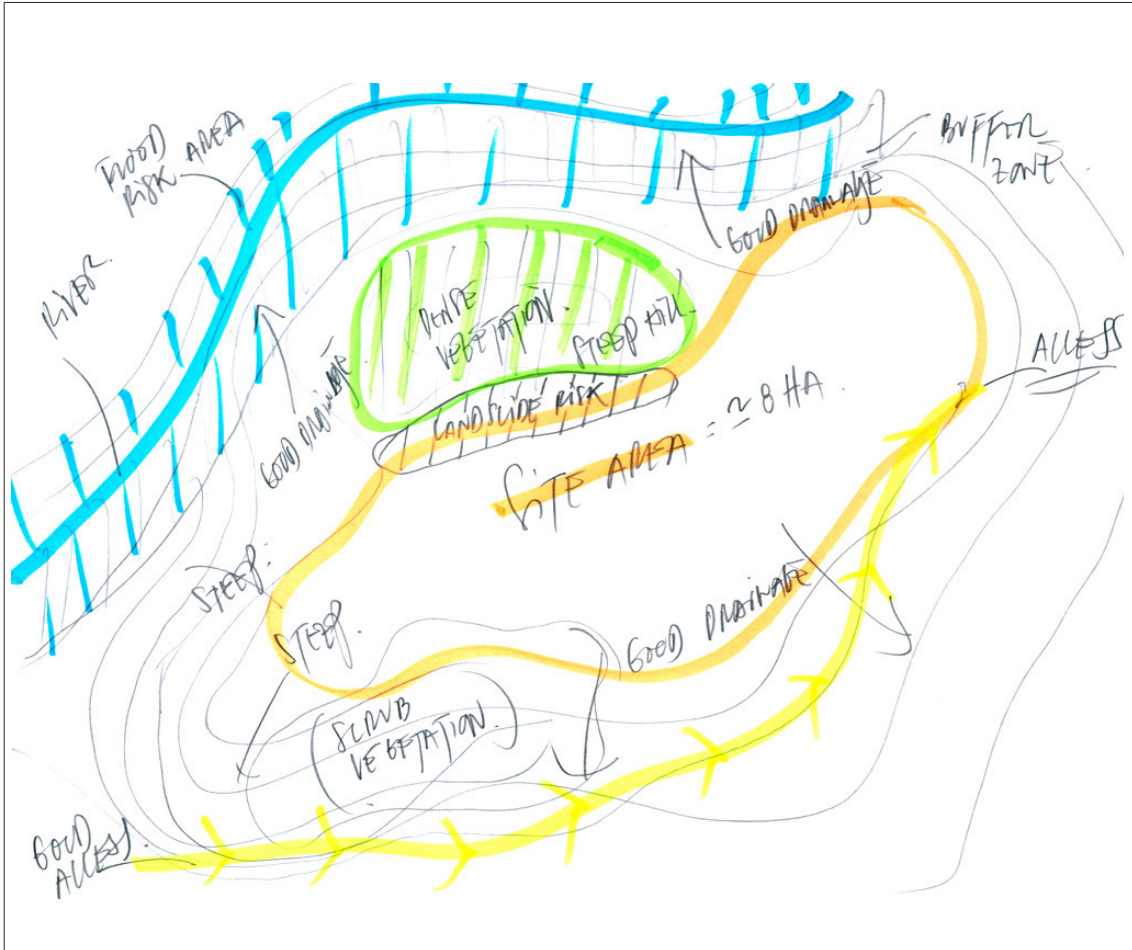
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ii.16 Sketch example





Aerial view in Shimelba refugee settlement, Ethiopia

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Master Plan – Absorption Capacity Profiling Template

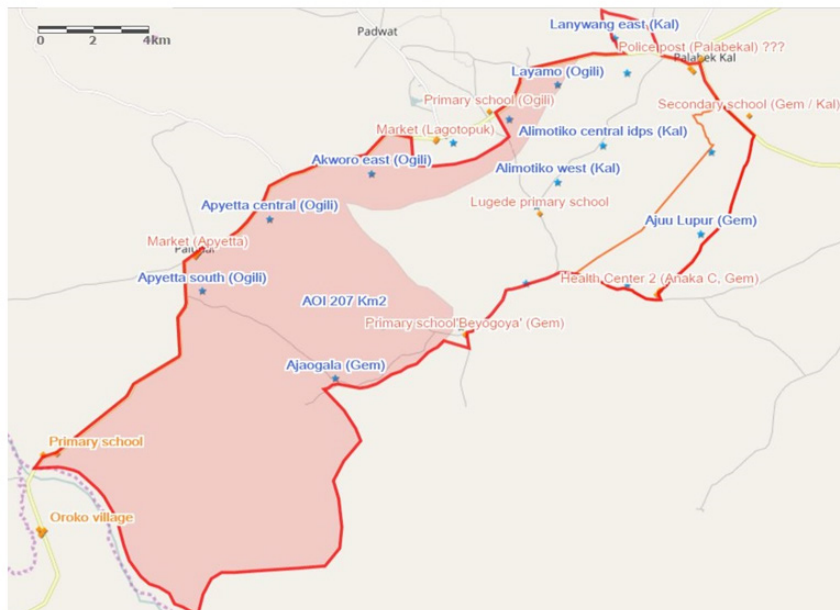
1 Information

Response / Operation:	
Assessment team:	
Date:	
Prepared by:	

2 Area of interest (AOI) information

2.1 Area of Interest (AOI) profile: (Brief description of the site characteristics)	
2.2 GPS Coordinates:	
2.3 AOI area (m ² / Km ²):	
2.4 AOI boundaries:	
2.5 Administrative division (include all sub-counties)	
2.6 District/s:	
2.7 Country:	

2.8 Site location map (AOI in context)



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2 Flag markers on natural resources situation to inform design / environmental baseline.

Provisioning services	Availability %	Regulating services	Description
Cooking Fuel		Air quality	
Food		Erosion control	
Water		Water regulation/ floods protection	
Diversity of species used for nutrition or traditional medicine (aromatic and medicinal plants)		Water purification	
		Biological reproductive capacities	
		Storm protection	

Mapping of livelihood related activities

Market surveys are key in informing decisions related to spatial planning. Liaise with Livelihood unit to request market surveys report.

Key livelihoods activities	Key economic centers	Area	Location name	Comments
Agriculture		56 Km ²	Within the AOI	According to local information, every HH needs approximately 2,500m ² of agricultural land subsistence agriculture
Commercial activities / Markets at sub-county level		n/a	1 Main market in Ogili 1 Main market in Kal 1 Main market in Gem	There are also monthly markets days in every village (16 villages)
	Closest main city at xx km of the camp			
	Market in the camp (or in another camp)			

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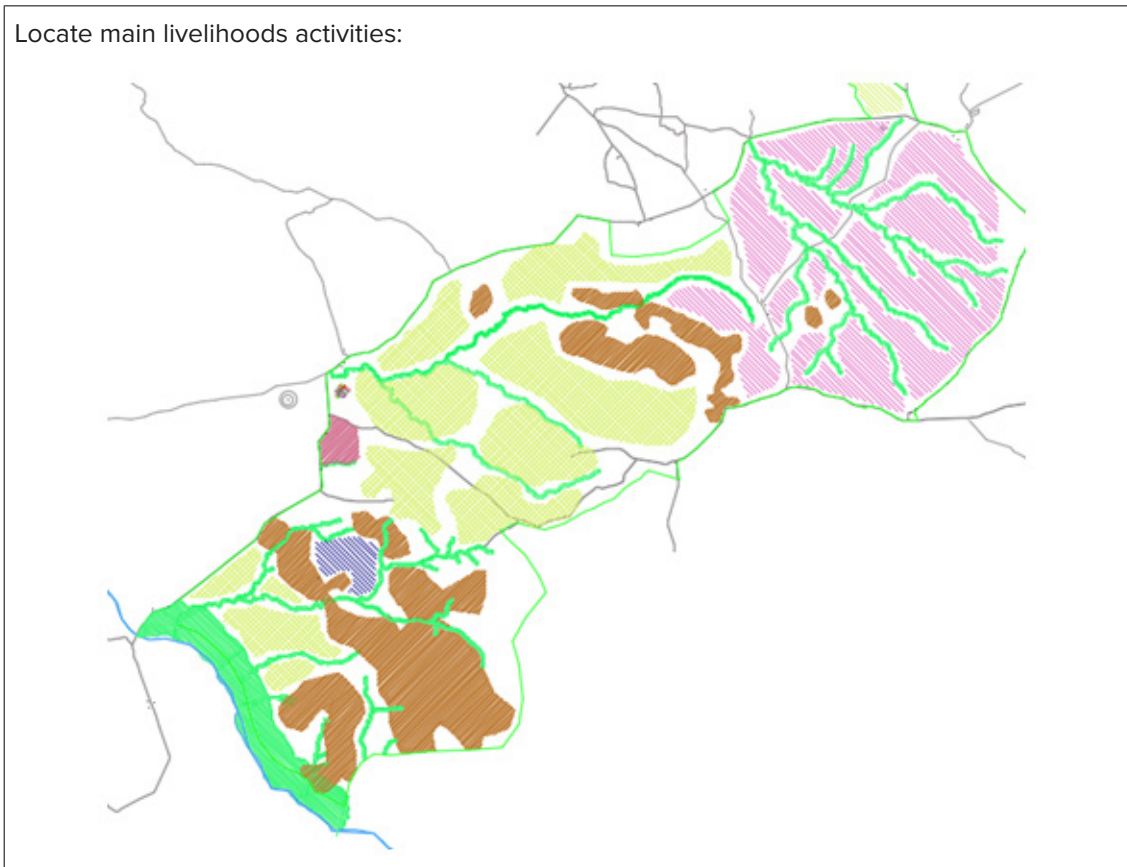


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Rapid map of usable land areas for livelihoods activities

Locate main livelihoods activities:



Adding a Rapid (community) mapping of green corridors/vegetative grids with main water streams and water bodies, main firewood / woody biomass collection areas

Source of information:

- Direct observations / field visits
- Satellite images
- Key informant interviews/FGDs
- Desk review on Expert technical assessments

Adding a part on the refugee community:

- demographic trends

- Project planned (example construction of a new bridge/health center/extension of agricultural plots)
- Community capacities for mitigating exceeded absorption capacity (governance and leadership, skills, level of awareness for natural resources related risks)

Master Plan – Basic Services Mapping Template

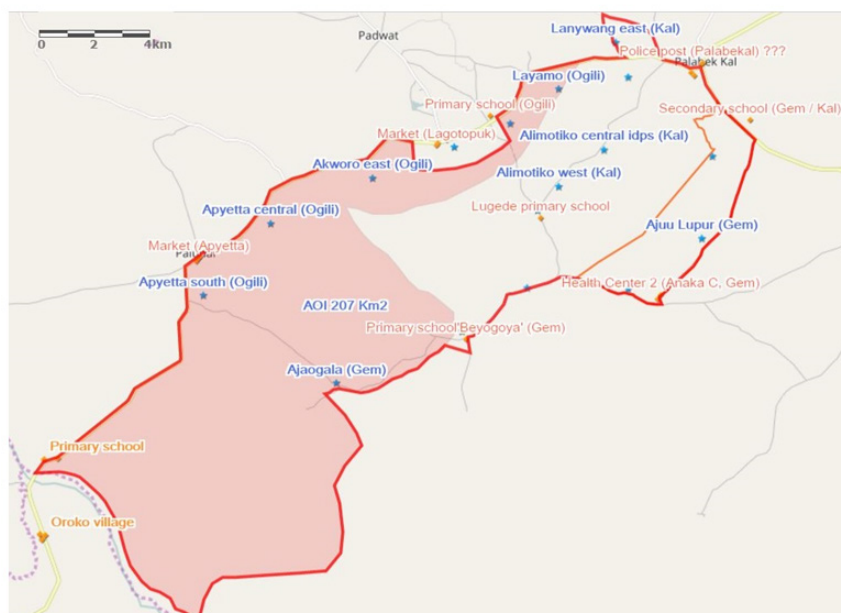
1 Information

1.1 Response / Operation:	
1.2 Assessment team:	
1.3 Date:	
1.4 Prepared by:	

2 Area of interest (AOI) information

2.1 Area of Interest (AOI) profile: (Brief description of the site characteristics)	
2.2 GPS Coordinates:	
2.3 AOI area (m2 / Km2):	
2.4 AOI boundaries:	
2.5 Administrative division (include all sub-counties)	
2.6 District/s:	
2.7 Country:	

2.8 Site location map (AOI in context)



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3 Social services - National parameters (Health centers and Education facilities)

Service type	Population served	Maximum distance	Referenced document / comments
Health centers IV	100,000	n/a	National health policy
Primary school	n/a	5 Km	

NOTE: In case national standards do not exist relate to the following parameters. These parameters are based on travel distances. Primary school (max. 2 Km); Health facilities: Max. 7Km

4 List existing services

4.1 Host community population:	
4.2 Displaced population:	
4.3 Name of villages / settlements of concern:	

Type	Capacity	Location name	Construction type / Comments
Health centers II	5,000	Ogili village	GoU has plan for up-grade to HCIV
Primary school	300	Apieta village	n/a

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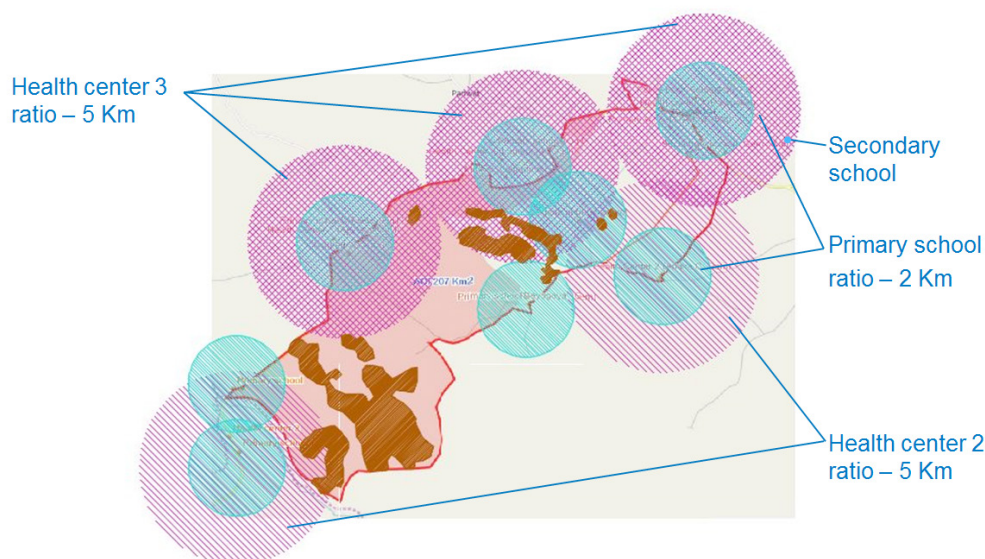


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5 Rapid map of existing services

Locate services indicating per color with indication of maximum distance ratios:



6 Mapping of livelihood related activities

Market surveys are a key to inform decisions related to spatial planning. Liaise with Livelihood unit to request market surveys report.

Key livelihoods activities	Area	Location name	Comments
Agriculture	56 Km ²	Within the AOI	According to local information, every HH needs approximately 2,500m ² of agricultural land subsistence agriculture
Commercial activities / Markets at sub-county level	n/a	1 Main market in Ogili 1 Main market in Kal 1 Main market in Gem	There are also monthly markets days in every village (16 villages)

Settlement analysis tools

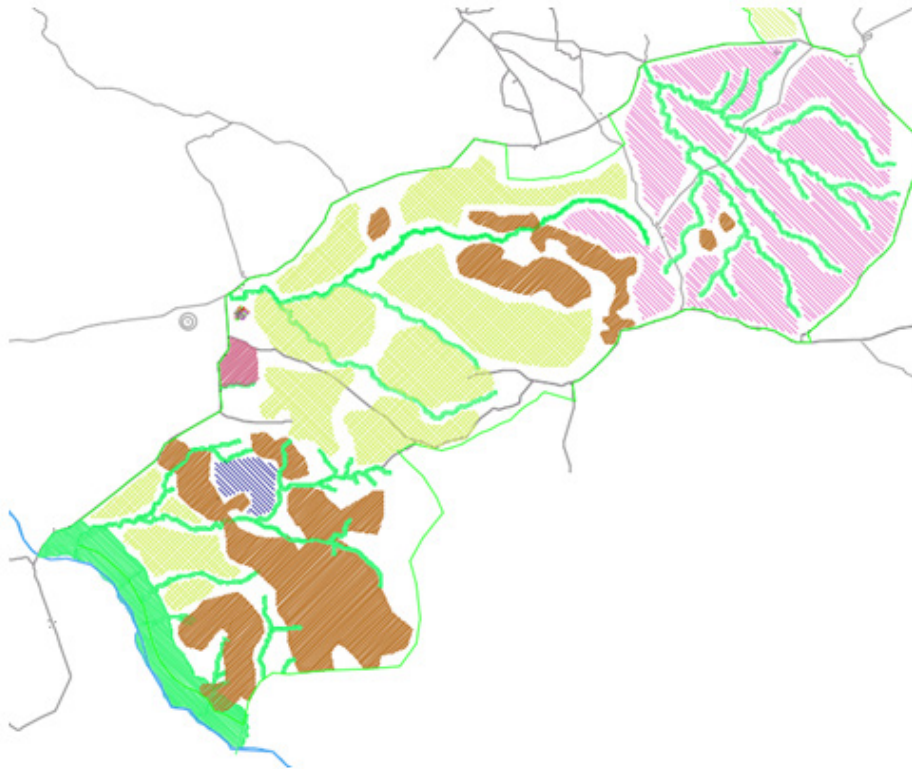
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7 Rapid map of current livelihoods activities

Locate main livelihoods activities:



8 Exploring comprehensive service delivery – Spatial analysis

Narrative / Rationale:

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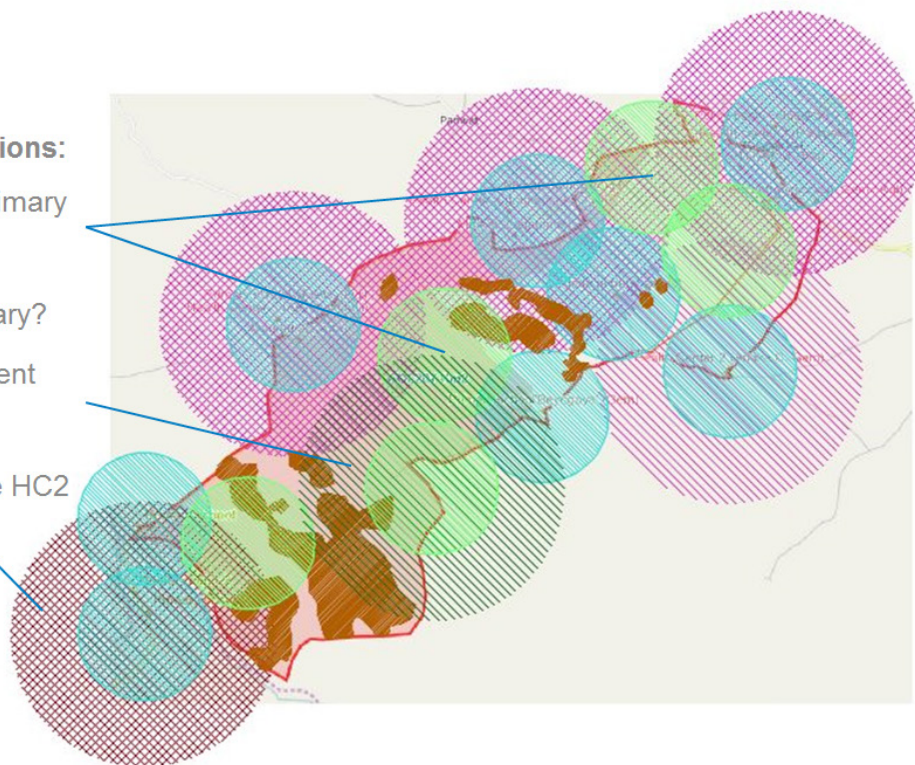
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Sketch with service upgrade and additional planned services:

Project additions:

- 5 Temp primary schools
- 1 Secondary?
- 1 Permanent HC3
- 1 Upgrade HC2 to HC3
- HC4?





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AND MANAGEMENT
SHELTER AND SETTLEMENT SECTION**

