

Volume Two

ESHIA Annexure

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Volume II Annex A

# Scoping Report Approval Letter



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FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA  
MINISTRY OF MINES

ቀን DATE 04 MAY 2012

ቁጥር Ref.No. MA229/39

To TS Environmental Technology

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Addis Ababa

Subject: **Approval of Environmental and Social Impact Assessment (ESIA) Scoping Report**

For Dallol Potash Project

We have reviewed the Environmental and Social Impact Assessment (ESIA) scoping report of Allana Potash-Dallol Potash Project in the Dankil Depression, Afar National Regional State (ANRS) in the Woreda of Berahale, in north eastern Ethiopia as per the Environmental Impact Assessment Proclamation No. 299/2002 and have found that the scoping report is prepared in accordance with the Environmental Protection Authority of Environmental Impact Assessment Guide Line For Mineral and Petroleum Operation Projects. Delegation of authority to review and decide on Environmental Impact Assessment Studies is given to the Ministry from the Federal Environmental Protection Authority by the Decision of the Council of Ministers.

Therefore the Ministry approved the Environmental and Social Impact Assessment (ESIA) scoping report and authorize the next stage that is the preparation of Environmental and Social Impact Assessment (ESIA ) of the proposed project.

With regards

CC:-

Allana Potash-Dallol Potash



Seyoum Zenebe  
Environment & Community  
Development Directorate Director

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Addis Ababa-Ethiopia

Volume II Annex B

Baseline Data Collection  
Methodologies for  
Ecological and Social  
Studies

## **B1** ECOLOGICAL STUDY

### **B1.1** VEGETATION ASSESSMENT METHODOLOGIES

#### **B1.1.1** Desktop Study

A desktop study was conducted to generate a checklist of expected flora and to identify Conservation Important Species in the region. Literature and databases used for the identification of species include USAID/Africa (2008), Ethiopia Biodiversity and Tropical Forests, Vivero *et al.* (2006), Red List of plants of Ethiopia and Eritrea, The Plant List, Encyclopaedia of Life (EOL) and Wikispecies

#### **B1.1.2** Field Survey

For vegetation, floristic diversity is usually measured on individual trees, plants, or other vegetative entities. For this study, representative areas of vegetation within and around the study site were assessed in order to determine vegetation communities.

- Vegetation structure and habitats were delineated from aerial imagery.
- Vegetation was sparse and considered insufficient to justify the assessment of detailed sampling plots. Instead a species presence and abundance was recorded for general locations within each habitat. Data collected entailed the compilation of a list of plant species, and those that were sufficiently abundant were assigned an approximate cover-abundance estimate using the Braun-Blanquet approach (Mueller-Dombois & Ellenberg, 1974). Seven cover-abundance categories were used as listed in Table 0.1.
- Plant taxa were identified to the lowest possible taxon, following international taxonomic standards.

**Table 1.1** Braun-Blanquet Cover Classes

Class	Range of Cover (%)	Mean Abundance
5	75-100	87.5
4	50-75	62.5
3	25-50	37.5
2	5-25	15.0
1	1-5	2.5
+	<1	0.1
r	<<1	0.01

Source: Mueller-Dombois & Ellenberg (1974)

## **B1.2 FAUNAL ASSESSMENT METHODOLOGIES**

### **B1.2.1 Desktop Review**

Faunal species inventories were compiled prior to the site visit based on an integration of existing data. The species inventories were then used to gather, where possible, Red Data listings and natural history information on specific species.

### **B1.2.2 Visual Observations**

Numerous visual observations were made by traversing the study areas noting habitat types and the visual presence of animals or evidence of their presence in the form of faeces, pellets, tracks, nests, burrows, feathers etc. The location of each faunal sampling point and the species observed was recorded using a GPS.

### **B1.2.3 Live Trapping**

Three locations were selected for the live trapping of smaller faunal groups, both within the Allana Concession and in the vicinity of Hamad Ela. The trap sites were placed in the *Hypaene* Palm belt in close proximity of prominent Doum Palm mounds where the best chances of trapping success were expected. Locations of trap sites are listed in Table 6.2 and maps illustrating the relative location of the trapping stations together with other faunal sampling points are provided in *Figure 1.1*.

**Table 1.2 Faunal trap site locations**

<b>Trap Site</b>	<b>Latitude</b>	<b>Longitude</b>
<b>Site 1</b>	14.13904	40.26832
<b>Site 2</b>	14.21066	40.22533
<b>Site 3</b>	14.08779	40.29500

Projection: Geographic, Datum WGS84

The array trap used at both sites consisted of three arms of plastic drift fences, bucket pitfall traps and plastic mesh funnel traps. A small amount of sand was added to the pitfall buckets and kept moist, while funnel traps were covered to provide shade for any trapped organisms. Sherman small mammal traps were used for trapping rodents.

### **B1.2.4 Camera Traps**

Motion (heat) sensitive cameras were deployed at four locations and baited with goat carcasses and pet food. Baiting was effective but the general environmental temperature did not differ sufficiently from a larger animal's body temperature to trigger the cameras. Spoor and feeding on baits provided evidence that Striped Hyaena and Desert Sand Fox visited the sites but few images were obtained.

**B1.2.5 Aquatic Assessment Methodologies**

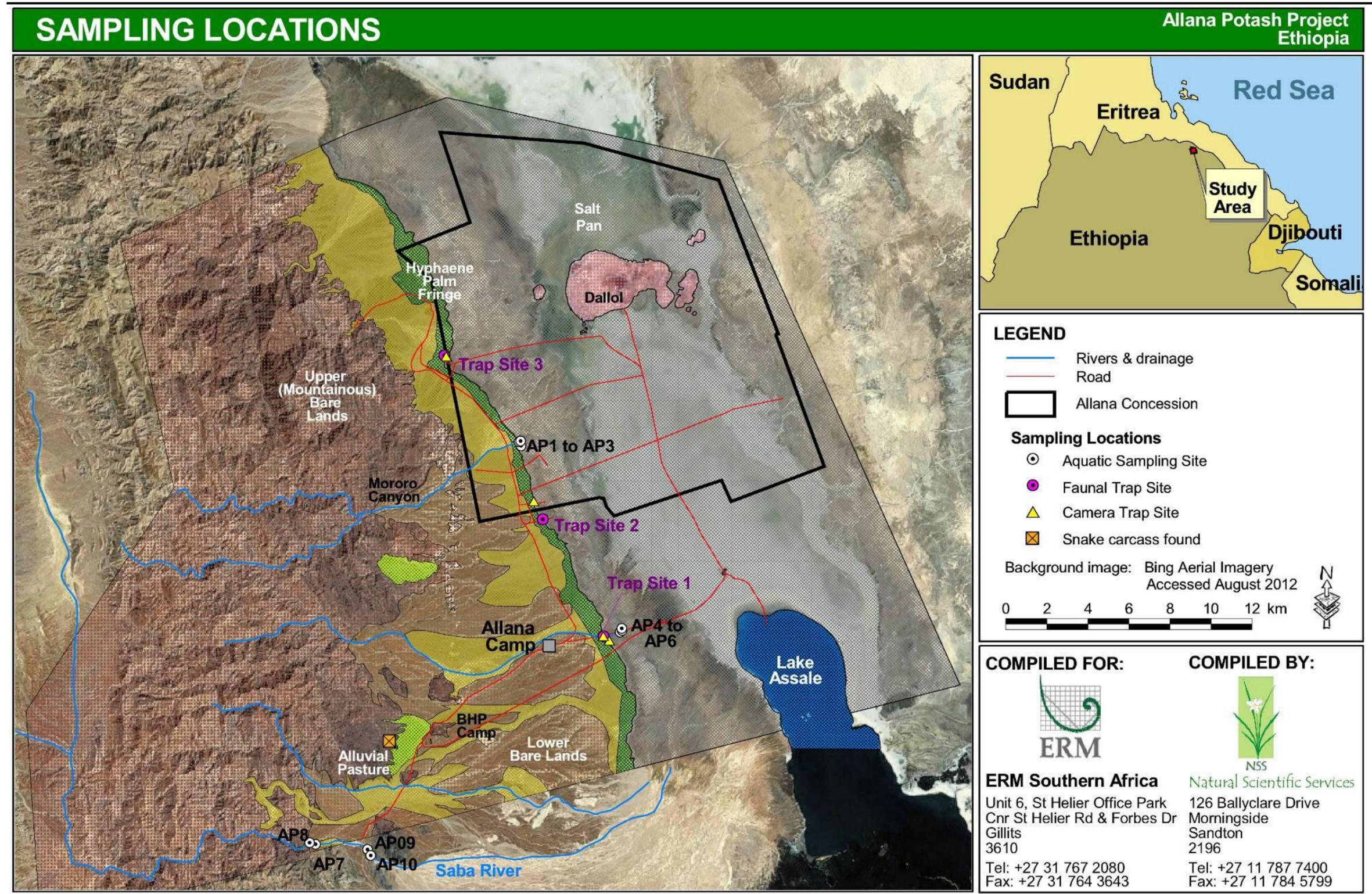
Aquatic Habitats were selected to be representative of as many habitats as possible within and around the Allana Concession. All the sites were situated in the vicinity of the proposed Potash mining operations and its associated infrastructure. A total of 10 sites were sampled, covering the two distinctly different aquatic habitats present. Their locations are illustrated in *Figure 1.1* and presented in *Table 1.3*.

**Table 1.3 Aquatic sample site locations**

Sample Number	Latitude	Longitude
<b>Mororo Groundwater Pools</b>		
AP01	14.17109	40.25884
AP02	14.17280	40.25807
AP03	14.17324	40.25875
<b>Hamad Ela Mudflats</b>		
AP04	14.08969	40.30238
AP05	14.09037	40.30317
AP06	14.09116	40.30304
<b>Sabah River</b>		
AP07	14.09116	40.30303
AP08	13.99743	40.16629
AP10	13.99441	40.19156
AP11	13.99190	40.19301

Projection: Geographic, Datum WGS84

Figure 1.1 Aquatic and Faunal Sampling Locations



### **B1.2.6**      *Water Quality*

Water quality is a measure of the physical attributes and chemical constituents of a sample of water. The physical and chemical constituents measured *in situ* included five standard physical WQ variables, namely, Dissolved Oxygen (DO) (mg/l and %), temperature (°C), Electrical Conductivity (EC) (mS/m), Total Dissolved Solids (TDS) (mg/l) and pH. This was done by using a pre-calibrated HI 9828 multi-parameter with a multi-sensor probe (Hanna Instruments).

### **B1.2.7**      *Aquatic Macro-invertebrate Assessment*

Aquatic macro-invertebrates are good indicators because they are visible, easy to identify and have rapid life cycles. The assessment of macro-invertebrate communities in a river system is a recognised means of determining aquatic ecological “health” (Dickens and Graham 2002). The macro-invertebrates were collected and identified to family level using the standardised SASS5 (South African Scoring System, version 5) sampling method described by Dickens and Graham (2002). SASS5 is a rapid assessment method developed for flowing aquatic system. Macro-invertebrates were collected using a standardised net in available habitat types taken to identify the presence and approximate abundances of macro-invertebrate families. The results for each site was then analysed using the following metrics:

- Occurrence: The number and abundances of families sampled were used to determine the overall family richness. These two measures are simple and were used as an indicator of contaminant stress on macro-invertebrate communities.
- Biotic indices: Such indices are usually based on the assignment of various macro-invertebrate taxa. Their utility in countries other than those for which they are originally designed may be limited as tolerances may not be reliably transferred to different areas where there are different families, climates and eco-regions. The biotic indices included SASS5 and Average Score Per Taxon (ASPT).

### **B1.2.8**      *Fish Sampling*

Fish were sampled at each aquatic sample site (*Figure 1.1*) using whatever methods were effective. An electro-shocker was used to sample fish in the Sabah River where freshwater conditions existed. However this was not possible in highly saline conditions and a broad seine net made of shade-cloth was used for the Mororo Groundwater Pools and the Hamad Ela Mudflats. The small seine net was used in shallower areas with overhanging vegetation by running the net out to the banks of the wetland. The sampled fish were identified to species level using available data on the Fishbase.org website and safely returned to the aquatic system.

## B2.1

## METHODOLOGY

The social baseline draws on a range of primary data collected for the purpose of the ESHIA for the proposed Allana Potash Mining Project, and publically available secondary data. In order to provide further context to the baseline, commentary is also provided at a national and regional level.

A combination of research methods were used to collect both quantitative and qualitative data and included:

- Review of secondary data;
- Household survey;
- Key Informant Interviews (KII) with various stakeholders;
- Focus Group Discussions (FGDs) with men, women, elders and youth;
- Participatory Rural Appraisal (PRA) techniques used during FGDs, including community mapping, Venn diagram <sup>(1)</sup> and seasonal calendars;
- Site walk over and cultural heritage survey; and
- Examination of satellite imagery to identify areas of high archaeological potential.

*Table 2.1* shows the range of methodologies used to fulfil the objectives of the social baseline.

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(1) A schematic diagram used to depict the relationship between a collection of characteristics / ideas.

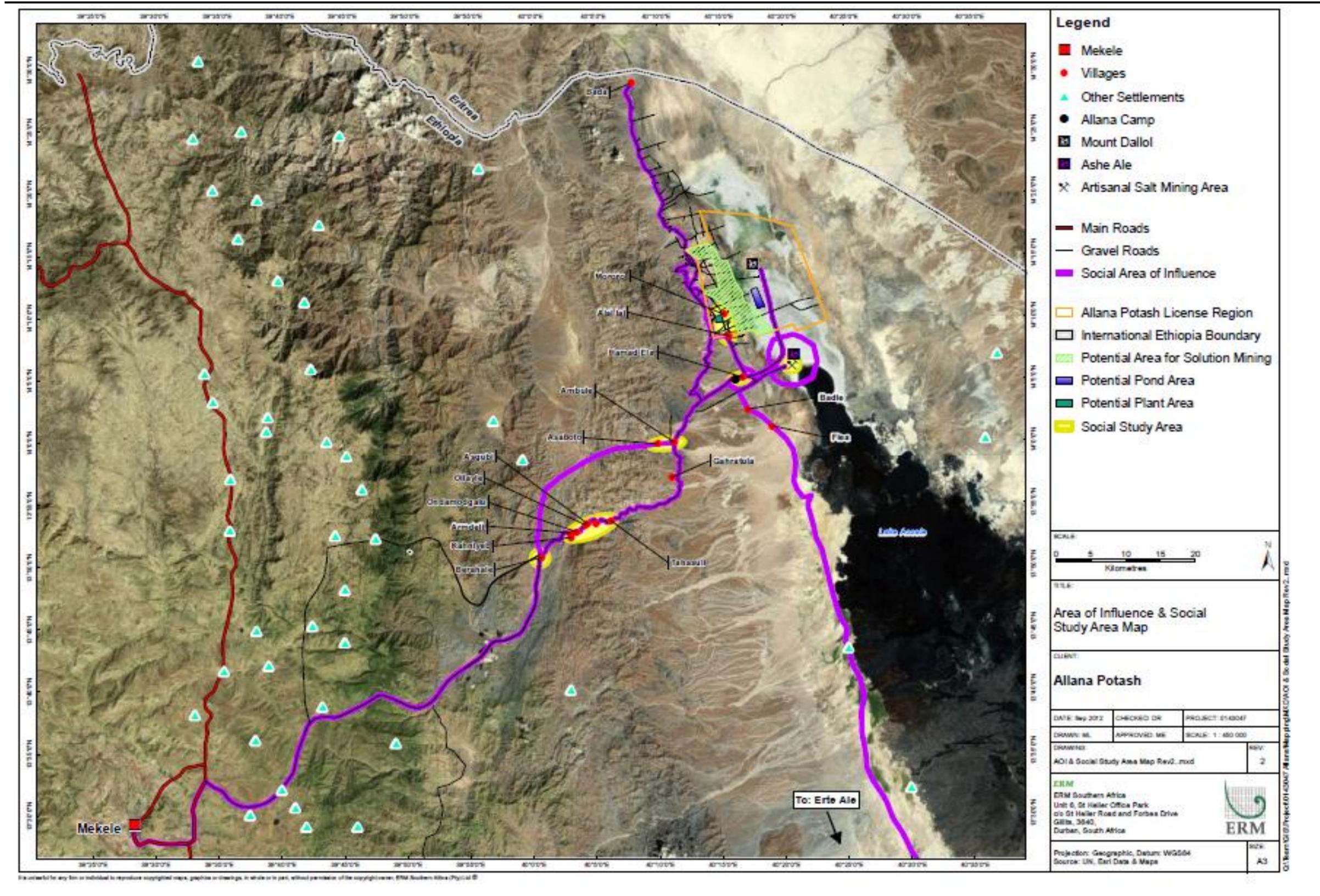
**Table 2.1 Data Collection Methodologies**

Objectives	Methods Used						
	Secondary Data	Household Survey	KII	FGD	Cultural Heritage Survey	Landscape and Visual Assessment	PRA
Describe population size and structure, settlement patterns, ethnic and religious structure, governance patterns etc.	X	X	X	X	X		X
Identify administrative and socio-cultural institutions, leadership patterns, migrant status of residents	X		X	X			
Identify areas of known or potential significance including graves, cultural heritage sites and areas used for religious practices and festivals				X	X		X
Identify intangible cultural heritage, in particular related to the salt trade	X			X			
Identify actual and perceived visual impacts in the Study Area, and potential impacts to tourism	X					X	
Assess level of infrastructure development (e.g. social amenities, infrastructure availability and condition)	X	X	X	X	X		X
Gender analysis of livelihoods		X		X			X
Identify potential for conflict and attitudes/ perceptions to the proposed Project	X	X	X	X			

Objectives		Methods Used					
Determine livelihood strategies (e.g. goat herding, salt mining, reed harvesting)	X	X	X	X			
Identify marginalised groups within the community		X	X	X			
Identify and assess status of resources (land, salt flats, water) and level of dependence upon these	X	X	X	X	X		X
Identify potentially successful mechanisms to minimise negative effects of proposed Project upon local population	X	X	X	X			

*Figure 2.1* shows the location where primary data collection activities were undertaken during the baseline survey. Data to supplement the ESHIA report and more particularly social baseline data for a federal and regional level have also been collected in Addis Ababa and Semera respectively through engagement sessions conducted in March 2012.

Figure 2.1 Social Area of Influence and Social Study Area



It should be noted that the villages of Asabolo and Ambule are sometimes jointly referred to as Sabbah, the name of the seasonal river on which they were founded. The village of Morrор is an amalgamation of several smaller villages along the road including:

- Tahasuli;
- Asgubi;
- Oilayle;
- Ondamodgalu;
- Armdeli; and
- Kahniyeb.

For the purposes of this report we will refer to these villages collectively as Morrор.

### **B2.1.1**      *Quantitative Methodology*

Quantitative primary data collection was conducted through a household survey. The household survey was applied to a representative sample of the households in the selected villages using a simple random sampling method. The equation that was used to determine sample sizes for each village in which the household survey was applied is included in *Box 1.2*.

#### **Box 2.1**      *Simple Random Sample Formula*

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$$n = \frac{N}{1 + N(e)^2}$$

Where *n* is the sample size, *N* is the population size, and *e* is the margin of error.

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\*Source: Yamane, Taro. 1967. *Statistics, an Introductory Analysis*, 2nd Ed., New York: Harper and Row.

The villages in which the household survey was applied, and the estimated numbers of households surveyed per village are also indicated in *Table 2.2* below.

**Table 2.2 Villages Surveyed and Number of Households**

<b>Community</b>	<b>Estimated Population</b>	<b>Estimated Number of Households - Based on visual observations during the scoping site visit</b>	<b>Minimum Number of Households to be Surveyed</b>	<b>Approximate Percentage of Total Households Surveyed</b>	<b>Number of Households Actually Surveyed</b>	<b>Population of Households Surveyed</b>
Berahale Town	2,954	401	24	5.87%	27	164
Morrer	~250	42	16	37.31%	19	98
Asabolo	~180	~30	14	45.45%	11	54
Ambule	200+	~40	15	38.46%	10	56
Hamad Ela	200-3,000	~250	23	9.09%	40	183
Mororo	32	6	5	80.65%	3	15
Alai lai	32	6	5	80.65%	4	22
<b>TOTAL</b>	101	36.14% (mean)	12.46% (% of estimated total households)	<b>114</b>	<b>592</b>	

For the purposes of sampling, household numbers were estimated for most of the villages based on visual observations during the scoping fieldwork, these estimates were not always accurate, and for the villages of Asabolo, Ambule, Mororo and Alai lai proved to be over-estimates.

Due to Health and Safety (H&S) and logistical limitations the simple random sampling formulae was applied for an 80% degree of certainty. A total of 100% of available <sup>(1)</sup> households were surveyed in Asabolo, Ambule, Mororo and Alai lai. Because Hamad Ela is the closest village to the area proposed for the Project a disproportionate number of surveys were specifically taken in that village as per Allana's request. *Figure 2.2* shows enumerators carrying out the household survey in Ambule.

**Figure 2.2** *Enumerators in Ambule Village*



The variation between the planned and actual numbers of household surveys collected in each village is discussed in *Section 1.2.6*.

### **B2.1.2** *Qualitative Methodology*

The qualitative methods included a series of FGDs and KII.

### **B2.1.3** *Focus Group Discussions*

FGDs were conducted with men, women, youth, elders (men) and salt trade workers.

*Table 2.3* shows the number of attendees in each FGD conducted. FGDs with men and women were conducted in every village however FGDs with youth, elders and salt trade workers were conducted where relevant or possible (depending on the availability of participants).

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(1) Households whose members were not present during the survey were not included.

**Table 2.3** *Focus Group Discussions*

Village	Focus Group Discussions:				
	Men	Women	Elders (men)	Youth (men)	Salt Trade Workers
Berahale	15	8	-	-	-
Morrer	6	3	-	-	-
Asabolo	6	4	-	-	-
Ambule	18	9	-	-	-
Hamad Ela	18	11	3	4	5
Mororo	7	6	-	-	-
Alai lai	6	3	-	-	-

The FGDs used the following PRA techniques:

- Natural resource ranking that facilitates participants scoring the availability and importance of resources;
- Livelihood significance ranking that facilitates the scoring of livelihood activities by income generation, subsistence, cultural significance etc.;
- Seasonal calendars that show the seasonality of key crops, activities, festivals (in a Gantt-style diagram);
- Community mapping and transect walks that develop an overview of significant infrastructure, services and resources;
- Household wealth ranking that evaluates the comparative economic status of households;
- Gender resource mapping that demonstrates the ownership, control and division of labour/responsibility of household resources;
- Daily calendars that show tasks and activities for typical men, women, children and youth;
- Diagram mapping of community networks and relationships; and
- Pictorial histories that show key events in villages in pictorial form along a timeline.

Figure 2.3 shows an example of a women's FGD that was conducted Asabolo.

**Figure 2.3** *Focus Group Discussion in Asabolo Village*





Key Informant	Date	Location
Head of the Health Post	20 June 2012	Berahale

### B2.1.5 *Cultural Heritage Survey*

In addition to the data collection activities outlined in the previous sections, ERM conducted two Cultural Heritage (CH) surveys within and around the proposed Project components. The first survey identified several Living Cultural Heritage (LCH) sites and numerous potential Archaeological Cultural Heritage (ACH) sites within the Project license area. The second field survey focused on a more detailed evaluation of all CH sites in terms of their location, importance, age and possible function both within the Project license area and elsewhere.

The objectives of the CH survey were to:

- Identify and ascertain the character, condition, location, extent, importance, age and possible function of both ACH and LCH sites, within and around the proposed Project components;
- Assess the potential for sub-surface ACH resources;
- Assess if the proposed Project components will influence either ACH or LCH resources;
- Gather data from areas *outside* the Project license area to assist in the interpretation and evaluation of ACH resources *within* the Project license area.

In general, the Project area lies in a region largely unexplored by archaeologists and required substantial pre-field preparations, including a review of written sources, maps and satellite imagery. The information gathered during the pre-field preparations assisted in the identification of potential CH site locations, as well as establishing the history of archaeological research in the Project area.

The CH field survey efforts included pedestrian survey of all proposed Project construction footprints and likely project ground disturbance outside of the construction footprints. Specifically, the field surveys targeted the proposed Plant, Solution Mining and Pond areas as well as two proposed Project roads in the southern portion of the license area (*Figure 2.1*). Most of the survey effort took place between the eastern slopes of the Ethiopian Plateau and the western shores of a now dry former lake-bed. The landscape within the general survey area is characterized by agglomerate, boulders and alluvial deposits transported from the highlands.

The CH field survey methodology included:

- Pedestrian Survey, including site walkovers of areas within and outside proposed Project component footprints;
- In-field data gathering by GPS and survey field-forms of any archaeological, historical or 'living' CH sites;
- Photographic records of visible CH; and
- Key Informants Interviews (KII) to assist in identification of recent cultural remains, particularly modern burial sites.

Pedestrian survey is the preferred method for archaeological investigation, involving intensive or more rapid, non-intensive walkovers of various locations within the survey area. Intensive pedestrian survey requires a systematic walkover targeting CH sites that are easily visible along with those that are often more difficult to detect. Non-intensive pedestrian survey involves a quick surface reconnaissance of locations believed to have low potential for CH sites.

Intensive pedestrian survey targeted the proposed Plant area, the western half of the proposed Solution Mining area and various sections of proposed roads. Additional intensive survey also targeted the areas around the villages of Hamad Ela, Alai-lai and Mororo. Non-intensive pedestrian survey efforts targeted the proposed Pond area, the eastern half of the proposed Solution Mining area, and the proposed Workers Village area. These areas received less attention for multiple reasons, including rapid sediment deposition or landscape erosion, resulting in limited potential for cultural resources.

Conducting two separate CH field survey efforts allowed for a more comprehensive and accurate mapping of CH resources within the Project area. For example, after completing the first field survey, the locations of all recorded CH features were plotted on high-resolution satellite imagery of the Study Area. A geospatial archaeologist then analysed the data to identify any potential archaeological features overlooked by the first survey effort. This process identified several additional potential CH features, which were ground-truthed during the second field survey.

Interviews with various key stakeholders enhanced the understanding of CH resources within the Project area. The general aim of the engagement was to introduce the proposed Allana Potash Mining Project to the stakeholders, and identify known cultural heritage within the Project area. Another aim was to discuss the potential for unforeseen impacts to cultural and archaeological heritage.

On April 21, 2012 a series of meetings were held with stakeholders at the federal level in Addis Ababa. Key participants included:

- The Federal Authority for Research and Conservation of Cultural Heritage of the Ministry of Culture and Tourism;

- The Department of Archaeology and Heritage Management;
- The Department of Social Anthropology of Addis Ababa University; and
- The Ethiopian Archaeologists and Palaeontologists' Association.

During the CH field surveys, both structured and semi-structured interviews were conducted with local stakeholders, including:

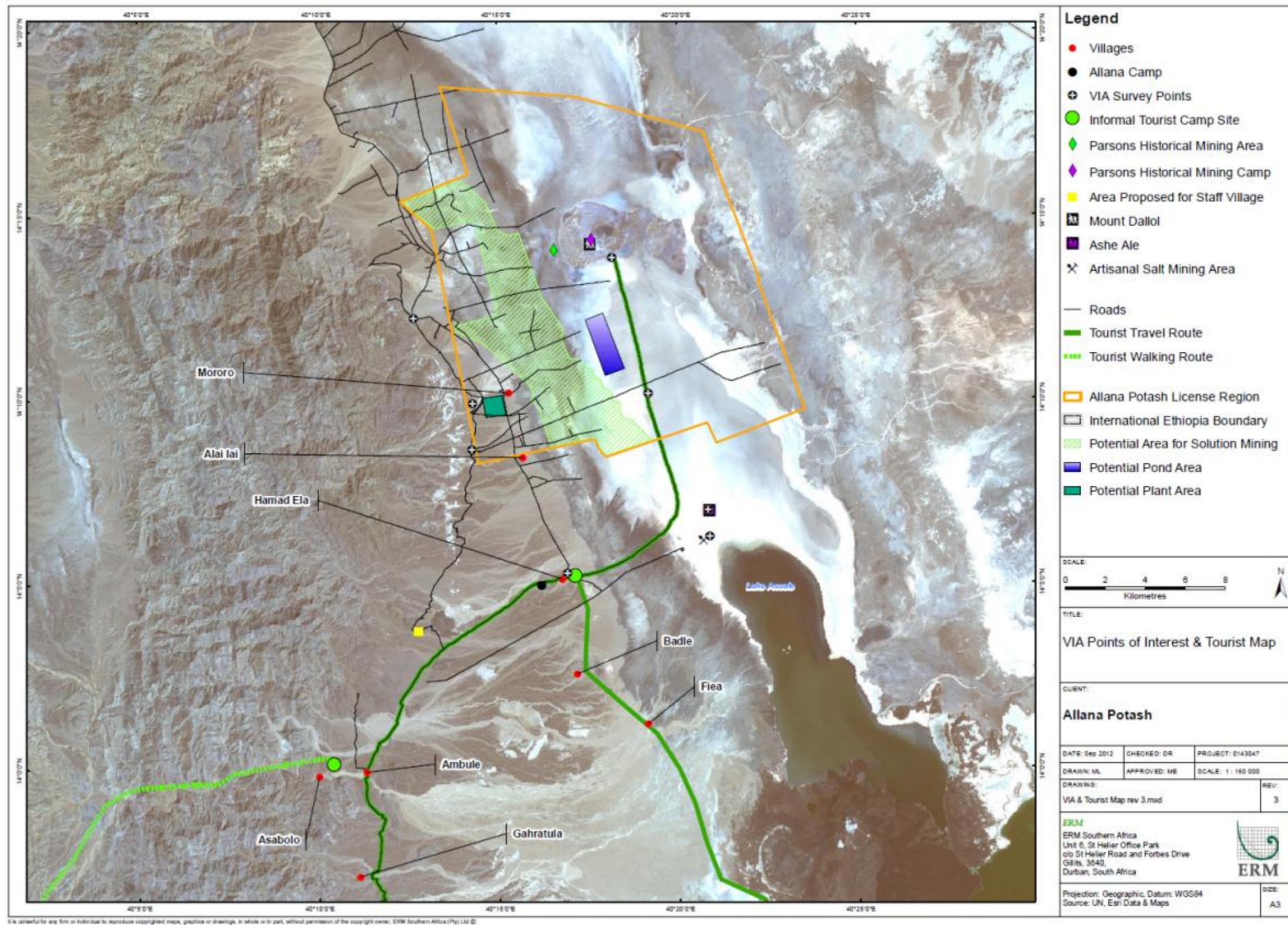
- Local leader and elders of the Hamad Ela village on May 20 2012 at Hamad Ela village;
- Salt trade workers who are engaged in salt cutting, transporting and digging on the salt plains on May 23 2012; and
- The head of the Berahale *Woreda* Culture and Tourism Desk on May 23 2012.

In summary, knowledge of the CH resources within the Project is sufficient for the purpose of a baseline study. Results from the pre-field preparations and CH field survey efforts provide enough data to limit risk of unexpected findings that might delay Project construction. However, trained archaeologists should undertake additional field survey if there are major changes to the proposed Project design that influence areas not previously surveyed. Further, while substantial progress has been made in understanding the CH resources of a previously unexplored region, gaps still exist.

#### **B2.1.6**      *Landscape and Visual Data Collection*

In order to collect relevant data for the assessment of actual and perceived visual impacts the ERM team conducted analysis of topographic surveys, remote sensing and site mapping to develop Zones of Theoretical Visibility (ZTVs). In field data collection was then conducted in May 2012 that involved identifying potential receptors and taking photographs from a range of viewpoints. The various viewpoints at which photos were taken are included in *Figure 2.5*.

Figure 2.5 Landscape and Visual Survey Points

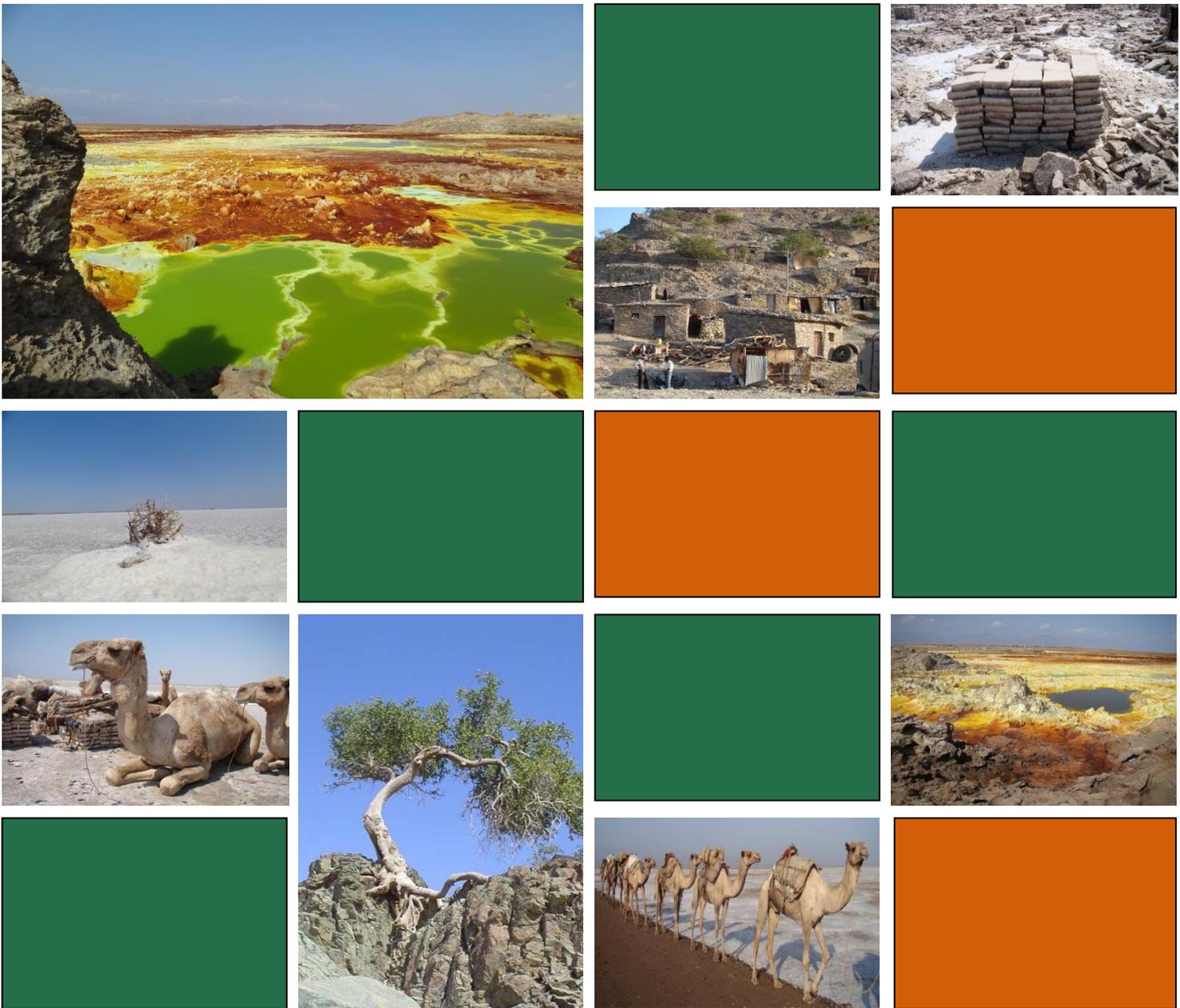


### **B2.1.7**      *Secondary Data Collection*

Secondary data was collected from academic journals, national census results, regional development planning documents and other sources to help develop a profile of the SSA.

Volume II Annex C

# ESHIA Stakeholder Engagement Plan



**Annex C -  
Stakeholder Engagement Plan**  
Environmental, Social and Health Impact Assessment

**DalloI Potash Project**

Version 4

December 2012

[www.erm.com](http://www.erm.com)



Allana Potash Corp.

December 2012

Prepared by: ERM

This report has been prepared by Environmental Resources Management, the trading name of Environmental Resources Management Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.

For and on behalf of  
Environmental Resources Management

Approved by: Philippa Spence

Signed: 

Position: Partner

Date: December 2012

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<b>D.1</b>	<b>OUTCOMES OF BASELINE DATA GATHERING &amp; ENGAGEMENT</b>	<b>1</b>
<b>D.1.1</b>	<b>STAKEHOLDERS ENGAGED</b>	<b>1</b>
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#### **APPENDICES**

*Appendix A: Stakeholder Database;*  
*Appendix B: Outcomes of Screening Phase engagement;*  
*Appendix C: Outcomes of Scoping Phase engagement;*  
*Appendix D: Outcomes of Baseline Data Gathering engagement;*  
*Appendix E: Stakeholder Engagement Materials – Non-Technical Summary of the Scoping Report (NTS).*

## LIST OF ACRONYMS

Abbreviation	Full Definition
AMREF	African Medical and Research Foundation
ANRS	Afar National Regional State
AOI	Area of Influence
APDA	Afar Pastoralist Development Association
CBOs	Community Based Organisations
CSOs	Civil Society Organisations
CRGE	Climate Resilient Green Economy
DSR	Draft Scoping Report
EIA	Environmental Impact Assessment
EHS	Environmental, Health and Safety
EPA	Environmental Protection Authority
EP	Equator Principles
ERM	Environmental Resources Management
ESHIA	Environment, Social and Health Impact Assessment
E MP	Environmental Management Plan
ESMPs	Environmental and Social Management Plans
ESTDP	Ethiopian Sustainable Tourism Development Project
FGD	Focus Group Discussions
FHH	Female Headed Household
I&APs	Interested and Affected Parties
ICP	Informed Consultation and Participation
IFC	International Finance Corporation
KII	Key Informant Interviews
ELCR	Environmental, Land and Community Relations
MELCA	Movement for Ecological Learning & Communication Action
MoM	Ministry of Mines
NGO	Non-Governmental Organisation
NTS	Non-Technical Summary
OECD	Organisation for Economic Co-operation and Development
SES	Stakeholder Engagement Strategy
SEP	Stakeholder Engagement Plan
SDPASE	Sustainable Development of the Protected Areas for Ethiopia
TET	TS Environmental Technology
TOR	Terms of Reference

## GLOSSARY

Term	Definition
Affected Party	Stakeholders who are affected by the company or operation, both positively and negatively. Within this it is possible to distinguish between those that are directly and indirectly affected by the company or operation.
<i>Arho</i>	The <i>Arho</i> is the local Afar name for the caravan of camels and donkeys transporting salt from Hamad Ela to Berahale.
Communication	Dialogue between either Allana or ERM and interested and/or affected parties (I&APs). Communication is exchanging (giving and receiving) information. Communication enables Allana or ERM to convey the aspects, risks and opportunities of their operations, and to receive information (in the form of concerns, questions and suggestions shared in response) from a range of stakeholders.
Consultation	Consultation is not the same as communication although both are two-way processes. Consultation deliberately seeks input from stakeholders in order to shape relations and the development of programmes. It involves the business, key individuals, organisations and groups affected by or interested in the development and outcomes of the issue/ process being discussed. The aim is to ensure mutual understanding and for all parties to be able to be involved in making decisions that have a potential to affect all concerned. A good consultation process needs to be supported by a strong communication programme.
Grievance	A concern, complaint or feedback raised by any stakeholder either affected by or interested in company operations. Both concerns and complaints can result from either real or perceived impacts of a company's operations.
Interested Party	Persons or groups who, although not affected by the Project or its operations, have an interest in or can influence them. This might include welfare organisations, Non-Governmental Organisations, local businesses and political groups.

<b>Term</b>	<b>Definition</b>
Representative Participation	An approach to stakeholder engagement which seeks to give all affected stakeholders an opportunity to participate in engagement activities.
Stakeholder	Persons or groups that are directly or indirectly affected by a Project as well as those that may have interests in a Project and/or the ability to influence its outcome, either positively or negatively. This can refer to employees, suppliers, locally affected communities or individuals and their formal and informal representatives, national or local governmental authorities, traditional authorities, religious leaders, civil society organisations (CSOs), and other groups with special interests, Non-Governmental Organisations (NGOs), the academic community, industry/rural/private businesses and others.
Stakeholder Engagement	An umbrella term encompassing a range of activities and interactions between Allana or ERM and stakeholders over the life of a Project that is designated to promote transparent, accountable, positive, and mutually beneficial working relationships.
Vulnerable Groups	Individuals or groups within the Project area of influence which could experience adverse impacts more severely than others based on their vulnerable or disadvantaged status. This vulnerability may be due to an individual or group's race, sex, language, religion, political, or other opinion, national or social origin, property, birth or other status. In addition other factors will be considered such as gender, ethnicity, culture, sickness, physical or mental disability, poverty or economic disadvantage, and dependence on unique natural resources.

## *INTRODUCTION*

Allana Potash Corp. (Allana) is seeking to develop a potash mine in the Danakil Depression in the north-east of Ethiopia (the Dallol Potash Project). Environmental Resources Management (ERM) has been appointed to implement an Environmental, Social and Health Impact Assessment (ESHIA). This Stakeholder Engagement Plan (SEP) serves to map out the plan for engaging stakeholders as part of this ESHIA.

Stakeholder engagement refers to a process of sharing information and knowledge, seeking to understand and respond to the concerns of potentially impacted or affected individuals, and building relationships based on trust. As such, stakeholder engagement is essential for the successful implementation of the ESHIA and the Project itself.

### *1.1 PURPOSE OF THE STAKEHOLDER ENGAGEMENT PLAN*

The purpose of the SEP is to ensure that a consistent, comprehensive, coordinated and culturally appropriate approach to consultation is undertaken for the ESHIA that fulfils all of the relevant legal and regulatory commitments. To this end the SEP:

- Outlines the **approach and plans** to be adopted and implemented for engagement, showing how the engagement process will integrate into the rest of the ESHIA process;
- Identifies **stakeholders and mechanisms** through which they will be included in the process; and
- Serves as a way to **document** the process.

The SEP focuses on consultation and disclosure activities undertaken during the ESHIA, and this version of the SEP includes specific details on the engagement for the Draft ESHIA report including proposed mitigation that took place in January 2013.

Stakeholder engagement should be undertaken for the Project throughout the planning, construction, operations and decommissioning phases. ERM will provide input on a broader approach to engagement for the Project through a Stakeholder Engagement Strategy (SES) which will be generated as one of the outcomes of the ESHIA process.

This SEP is intended to be a 'live' document and will be updated throughout the ESHIA process.

The remainder of the document is structured as follows:

- **Section 2** outlines the national and international legislative context that will govern the manner in which stakeholder engagement is conducted for the ESHIA engagement process.
- **Section 3** proposes an engagement process that will comply with the national and international standards and presents information about each step in the process.
- **Section 4** provides an overview of the process followed to identify and define key Project stakeholders.
- **Section 5** outlines more detail on the plan for the current and next phases of engagement, namely engagement on the Draft ESHIA and subsequent Disclosure phase.
- **Section 6** outlines the feedback mechanism that will be available for stakeholders through the ESHIA.
- **Section 7** presents an overview of how records of the process will be kept and monitored.

In addition, there are several *Appendices* including:

- *Appendix A*: Stakeholder Database;
- *Appendix B*: Outcomes of Screening Phase engagement;
- *Appendix C*: Outcomes of Scoping Phase engagement;
- *Appendix D*: Outcomes of Baseline Data Gathering engagement; and
- *Appendix E*: Stakeholder Engagement Materials – Non-Technical Summary of the Scoping Report (NTS).

## 1.2

### **PROJECT DESCRIPTION**

Allana holds one consolidated potash concession created from the amalgamation of their four original licenses (Exploration license Numbers – 2952-2954/2000, 2949-2951/2000, 2955-2957/2000 & 1878/2002 from the Ethiopian Ministry of Mines and Energy), in the Danakil Depression in the Afar National Regional State (ANRS) in the *Woredas* of Dallol and Berahale, in north eastern Ethiopia.

Allana propose to develop a potash mine, within their concession area. As part of the approval process for the proposed Project a suite of management plans need to be compiled to address the issues identified in the Environmental, Social and Health Impact Assessment (ESHIA). The

management plans have been developed in light of public and authority comment, as well as in response to legal and policy requirements. The management plans address impacts identified in the ESHIA and are implemented as part of an environmental management system for the proposed Dallol Potash Project.

As part of its first phase of activity, Allana proposes to mine a portion of the deposit in their concession area. The ESHIA being undertaken focuses only on this first phase. The mining process to be undertaken is known as solution mining.

### 1.3 *OBJECTIVES OF STAKEHOLDER ENGAGEMENT*

The objectives of engaging stakeholders during the ESHIA process include:

- **Ensuring understanding:** An open, inclusive and transparent process of culturally appropriate engagement and communication will be undertaken to ensure that stakeholders are well informed about the proposed development. Information throughout the ESHIA process will be disclosed as early, and as comprehensively as possible and appropriate for stakeholder groups.
- **Involving stakeholders in the assessment:** Stakeholders will be included in the scoping of issues, the assessment of impacts, the generation of mitigation and management measures and the finalisation of the ESHIA report. They will also play an important role in providing local knowledge and information for the baseline to inform the impact assessment.
- **Building relationships:** Through supporting open dialogue, engagements will help establish and maintain a productive relationship between the ESHIA team and stakeholders. This will support not only an effective ESHIA, but will also strengthen the existing relationships between Allana and stakeholders.
- **Engaging vulnerable peoples:** An open and inclusive approach to consultation increases the opportunity of stakeholders to provide comment on the proposed Project and to voice their concerns. Some stakeholders, however, need special attention in such a process due to their vulnerability. Differentiated measures will be used to ensure effective participation of vulnerable stakeholders.
- **Managing expectations:** It is important to ensure that the proposed Project does not create or allow unrealistic expectations to develop amongst stakeholders about Project benefits. The engagement process will serve as one of the mechanisms for understanding and then managing stakeholder

and community expectations, where the latter will be achieved by disseminating accurate information in an accessible way.

- **Ensuring compliance:** The process is designed to ensure compliance with both local regulatory requirements and international best practice.

For projects with potentially significant adverse impacts on affected communities an Informed Consultation and Participation (ICP) that focuses on an in-depth exchange of views and information with affected communities will be conducted. The consultation process is designed to be an organised and iterative process that manages and mitigates impacts, tailors implementation, and identifies appropriate mechanisms for sharing and capitalising on development benefits and opportunities.

## 2 **KEY STANDARDS AND LEGISLATION GUIDING STAKEHOLDER ENGAGEMENT**

### 2.1 **INTRODUCTION**

The stakeholder engagement process has been designed to ensure compliance with both Ethiopian legislative requirements, as well as the IFC Performance Standards (2012). This section presents the relevant standards and legislation identifying the key Ethiopian and international requirements for engagement. The following section will present the process that has been designed to comply with these standards.

The focus of this section looks only at legislation that relates directly to public participation requirements, where the legislative review in the Draft ESHIA Report provides greater context.

### 2.2 **ETHIOPIAN LEGISLATIVE REQUIREMENTS**

The following legislation is relevant to consider when designing an engagement process:

- The Constitution;
- Environmental legislation; and
- Environmental standards and guidelines.

#### 2.2.1 ***The Ethiopian Constitution***

By virtue of the Project being in Afar region, *Article 39* of the Constitution is relevant. This article defines ethno-cultural communities, whereby the Afar people can be classified as such a community. *Article 39* provides every ethno-cultural community with the right to their own territory, within which they can establish institutions of government. It therefore effectively grants them the right to self-governance and to this effect the Afar region has its own constitution. Given the location of the proposed Project, there is a need to design a process that meets both federal and regional requirements.

The federal requirements are described further below, and mirror the legislative requirements at the regional level.

## 2.2.2

### *Environmental Legislation*

Ethiopian Environmental Impact Assessments (EIAs) are governed by the EIA Proclamation (No. 299/ 2002). This is described further in the legislative section of the Draft ESHIA Report.

Part 5 of this proclamation identifies the need to undertake stakeholder engagement. It states that the authority or the relevant regional environmental agency (which in this case is the Ministry of Mines (MoM), as delegated by the Environmental Protection Authority (EPA) must make any Environmental Impact Study Report accessible to the public and solicit comments on it. They must also ensure that the comments made by the public, and in particular communities likely to be affected by the implementation of the Project, are incorporated into the EIA process.

The authority is compelled to consider public comments when making a decision about whether to approve or reject the application. Furthermore, any person dissatisfied with the decision of the authority or the relevant regional environmental authority may submit a grievance notice to the head of the authority or the relevant regional environmental agency.

## 2.2.3

### *Guidelines and Standards*

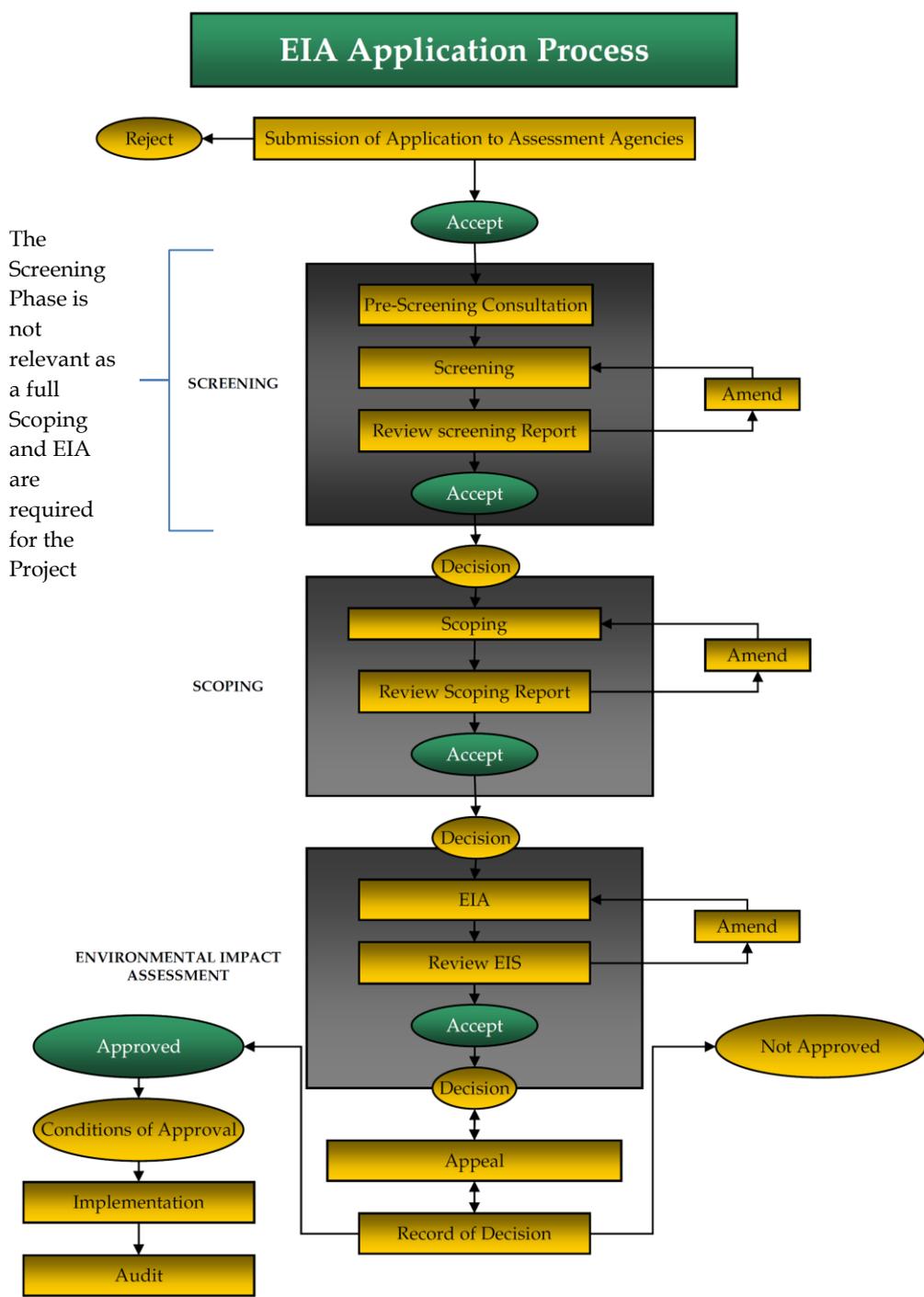
The EIA Guideline document (final draft 2000) and the EIA Procedural Guideline (Series 1, 2003) also provide specific recommendations for stakeholder engagement.

The EIA procedure according to Ethiopian EIA Guidelines is outlined below in *Figure 2.1*. The flow diagram indicates the phases at which stakeholder engagement is expected. From the stakeholder consultation undertaken with federal stakeholders it has been confirmed that pre-screening and screening is not necessary for the proposed Project given that a full scoping and EIA is required for the proposed Project.

*Table 2.1* provides further detail on the phases, guidelines and activities required for engagement as part of the EIA.

Figure 2.1

EIA Procedural Flow Diagram



Environmental Protection Authority, (2000)

**Table 2.1 Ethiopian Environmental Guidelines on Engagement**

Phase	Key Objectives	Legislative Requirements / Recommendations
Scoping <sup>(1)</sup>	Creation of a plan of study for scoping to ensure that stakeholders who may have an interest in the proposed Project are identified.	<ul style="list-style-type: none"> <li>• Five copies of the Scoping Report are submitted to the authority for review and approval;</li> <li>• As a minimum, the Scoping Report should include all issues raised by stakeholders and how these will be addressed; and a description of the engagement process including a list of stakeholders, and minutes of meetings;</li> <li>• Stakeholders should be given a reasonable timeframe to review the Scoping Report typically in the region of four weeks; and</li> <li>• The process of stakeholder review on the Draft Scoping Report (DSR) should be reflected in the Final Scoping Report <sup>(2)</sup>.</li> </ul>
Environmental Impact Assessment	To enable authority review (four weeks from submission). In addition if new issues are raised and addressed during the EIA process, these must be added as an addendum to the initial Scoping Report submitted.	<ul style="list-style-type: none"> <li>• Five copies of the Environmental Impact Statement (or Environmental Impact Assessment Report) submitted to the competent agency, stakeholders and a specialist for review; and</li> <li>• The proponent is responsible for co-ordinating the stakeholder reviews, either through distributing the document to all of the stakeholders or by making the document available in strategic places such as public libraries, schools, clinics etc.</li> <li>• The process of stakeholder review on the Draft Impact Assessment Report should be reflected in the Final Report together. Appended to the Final Report should be a record of engagements with local stakeholders on their position on the proposed Project and associated process that have been signed by affected stakeholders and local authorities and endorsed by regional authorities.</li> </ul>

(1) Please note that in the regulations a pre-screening and a screening phase were also identified. These, however, are not applicable for this Project as it had already been confirmed that a full Scoping and EIA would need to be completed as part of the Project. This was confirmed through consultation with the Ministry of Mines during the scoping phase engagement.

(2) Stakeholder review and the results of the engagement have been included in *Appendix B, C and D* of this SEP. The Final Scoping Report has also reflected on stakeholder inputs and been revised accordingly.

Phase	Key Objectives	Legislative Requirements / Recommendations
Record of Decision	For the competent agency to provide a record of decision report which should be provided to the proponent and be made available to stakeholders upon request.	<ul style="list-style-type: none"> <li>• Stakeholders who are dissatisfied may object to actions, opinions or decisions made not later than 30 days after receipt of such a decision; and</li> <li>• The Head of the competent agency should make his decision within 30 days following the receipt of the appeal.</li> </ul>

Ethiopian legislative text states that various techniques can be employed for engagement including:

- Public meetings;
- Exhibits or 'open days';
- Newspaper advertisements;
- Written information;
- Working with established groups (e.g. NGO's, community based organisations (CBOs); and
- Workshops or seminars.

For projects that fall under the jurisdiction of the Federal Environmental Protection Authority (EPA), as is the case with this ESHIA, the EPA EIA Procedural Guidelines (2003) require that regional agencies should write an endorsement letter verifying or confirming the following:

- The biophysical and socio-economic baseline conditions are adequately and truly described;
- During scoping major issues are well defined and explicitly indicated in the Term of Reference (TOR);
- Interested and especially the affected parties, or their true representatives are provided with all means and facilities (e.g. notice, assembly halls, reasonable timeframes, understandable language etc.) that enable them to adequately air their views and concerns;
- Interested and affected parties (I&APs) have agreed to and are satisfied with the terms of compensation and the appropriateness of the Environmental Management Plan;
- The environmental monitoring activities are undertaken according to an appropriate timeframe with the involvement of the IAPs, and regular reporting is made in good faith and to all concerned;
- The proponent or consultant fulfil the local and regional legislative and policy requirements and obtain the necessary permits;
- The envisaged benefits to the communities and the region are tangible;
- The monitoring plans are logical and allow for the participation of relevant bodies in the region;

- The strategy for impact communication and reporting is understandable and appropriate for regional level stakeholders; and
- The minutes of the consultation process reflect the true and unbiased accounts of the opinions and interests of the I&APs at the local level.

## 2.3 *INTERNATIONAL REQUIREMENTS*

In addition to aligning to national standards, the Project has committed to develop according to international best practice standards, in particular the Equator Principles (EP) and the International Finance Corporation (IFC) Performance Standards.

The focus of the following section is on the engagement-specific requirements of these standards. A full summary of the standards is described further in the ESHIA Report.

### 2.3.1 *Equator Principles*

Of the EPs, Principle Five has an engagement specific requirement of relevance to the ESHIA. Principle Five states that “Projects with potentially significant adverse impacts on Affected Communities will conduct an Informed Consultation and Participation process. The borrower will tailor its consultation process to the language preferences of the Affected Communities, their decision-making processes, and the needs of disadvantaged and vulnerable groups. This process should be free from external manipulation, interference, coercion and intimidation” (Draft Equator Principles, 2012).

Principle Five also makes provision for ensuring that Project related information, including assessment documentation (or non-technical summaries - NTS), and Environmental and Social Management Plans (ESMPs) are made publicly available, disclosed early in the assessment process and on an on-going basis, and are available for reasonable periods of time. In addition there is a need to ensure that content is communicated in a culturally appropriate way, including in relevant local languages.

It should also be noted that Principle Six includes requirements for establishing a grievance mechanism based on an understandable, culturally appropriate and transparent consultative process. The grievance mechanism needs to be scaled to the level of risks and impacts of the Project, and have affected communities as its primary user. Further detail is included in the SES which has been developed as an outcome of the ESHIA process. All reporting and disclosure requirements are now included within Principle 10.

### *Updates to the Equator Principles*

It should be noted that the Equator Principles are currently undergoing a process of strategic review and as such details may change (further details are available from <http://www.equator-principles.com/index.php/ep3>). The draft version of the EP (EP III) was released on 13 August 2012 for stakeholder review and comment until 12 October 2012. It is expected that a revised version of the EP is expected to be publicised thereafter. Current relevant updates include changes to Principles 5 and 6 to reflect the language and content of the revised IFC Performance standards.

Allana will continue to monitor their evolution and respond as appropriate and practicable to changes which are implemented.

### **2.3.2** *IFC Performance Standards*

The IFC Performance Standards on Environmental and Social Sustainability and the IFC Environmental, Health and Safety (EHS) Guidelines, effective since 1 January 2012, are generally accepted as the benchmark of best practice for environmental and social safeguards. These standards include guidelines for engagement activities, and are a key source of guidance in planning for engagement activities.

The Performance Standards are also the reference standards to which the EPs refer when Projects in non-OECD (Organisation for Economic Co-operation and Development) countries are financed (as is the case in the Project being developed by Allana).

The IFC Performance Standards require clients to engage with affected communities through disclosure of information, consultation, and informed participation, in a manner commensurate with the risks to and impacts on the affected communities. *Box 2.1* outlines the main requirements for consultation and disclosure under Performance Standard 1, the umbrella Standard on the *Assessment and Management of Environmental and Social Risks and Impacts*.

For projects with significant adverse impacts on affected communities ICP that focuses on an in-depth exchange of views and information will be carried out. The consultation process is designed to be an organised and iterative process that manages and mitigates impacts, tailors implementation, and identifies appropriate mechanisms for sharing and capitalising on development benefits and opportunities.

**Box 2.1**      **Requirements for Public Consultation and Disclosure in Performance Standard 1**

**Aims:**

To ensure that affected communities are appropriately engaged on issues that could potentially affect them; to build and maintain a constructive relationship with communities; and to establish a grievance mechanism.

**Who to Consult:**

- Directly and indirectly affected communities;
- Positively and negatively affected communities/individuals;
- Those with influence due to local knowledge or political influence;
- Elected representatives;
- Non-elected community officials and leaders;
- Informal/traditional community institutions and/or elders; and
- Indigenous peoples, where the Project is identified to have adverse impacts on them;
- Communities in the wider area of influence (AOI).

**When to Consult:**

As early as possible or at the latest consultation should begin prior to construction. Consultation should be an on-going process throughout the life of the Project, i.e. iterative. Consultation should also allow for a feedback mechanism where affected people are able to present their concerns and grievances for consideration and redress.

**What to Consult on:**

- Disclosure of Project information (purpose, nature, scale);
- Disclosure on the Action Plan as a result of consultation, with periodic reports to Demonstrate implementation;
- Risks and impacts of the Project; and
- Updates actions and proposed mitigation measures to address negative impacts and Areas of concern for affected communities.

**How to Consult:**

- Be inclusive and culturally appropriate;
- Allow for free, prior and informed participation of affected communities;
- Be in the language preferred by the affected communities;
- Consider the needs of disadvantaged and vulnerable groups;
- Be fed into the decision making process including proposed mitigation, sharing of benefits and opportunities;
- Be iterative;
- Be documented;
- Be responsive to community concerns and grievances;
- Be easily understood and transparent; and
- Allow for differentiated means of engagement particularly for disadvantaged or vulnerable groups.

*\*Where engagement relies substantially upon a community representative the client will aim to ensure that the views of affected communities are communicated, and that the results of consultation are communicated back to the community.*

Source: IFC Performance Standard 1, (paragraphs 25-35), (2012)

### *Consultation with Sensitive or Vulnerable Groups*

Vulnerable stakeholders require special attention according to the IFC. The proposed Project will have impacts on vulnerable / marginalised or sensitive groups. Vulnerable people include those who, by virtue of their gender, ethnicity, age, physical or mental disability, economic disadvantage or social status may be more adversely affected by a Project than others, and who may be limited in their ability to take advantage of a Project's development benefits. As a whole the ANRS can be identified to be vulnerable in a national context, as key indicators such as literacy and access to basic health care are particularly low for the region.

More specifically within the Project area, and based on the results of the socio-economic baseline survey the following groups have been identified as vulnerable:

- **Afar Women:** an Afar woman's access to resources (physical and financial) are considerably restricted due to traditional and cultural practices. Women were identified to have low representation in village level decision making. In addition the prevalence of female genital cutting (FGC) and abuse from male members of a household were reported to be common.
- **Female headed households (FHH):** across Ethiopia FHH are identified as particularly vulnerable due to reduced access to income generating opportunities and typically suffer from higher levels of food insecurity. At the local level the results of the baseline survey indicated that approximately a quarter of households surveyed were FHH, and illustrated similar vulnerabilities to those identified at a national level.
- **Sex Workers:** sex workers in the local area will not have access to forms of protection (authorities, health services, education for children) and may be subjected to discrimination.
- **Elderly:** the elderly within the village are less likely to receive an income and are reliant upon other members of a household. However elder men have an elevated status in Afar society and play a prominent role in traditional institutions and village level decision making.
- **Children:** children are mainly reliant upon older members of the household to access resources and for the maintenance of their general wellbeing. During the FGDs children (particularly under the age of 5 years) were identified as particularly susceptible to illness due to decreased immunity.

- **People with physical / mental health illnesses and disabilities:** the household survey indicated approximately 15% of households had a member with a physical / mental disability. The Project area has no institutional systems or services to encourage their economic and social participation in the community, and therefore this is important to consider when designing stakeholder engagement processes.
- **Households reliant on artisanal salt mining:** in particular the Afar men who are engaged in artisanal salt mining do not demonstrate high levels of livelihood diversification, and are largely reliant on the land and its resource base for income generation. Afar men also derive a cultural identity from their livelihood, with some indicating a desire to maintain their cultural identity and artisanal skills as well as a desire to avoid socio-cultural change to their livelihood.
- **Households reliant on livestock:** herding livestock was identified to be one of the common livelihood activities in the Project area. However the Project Area has been subjected to cyclic drought and consequent decline in the carrying capacity of the rangeland with households losing livestock.
- **Internally Displaced Persons:** the Ethiopia - Eritrea war has led to the displacement of a significant proportion of the Afar population, who as a result of their displacement may have impacts to their access to resources and infrastructure, community cohesion and livelihoods.

The Performance Standards outline requirements for engagement with vulnerable people which should include differentiated measures to allow for the effective participation of these people. Thus the process needs to be designed to address the needs of these vulnerable groups.

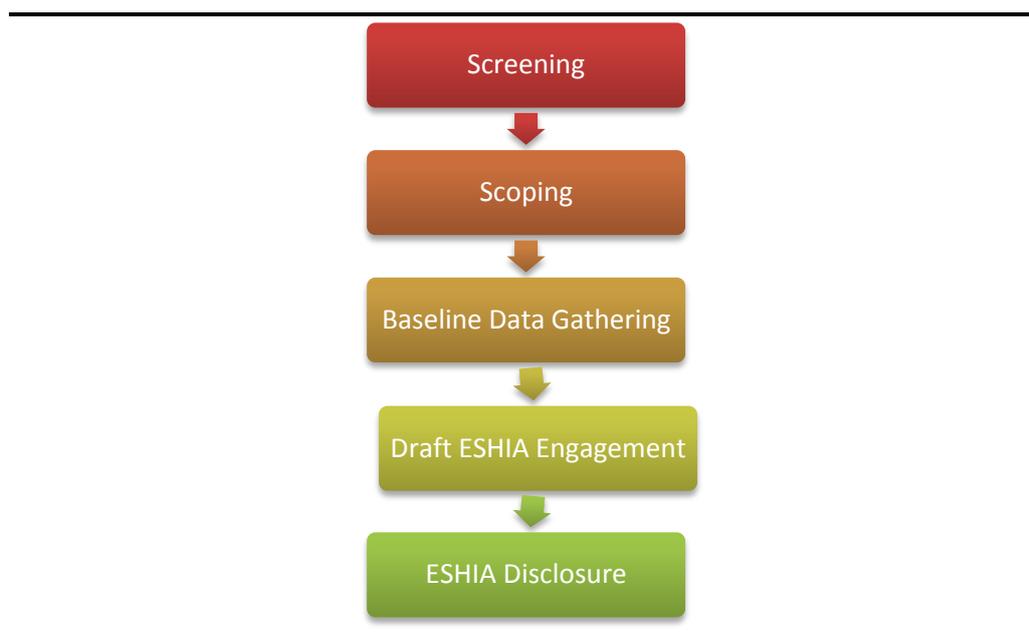
This section tables an approach to engagement which has been designed to comply with the national and international standards described in *Section 2*.

The engagement process will involve five key phases, namely:

- Screening;
- Notification and Scoping;
- Baseline Data Gathering;
- Draft ESHIA engagement; and
- ESHIA Disclosure.

*Figure 3.1* below identifies the phases within the designed stakeholder engagement process. The phases in *Figure 3.1* are aligned to the EIA procedures of the Ethiopian EIA guidelines as shown in *Figure 2.1*.

**Figure 3.1** ESHIA Stakeholder Engagement Phases



It is also worth noting that these phases align with and support the rest of the ESHIA process.

A summary of the objectives and activities for each phase is listed in *Table 3.1*. The Screening, Scoping and Baseline Data Gathering have already been undertaken in November 2011, March 2012 and May 2012 respectively. The outcomes of these engagements are described further in *Appendices B, C and D*.

**Table 3.1** *Phases of Engagement*

Phase	Objective	Key Activities	Key Outputs
Screening	<ul style="list-style-type: none"> <li>To gain a preliminary understanding of the scope of the Project, it's likely impacts and relevant stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Inception meeting with Allana and in-country sub-consultants involved in the stakeholder engagement activities;</li> <li>Screening field visit;</li> <li>Preliminary meetings with selected local stakeholders; and</li> <li>Stakeholder identification process.</li> </ul>	<ul style="list-style-type: none"> <li>Engagement plan for the ESHIA; and</li> <li>Summary of issues raised during engagement with key stakeholders.</li> </ul>
Scoping Engagement	<ul style="list-style-type: none"> <li>To meet key stakeholders and introduce them to the proposed Project and ESHIA;</li> <li>To generate feedback on the Draft Scoping Report, including the scope, approach and key issues to be investigated further for the ESHIA; and</li> <li>To consult key stakeholders on the next steps in the ESHIA process.</li> </ul>	<ul style="list-style-type: none"> <li>Notification and communication on the proposed Project and associated ESHIA through:                             <ul style="list-style-type: none"> <li>Meetings and workshops with key stakeholders at the federal, regional and local level;</li> <li>Distribution of draft Scoping Report to key stakeholders directly and via project website; and</li> <li>Dissemination of a non-technical summary of the draft Scoping Report and posters/presentations describing the proposed Project.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Updated SEP;</li> <li>Engagement tools and proof of their dissemination;</li> <li>Final Scoping Report with record of stakeholder issues; and</li> <li>Non-technical presentation and posters summarising the draft Scoping Report including list of preliminary identified impacts.</li> </ul>
Baseline Data Gathering	<ul style="list-style-type: none"> <li>To collect baseline data through detailed surveys using participatory appraisal methods.</li> </ul>	<ul style="list-style-type: none"> <li>Household survey with a random selection of households;</li> <li>Focus Group Discussions (FGD) with select stakeholders; and</li> <li>Key Informant Interviews (KII) with key stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Updated SEP;</li> <li>Engagement tools; and</li> <li>Socio-economic baseline.</li> </ul>
Draft ESHIA Disclosure Engagement	<ul style="list-style-type: none"> <li>To discuss the identified impacts and proposed mitigation measures with stakeholders allowing for their input; and</li> <li>To provide stakeholders with the opportunity to comment on the Draft ESHIA report.</li> </ul>	<ul style="list-style-type: none"> <li>Dissemination of the Draft ESHIA to key stakeholders directly and via project website;</li> <li>Dissemination of a non-technical summary of the draft ESHIA Report; and</li> <li>Meetings and workshops at the national, regional and local level.</li> </ul>	<ul style="list-style-type: none"> <li>Draft ESHIA Report;</li> <li>Non-technical summary of identified impacts and mitigation measures; and</li> <li>Draft Stakeholder Engagement Strategy (SES).</li> </ul>

Phase	Objective	Key Activities	Key Outputs
ESHIA Disclosure Engagement	<ul style="list-style-type: none"> <li>• Obtain community sign-off on a position on the proposed Project and associated process; and</li> <li>• To notify stakeholders of the submission of the final report to regulators.</li> </ul>	<ul style="list-style-type: none"> <li>• Dissemination of the Final ESHIA to key stakeholders via project website;</li> <li>• Disclosure of the Final ESHIA Report with stakeholders;</li> <li>• Meetings at local, regional and federal levels to gain stakeholder sign-off on a position about the Project and endorsement of the process.</li> </ul>	<ul style="list-style-type: none"> <li>• Final ESHIA Report;</li> <li>• Endorsement letter from regional authorities verifying: <ul style="list-style-type: none"> <li>- the outcomes of the stakeholder process reflect the true and unbiased opinions of local stakeholders;</li> <li>- Stakeholders have been provided the opportunity to voice their opinions; and</li> <li>- Have agreed and are satisfied with the Environmental Management Plan (EMP).</li> </ul> </li> <li>• Final SES.</li> </ul>

**4.1****INTRODUCTION**

This section presents the information currently available on stakeholders for the Project collected over the Screening, Scoping and Baseline Data Gathering phase. For the purposes of this plan, a stakeholder is defined as any individual or group who is potentially affected by the proposed Project, or who has an interest in the proposed Project and its potential impacts. It is therefore important to establish which organisations, groups and individuals may be directly or indirectly affected (positively and negatively) by the proposed Project and which might have an interest in the proposed Project.

It should be noted that stakeholder identification is an on-going process, requiring regular review and updating as the ESHIA progresses.

**4.2****STAKEHOLDERS**

A stakeholder database has been compiled and appended as *Appendix A*. The database will be periodically updated throughout the ESHIA engagement process. The stakeholder groups that have been identified to date are included in *Table 5.1* and *Figure 4.1*, and stakeholders within these groups will be engaged during the draft ESHIA phase in January 2013.

*Figure 4.2* presents a map showing the location of directly affected settlements in and near the concession area that are likely to be affected by the proposed Project. Key areas related to the artisanal salt trade, tourism and palms are identified in *Figure 4.2*, all of which are of importance to stakeholders identified in *Table 5.1*.

Figure 4.1 Stakeholders across the Federal, Regional and Local Level

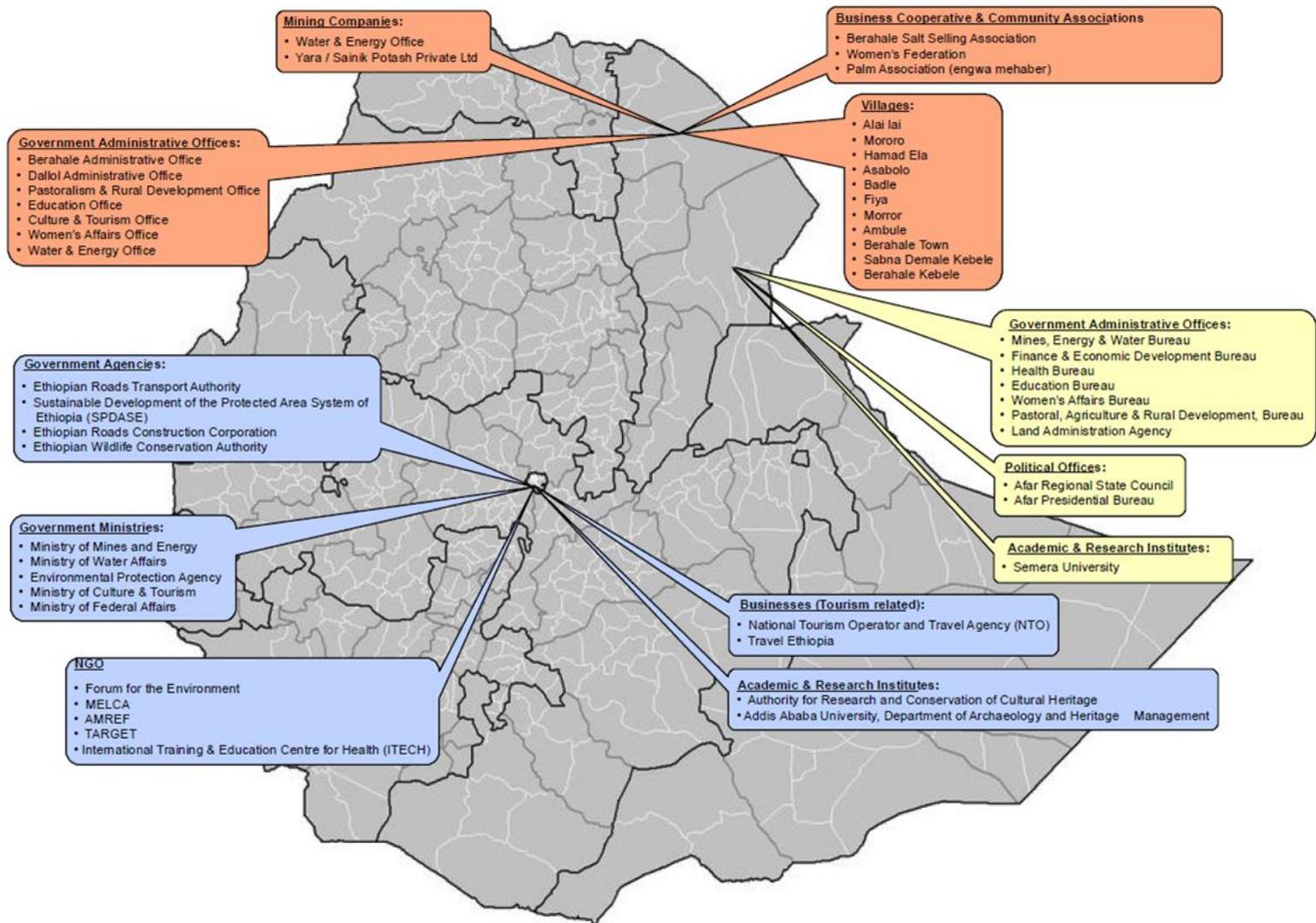
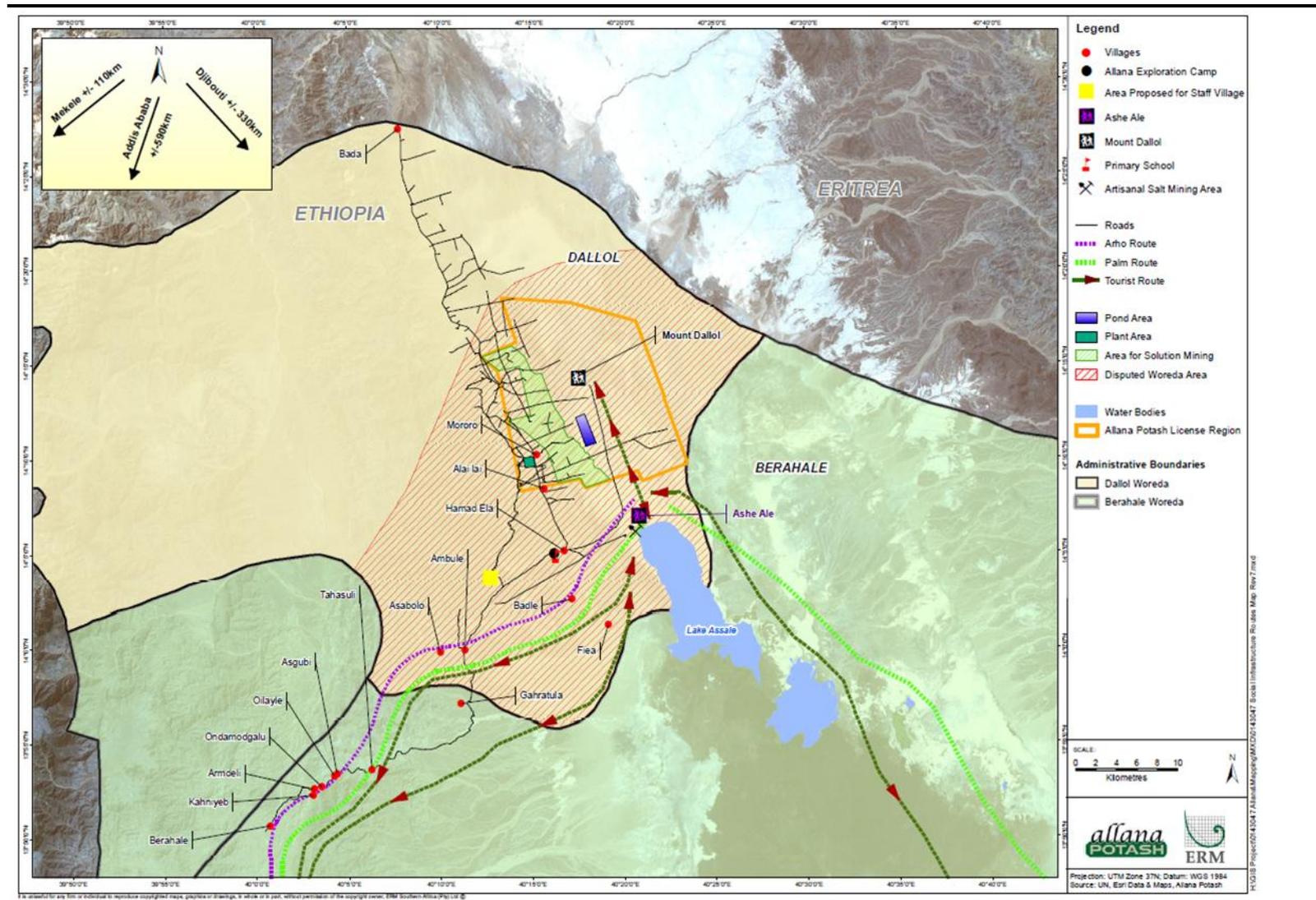


Figure 4.2 Location of Villages and Key Routes in the Study Area



Please note that the village of Mororo is an amalgamation of several smaller villages along the road including Tahasuli, Asgubi, Oilayle, Ondamodgalu, Armdei and Kahn-yeb.

### 5.1 *STAKEHOLDER ENGAGEMENT TO DATE*

The first round of engagement for the ESHIA was conducted during the Screening phase in November 2011. This involved high level engagement with a selection of local communities, to develop a preliminary understanding of both relevant stakeholder groups for the ESHIA and community perceptions towards the proposed Project (refer to Appendix B).

A more comprehensive round of stakeholder engagement was conducted during the Scoping phase of the ESHIA in March 2012. Stakeholders were engaged at the federal, regional and local levels with the objective of introducing the proposed Project, discussing the draft Scoping Report and capturing stakeholder feedback. Stakeholder raised a set of concerns related both to proposed focus for the ESHIA's specialist studies and to a set of project related issues. Further detail on ESHIA and project related stakeholder concerns are included in Appendix C.

Further engagement was conducted during the baseline data gathering in May 2012. Although the core focus was to collect baseline data, engagement formed a component to the data gathering activities through the use of Key Informant Interviews (KII) and Focus Group Discussions (FGDs). The key issues raised were similar to those identified during Scoping, with an emphasis for further engagement particularly at the local level was raised by stakeholders, where stakeholders commented that they still lacked information on the proposed Project in light of the increased activity observed in the local area (refer to Appendix D for further detail).

### 5.2 *ENGAGEMENT PLAN FOR DRAFT ESHIA PHASE*

This section expands on the process described in *Section 3*, providing more detail on the plan for the next phase of engagement to be undertaken, namely engagement around the Draft ESHIA.

### 5.3 *ENGAGEMENT ACTIVITIES*

Engagement during the draft ESHIA phase will be undertaken through a two week trip in January 2013. The broad objective of the engagement will be to provide stakeholders with information on the outcomes of the specialist studies and draft ESHIA report with the aim to:

- Highlight the key impacts identified in the draft ESHIA report, and proposed mitigation;

- Identify stakeholder concerns and opinions on the impacts identified;
- Involve stakeholders in assessing the efficacy and appropriateness of the proposed mitigation measures; and
- Identify revisions or additions to the draft ESHIA report where necessary.

In addition, where relevant, the engagement may support Allana in identifying stakeholders who can support the development and implementation of mitigation measures.

*Table 5.1* presents the key stakeholder groups that are being engaged on the draft ESHIA. This includes a set of directly affected federal, regional and local stakeholders which have been identified based on the issues identified through previous rounds of engagement as well as the impacts identified in the ESHIA.

Table 5.1 Stakeholder Groups

Stakeholder Categories	Stakeholder Groups	Stakeholder
<b>Government</b>	Federal, regional and local government: Political	<ul style="list-style-type: none"> <li>• Afar Regional State Council</li> <li>• <i>Woreda</i> administrators for Dallol and Berahale</li> <li>• <i>Kebele</i> leaders for Sabana Demale, Berahale and Bada Admerug</li> </ul>
	Federal, regional and local government: Administrative and technical	<ul style="list-style-type: none"> <li>• Ministries at Federal level (including Ministry leads and technical support)</li> <li>• Bureaus at Regional level</li> <li>• Bureaus at <i>Woreda</i> level</li> </ul>
	Government agencies	<ul style="list-style-type: none"> <li>• Ethiopian Roads Transport Authority</li> <li>• Ethiopian Wildlife Conservation Authority</li> <li>• Ethiopian Road Construction Corporation</li> <li>• Sustainable Development of the Protected Area System of Ethiopia (SPDASE)</li> </ul>
<b>Directly Affected Stakeholders*</b>	Customary authorities (per village)	<ul style="list-style-type: none"> <li>• Clan and religious leaders</li> <li>• Elders</li> </ul>
	Community associations (per village)	<ul style="list-style-type: none"> <li>• Women's Federation</li> <li>• Youth Groups</li> <li>• Palm Association (<i>engwa mehaber</i>)</li> </ul>
	Community members, including men, women, youth, artisanal salt workers	<ul style="list-style-type: none"> <li>• Alai lai</li> <li>• Mororo</li> <li>• Hamad Ela</li> <li>• Asabolo</li> <li>• Ambule</li> <li>• Morrro</li> <li>• Fiya</li> <li>• Badle</li> <li>• Berahale Town</li> </ul>
<b>Business</b>	Mining companies in the northern Danakil	<ul style="list-style-type: none"> <li>• Yara/ Sainik Potash Private Ltd</li> <li>• Ethiopian Potash Corporation</li> </ul>
	Salt related businesses	<ul style="list-style-type: none"> <li>• Berahale Salt Selling Association</li> <li>• Mekele Salt Buying Association</li> <li>• Subsidiary services including local restaurants, hotels, accommodation etc. in Berahale, Asabolo, Hamad Ela</li> </ul>
	Tourism operators	<ul style="list-style-type: none"> <li>• Operators based in Addis Ababa</li> <li>• Operators based in Mekele</li> <li>• National Tourism Operator and Travel Agency (NTO)</li> </ul>

Stakeholder Categories	Stakeholder Groups	Stakeholder
<b>Media</b>	Federal, regional and local newspapers	<ul style="list-style-type: none"> <li>• Addis Zemen</li> <li>• Ethiopian Herald</li> </ul>
	Federal and regional TV and radio	<ul style="list-style-type: none"> <li>• Ethiopian Radio and Television Agency (ERTA)</li> <li>• Ethiopian Television</li> <li>• Panos Ethiopia Radio programme</li> </ul>
<b>Civil Society</b>	Federal and regional environmental NGOs	<ul style="list-style-type: none"> <li>• Forum for the Environment</li> </ul>
	Federal and regional social and health NGOs	<ul style="list-style-type: none"> <li>• MELCA</li> <li>• TARGET</li> <li>• International Training &amp; Education Centre for Health (ITECH)</li> <li>• AMREF</li> <li>• Afar Pastoralist Development Association</li> </ul>
	Academics and research institutes	<ul style="list-style-type: none"> <li>• Authority for Research and Conservation of Cultural Heritage</li> <li>• Addis Ababa University, Department of Archaeology and Heritage Management</li> <li>• Ethiopian Archaeology and Palaeontology Association</li> <li>• Semera University</li> </ul>

*\*Settlements in and near the concession areas and other affected areas/routes*

A set of technical specialists (some of whom are included in *Table 5.1*) have been identified for inclusion in engagement, where the objective of involving these experts is to invite them to assess the efficacy of the mitigation measures proposed in the draft ESHIA. The following areas have been identified as requiring input from technical specialists according to the impacts identified in the ESHIA:

- Food security and livelihood strategies;
- Pastoral livelihoods (including palm collection);
- Livelihood diversification through capacity building and enterprise development;
- Tourism;
- Cultural heritage
- Influx management; and
- Conflict management.

*Table 5.2* identifies the groups of stakeholders that will be engaged at the three different levels during the draft ESHIA engagement phase.

**Table 5.2** *Stakeholders to be Engaged*

Level of Stakeholder Engagement	Government (political & administrative)	NGOs (environmental, social & health)	Community Based Organisations	Tourism Experts	Research & Academic Institutions	Wildlife & Biodiversity Experts	Livelihood Experts	Customary Authorities	Communities
Federal	✓	✓		✓	✓	✓	✓		
Regional	✓	✓		✓	✓		✓		
Local	✓		✓					✓	✓

#### 5.4 CONSIDERATIONS FOR THE ENGAGEMENT PROCESS

Special efforts will be undertaken to engage directly impacted stakeholders and particularly vulnerable stakeholders. The following groups have been identified, through the baseline data gathering to potentially be directly affected by the proposed Project:

- Local customary authorities, including clan and religious leaders and elders;
- Local government: political and administrative authorities;
- The directly affected communities of Mororo and Alai lai;
- Other impacted communities, including Hamad Ela, Asabolo, Ambule,

Morror, Berhale;

- Salt related businesses, including Berahale Salt Selling Association, Mekele Salt Buying Associations, subsidiary services (e.g., local restaurants, hotels, accommodation in Berahale, Asabolo, Hamad Ela); and
- Associations per village representing palm traders and growers (the *engwa mehaber*).

The SIA has identified the following stakeholder groups and individuals to be potentially vulnerable:

- Afar women;
- Female headed households;
- Elderly (in particular women);
- Households reliant on artisanal salt mining;
- Households reliant on livestock;
- People with physical / mental health illnesses and disabilities;
- Children;
- Sex Workers; and
- Internally Displaced Persons <sup>(1)</sup>.

Considerations for engagement will include arranging one-on-one meetings with identified groups. In addition careful consideration will be taken in the use of translators or intermediaries, ensuring that they are culturally appropriate and relevant for the stakeholder being engaged. Women and men will also be engaged separately in most instances.

## 5.5

### *NEXT STEPS IN THE STAKEHOLDER ENGAGEMENT PROCESS*

Following dissemination of the draft ESHIA and associated engagement during this phase, there will be a four week comment period for stakeholders to provide comments. These will be considered as the ESHIA is finalised and, where appropriate, adjustments will be made to the ESHIA. Responses will also be generated to all comments received through the comment period as well as through the engagements undertaken during the draft ESHIA phase.

The next step in the engagement process will be to disclose the final findings of the ESHIA report to stakeholders at the federal, regional and local level. It is anticipated that this will be conducted through a field visit where local stakeholders will be engaged first, followed by regional and national stakeholders. During these engagements, local stakeholders will be required to sign-off on their position in response to the proposed Project as well as to

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(1) IDPs as a result of the Ethiopian - Eritrean border conflict. The village of Mororo was identified to have moved due to the border conflict and a camp for IDPs exists in Berahale, it is reported 2,720 IDP both from Eritrea and Ethiopia live in Berahale - UNDP, 1999

endorse the engagement process undertaken. This is as per the Ethiopian requirements.

## 6.1 *PURPOSE*

Stakeholder engagement is a two way process. It is therefore important to ensure that there is a feedback mechanism to ensure stakeholders affected by or interested in a Project can present their input (e.g., opinions, requests, suggestions and grievances) for consideration and, if required, redress. It should be noted that, even where not all feedback or grievances are deemed 'valid' or applicable to the context of the proposed Project, the feedback mechanism needs to function in a non-judgemental manner and record all feedback received.

In the case of this Project, there is a need for both a grievance and feedback mechanism for the Project, as well for the ESHIA. The former is the responsibility of the Project. ERM will, however, review the existing mechanisms in place and provide input on how to strengthen these through the SES which will be generated as an outcome of the ESHIA process.

This section identifies the feedback opportunities available to stakeholders through the ESHIA. The focus of the mechanism will be on comments related to the ESHIA, in particular with a focus on concerns or comments about the proposed Project and its possible impacts as well as opportunities and constraints for mitigation. The ESHIA team will channel Project related issues or requests to Allana. It is anticipated that these will be dealt with through the existing feedback channels, managed by the on-site Environmental and Community Relations (ELCR) office.

### 6.1.1 *Feedback Mechanism for the ESHIA Process*

Each round of engagement undertaken will provide stakeholders with an opportunity to provide input and feedback on the Project. However, it remains important to offer opportunities to people to both provide feedback and receive response in the times between our rounds of engagement.

A feedback mechanism has therefore been put in place during the ESHIA to ensure that potential concerns raised by stakeholders during engagement are acknowledged and addressed in a timely, structured and culturally appropriate manner.

The main principles on which the grievance mechanism has been structured are as follows:

- **Proportionality:** a mechanism scaled to the potential risks and adverse impacts that the Project may impose on affected communities;

- **Cultural Appropriateness:** a mechanism designed in a culturally appropriate manner;
- **Accessibility:** a clear and understandable mechanism that is accessible to all segments of the affected communities at no cost to them;
- **Transparency and Accountability:** a mechanism that operates in a transparent way and that is accountable to all stakeholders; and
- **Appropriate Protection:** a mechanism that prevents retribution and does not impede access to other remedies.

The feedback mechanism for the ESHIA, described below, was initially communicated to stakeholders through the Scoping Phase. It is managed by the ERM team and local sub consultants - TS Environmental Technology (TET). It involves the following:

The following feedback channels are available to stakeholders through the course of the ESHIA:

- Electronic and telephonic feedback, where email and telephonic contact details have been made available to stakeholders both for the SA and UK based ERM team as well as for the in-country sub-consultants.
- Engagement activities undertaken directly with stakeholders during the draft ESHIA and Disclosure phases.

The ESHIA team commits to receiving and recording any issues or grievances raised, generating responses which will be communicated through the final ESHIA as well as through the disclosure round of engagements. ERM also commits to monitoring this feedback mechanism to ensure it is working effectively.

It will be important to monitor and report on the on-going stakeholder engagement efforts to ensure that the desired outcomes are being achieved, and to maintain a comprehensive record of engagement activities and issues raised. This will be done through this SEP, where the following will be recorded through this plan:

- Updates to the stakeholder database;
- Recording of all consultations held; and
- Updates to the issues and responses table.

These records and outputs will be regularly updated and appended to each iteration of this report. In other words, this will serve as a tool not only to plan future engagements but also to record previous phases of the process.

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Appendix A

## Stakeholder Database

Allana's Dallol Potash Project - ERM's Stakeholder Database for the ESHIA

Version 3 Dated: 221112

Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
National Government	Federal Ministries and Agencies	Ato.s.	Senkenesh	Ejigu	Ministry of Mines	Minister
		Ato.	Seyoum	Zenebe	Ministry of Mines:	Environmental and Community Development Directorate Director
		Ato.	Sisay	Amera	Ministry of Mines	Mineral Licensing
		Ato.	Teketsel	Tsige	Ministry of Mines	Mineral License Administration Team Leader
		Ato.	Derebew	Mesfin	Ministry of Mines	Head of Oil Exploration
		Ato.	Derebew	Zenebe	Ministry of Mines	Head of Environmental and Community Development Unit
		W/ro	Meseret	Gufa	Ministry of Mines	
		Ato.	Dereje	Agonafer	Environmental Protection Authority (EPA)	Head of EIA services
		Ato.	Getahun	Fanta	Environmental Protection Authority (EPA)	Director of Policy and Planning
		Ato.	Dereje	Agonafir	Environmental Protection Authority (EPA)	EI and Action Directorate
		Ato.	Mehari	Wondemagn	Environmental Protection Authority (EPA)	Evaluation and Control Directorate
		Ato.	Solomon	Kebede	Environmental Protection Authority (EPA)	Head of EIA services
		Ato.	Gebreselasie	Gebremelak	Environmental Protection Authority (EPA)	
		Ato.	Kambiro	Gacha	Ministry of Foreign Affairs	
Ato.	Timere	Girma	Ministry of Cultural and			

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Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
					Tourism	
		Ato.	Mulatu	Gebissa	Ministry of Justice	
		Ato.	Kifle	Alemayehu	Ministry of Water	
		Ato.	Senayit	Abebe	Ministry of Cultural and Tourism	Tourism Expert
		Ato.	Wolde Gabriel	Berhe	Ministry of Cultural and Tourism	Tourism Promotion Expert
		W/ro	Sara	Yemane	Ministry of Transport	
		Ato.	Fekadu	Shumet	Ministry of Transport	Head of Planning
		Ato.	Yetmyet	Berhanu	Ministry of Transport	Strategic Planning Director
		Ato.	Daniel	Mengste	Ethiopian Roads Authority	Director of Policy and Planning
		Ato.	Getachew	Mandefero	Ethiopian Road Construction Corporation	Corporate Planning and Business Development
		Ato.	Lakew	Berhanu	SDPASE: EWCA	National Project Coordinator
		Mr.	Siege	Ludering	SDPASE: GIZ	
		Ato.	Markos	Feleke	Ministry of Economic Development	
		Ato.	Mezegebu		Ministry of Finance and Economic Development	Director
		Ato..	Tesfaye	Atire	Ministry of Civil Service	Planning and Programming Directorate - Acting Head
		Ato.	Solomon	Shiferaw	Ministry of Education	EMIS, Planning and Resource Mobilization Management Process
		Ato..	Teshome	Worku	Ministry of Communication and Information Technology	Private Sector Directorate
		Ato.	Getachew	Belisi	Ministry of Trade &	Director, Plan,

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Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
					Industry	Management and information
		Ato.	Sineshaw	Alamerew	Ministry of Trade & Industry	Director, HR
		Ato..	Abebe	Mekuria	Ministry of Science and Technology	Director of Policy and Research
		Ato.	Shanko	Delelegn	Minister of Federal Affairs	Director General, Pastoral Affairs
		Ato.	Firesenbet	Woldetensae	Minister of Federal Affairs	Director, Policy and plan
		Ato.	Mengistab	Woldearegay	Food, Medicine and Healthcare Administration and Control Authority	Deputy Director General
		Ato.s	Roman	Tesfay	Ministry of Health	Director General, Policy, Plan Finance
		Ato.	Dawit	Dokasso	Food, Medicine and Healthcare Administration and Control Authority	Deputy Director General
		Ato.	Dereje	Mamo	Ministry of Health	Director, Policy and plan
	<b>Afar Regional State</b>				Afar Pastoral, Agricultural and Rural Development Bureau	
<b>Regional Government</b>	<b>Afar Regional State</b>	Ato.	Wondmagn	Shibru	Minister of Federal Affairs	Afar Region Equitable Development Director
		Ato.	Abdu	Nur Farisia	Afar Regional Mines, Energy & Water Resources	Head of Mines and Energy Resources
		Ato.	Abdu	Neie	Environmental Protection, Land Use and Administration Agency	Representative
		Ato.	Jemal	Ibrahim	Afar Regional Mines,	Representative

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Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
					Energy & Water Resources	
		Ato.		Subhato	Bureau of Education	Representative
		Ato.	Fantaye	Ali	President office	Assistant to President office
		Ato.	Mohamheed	Awale, Maei	Regional Pastoral, Agricultural and Rural Development Bureau	Bureau Head
		Dr.	Abdurekadir	Mohammed	Regional Pastoral, Agricultural and Rural Development Bureau	Deputy Head
		Ato.	Mohammed	Ahmed	Regional Bureau of Health	Deputy Bureau Head
		Ato.	Sedik	Mohammed	Regional Bureau Mine and Energy	Bureau Head
		Ato.	Awal	Arba, Hundie	Bureau Water Resources	Bureau Head
		Ato.	Mohammed	Yayo	Bureau of Culture, Tourism and Information	Bureau Head
		Ato.	Ibrahim		Agricultural Bureau of Semera	Deputy Bureau Head
		Ato.	Osman	Meqbul	Regional Finance & Economic Development	Bureau head
		Ato.	Mohammed	Bidaru	Regional Finance & Economic Development	Representative
		Ato.	Abdurekadir	Mohammed	Urban Construction and Development Bureau	Bureau Head
		Ato.	Siyoum	Awal	Regional Justice, Security and Administrative bureau	Head of Bureau
		Ato.	Iasha	Mohammed, Mussa	Disaster Prevention and Food Security	Bureau Head
		Ato.	Gedo	Hamolo	Civil Service Bureau	Bureau Head
		Ato.	Numery	Bori	Afar Regional Bureau of	Plan and Program

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Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
					Health Planning and Programming	Department
		Ato.	Jemal	Nur	Regional State Bureau of Finance & Economic Development	UNDP coordinator
		W/ro	Zahra	Humad	Women Affair's Bureau	
		Ato.	Esmael	abdella	Regional Sharia Office	
Local Government	Zone 2	Ato..	Mear	Ibrahim	Administrative Offices	Head of the Zone (Administrator)
		Ato.	Momin	Mohammed	Zone 2 Administration office (Berahale, Afdera, Erebti, Dallol)	Deputy Administrator
	Woreda - Berahale	Ato.	Ali	Osman	Berahale Administrative Office	Woreda Head
		Ato.		Ahmed	Berahale Administrative Office	Administrative Officer
			Hasna	Mith	Berahale Administrative Office	Administrative Officer
		Ato.	Mohammed	Ibrahim	Berahale Culture & Tourism	Bureau Head
		Ato.	Idris	Hasan	Bureau of Health	Bureau Head
		Ato.	Mear	Ahmed	Bureau of Security	Bureau Head
		Ato.	Fulum	Ibrahim	Bureau of Water Resources	Representative
		Ato.	Abdusenat	Mohammed	Pastoral, Agriculture, Rural Development & Emergency preparedness	Representative
		Ato.	Idris	Hamedu	Bureau of Health	Bureau Head
		Ato.	Mohammed	Salih Kedir	Bureau of Education	Bureau Head
		Ato.	Mohamed	Ali	Bureau of Finance and Economic Development	Bureau Head
W/ro	Halima	Saleh	Bureau of Women's Affairs	Bureau Head		

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Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
	Woreda - Dallol	Ato	Mohamed	Ebrahim	Dallol Administrative Office	Assistant Administrator
		Ato.	Ahmed	Nuru	Finance & Economy Bureau	Finance and Economy Bureau Head
		W/ro	Hawa		Women, Youth & Child Affairs Bureau	Representative
		Ato.	Abdu	Tahir	Water Resources Bureau	Head of Bureau
	Kebele - Sabna Demale					
	Kebele - Berahale					
	Kebele - Morrora	Ato.	Siraj Ahmed	Kadir	Morrora	Kebele Head
Directly Affected Stakeholders	Settlements/Communities	Ato.	Edris	Musa	Hamadela	Youth member
Traditional Authorities	Elders	Ato.	Osman Mear	Ali	Morrora	Elder
	Village & Clan Leaders	Ato.	Abdella	Ali Nur	Hamad Ela	Clan leader
		Ato.	Abdu	Musa	Hamad Ela	Village leader
Community Based Organisations		W/ro	Halima	Esmael	Women's Federation	Office Head
Business Cooperatives	Salt Mining & Production	Dr.	G/Micheal		Salt Buying & Selling Organisation	
		Ato.	Habtu	Hagos	Afdera Salt Production Share company	
		Ato.	Hussein Mohammed	Ibrahim	Salt Cooperative (Selling Organisation)	Financial controller
Non-Governmental Organisations (NGO)	NGOs	Ato.	Ismael	Ali Gardo	Afar Pastoralist Development Association	Executive Director
		Ato.	Amin	Yayo	Afar Pastoralist Development Association	Representative
		Ato.	Befekadu	Refera	MELCA Ethiopia	EIA Implementation Policy Team Advocacy
		Ato.	Kibrom	Tadesse	Forum for Environment	

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<b>Stakeholder Group/Category</b>	<b>Stakeholder Sub-Group</b>	<b>Title</b>	<b>First Name</b>	<b>Surname</b>	<b>Organisation</b>	<b>Position</b>
		W/ro	Mahilet	Sisay	Forum for Environment	Representative
		Ato.	Dawit	Seyoum	African Medical and Research Foundation (AMREF)	Senior Programme Development Coordinator
<b>Institutes</b>	<b>Academics and Research Institutes</b>	Dr.	Kassaye	Begashaw	Addis Ababa University, Department of Archaeology and Heritage Management/also Ethiopian Archaeology and Palaeontology Association	Associate Professor,
		Dr		Beyene	Haramaya University	Assistant Professor at Haramaya University and is a director of the Institute of Pastoral Studies
		Ato.	Tekle	Hagos	Addis Ababa University	
		Ato.	Temesgen	Burka	Addis Ababa University	
		Ato.	Getachew	Meressa	Addis Ababa University	
		Ato.	Mengistu	Gobezie	Addis Ababa University	
		Ato.	Alemseged	Beldados	Addis Ababa University	
		Dr	Getachew	Kassa	Addis Ababa University	African Studies

Allana's Dallol Potash Project - ERM's Stakeholder Database for the ESHIA

Version 3 Dated: 221112

Stakeholder Group/Category	Stakeholder Sub-Group	Title	First Name	Surname	Organisation	Position
		Ato.	Getachew	Senshaw	Authority for Research and Conservation of Cultural Heritage	
		Ato.	Efraim	Amare	Authority for Research and Conservation of Cultural Heritage	
		Ato.	Solomon	Eshete	Authority for Research and Conservation of Cultural Heritage	
		Ato.	Melkamu	Tekele	Authority for Research and Conservation of Cultural Heritage	
		Ato.	Hailu	Zelege	Authority for Research and Conservation of Cultural Heritage	Senior heritage researcher
		Ato.	Arebo	Sambi	ESSD	
		Dr	Bekele	Hundie	Ethiopian Economics Association/Ethiopian Economic Policy Research Institute	Fellow at the Ethiopian Economics Association/Ethiopian Economic Policy Research Institute
		Dr	Ameha	Kebede	Ethiopian Public Health and Nutrition Research Institute	Director General
		Dr	Dadi	Jimma	Ethiopian Public Health and Nutrition Research Institute	Deputy Director General
		Dr	Daan	Vreugdenhil	World Institute for Conservation & Environment (WICE)	Director
<b>Tourism</b>	<b>Operators</b>	Ato.	Jemal Kedir	Biadgigne	Travel Ethiopia	Tourism Expert

Appendix B

## Screening Phase: Records of Engagement Undertaken

## **B1**                    **ACTIVITIES IN SCREENING PHASE**

### **B1.1**                    **ACTIVITIES IN FIELD - FIELD NOTES FOR SCREENING TRIP**

**Dates of Field Trip:** 17 to 24 November 2011

**Field Team:** Alastair Gow-Smith, Andrew Hickman, Heinrich, Hugo Marais, Chris Hazell-Marshall, Pravesh Mishra, Dr. Hassan, Beles Engineering (various sub-contractors).

A series of notes were taken during the field trip which include observations on the settlements visited in the area. In addition the perception of Allana Potash was noted during any engagement.

### **B1.2**                    **SETTLEMENTS**

The following settlements were visited between 19 and 21 November 2011.

#### **B1.2.1**                    ***Maroro (Dallul Woreda)***

Located on the route to the Sainik Camp 10-50m from the road. Approximately 5 structures indicating 2-3 households. Population was reported to be 32 (including children) however 5-10 people were present when visited (women, children & elderly).

Water is sourced from the well at Hamadella (approximately 20km walk or via donkey). No other infrastructure was apparent or reported.

Predominant livelihoods were reported to be weaving of 'senan' grass mats for sale in Berhalle (female activity to supplement income), salt cutting and sale of livestock (shoats and donkeys present). The grass mats are harvested from a material known locally as Gara. It is assumed that shoats are used as a 'savings and support system' and sold during periods of economic struggle or festivals. It was reported that many families and households maintain another structure in Hamadella as an alternative residence despite the settlement reported as a permanent settlement.

#### **B1.2.2**                    ***Sabbah (Sabbah Kebele, Berhalle Woreda)***

Located on the Berhalle - site road ranging from 10-500m from the road. Approximately 40-50 dispersed structures indicating 20-30 households. Population was reported to be 54 families and 200 plus residents (approximately 4 per family). *It should be noted that since the discussion this is believed to be figures for the entire Sabbah Kebele rather than Sabbah Settlement.* The

settlement is split by the Berhalle – site road with approximately 75 percent on the southern side.

Water is sourced from the adjacent river through harvesting surface flow, hand dug shallow wells or hand dug depressions in the dry river basin that slowly fill with water. The borehole and water pump also used by military construction company was mentioned as a source of water however runs on a diesel generator located in a locked shack – presumed not to be a reliable or significance source. Other infrastructure included a ‘school’ operated by a government teacher run from a shack, it was reported that desks/ chairs are not present and that the building was insufficient. No reported plans / funds from government to upgrade.

Predominant livelihoods were reported as salt cutters (1 day walk to the salt pan) and sale of livestock (sheeps witnessed). Women’s prime responsibility is primary care duties however they also produce ‘senan’ grass mats for sale in Berhalle to supplement income. Working for the company was mentioned as the only viable ‘job’ or employed position. Subsistence activities were reported to generate approximately 50 percent of food with the UN Food Program (based in Berhalle) providing the other 50 percent.

Residents were aware of Allana in the area and the benefits they are delivering – specifically in Hamadella. It was mentioned that these benefits should spread to the surrounding area. No negative impacts were mentioned.

#### **B1.2.3** *Asabolo (Sabbah Kebele, Berhalle Woreda)*

Located approximately 2.5 km up the Sabbah River channel from Sabbah settlement, off the road. Approximately 25-35 structures indicating 15-20 households. No road access currently (off-road only). The new road under construction by the military construction company will run closer to the settlement.

Water sources, livelihoods and infrastructure reported to be similar to Sabbah (approximately 20-30 mins walk). Evidence of agriculture improvements to subsistence / income generating crop production including irrigation along Sabbah floodplain, planting of juvenile crops etc. Tourists were present in the village (2 4x4 vehicles) when visited and mentioned as a supplemental source of income.

#### **B1.2.4** *Asadege (Sabbah Kebele, Berhalle Woreda)*

Reported to be 2-3km up Sabbah River channel from Asabolo and similar in size, infrastructure and population. No road access currently (off-road difficult, walking difficult / impossible during wet season).

Settlement was not visited due to restriction on timing (driving after dark).

### **B1.2.5** *Morrer (Berhalle Kebele)*

Located approximately 5 – 15 km from Berhalle settlement. Split into three distinct sections (although reported as one settlement) along the Berhalle – site road (approximately 10 – 50 m from the road). Approximately 100 – 200 structures (including all three sections) however reported population in one section is 42 families (including women and children) – indicative of a population of 120 – 150 residents.

Water is sourced from the Morrer River channel (unclear if this is the same as the Sabbah River) similar to methods used in Sabbah. The salt content was reported to be high in dry season and it was understood to be bad to drink. No other infrastructure was apparent or reported. Health services were sourced from Berhalle and vaccinations were reported to be given to children already (unknown which diseases).

Predominant livelihoods were reported to be salt cutting (two days walk to the salt pan). It was reported that people work on the salt pan for typically 1 month periods and return to buy food for their families etc. Hamadella was reported to be the key location for procuring orders for salt cutting from transporters and the main reason for moving to Hamadella for cutting activities. All young men in the village were reported to be at the salt pan. Women supplement income with tourist services and the sale of mats. It was reported that no financial support systems exist for to encourage income generation.

Food and other items (including education and services) area are sourced from Berhalle. Savings were reported to not exist.

### **B1.2.6** *Hamadella (Demele Kebele)*

Located approximately 100 m from the camp on the camp - salt pan road. Reported to contain approximately 1800 structures with population ranging from 3000 to 250 (peak to lull). Summer population believed to drop even lower on occasion (due to absence of salt mining and tourism). Settlement contains between 200-300 households. It is common for the village to contain in excess of 200-300 non-Afari including camel drivers etc.

Water is sourced from hand dug wells along the river channel. Education includes a school run by a government teacher. Allana supports the school by providing children meals. Power has previously been provided by a generator (bought by the village) however this is not currently functioning. There is a mobile phone mast in the village which is non-functional and waiting for parts from Addis – anticipated operational date February 2012. No other infrastructure was apparent.

Predominant livelihoods are related to the salt trade and related services. Tourism contributes however salt is believed to be more significant. Income

generation may come from salt cutting, digging, receipt of rental fees, shops, sex workers (non-Afari highlander women) and formal employment with Allana (approx 75 at Allana- others mining companies employ 3-4 people). Shoats and livestock provide income when sold (believed to be in times of economic strife).

Afari women are forbidden from participating in sex work and Afari men are reported not to use the prostitutes. Afari women supplement income from senan grass mats. Tourists are forbidden from visiting the prostitutes. Tourist groups do not engage with the village regarding their arrival and reportedly turn up unannounced. Tourists stay at purpose built huts rented by people from Hamadella for which they pay approximately ETB 200 / night per hut (USD 15). They are reported to be free to use Hamadella's services and travel as they desire. They do not purchase food in the restaurant and typically bring a cook with them. Income from tourists typically stems from small items and consumables such as cold drinks and batteries. On one evening there were seven different tourist groups in the village made up of 23 different 4x4 vehicles. The tourism season was stated to mirror that of the salt trade.

### **B1.3**

#### ***PERCEPTIONS AND PERCEIVED IMPACTS***

Allana is generally seen as having a positive influence in the area and stakeholders struggled to mention significant negative impacts. *"God knows what the future holds"*. The only concerns mentioned included a consensus that negative impacts and changes to the salt mining would be a bad thing as everyone is dependent on it. Dust and interference with the organic replenishment of the salt process from the road etc was mentioned as a negative impact that would affect the value of the salt (colour and grade), as well as the collection of the salt due to broken tools and blocks.

The potash industry was stated as an ultimately unsustainable source of income, whereas salt mining was stated to be a sustainable source of income with annual salt replenishment.

It was also stated that the mine may attract more people who are strangers and they may outnumber the Afari. This was interpreted as a negative impact - based on previous experience this is commonly synonymous with some intrinsic ties to the land and cultural identity with a place (e.g. the salt pan and artisanal salt mining). However it was stated that Allana should allow local men to compete with any new strangers by providing them with economic opportunities. It should be noted that in southern Afar where the area surrounding the Awash experienced fast socio-economic change related to agriculture and irrigation project anecdotal evidence states that the Afar did / could not mobilise in significant numbers to exploit the change for their own benefit and immigrant highlanders experienced most of the beneficial impacts.

Positive impacts mentioned included employment, provision of the students with food (Hamadella), provision of health care at the camp and a general provision of development options. Expectations are high and it is anticipated that current positive impacts at exploration phase indicate big positive impacts and construction /operations phase.

Other mining companies in the area such as Sainik and BHPB were listed as creating negative impacts including dismissing workers (Sainik) and impacting the salt replenishment through the construction of roads on the salt flats.

When questioned about potential suggested changes including increases in visitors and foreigners, buildings etc. this was stated to be a welcome change that would bring new opportunities.

Appendix C

## Outcomes of Scoping Engagements

## C.1 OUTCOME OF SCOPING ENGAGEMENT

### C.1.1 STAKEHOLDERS ENGAGED

The ESHIA team conducted the Scoping round of engagement in March 2012. The objective of engagement was to:

- Meet key stakeholders and introduce them to the proposed Project and ESHIA;
- Generate feedback on the Draft Scoping Report, including the scope, approach and key issues to be investigated further for the ESHIA; and
- Consult key stakeholders on the next steps in the ESHIA process.

This was undertaken through a series of face-to-face meetings and workshops with key stakeholders at the federal, regional and local levels. An outline of stakeholders that were engaged at each level is in *Table C.1* below.

*Table C.1 Stakeholder Consultation Meetings*

Organisation	Date	Location
<b>Federal Government</b>		
Ministry of Water Affairs	5 March 2012	Addis Ababa
Environmental Protection Authority	5 March 2012	Addis Ababa
Ministry of Mines & Minerals	5 & 6 March 2012	Addis Ababa
Ministry of Culture & Tourism	5 & 6 March 2012	Addis Ababa
Ministry of Transport	5 & 6 March 2012	Addis Ababa
<b>Regional Government</b>		
Bureau of Education	7 March 2012	Semera
Bureau of Finance & Economic Development	7 March 2012	Semera
Bureau of Health	8 March 2012	Semera
Bureau of Culture & Tourism	8 March 2012	Semera
Bureau of Mines, Energy & Water	8 March 2012	Semera
<b>Local Government</b>		
Berahale Woreda Head	15 March 2012	Berahale Town
Dallol Woreda	11 March 2012	Adigrat
Bureau of Education	13 March 2012	Berahale Town
Bureau of Culture & Tourism	13 March 2012	Berahale Town
Bureau for Agriculture & Pastoralism	13 March 2012	Berahale Town
Bureau of Economic Development	13 March 2012	Berahale Town
<b>Government Agencies</b>		
Sustainable Development of the Protected Area System of Ethiopia (SDPASE)	8 March 2012	Addis Ababa
<b>Associations</b>		
Afdera Salt Association	7 March 2012	Addis Ababa

Organisation	Date	Location
Berahale Salt Selling & Buying Association	12 March 2012	Berahale Town
Women's Federation - Berahale	13 March 2012	Berahale Town
<b>Salt Trade Workers</b>		
Camel Owner	16 March 2012	Asabolo
<b>Tourism Operators &amp; Experts</b>		
Travel Ethiopia	9 March 2012	Addis Ababa
Ethiopian Sustainable Tourism Development Project (ESTDP)	7 March 2012	Addis Ababa
<b>Federal and Regional NGOs</b>		
Forum for the Environment	8 March 2012	Addis Ababa
MELCA	8 March 2012	Addis Ababa
Afar Pastoral Development Association (APDA)	8 March 2012	Loggia
<b>Settlements/Communities*</b>		
Ambule	16 March 2012	Ambule
Asabolo	16 March 2012	Asabolo
Hamedela	14 March 2012	Hamedela
Mororo	15 March 2012	Mororo
Morrer	15 March 2012	Morrer
Alai lai	15 March 2012	Alai lai

\* Community consultations involved engagement with the clan leader, local elders and religious leaders as well as selected women and youth as identified by the local elders and clan leader.

## C.1.2

### ISSUES AND COMMENTS

Stakeholders engaged raised a series of questions, comments and concerns. A summary of the key issues identified through the comments register has been generated and is provided in *Table C.2* and *Table C.3* below. *Table C.2* focuses on ESHIA related comments and issues, while *Table C.3* looks at more general project related issues. A column has been added to each table with the team's proposed responses to the issues.

Table C.2 ESHIA Related Issues

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
Anticipated Impacts	Roads and traffic	<ul style="list-style-type: none"> <li>• There have already been impacts associated with the new roads and increased traffic in the area (see Table C.3)</li> <li>• There are concerns about this going forward as well as questions about the extent to which traffic is anticipated to increase (e.g., will trucks drive day and night?).</li> <li>• There are also concerns about the impact roads will have on the salt both in with respect to where roads are located in relation to the salt flats and with respect to how roads into the area will impact the use of camels and donkeys, where these are currently the primary mode of transporting salt blocks to Berahale. If the Arho route (the route taken by camels and donkeys transporting salt from Hamad Ela to Berahale as shown in Figure 4.2 in the SEP version 4) is impacted, this will affect not only camel/donkey owners and operators but also those who supply them en route (e.g., accommodation, water bags, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>• Directly affected communities</li> <li>• Local government</li> <li>• Regional government, local government, directly affected communities, stakeholders related to the salt trade</li> </ul>	<ul style="list-style-type: none"> <li>• The impact of new roads and traffic will be considered in the ESHIA, although it should be noted that the new roads do not form part of the scope of the ESHIA since they are being developed by the Government</li> <li>• The existing impacts identified through the engagement process will be communicated to Allana for their consideration and attention</li> </ul>
	Salt trading	<ul style="list-style-type: none"> <li>• All stakeholders strongly emphasised the point that mining in the area should not be allowed to impact negatively on the artisanal salt trade. This industry is considered to be the lifeblood of all communities in the area.</li> <li>• Any negative impact could result in loss of livelihoods for harvesters, cutters, Arho drivers and owners and associated suppliers. Government is also involved in the industry through land rents and salt taxes. The impact would extend all the way from the salt flats to Mekele which is where the main market for the Dallol salt is located.</li> <li>• The salt trade also has an important cultural significance, where trading in salt plays an important role in the culture and identity of the people of the area.</li> </ul>	<ul style="list-style-type: none"> <li>• Federal, regional and local government, directly affected communities, academics, NGOs, tourism stakeholders, salt stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis of the salt trade will form a very important part of the ESHIA. Data on the salt trade is currently being collected through the social baseline data gathering</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<p>For example, salt cutting skills are an important demonstration by men of their ability to support their families.</p> <ul style="list-style-type: none"> <li>• The trade also plays an important role in dictating and mediating relationships between the Afar and the highlanders (in particular the Tigreyans). There are concerns about this being disrupted.</li> <li>• There have already been impacts on the salt flats and its ability to replenish itself because of road development in the area. Stakeholders felt strongly that this should not be allowed. There are also fears of how dust and pollution will impact on the quality of the salt. There are concerns about how roads into the area will impact the use of camels and donkeys, where these are currently the primary mode of transporting salt blocks to Berahale. If the Arho route is impacted, this will affect not only camel/donkey owners and operators but also those who supply them en route (e.g., accommodation, water bags, etc.).</li> <li>• Assuming roads don't negatively affect camel/donkey routes, one of the arho drivers was hopeful that they would be able to use the new roads, especially in the wet season where otherwise they use the river beds.</li> <li>• Several local stakeholders emphasised that Allana was not welcome to become involved in trading salt - only local Afars may be involved in this industry. This was further underscored by reports that the Ethiopian market for salt is saturated.</li> </ul>		
	Tourism	<ul style="list-style-type: none"> <li>• Both positive (e.g., improved access, greater stability and security) and negative (e.g., visual impact, competition for space, compromised value of the asset) impacts of mining on tourism were recognised. It was felt that, if planning was done carefully, there would be ways for mining and tourism to co-exist.</li> <li>• Any negative impact on tourism was noted to likely extend beyond only Mt Dallol. If the value of this asset</li> </ul>	<ul style="list-style-type: none"> <li>• Federal, regional and local government; Tourism operators; directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts on tourism and associated economic impacts on operators, authorities and local stakeholders will be considered as part of the social impact assessment</li> <li>• A visual impact</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<p>is compromised, it was felt that this could undermine the entire eastern route impacting Mekele, Dallol, Erte Ale and even southern Afar near Semera and area where Lucy was found.</p> <ul style="list-style-type: none"> <li>It was argued that the tourism proposition should not be compromised, not only because the site has national and even international significance but also because locals benefit significantly from this industry. It was suggested that the locals that currently benefit from tourism (e.g., as guides or escorts) were unlikely to benefit as much from mining (i.e., the beneficiaries at a local level would change).</li> </ul>		assessment will be undertaken in the ESHIA phase
	Impact on sites of cultural significance	<ul style="list-style-type: none"> <li>Sites such as Mt Dallol and Erte Ale were noted as having cultural significance. It was requested that these areas not be affected and remain accessible to people.</li> </ul>	<ul style="list-style-type: none"> <li>Tourism, academics, local government authorities, directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>A cultural specialist has been appointed to investigate this further</li> </ul>
	Water	<ul style="list-style-type: none"> <li>Stakeholders at federal, regional and local level endorsed the need for a water study to look at where Allana would get its water and how this would impact people in the area as well as salt production. In addition, it was suggested that this study should also look at how the mine's use of water would impact animals, both livestock and wild animals in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Federal, regional and local government; academics, NGOs, directly affected communities, salt-related stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>A hydrological study will form an important component of the ESHIA</li> </ul>
	Influx and associated cultural changes	<ul style="list-style-type: none"> <li>There are already perceptions that foreigners to the area (including Ethiopians from other parts of the country and international workers) are benefiting more than locals are from the project. Locals are aggrieved at this. It was emphasised that this should be understood in terms of the fact that there is a history of tensions between the Afar and highlanders.</li> <li>Some local participants suggested that there may be some benefits associated with influx to the area (e.g., more business opportunities for them, a larger market for their products and generally improved</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities, Federal and local government, Regional salt stakeholders, Tourism operators</li> </ul>	<ul style="list-style-type: none"> <li>Influx related impacts will be considered as part of the SIA. In addition, an influx management plan will be generated with measures identified to avoid, minimise and mitigate such impacts</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<p>development).</p> <ul style="list-style-type: none"> <li>Others feel that there is a need to protect the local culture and thus worry about the impacts of influx. Tourism operators noted that the local culture was not only important in its own right but also for its tourist value.</li> </ul>		
	Wildlife and biodiversity	<ul style="list-style-type: none"> <li>The area has been found to be important from a wildlife perspective. In particular, it is home to the endangered African Wild Ass. It is also reported to be home to many other creatures as well as an important corridor for migratory birds.</li> </ul>	<ul style="list-style-type: none"> <li>Government agency</li> </ul>	<ul style="list-style-type: none"> <li>This is noted. It will be considered in the ecological study as part of the ESHIA phase</li> </ul>
	Pollution and waste	<ul style="list-style-type: none"> <li>Dust, air pollution and solid waste are already reported to be significant problems locally. Stakeholders anticipated that this will be magnified and exacerbated by noise pollution and more liquid waste. There is a need to understand more on this future impact and the ways in which Allana plans to address it (and associated health issues). Several local stakeholders noted light pollution was not anticipated to be a problem but conversely, a benefit.</li> </ul>	<ul style="list-style-type: none"> <li>Federal, regional and local government, directly affected stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>This will be considered during the ESHIA</li> </ul>
	Health	<ul style="list-style-type: none"> <li>Specific questions and concerns were raised about the health impact of the operation, for example about whether any chemicals emitted may have an impact and whether there are health impacts associated with drilling. Women's groups particularly were concerned about the impact on pregnant women and lactating mothers.</li> <li>It was recommended that the scope of the health assessment also include animals.</li> <li>It was noted that there is prostitution in the area, so STIs must be considered. The bureau of health also supplied a list of diseases faced in the area that will provide important baseline for consideration in the impact assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Regional and local government, directly affected stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>A health impact assessment will be an important part of the ESHIA (hence the name, Environmental, social and health impact assessment)</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
	Pastoralism	<ul style="list-style-type: none"> <li>The ESHIA should consider the impact of the project on palm harvesting activities, in particular in and around the concession area, as well as livestock grazing.</li> </ul>	<ul style="list-style-type: none"> <li>Academics, regional NGOs, directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>This will be considered in the SIA</li> </ul>
	Land use and access	<ul style="list-style-type: none"> <li>Several concerns were raised about the extent of land required by mining and the monopoly this creates in the area. Tourist operators are worried about their access to the area. Locals are concerned about their access and mobility through, across and in the area for both their nomadic practices and their livestock grazing.</li> </ul>	<ul style="list-style-type: none"> <li>Tourism operators; directly affected communities, local government</li> </ul>	<ul style="list-style-type: none"> <li>These will be considered as part of the SIA</li> </ul>
	Geological/seismic activity	<ul style="list-style-type: none"> <li>There were questions about whether mining would affect the geology and geo-thermal/seismic activity in the area.</li> <li>It was also recommended that the geology be considered in the feasibility study, with a focus on whether this activity may impact on mining.</li> </ul>	<ul style="list-style-type: none"> <li>Federal government</li> </ul>	<ul style="list-style-type: none"> <li>The issue of geothermal activity will be investigated further in the feasibility as well as geohydrological studies</li> </ul>
	Tensions and conflict	<ul style="list-style-type: none"> <li>Several concerns were raised that the project may result in increased conflict, e.g. between clans in the area especially in so far as mobility and resources are affected, as well as between Afar people and others (Tigreynans and other Ethiopians).</li> </ul>	<ul style="list-style-type: none"> <li>Academics, regional NGOs, directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>This will be considered both through the SIA and in the influx management plan</li> </ul>
	Resilience to adapt	<ul style="list-style-type: none"> <li>Certain stakeholders recognise that change is inevitable with development. A concern was raised, however, that people may not be able to adjust to this change fast enough - socially, culturally. This may pose a risk to the project.</li> </ul>	<ul style="list-style-type: none"> <li>Tourism, regional salt stakeholders, local communities, regional government</li> </ul>	<ul style="list-style-type: none"> <li>This will be considered through the SIA and mitigation will be suggested</li> </ul>
<b>Process Related</b>	Requirements	<ul style="list-style-type: none"> <li>A set of process specific requirements and recommendations were made by key Government stakeholders, in particular with relation to the environmental legislation, policies and regulations.</li> </ul>	<ul style="list-style-type: none"> <li>Federal and regional government</li> </ul>	<ul style="list-style-type: none"> <li>These points have been described and used to augment the legislative reviews presented in the Scoping Report and the SEP</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
	Methodology	<ul style="list-style-type: none"> <li>Methodological recommendations were made, where academics in particular noted that EIAs often did not spend sufficient time doing meaningful engagement and sufficient extensive fieldwork.</li> <li>It was suggested that seasonality of the area needs to be considered, where this extends also to the social study since many associated with the salt trade move out of the area during the hot months.</li> </ul>	<ul style="list-style-type: none"> <li>Academics, NGOs, Federal government</li> </ul>	<ul style="list-style-type: none"> <li>These points are noted. The engagement process and specialist studies have been designed to be as effective as possible. Seasonality has been considered, although the SIA will only conduct data gathering activities once</li> </ul>
	Engagement	<ul style="list-style-type: none"> <li>There is a general lack of detailed understanding of the project (and other projects in the area). Furthermore, there was a lack of understanding of the phase in which the project is currently operating, where many had not understood that the operation would be significantly scaled up.</li> <li>Many noted that this round of engagements was the first time someone had addressed them on the project. There were calls for more extensive engagement both through the ESHIA and in general.</li> </ul>	<ul style="list-style-type: none"> <li>Federal, regional and local government, directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>Noted. Extra effort will be undertaken to communicate information about the phase of the project more broadly. Engagement around the draft ESHIA will also be undertaken through a more extensive public process</li> </ul>
	Database recommendations	<ul style="list-style-type: none"> <li>Many database recommendations on additional stakeholders to involve in engagement were made</li> </ul>	<ul style="list-style-type: none"> <li>Various</li> </ul>	<ul style="list-style-type: none"> <li>Either already included (<i>Appendix A</i>) or to be followed up in future.</li> </ul>
<b>Observations</b>	Lack of clarity on scope	<ul style="list-style-type: none"> <li>Several questions pointed to the fact that there is some confusion related to whether the ESHIA focuses only on Allana or on all mining in the area. There were also questions about whether the ESHIA would focus on developing the whole concession or just the phase one area indicated in the NTS.</li> </ul>		<ul style="list-style-type: none"> <li>This will be noted in future engagements and communications through the ESHIA process</li> </ul>
	Perceived inability to influence	<ul style="list-style-type: none"> <li>A number of local stakeholders made comments which suggested that they did not feel sufficiently empowered</li> </ul>		<ul style="list-style-type: none"> <li>This will be considered in future rounds of</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder Raising Issue	ESHIA Team Response
	decision making	to influence decision making given engagement undertaken to date. This has influenced to some extent the way in which they have interacted with the project.		engagement. It will also be communicated to Allana. A more accessible grievance mechanism will be generated through the Stakeholder Engagement Strategy for be developed by Allana.

In addition to a set of ESHIA related comments, a set of Project related issues, concerns and recommendations were raised by stakeholders. These are summarised below in *Table C.3*.

**Table C.3 Project Related Issues**

Issue Category	Issue	Further on the Issue	Stakeholder Raising Issue	ESHIA Team Response
Project	More information requested	<ul style="list-style-type: none"> <li>• Several misconceptions about the project and the phase in which it currently is were identified through engagement.</li> <li>• Several stakeholders asked for more information about the extent of the licence granted and whether the company was entitled to mine anything other than potash.</li> <li>• It was stressed by the Ministry of Mines that the ESHIA needs to be lodged at the same time as the feasibility report and that it needs to be based on detailed production figures in particular around scale of the operation.</li> <li>• Several stakeholders asked about the life of the mine, looking both at life of each hole and also at the whole concession. Only part of the concession was indicated for mining in the NTS and questions were asked about the plans for the rest of the concession area.</li> </ul>	<ul style="list-style-type: none"> <li>• Federal, regional and local government, directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>• This will be communicated to Allana for their consideration. It will also be considered when generating the Stakeholder Engagement Strategy and in future rounds of engagement.</li> </ul>
	Recommendations to consider	<ul style="list-style-type: none"> <li>• A significant number of stakeholders at the regional and federal levels suggested that the project look for a low carbon approach, for example through using geothermal or other renewable energies. There was also a suggestion that Allana look at ways to recycle water from evaporation ponds. These should be in keeping with the Government’s Climate Resilient Green Economy (CRGE) strategy.</li> <li>• The Ministry of Transport proposed that rail should be considered as an option, where plans for a future rail line in the north of the country were presented.</li> <li>• Several stakeholders referenced discussions on the possibility of defining the area as a national park or an area with special protection status from a tourism and a wildlife/biodiversity perspective. It was recognised that, given the proposed mining in the area, a national park may not be possible. However, it was still felt that mining could in fact support the establishment of a protected area. It was suggested this would be a creative approach to address many of the anticipated negative impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Federal and regional government, NGOs, tourism stakeholders, Government agencies</li> </ul>	<ul style="list-style-type: none"> <li>• This will be communicated to Allana for their consideration.</li> </ul>

Issue Category	Issue	Further on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		(e.g., on tourism, on wildlife, on influx, etc.).		
	Boundary dispute	<ul style="list-style-type: none"> <li>Engagement with the regional and local government stakeholders identified that there is a lack of clarity on the boundary between the Dallol and Berahale Woredas. Three different sets of data were referred to. It was also noted that historically there had been some dispute on the boundary.</li> </ul>	<ul style="list-style-type: none"> <li>Regional and local government</li> </ul>	<ul style="list-style-type: none"> <li>Data from each woreda and the region will be cross-checked. Where there is a dispute, this will be elevated to the regional and federal authorities for advice</li> </ul>
Existing impacts	Labour	<ul style="list-style-type: none"> <li>Many of the issues raised by local communities related to Allana's labour practices (real or perceived). These include issues related to payment for overtime, firing practices (i.e., it was alleged that no compensation was paid when staff were dismissed and no written testimonies were given where a leaving package is apparently provided for by legislation), safety (e.g., drilling, holes, emissions/smells emanating from holes) and pay in general (rates are perceived as being too low).</li> <li>An issue was raised about the fact that no accommodation is provided to local people which is perceived as being unfair.</li> <li>The issue was raised regarding perceived gender disparities. It was noted that not only are there limited female employees, but they were reportedly being paid less than male counterparts. Female employees were also concerned that, since they had to work outside the camp, they were not afforded protection from the elements in the same way as those in the camp and that did not always receive food and water on time.</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities, local government</li> </ul>	<ul style="list-style-type: none"> <li>These points will be communicated to Allana for their consideration</li> </ul>
	Existing impacts from exploration activities	<ul style="list-style-type: none"> <li>Many issues were raised regarding traffic and driving practices. Settlements along the road felt that drivers were driving very fast on the main road which makes people feel unsafe. There have also reportedly been accidents, for example where livestock has been hit. It was reported that no compensation was paid in some cases. There was also a perception that drivers speed up when they get to the settlements because they don't want to give people lifts.</li> <li>Concerns were raised about the air and noise pollution that has</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities, local government</li> </ul>	<ul style="list-style-type: none"> <li>These points will be communicated to Allana for their consideration</li> </ul>

Issue Category	Issue	Further on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<p>been created because of activities, in particular dust from cars. Concerns were raised around associated health impacts, with an increase in health issues reported in Ambule which has been experienced since the traffic in the area increased.</p> <ul style="list-style-type: none"> <li>• Vehicles moving on and around the project site have reportedly had livelihoods impacts, e.g., stock farming (vehicles driving over grazing areas and hitting animals in particular raised by Mororo and Asabolo), on reed harvesting (reeds are used for mats, homes, ropes, brooms in particular an issue raised by Mororo and Hamad Ela); and on salt collection (in particular local collection of 'black' salt used by locals and animals - raised by Mororo).</li> <li>• There were also concerns about mobility on site and access routes (raised by Mororo).</li> <li>• Members of Mororo raised concerns that holes were dug and left which poses a risk that people may fall into them. There was also a concern that water would collect in these holes and breed parasites and diseases.</li> </ul>		
<b>Anticipated benefits</b>	General	<ul style="list-style-type: none"> <li>• Locals have expectations of significant benefits from the Allana development and the expectation is that these will be shared with them or created for them.</li> <li>• Several local stakeholders recognised that there had already been some benefits experienced, in particular in Berahale (e.g., computers at schools, provision of teachers, use of medical facilities and employment). As the project moves into operations phase, there are expectations that the benefits will also scale up and extend to other villages.</li> <li>• Concerns were raised that foreigners and Ethiopians from other parts of the country seem to be benefitting more than the locals, in particular in terms of employment but also procurement. This is perceived as being unfair.</li> <li>• It was emphasised that all development needs to be sustainable. A regional stakeholder, for example, raised a concern about bringing in health care from Tigray since staff from Tigray may leave again without building local capacity.</li> </ul>	<ul style="list-style-type: none"> <li>• Directly affected communities, local and regional government</li> </ul>	<ul style="list-style-type: none"> <li>• These points will be communicated to Allana for their consideration. These will also be considered when generating the community development plan</li> </ul>

Issue Category	Issue	Further on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<ul style="list-style-type: none"> <li>Several national stakeholders stressed that community development strategies should be informed by a participatory needs assessment.</li> </ul>		
	Anticipated benefits	<ul style="list-style-type: none"> <li>Local stakeholders identified the following ways in which they hoped to benefit: <ul style="list-style-type: none"> <li><b>Tax to the local area:</b> A request was made that some tax from the operations be retained in the area from which the mineral was being exploited. Furthermore, the local area should benefit from taxes associated with regional car registration and workers operating on workers' visas. Locals reported that they therefore monitor this with keen interest and have raised concerns in both regards.</li> <li><b>Employment benefits:</b> This benefit is currently constrained by the fact that many positions are given to outsiders (even ones that locals feel they could do) and that local labourers get more menial jobs. Several stakeholders noted that this makes locals feel degraded and excluded. A concern was raised with Allana's expectations around education, literacy and English proficiency, where locals feel this is unreasonable in the context.</li> <li><b>Roads and infrastructure:</b> To date the new roads have generally been perceived as a positive development. The Dallol Woreda requested that the development of roads be considered in their areas. General development and even the development of a town in the area were perceived as positive by some.</li> <li><b>Service provisions:</b> Requests were made for improved education, health care (and more awareness raising on basic health issues), potable water and electricity. Several women also requested that livelihoods and vocational training be given (e.g., to create handicrafts for tourism souvenirs)</li> <li><b>Other:</b> A group of women asked about why all potash was to be exported and suggested that some should be</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities, local government</li> </ul>	<ul style="list-style-type: none"> <li>These points will be communicated to Allana for their consideration. These will also be considered when generating Allana's community development plan</li> </ul>

Issue Category	Issue	Further on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<ul style="list-style-type: none"> <li>○ retained in the area to improve food security locally.</li> <li>○ <b>Transport:</b> Many of the locals felt aggrieved that Allana would not give lifts to locals, and in the cases of medical emergency.</li> </ul>		
Process considerations	Engagement	<ul style="list-style-type: none"> <li>• Several stakeholders advised that special attention be given to engaging locals, and in particular traditional leaders (e.g., clan leaders). The need for more engagement with the project was identified. It was noted that this should be done in a culturally appropriate manner and that it may be worth considering training staff for this purpose.</li> <li>• Local stakeholders raised concerns about not feeling heard and considered, and they related this to the fact that there seems to be a high turnover in staff with whom they need to engage. It was felt that for this reason, issues were not being remembered and addressed. Furthermore, concerns were raised that promises have been made but were no longer recognised or kept because of staff turnover. .</li> <li>• Both the Region and Dallol Woreda were concerned that they had not previously been engaged. They requested that they be engaged in the future. The bureaus in Berahale also requested more engagement in future.</li> </ul>	<ul style="list-style-type: none"> <li>• Federal, regional and local government, academics, NGOs, directly affected communities</li> </ul>	<ul style="list-style-type: none"> <li>• These points will be communicated to Allana for their consideration. They will also be considered when generating the Stakeholder Engagement Strategy</li> </ul>
	Alignment and co-ordination	<ul style="list-style-type: none"> <li>• Several government stakeholders expressed the hope that Allana's plans would consider and align with federal and regional plans (e.g. national growth plan, economic development plans, transport strategies, low carbon strategy, tourism strategy, etc.).</li> <li>• The Region expressed a hope that the three tiers of government would work together effectively, where they felt there was an opportunity for more consultation with federal government and more integration with local government (e.g., the Woreda). They also stressed the importance of collaboration between regions, in particular between Afar and Tigray (e.g., Danakil depends a lot of Mekele University and medical care).</li> <li>• There was a request from regional and federal government</li> </ul>	<ul style="list-style-type: none"> <li>• Federal, regional and local government</li> </ul>	<ul style="list-style-type: none"> <li>• These points will be communicated to Allana for their consideration.</li> </ul>

Issue Category	Issue	Further on the Issue	Stakeholder Raising Issue	ESHIA Team Response
		<p>stakeholders that mining companies work together to both address negative impacts and work toward positive benefits and development in the area. It was suggested that there may also be opportunities to reduce negative impact by sharing resources.</p> <ul style="list-style-type: none"> <li>• There were several noted about sharing information. The Region requested that health data collected be shared with them; Federal asked mining companies to share studies between themselves. SDPASE offered to share their data for wildlife in the area.</li> </ul>		

Appendix D

## Outcomes of Baseline Data Gathering and Engagement

## D.1 OUTCOMES OF BASELINE DATA GATHERING & ENGAGEMENT

### D.1.1 STAKEHOLDERS ENGAGED

The ERM ESHIA team conducted baseline data gathering as part of the Scoping phase of the ESHIA in May 2012. The objective of the trip was to collect data to gain an understanding of the socio-economic at the local level (Study Area).

Various methodologies were used to gather data including engagement with local stakeholders through qualitative data collection methods including Key Informant Interviews (KII) and Focus Group Discussions (FGDs). The FGDs and KII were conducted across six villages and one town (Berahale) with a variety of groups within the community. The stakeholders engaged are included in *Table D.1* below.

The objective of the FGDs and KII was to collect information across a range of areas including traditional and socio-cultural institutions, areas of cultural significance, demographics and stakeholder perceptions of the proposed Project.

**Table D.1 Stakeholder Consultation Meetings**

Stakeholder Group	Location	Date
Focus Group Discussions		
Community men <sup>(1)</sup>	• Berahale	17 May 2012
	• Morrora	20 May 2012
	• Asabolo	19 May 2012
	• Alai lai	22 May 2012
	• Mororo	21 May 2012
	• Ambule	16 May 2012
	• Hamad Ela	14 May 2012
Community women	• Berahale	17 May 2012
	• Morrora	20 May 2012
	• Asabolo	19 May 2012
	• Ambule	16 May 2012
	• Mororo	21 May 2012
	• Hamad Ela	14 May 2012
	• Alai lai	22 May 2012
Community elders	• Hamad Ela	18 May 2012
Community youth	• Hamad Ela	14 May 2012
Salt trade workers	• Hamad Ela	18 May 2012
Key Informant Interviews		
The Women's Federation	Berahale	23 May 2012
Woreda Cultural Heritage and Tourism Office	Hamad Ela	23 May 2012
The Salt Selling Association	Berahale	12 March and 23 May 2012
Tourists	Hamad Ela	18 May 2012
Woreda Health Office	Berahale	19 June 2012
Health Extension Workers	Berahale and Daar Kebele	21 June 2012

(1) In some instances the elders within the community attended the FGDs for men.

Stakeholder Group	Location	Date
Head of the Health Post	Berahale	20 June 2012

The majority of stakeholders included in Appendix A were provided materials created during the Scoping phase of engagement including flipcharts and a non-technical summary (NTS) of the proposed Dallol Potash Project <sup>(1)</sup>. The NTS and flipcharts were translated and printed in English, Afari and Amharic. A copy of the English NTS of the Scoping Report may be found in Appendix E).

Both the FGDs and KIIs followed a similar structure whereby the proposed Project was introduced to stakeholders, followed by an explanation of the engagement process and ERM's role. Time was made available at the end of each session to discuss stakeholder issues and concerns with regards to the proposed Project (further detail is included in *Section D.1.2*). The findings of the baseline data gathering studies are included the Social Baseline chapter of the ESHIA (*Chapter 9*). This report captures the key comments and issues raised by stakeholders during qualitative data collection.

#### **D.1.2**      **STAKEHOLDER ISSUES AND COMMENTS**

The comments raised by stakeholders during FGDs and KII are detailed in *Table D.2*. The majority of comments raised by stakeholders during the baseline data collection trip mirrored those identified during the Scoping phase. Most notable was the need for engagement as stakeholders expressed concern over their lack of knowledge on the Project and increased activities being conducted in the area.

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(1) The tourists encountered in Hamad Ela and the Health Post and Health Extension Workers were the only stakeholders that did not receive any engagement materials.

**Table D.2 Stakeholder Comments**

Issue Category	Issue	Details on the Issue	Stakeholder
Anticipated Impacts	The salt trade	<ul style="list-style-type: none"> <li>The salt trade is of great cultural significance to the Afar, with stakeholders citing involvement since the time of their forefathers.</li> </ul>	<ul style="list-style-type: none"> <li>Elders</li> <li>Local government</li> <li>Directly affected communities</li> </ul>
		<ul style="list-style-type: none"> <li>The salt trade was indicated to be the backbone of the local economy and therefore no harm should be done to it.</li> </ul>	
	Cultural heritage	<ul style="list-style-type: none"> <li>The graves were identified to be of high cultural significance to the local Afar, and removal or disturbance is culturally forbidden.</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>Elders</li> </ul>
		<ul style="list-style-type: none"> <li>Disturbance of graves was identified to be forbidden, with some stakeholders indicating that the Project design needs to take this into account so there is no disturbance to graves.</li> </ul>	<ul style="list-style-type: none"> <li>Elders</li> </ul>
Palm resources	<ul style="list-style-type: none"> <li>In addition to avoiding disturbance to graves stakeholders expressed that disturbance should not be caused to palms.</li> </ul>	<ul style="list-style-type: none"> <li>Elders</li> <li>Women</li> </ul>	
		<ul style="list-style-type: none"> <li>Palms were identified to be both economically and culturally significant for the local Afar women and men who use the products they make, with stakeholders specifically requesting that the resource is not impacted.</li> </ul>	<ul style="list-style-type: none"> <li>Elders</li> <li>Women</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder
	Tension and conflict	<ul style="list-style-type: none"> <li>Stakeholders reiterated that any negative impacts caused to the salt trade may exacerbate tension and cause conflict both between communities in the area, and between people involved in the salt trade.</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>Elders</li> </ul>
	Disturbance and Pollution	<ul style="list-style-type: none"> <li>Stakeholders raised concern over increased disturbance (dust and noise pollution) in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities</li> </ul>
	Labour and Employment	<ul style="list-style-type: none"> <li>Several stakeholders expressed their concern over labour relations at Allana.</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities</li> </ul>
Existing Impacts	Labour and Employment	<ul style="list-style-type: none"> <li>Stakeholders (current and previous employees of Allana) indicated poor management of labour conditions including equal pay, working hours etc.</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities</li> <li>Elders</li> </ul>
		<ul style="list-style-type: none"> <li>Local Afar stakeholders expressed grievance over the fact that the majority of jobs continue to be allocated to non-Afar groups.</li> </ul>	<ul style="list-style-type: none"> <li>Directly affected communities</li> </ul>
Process Related	Engagement and communication	Stakeholders expressed their dissatisfaction that they continue not to be engaged with regards to exploration activities occurring particularly with the increase in activity that they have seen.	<ul style="list-style-type: none"> <li>Directly affected communities</li> <li>Elders</li> </ul>
		Community awareness about the proposed Project and current activities is still low.	<ul style="list-style-type: none"> <li>Directly affected communities</li> </ul>
		Stakeholders requested that local customs and traditions are respected, in particular around engagement, providing information to stakeholders and gaining permission prior to conducting activities.	<ul style="list-style-type: none"> <li>Directly affected communities</li> </ul>

Issue Category	Issue	Details on the Issue	Stakeholder
		Stakeholders stated that Allana’s management should respect their promises in order to maintain a good relationship with the community. Promises referred to included providing boreholes and developing the local health centre.	<ul style="list-style-type: none"> <li>• Directly affected communities (Alai lai, Hamad Ela and Mororo)</li> </ul>
Stakeholder Expectations	Anticipated Benefits	Stakeholders in particular from Hamad Ela expressed expectation of employment opportunities.	<ul style="list-style-type: none"> <li>• Directly affected communities</li> </ul>
		There is high expectation from local stakeholders that if they are not employed by Allana they expect to receive other benefits including provision of potable water, development of schools and health posts and developing income generating activities.	<ul style="list-style-type: none"> <li>• Directly affected communities</li> </ul>
		Stakeholders living further from the Project expect that if they do not see benefits from employment and direct benefits from community development initiatives they expect to see benefits from improved infrastructure including improved roads and other infrastructure in the area.	<ul style="list-style-type: none"> <li>• Directly affected communities</li> </ul>
	Compensation	Stakeholders living in areas that will be impacted expect compensation for any disturbance they will experience (Alai lai and Mororo).	<ul style="list-style-type: none"> <li>• Directly affected communities</li> </ul>

Appendix E

Stakeholder Engagement  
Materials – Non-Technical  
Summary of the Scoping  
Report (NTS)



## Non-Technical Summary

# ALLANA POTASH

## Introduction

Allana Potash Afar Plc (Allana) proposes to develop the Dallol Potash Project in the Danakil Depression in the Afar Regional State. Before Allana are allowed to proceed, a study called an Environmental, Social and Health Impact Assessment (ESHIA) needs to be done.

The aim of this study is to advise the Ethiopian Government and international banks lending money to the proposed Project on the expected impacts of the proposed Project, and to suggest how these impacts can be managed.

This document provides information on the proposed Project and the ESHIA study. It is also a summary of the important findings from the draft scoping report.

## This document provides:

- a brief background and introduction to the proposed Project;
- an introduction to the Environmental, Social and Health Impact Assessment (ESHIA);
- details of the stakeholder engagement process for the ESHIA; and
- an invitation for the public to become involved in the ESHIA process.





## What is an ESHIA?

An Environmental, Social and Health Impact Assessment (ESHIA) is a study to understand the impacts, both positive and negative, of the proposed Project. Impacts are how the proposed Project will change the area's environment and affect the people living and working there.

It also identifies ways to manage any changes that may happen because of the proposed Project.



The ESHIA helps the Ethiopian Government, as well as the banks who are lending money to finance the proposed Project, to decide on whether to continue with the development of the proposed Project and what needs to be done to make sure that any risks are managed.

Specific objectives of this ESHIA are to:

- Meet Ethiopian legal requirements as well as international best practice for impact assessments.
- Identify and understand both the positive and negative changes or impacts (e.g., environmental, social and health impacts).
- Identify ways to avoid, reduce or manage negative impacts and to increase the positive impacts or benefits from the proposed Project.
- Involve people who are going to be affected (stakeholders\*) in decision-making around the proposed Project.
- Help to make sure that the proposed Project is planned better and is better able to manage environmental and social issues and matters.

\* Stakeholders are defined as any people or groups that either are affected by a project or are interested in the Project.



## Background to the Proposed Project

Allana wants to develop a potash mine in the Danakil Depression in the north-east of Ethiopia (the Dallol Potash Project). Allana owns four mineral concessions totalling an area of 158km<sup>2</sup>.

Potash, also known as potassium chloride, is mainly used in the manufacture of fertilizer for farming/agriculture. Fertilizer is important because land is becoming less productive due to climate change and over-farming. Fertilizer helps farmers grow more food on the same land to make sure that there is enough food for our world's growing population.



## Project Location

The proposed Project will be developed in the Afar State, in the north eastern region of Ethiopia, near the border between Ethiopia and Eritrea. The proposed Project site is located in the Danakil Depression and about 800km north of the capital Addis Ababa, and 600km north east of Djibouti. [See locality map overleaf.]

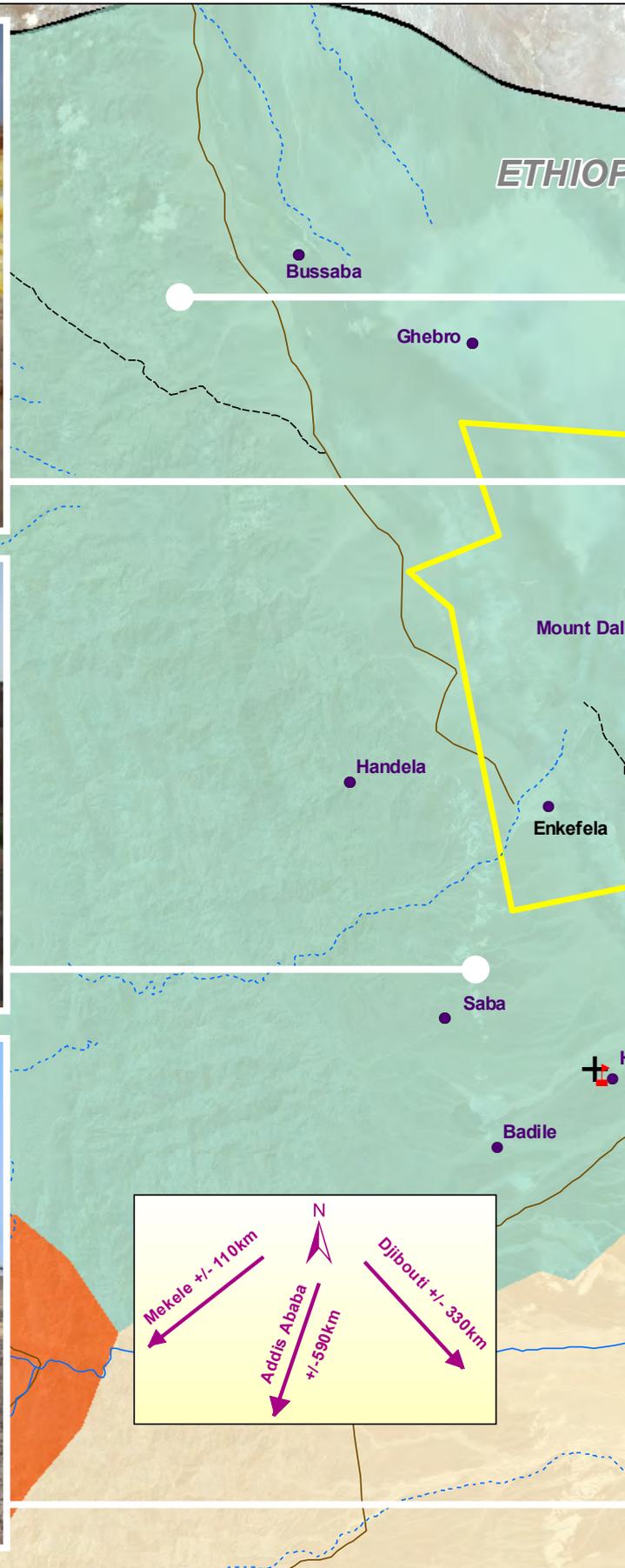
The Danakil Depression is the hottest place on earth, and is up to 100m below sea level, or even more in some places.

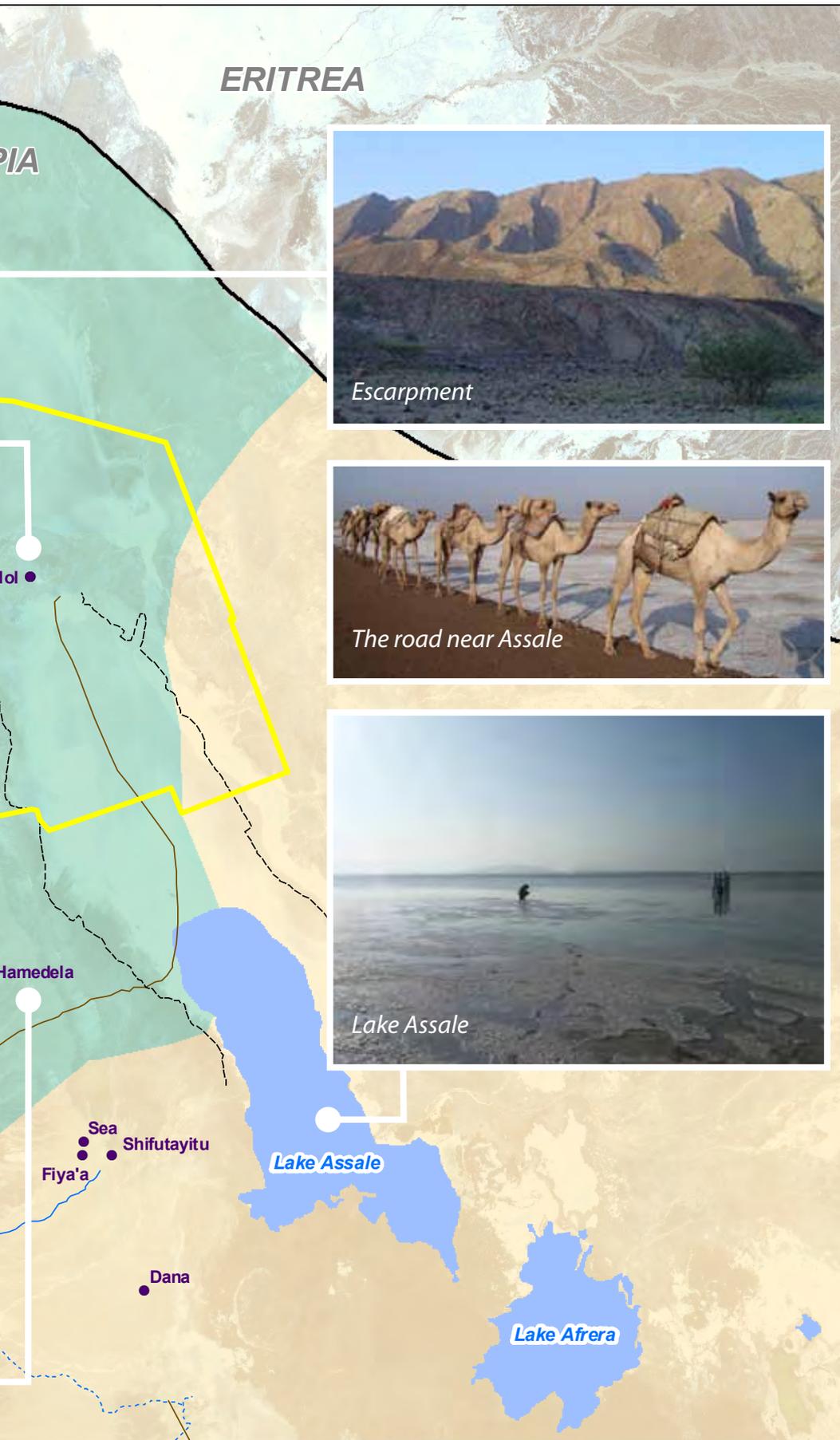
The number of people living in the Danakil Depression is low but there are some towns and villages in the area around the proposed Project site.

In addition to the settlements, there are two important economic activities that happen in the area:

- **Salt Mining** The Danakil Depression has salt flats where salt has been produced for more than 2000 years by the Afar people and other ethnic groups from the nearby areas. The salt miners move into the area during the cooler seasons, mine salt and take the salt blocks out of the area using camels.
- **Tourism** The Danakil Depression is visited by tourists from all around the world. The area is a popular place because of the local geology, including volcanoes, lava lakes and hot springs.







**Legend**

- Primary School
- Settlements
- Allana Exploration Camp
- Perennial River
- Non-Perennial River
- Dry Weather Road
- Trail
- Water Bodies
- Allana Potash License Region
- Ethiopia

**Administrative Boundaries**

- Berahle
- Dalul
- Erob
- Koneba

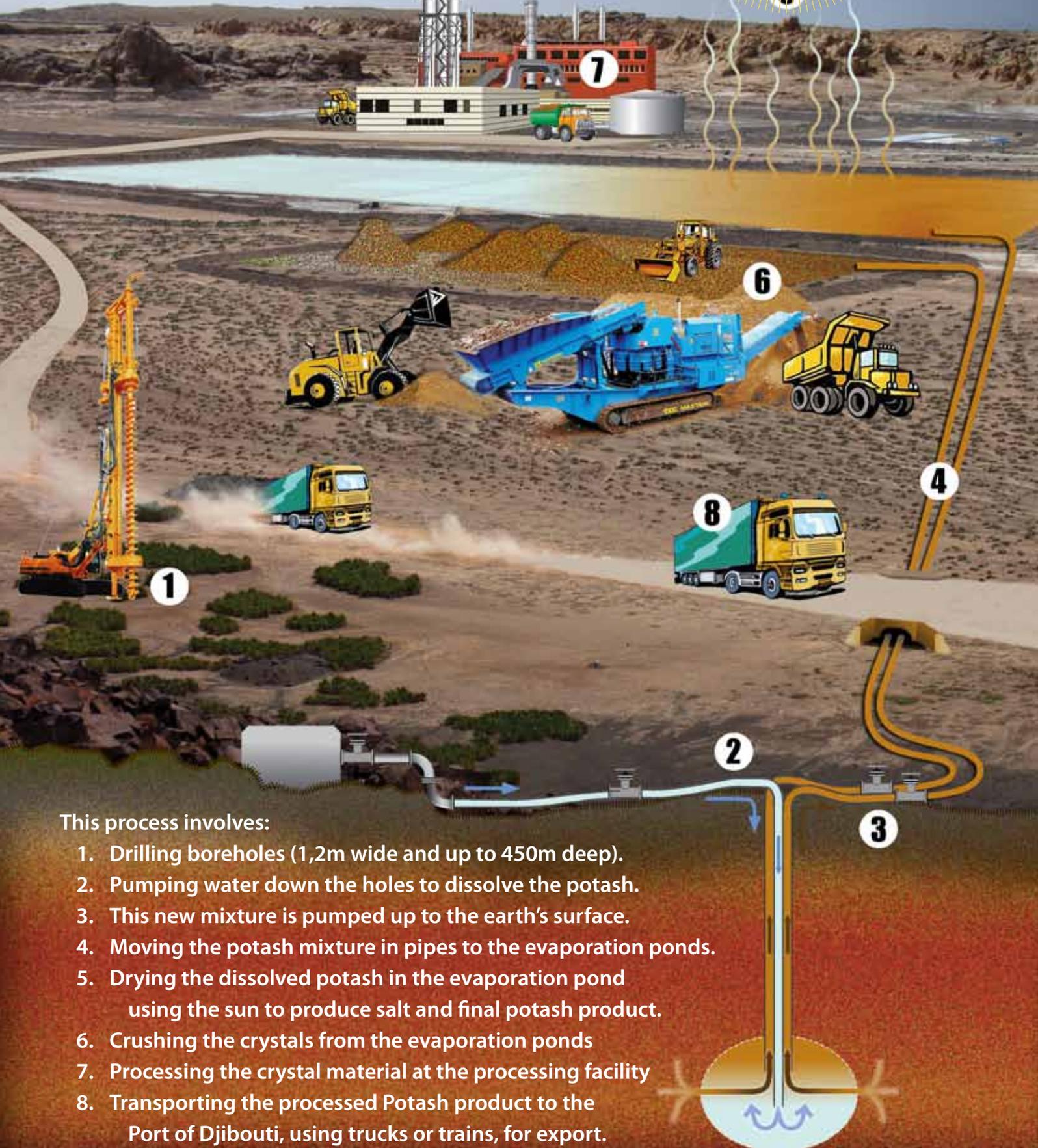
SCALE:



Projection: UTM Zone 37N; Datum: WGS 1984  
Source: UN, Esri Data & Maps, Allana Potash

## Solution Mining

Allana is planning to start mining potash in the area after gaining approval from the Ministry of Mines. They will mine this through a process known as solution mining.



This process involves:

1. Drilling boreholes (1,2m wide and up to 450m deep).
2. Pumping water down the holes to dissolve the potash.
3. This new mixture is pumped up to the earth's surface.
4. Moving the potash mixture in pipes to the evaporation ponds.
5. Drying the dissolved potash in the evaporation pond using the sun to produce salt and final potash product.
6. Crushing the crystals from the evaporation ponds
7. Processing the crystal material at the processing facility
8. Transporting the processed Potash product to the Port of Djibouti, using trucks or trains, for export.

The solution mining process involves dissolving potash from under the ground with water and then pumping the water with the potash in it to the earth's surface. The water is then left in a pond so that the sun can evaporate the water, leaving only the potash in the form of crystals. These potash crystals are then processed in the mine process facility before being transported out of the area, to the port in Djibouti for sale and trade outside of Ethiopia. Allana believes solution mining is the best way to mine the potash from the area because other methods of mining are more expensive and it is also the easiest way to mine potash in this area.

Solution mining will use a large amount of water – about 8.2 million m<sup>3</sup> of water will be needed each year. This is because 59 wells will need to be dug with each well needing 139,000m<sup>3</sup> of water. The ESHIA will look at where the water will come from and what quality of water will be required for the process.

## Required Infrastructure and Services

For the mining and production of potash infrastructure will be needed. This will include:

- Machinery and equipment for drilling boreholes and pumping water into and out of the ground.
- A pipeline to transport potash water to the evaporation ponds from the boreholes.
- Evaporation ponds where the potash crystals will be produced.
- A power station (likely to be powered by diesel) to bring electricity to the proposed Project.
- A process facility for making the final product.
- Storage buildings and tanks to store equipment for the proposed Project, as well as waste that is left at the end of the solution mining process.
- Buildings for people to live in.
- A fuel station for the cars and trucks.
- A plant to produce clean drinking water.
- A sewage plant to deal with human waste.
- Access road/rail to Djibouti and access road to Mekele\*
- Improvements to the Djibouti harbour\*

\*The Governments of Ethiopia and Djibouti are responsible for:

- Building roads / a railway to help move people and products into and out of the area; and
- Improving the Djibouti harbour to export the mined potash to other countries in the world.

The ESHIA for Allana's proposed Project will consider how the new Project and the new roads together will change the environment of the area, and affect the people living in the Danakil Depression.



Machinery



Accommodation



Access roads



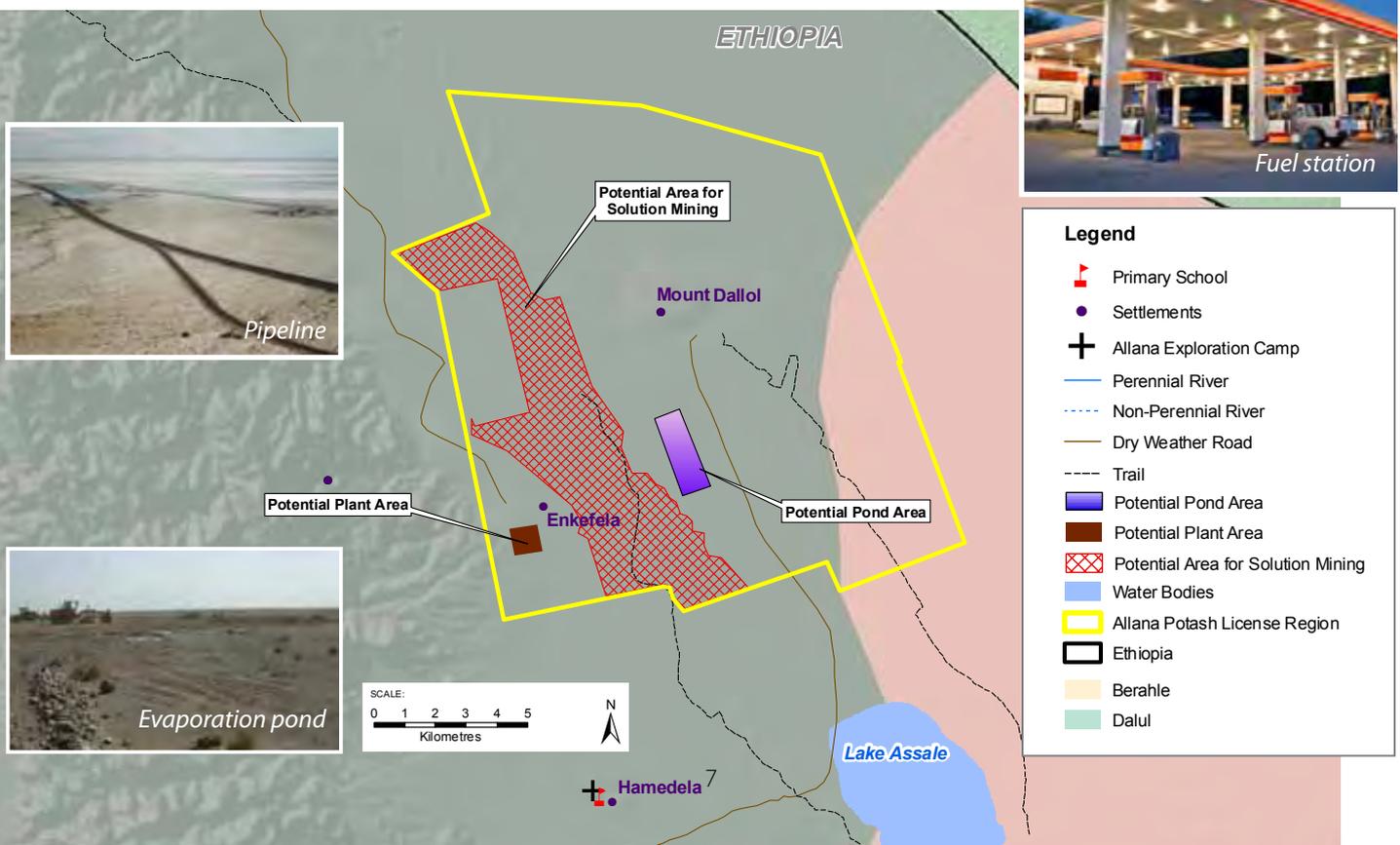
Processing plant



Power station



Fuel station



Pipeline



Evaporation pond



## The Environmental, Social and Health Impact Assessment

Allana was given prospecting and exploration licenses from the Ethiopian Ministry of Mines and Energy to explore for potash. Allana still needs to apply for an environmental operating license under the EIA Proclamation No. 299/2002 to develop the full mining operation. Allana needs to get this license before they can begin to operate.

To get the Environmental License, an EIA to Ethiopian standards needs to be done. Because Allana is also looking to borrow money from international banks, they need to follow the bank's principles (the Equator Principles and International Finance Corporation (IFC) Performance Standards). The Equator Principles and IFC Performance Standards identify important environmental and social issues that a Project needs to understand and manage before the Project can begin. Because of this requirement Allana needs to complete an ESHIA that looks at all of the important social and environmental changes that may happen because of the proposed Project.

Environmental Resources Management (ERM), TS Environmental Technology and Beles Engineering Plc are working as a team of independent environmental and social specialists to do this ESHIA, and to give advice on the best way to make sure the proposed Project manages environmental, social and health issues that are associated with the proposed Project.

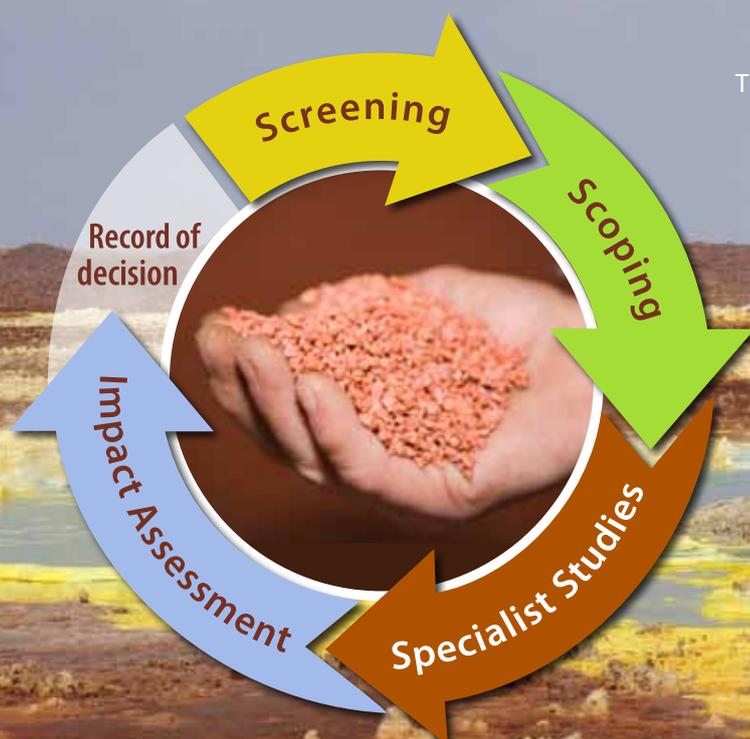
## The Process

The ESHIA has been designed and is divided into 4 key phases:

1. **Screening:** defines what environmental and social issues the ESHIA will focus on.
2. **Scoping:** identifies the likely changes (also called impacts) that will happen because of the proposed Project.
3. **Specialist Studies:** collect information from the area (the Danakil Depression) to understand what the environment and people in the area are like and how the proposed Project is likely to impact them.
4. **Impact Assessment:** understands how large and important the changes (impacts) are likely to be, and identify ways to avoid or reduce these changes.

At the end of the process, an ESHIA report will identify the changes that are likely to happen because of the proposed Project. The ESHIA report will also identify the best way to avoid or reduce the negative changes, and support the positive changes that will happen because of the proposed Project. The report will be submitted to the Government of Ethiopia and to international banks. The Government of Ethiopia will then decide whether the proposed Project can go ahead or not through issuing a **record of decision**. The international banks will also decide whether they want to give financing to the proposed Project depending on the result of the ESHIA study.

The ESHIA process follows the Ethiopian EIA Proclamation (No. 299/2002), EIA Guideline (final draft 2000) and EIA Procedural Guideline (Series 1, 2003). It also follows the IFC Performance Standards on Environmental and Social Sustainability (2012).



This proposed Project is now in the Scoping Phase, as shown in the flow diagram.

## More on the Scoping Phase

Scoping is done to identify the likely changes (impacts) that will happen because of the proposed Project. The impacts that are identified will help to decide what specialist studies will be done, and what impacts will be looked at in the Impact Assessment phase.

During the Scoping phase, it is important to engage with local communities and other stakeholders, to introduce the proposed Project and ESHIA process. It is also important to give people a chance to tell the team their views on the proposed Project and discuss any concerns or suggestions they may have.

## Stakeholder Engagement

Stakeholders are defined as any people or groups that either are affected by a Project or are interested in the Project. Talking to stakeholders is one of the most important things to do in an ESHIA.

Talking to or engaging stakeholders is done to:

- Give information about the proposed Project to people who will be affected;
- Give an opportunity for stakeholders to give their opinions and raise their concerns;
- Allow stakeholders opinions to be thought about by decision makers (e.g., the Government of Ethiopia); and
- Give stakeholders regular feedback about the proposed Project.

ERM and TS Environmental Technology are independent consultants who will run the engagement process. Our team commits to talking to people and engaging stakeholders according to the following principles:

- Free: Stakeholders are free to express their real opinions and concerns without being influenced by other stakeholders;
- Prior: Stakeholders are given information before any important decisions are made on the proposed Project. It also allows stakeholders enough time to consider information that they are receiving; and
- Informed: Stakeholders are given enough of the right information at the right time to make sure they are able to engage in a meaningful way.

The team will also try to make sure engagement is open to all people, especially people who will be affected by the proposed Project. This will be done in a way that is culturally appropriate.





## Initial Thoughts on the Expected Changes from the Proposed Project

A number of potential changes (potential impacts) have been identified as likely to happen because of the proposed Project. These impacts will be studied and understood in more detail through the Specialist Studies and Impact Assessment phases in the ESHIA.

### Air

- Emissions from dust from construction, potash production and vehicle movement on the road.
- Small particles from construction, potash production, vehicle movement on the road and from the burning of fossil fuels (diesel).

### Noise

- Drilling and movement of heavy vehicles especially on the road from Berhalla to the proposed Project site.

### Groundwater and Surface Water

- During operation the main water to be used will come from groundwater in the region, and some surface water may be used. This may decrease the amount of water for people to use in the area.



## Population Change

- Increase in the number of people coming into the area will likely increase the number of people using the local schools, clinics, etc.
- It may also change the way in which communities interact, especially the local Afar people.

## Changes to the Local Salt Trade

- The proposed Project activities may change how and where the local people can mine salt.
- The production of salt during mining activities may change how the local people produce salt.

## Employment

- The proposed Project may employ local people for construction and operation and use the services in the local area. This may increase the employment in the area however the number of people to be employed will need to be confirmed.

## Health

- The increase in people coming into the area may increase the type and number of diseases in the area.





## How can you be involved?

- By attending workshops and public meetings held during the ESHIA process (these will be advertised);
- By visiting the Project website (<http://www.erm.com/Allana> ESHIA)
- By contacting ERM or TS Environmental Technology for further information (details below); and
- By registering an interest in the Project. Registration will allow you to receive further communication about the ESHIA process and the proposed Project.

Register and provide comment by contacting either Samuel Hailu or Nomsa Fulbrook-Bhembe at the details below.

### **Samuel Hailu**

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## Social Sensitivity Criteria

Version 2.0

December 2012

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Document Ref.	Prepared By	Reviewed By	Date Submitted to Allana for Review
Social Sensitivity Criteria_V2.0	Alastair Gow-Smith	Philippa Spence	December 2012

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This document presents the criteria for assessing social (including community health, landscape and visual and cultural heritage) impacts as part of the Allana Potash ESHIA.

The overall approach to the rating and evaluation of impacts is provided within the Impact Assessment Methodology Section however this chapter describes the specific sensitivity criteria for individual specialist areas including:

- Community health and wellbeing;
- Landscape and visual;
- Socio-economic and cultural context;
- Labour and workforce; and
- Archaeology and cultural heritage.

The specific objectives of this section are to define magnitude, sensitivity / vulnerability and significance for these disciplines.

## 2.1 INTRODUCTION

In the absence of any specific landscape and visual impact assessment guidelines in Ethiopia, the landscape and visual impact assessment has been prepared in accordance with good practice and also incorporates the assessment methodology as described in the Guidelines for Landscape and Visual Impact Assessment <sup>(1)</sup> produced jointly by the UK Landscape Institute and the Institute of Environmental Management and Assessment (IEMA). This methodology is applicable both to the assessment of short term impacts during the construction of the project, and to long term impacts during its operation.

Landscape character and resources should be considered to be of importance in their own right, and valued for their intrinsic qualities regardless of whether they are seen by people. Impacts on visual amenity as perceived by people are therefore clearly distinguished from, although closely linked to, impacts on landscape character and resources. Landscape and visual assessments are therefore separate, but linked processes and a clear distinction is drawn between impacts on landscape character and visual impacts, as described below.

- Landscape impacts relate to the effects of the proposals on the physical and other characteristics of the landscape and its resulting character and quality.
- Visual impacts relate to the effects on views from visual receptors (e.g. residents, workers, tourists, etc) and on the amenity experienced by those people (*sometimes referred to as visual impact receptors*).

## 2.2 IMPACT ASSESSMENT CRITERIA

The significance of impacts is identified as being of:

- *not significant;*
- *minor;*
- *moderate;*
- *moderate to major; or*
- *major.*

The significance of landscape and visual impact is based and evaluated on two main factors, sensitivity of the landscape or viewer to change, and magnitude of change.

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(1) The Landscape Institute and Institute of Environmental Management and Assessment (2002), Guidelines for Landscape and Visual Impact Assessment: 2nd Edition

### 2.2.1 *Sensitivity of the Landscape or Viewer to Change*

The sensitivity of the landscape depends upon its inherent nature, quality, condition and ability to accommodate change; and on any specific values (such as statutory landscape designations) that may apply. A World Heritage site for example would be more sensitive to change than a 'brownfield industrialised area.

The sensitivity of viewers depends upon the duration of their exposure to perceptible views of the site, the frequency of opportunities for them to visually perceive the site. Hence, a resident with a permanent view is considered to be of higher sensitivity than a worker or traveller with a transient viewing opportunity. The sensitivity of the receptor is described as *low, moderate* or *high*.

### 2.2.2 *Magnitude of Change*

The magnitude of change on landscape or visual receptors depends upon the nature and scale of the development and other factors such as distance from source, context and quantifiable elements such as area and length. The magnitude of impact is described as being imperceptible, small, medium or large.

### 2.2.3 *Evaluation of Impact Significance*

Impact significance is determined by cross-referencing the sensitivity of the landscape or viewer, with the magnitude of change expected as a consequence of the development. Thus an impact of major significance will usually occur where the sensitivity of the landscape or viewer is high and the magnitude of the impact is large. The assessment of impact significance also requires the application of professional judgement and experience as significance can be subjective. Each example is therefore assessed on a case-by-case basis.

The following definitions, as described in *Figure 1.1* and *Figure 2.2* are used in this assessment.

Figure 2.1 Levels of Significance of Landscape Impacts

		Magnitude of Change in Landscape caused by Proposed Development				
		Imperceptible	Small	Medium	Large	
Levels of Significance of Landscape Impacts		An imperceptible, barely or rarely perceptible change in landscape characteristics.	A small change in landscape characteristics over a wide area or a moderate change either over a restricted area or infrequently perceived	A moderate change in landscape characteristics, frequent or continuous and over a wide area or a clearly evident change either over a restricted area or infrequently perceived.	A clearly evident and frequent/continuous change in landscape characteristics affecting an extensive area.	
Sensitivity of Landscape	Low	A landscape which is not valued for its scenic quality or where its character, existing land use, pattern and scale are tolerant of the type of change envisaged, and the landscape has capacity to accommodate change	Not significant	Not significant	Minor	Minor to moderate
	Medium	A moderately valued landscape, perhaps a locally important landscape, or where its character, land use, pattern and scale may have the capacity to accommodate a degree of the type of change envisaged.	Not significant	Minor	Moderate	Moderate to major
	High	A landscape protected by a regional (structure plan) or national designation and/ or widely acknowledged for its quality and value; a landscape with distinctive character and low capacity to accommodate the type of change envisaged	Not significant	Minor to moderate	Moderate to major	Major

Figure 2.2 Levels of Significance of Visual Impacts

Levels of Significance of Visual Impacts		Magnitude of Change in View caused by Proposed Development				
		Imperceptible	Small	Medium	Large	
		Change which is barely visible, at very long distances, or visible for a very short duration, perhaps at an oblique angle, or which blends with the existing view.	Minor changes in views, at long distances, or visible for a short duration, perhaps at an oblique angle, or which blends to an extent with the existing view.	Clearly perceptible changes in views at intermediate distances, resulting in either a distinct new element in a significant part of the view, or a more wide- ranging, less concentrated change across a wider area.	Major changes in view at close distances, affecting a substantial part of the view, continuously visible for a long duration, or obstructing a substantial part or important elements of view.	
Sensitivity of Viewpoint	Low	Small numbers of visitors with interest in their surroundings. Viewers with a passing interest not specifically focussed on the landscape eg workers, commuters. The quality of the existing view, as likely to be perceived by the viewer, is assessed as being low	Not significant	Not significant	Minor	Minor to moderate
	Medium	Small numbers of residents and moderate numbers of visitors with a interest in their environment. Larger numbers of recreational road users. The quality of the existing view, as likely to be perceived by the viewer, is assessed as being medium	Not significant	Minor	Moderate	Moderate to major
	High	Larger numbers of viewers and/or those with proprietary interest and prolonged viewing opportunities such as residents and users of attractive and well-used recreational facilities. The quality of the existing view, as likely to be perceived by the viewer, is assessed as being high	Not significant	Minor to moderate	Moderate to major	Major

In addition, the following criteria were also used in the landscape and visual assessment:

- Landscape/townscape integrity – compatibility with existing built environment; and
- Visibility of lighting, and the effect of lighting on surroundings.

#### *Limitations*

This assessment is based on a desktop research and reconnaissance site surveys using survey maps, topographical data and aerial photographs. This information was used to identify and understand the topographical features, land use and landscape patterns as well as the view catchment area ie where the development might be seen.

The key limitation for this landscape and visual impact assessment is the absence of a finalised design scheme and the selection of proposed Project equipment (*various equipment to be used during construction and operation*), as this is an on-going exercise and decisions are being made with respect to reducing impacts. 3D computer simulations (e.g. Photomontages) have been prepared to illustrate the proposed Project and professional judgement has been used to assess the landscape and visual impacts assisted by field work photography from sensitive receptors.

Zones of Theoretical Visibility (ZTV) have also been prepared (refer *Chapter 9* of the ESHIA) to identify and map the area(s) within which a proposed development might theoretically have an influence or an effect upon landscape character and visual amenity, in other words where it can be seen. It is used as a tool to select landscape character areas, landscape features and viewpoints for more detailed assessment. The ZTV is based on bare earth height data, which means it takes no account of any screening which might actually occur if trees or buildings are in place or climatic factors such as heat haze which is relevant in this location. The ZTV is therefore in some respects the worst case scenario, and is proven in the field using field work and the constructed visualisations.

## 3.1

## INTRODUCTION

This Section provides the criteria for assessing social (including community health) impacts as part of the Allana Potash ESHIA. The overall approach to the rating and evaluation of impacts is provided within the Impact Assessment Methodology Section. The specific objectives of this section are to:

- provide a framework for determining the *vulnerability* of receptors to potential social impacts by assessing social sensitivities and those receptors who may be more vulnerable to impacts and less able to adapt to change;
- provide criteria that help to determine the *magnitude* of change in social conditions potentially brought on by a social impact; and
- provide criteria that evaluate the *significance* of potential social impacts, which is a combination of the above elements and includes consideration of the acceptability of the change to stakeholders and the local regulatory framework.

This chapter is divided into the following sections:

*Section 3.2* defines vulnerability and provides a framework for identifying key social sensitivities and groups that may be more vulnerable or less resilient to change;

*Section 3.3* defines and provides a methodology for assessing the magnitude of social impacts; and

*Section 3.4* provides an approach and relevant definitions for rating the significance of social impacts.

For the purposes of this clarity the definition of the term 'social' when referring to social impacts is discussed in *Box 3.1*.

**Box 3.1**      *Defining 'Social'*

For the purposes of this document it is understood that the term 'social' when referring to social impacts includes impacts received by the following aspects:

- Settlements, dispersed communities, solitary dwellings and mobile / semi-mobile groups (including temporary and permanent human residents with both formal and informal tenure of land/structures);
- Population dynamics including population size, structure, settlement pattern and migration;
- Tangible and intangible cultural heritage sites and items, including archaeological heritage;
- Ecosystem services, including provisioning services, regulating services, supporting services and cultural services used by human receptors;
- Social infrastructure including both tangible (i.e. schools, community centres, electricity lines, water pipes) and intangible items (i.e. meeting places, shaded areas);
- Individual and communally owned assets (i.e. farm animals and/or grazing land);
- Livelihoods, formal and informal businesses;
- Community groups including civil society groups;
- Gender;
- Human rights;
- Employee and worker labour, accommodation and working conditions; and
- Community health, safety and security (including wellbeing).

**3.2**      *DETERMINING VULNERABILITY FOR SOCIAL RECEPTORS*

A vulnerable individual or group is one that could experience adverse impacts more severely than others, or have a limited ability to take advantage of positive impacts, due to a vulnerable or disadvantaged status. *Box 3.2* provides some common definitions of vulnerable groups.

**Vulnerable Groups** (ref: World Bank Glossary of Terms).

*“This denotes a condition characterised by higher risk and reduced ability to cope with shock or negative impacts. It may be based on socio-economic condition, gender, age, disability, ethnicity, or other criteria that influence people’s ability to access resources and development opportunities. Vulnerability is always contextual, and must be assessed in the context of a specific situation and time...”*

**Vulnerable Groups** (ref: IFC Performance Standards).

*“...individuals and groups that may be directly and differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status. This disadvantaged or vulnerable status may stem from an individual’s or group’s race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth, or other status. The client should also consider factors such as gender, age, ethnicity, culture, literacy, sickness, physical or mental disability, poverty or economic disadvantage, and dependence on unique natural resources.”*

Vulnerability is a pre-existing status that is independent of the Project. The Project could however, exacerbate these vulnerabilities if existing sensitivities and coping mechanisms are not adequately understood or considered.

Heightened vulnerability may be caused by an existing low level of access to key socio-economic/cultural, health or bio-physical resources or a low status in certain socio-economic/cultural or health resources. More vulnerable receptors will tend to lack natural resources, services and infrastructure, skills and livelihoods options, and rights and access to decision making that could help them to respond to or manage changes. Often this vulnerability can be exacerbated if rights to resources and services are not recognised or protected.

An assessment of the levels of access to key socio-economic/cultural, health or environmental resources or a low status in certain socio-economic/cultural or health conditions will be context specific, comparing to local, regional and national Ethiopian averages.

### 3.2.1 **Assessing Levels of Vulnerability for ESHIA**

Table 3.1 shows a matrix which will be used to identify potentially vulnerable receptors according to sensitivity. This will reflect vulnerability resulting from an absence of a variety of socio-economic/cultural, health or bio-physical resources.

The table may identify receptors that are only vulnerable in relation to an absence of individual or limited numbers of socio-economic/cultural, health or bio-physical resources, or those receptors that are vulnerable across many resource areas. This may result in the identification of receptors that are vulnerable to only a certain type of impacts; e.g. some receptors may demonstrate vulnerability to socio-economic or livelihood impacts but not to health or service / infrastructure impacts.

Table 3.1 Matrices for Identifying Vulnerable Receptors

	Socio-Economic/Cultural or Bio-physical Resources	Specific Considerations	Assessing Vulnerability of Receptors
Receptors Access to:	Livelihoods	Diversity of livelihoods	<ul style="list-style-type: none"> <li>• Reliance on one principal livelihood?</li> <li>• Principal livelihoods are unsustainable, fragile or lack legal backing?</li> <li>• Principal livelihoods are relatively unproductive and/or highly seasonal?</li> </ul>
		Legality of livelihood	
		Productivity of livelihood	
	Natural Resources / Ecosystem Services	Water	<ul style="list-style-type: none"> <li>• Heavily dependent on a particular resource, with few alternatives available?</li> <li>• Resource shortages are frequent and serious?</li> <li>• Key species or areas depended upon for goods or services are legally protected and use is illegal?</li> <li>• Resources are controlled by an influential organisation or individual and access is not guaranteed?</li> <li>• Low availability of alternatives for a number of important ecosystem services?</li> </ul>
		Ecosystem Services	
		Non-Timber Forest Products	
Land			
Services and Infrastructure	Regulating services including flood and erosion control		
	Health	<ul style="list-style-type: none"> <li>• Minimal access to services and infrastructure?</li> <li>• Provision of key services and infrastructure is poor?</li> <li>• Lack of awareness of rights for services?</li> </ul>	
	Education		
	Transport		
	Recreation		
	Savings and support networks		
Fair Policing and Security			
Participation in Political and Civil Institutions and Decision Making	Freedom of association	<ul style="list-style-type: none"> <li>• Minimal ability to participate in orthodox governance and decision making systems?</li> <li>• Subject to high levels of corruption?</li> <li>• Restrictions on rights of association, ability to participate freely in governance?</li> <li>• Traditional governance systems not recognised?</li> </ul>	
	Freedom from corruption		
	Rights / ability to participate in decision making		
Community and Social Inclusion and Cohesion	Security	<ul style="list-style-type: none"> <li>• Subject to marginalisation and discrimination?</li> <li>• Subject to violence and conflict?</li> </ul>	
	Freedom from inter and intra community conflict		
Receptors status for:	Health	Health status including malnutrition, infectious diseases, disability etc.	<ul style="list-style-type: none"> <li>• Suffer from acute / chronic illness?</li> <li>• Frequent incidence of health problems?</li> <li>• High rates of maternal/child mortality?</li> </ul>
	Knowledge, Skills and Education	Levels of knowledge skills and education	<ul style="list-style-type: none"> <li>• Low levels of literacy?</li> <li>• Low rates of school attendance?</li> <li>• Low levels of education levels achievement?</li> </ul>
		Ability to participate in orthodox economic and social systems.	
	Financial resources	Income generation	<ul style="list-style-type: none"> <li>• Low levels of income levels relative to expenditure?</li> <li>• Low ability to pay for food, key services, resources and infrastructure?</li> <li>• Limited access to savings, loans, banking, and financial support systems?</li> </ul>
		Savings	
	Independent Cultural Identity	Desire to maintain strong independent cultural identity.	<ul style="list-style-type: none"> <li>• Cultural identity not understood by the mainstream?</li> <li>• Minority cultural identity is discriminated against?</li> <li>• Receptors have relatively limited interaction with predominant cultural systems?</li> </ul>
		Desire to avoid all socio-cultural change	
	Labour and Human Rights	Human Rights	<ul style="list-style-type: none"> <li>• Presence of contractors?</li> <li>• Minimal labour right regulation?</li> <li>• Poor track record of recognition of human rights?</li> </ul>
		Child and Child Labour	
		Right to association	
H&S and accommodation standards			
Minimum wages etc.			

Receptors will be considered vulnerable in the context of their immediate surroundings and should be considered against existing pre-project baseline levels; because of this there are usually some vulnerable receptors within a given Project Area.

### 3.2.2 *Ranking Levels of Vulnerability*

As part of the social impact assessment process ERM will consider the topic area of the social impact being considered and calculate the vulnerability of receptors according to the specific impact area; receptor sensitivity may therefore be ranked differently for different impacts that are assessed.

Table 3.2 shows exemplar descriptions of the level of vulnerability of receptors to positive and negative impacts. The transitional colour scheme is designed to show that levels of vulnerability are often fluid and moving and may not be a 'hard' quantitative definition.

**Table 3.2** *Levels of Vulnerability*

Level of Vulnerability	Definition for Negative Impacts
Low	Minimal areas of vulnerabilities; consequently with a high ability to adapt to changes brought by the project.
Medium	Few areas of vulnerability; but still retaining an ability to at least in part adapt to change brought by the project
High	Profound or multiple levels of vulnerability that undermine the ability to adapt to changes brought by the project.

It should be noted that levels of vulnerability of receptors to impacts related to ecosystem services, although assessed using the same technique, will be defined differently. Please see the ecosystem services impact assessment methodology for further details.

Vulnerability to impacts related to human health will consider health vulnerability including access to healthcare, amenities, services and support networks as well as levels of poverty and education.

## 3.3 *RATING MAGNITUDE OF IMPACTS*

### 3.3.1 *Defining Magnitude for Social and Health IA*

Magnitude of social and health impacts is understood as a reflection of the 'size' of change caused by social impacts<sup>1</sup>. As discussed in the Impact Assessment Methodology Section magnitude is a function of the following:

<sup>1</sup>Noting that size does not equate to significance.

- Extent;
- Duration;
- Scale; and
- Frequency.

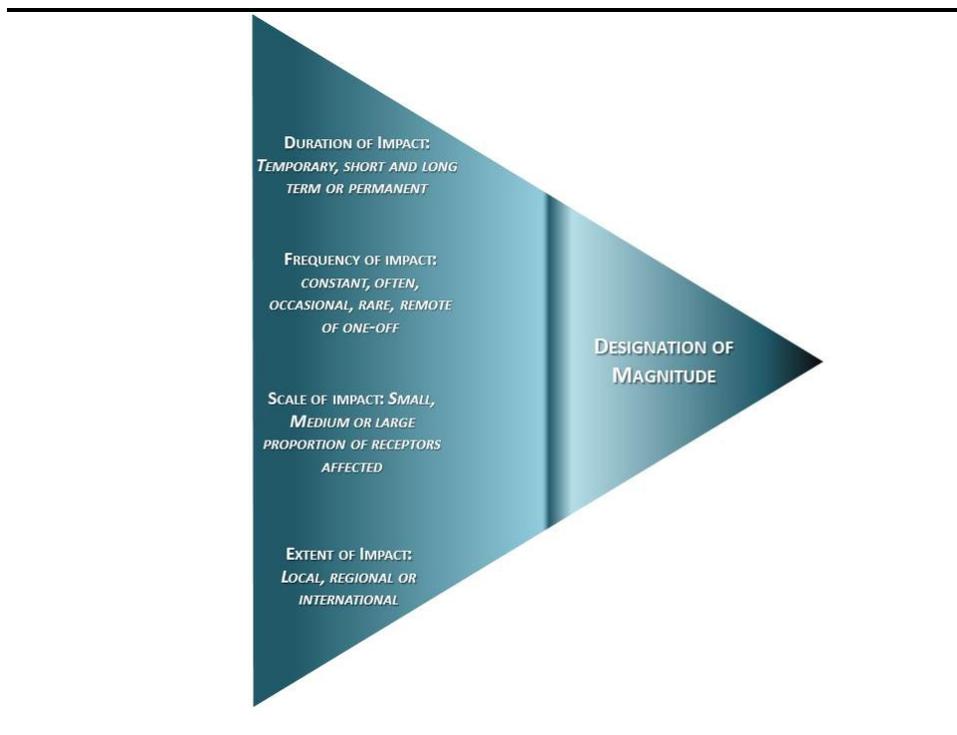
### 3.3.2 *Assessing Magnitude for Social and Health Impacts*

The following sections provide guidance of how to determine magnitude in terms of assessing social and health impacts.

- *Extent* for social impacts is the geographic ‘reach’ of the impact; this may include reference to a local, regional or international scale. This takes into account the proportion of the households or communities potentially affected by the change.
- *Duration* for social impacts is the timeframe over which an impact will be experienced, this may include temporary, short-term, long-term and permanent. An impact that lasts for only a short time, for example for a few months, would tend to be small duration, while one that persisted for the lifetime of the Project would tend to be a large duration
- *Scale* for social impacts is the degree of change at a household or community level to livelihoods and quality of life. For example, an impact that leads to a fundamental change in the way of life of people or to the nature of relationships within a community or to the livelihood patterns would tend to be large, whilst one that resulted in only subtle changes in conditions would be small.
- *Frequency* for social impacts is the constancy or periodicity of an impact. For example an impact that incurs constantly would have a high frequency while an impact that occurs as a one off occurrence would have a low frequency. The designation for frequency is constant (is a permanent occurrence), often (occurs at least once a month), occasional (occurs at least once every six months), rare (occurs about once a year), remote (occurs periodically less often than once a year) or one-off.

*Figure 3.1* shows a representation of how the assessment of impact characteristics should culminate in a rating of magnitude based on past experience and expert judgement.

**Figure 3.1** *Assessing Level of Magnitude*



**3.3.3** *Ranking Levels of Magnitude*

Table 3.3 shows exemplar descriptions of the different designations of magnitude.

**Table 3.3** *Designation of Magnitude*

Designating Magnitude	Definition
Negligible	Change remains within the range commonly experienced within the household or community.
Small	Perceptible difference from baseline conditions. Tendency is that impact is local, rare and affects a small proportion of receptors and is of a short duration.
Medium	Clearly evident difference from baseline conditions. Tendency is that impact affects a substantial area or number of people and/or is of medium duration. Frequency may be occasional and impact may be regional in scale.
Large	Change dominates over baseline conditions. Affects the majority of the area or population in the area of influence and/or persists over many years. The impact may be experienced often and national or international in scale.

It should be noted that levels of magnitude of impacts related to ecosystem services, although assessed using the same technique, will be defined differently. Please see the ecosystem services impact assessment methodology for further details.

### 3.4 *RATING SIGNIFICANCE*

#### 3.4.1 *Evaluating Significance for Social Impacts*

The significance of social impacts is evaluated taking into account the magnitude of the impact and the vulnerability of affected receptors. The approach to calculating significance is established in the Impact Assessment Methodology. *Figure 3.2* shows how to calculate negative social impacts and includes the definitions of vulnerability and magnitude designations specifically for rating significance for social impacts.

Figure 3.2 Designating Significance Ratings for Social Impacts

Negative impacts					
			Vulnerability of Receptors		
			Low	Medium	High
			Minimal areas of vulnerabilities; consequently with a high ability to adapt to changes brought by the project.	Few areas of vulnerability; but still retaining an ability to at least in part adapt to change brought by the project.	Profound or multiple levels of vulnerability that undermine the ability to adapt to changes brought by the project.
Magnitude of Impact	Negligible	Change remains within the range commonly experienced within the household or community.	Negligible	Negligible	Negligible
	Low	Perceptible difference from baseline conditions. Tendency is that impact is local, rare and affects a small proportion of receptors and is of a short duration.	Negligible	Minor	Moderate
	Medium	Clearly evident difference from baseline conditions. Tendency is that impact affects a substantial area or number of people and/or is of medium duration. Frequency may be occasional and impact may be regional in scale.	Minor	Moderate	Major
	Large	Change dominates over baseline conditions. Affects the majority of the area or population in the area of influence and/or persists over many years. The impact may be experienced often and national or international in scale.	Moderate	Major	Major

### 3.4.2 *Involving Stakeholders, Policy and Planning and Perceptions into Significance Rating*

Change brought about by the Project need to be reflected within the frame of reference of the local setting as articulated in stated policy or development objectives and / or the views and perceptions of the local people. For example:

- Owners of holiday homes looking for a peaceful retreat typically consider noise and disturbance caused by construction to be more severe than communities in developing countries that are anxious to see signs of change and development in their area.
- Communities with strong cultural identity and norms may be more greatly disturbed by a non-local workforce than holiday makers in a cosmopolitan location.

The ESHIA process will seek ways to bring stakeholders' views on impacts explicitly into the evaluation, for example by reporting the results of stakeholder workshops, including quotes from consultation or public meetings required by law etc.

Stakeholder views and priorities will be integrated specifically into the assessment by increasing significance ratings where necessary based on expert judgement and experience.

It is common that the public may have the perception that an impact is different (either lower or higher) than will actually be the case. This is commonly referred to as a perceived impact. Perceived impacts will be captured, but will be clearly differentiated to 'actual' impacts as evaluated in the standard methodology. Where the effect of impacts are perceived to be more critical than has been assessed in the impact assessment they will be evaluated separately. Relevant mitigation is likely to focus around, for example, strengthening aspects of awareness raising, project communication and engagement, participation in project development and participative monitoring.

### 3.4.3 *Ranking Levels of Significance*

Table 3.4 shows exemplar descriptions of the different designations of significance for social impacts.

**Table 3.4** *Defining Significance Designations*

<b>Significance</b>	<b>Negative Social Impacts</b>	<b>Negative Health Impacts</b>
Negligible	Inconvenience caused but with no long-term consequences on long-term livelihoods, culture, quality of life, resources, infrastructure and services.	Annoyance, minor inquiry or illness that does not require treatment.
Minor	Impacts are confined to an area around the project. Primary and secondary impacts caused on livelihoods, culture, quality of life, resources, infrastructure and services.	Some exposure to communicable diseases to workers and population around the project, as well as risks from project activities that may expose the community to accidents and injuries risks.
Moderate	Some adverse impacts; can be reversed or compensated, but significant residual impacts remain. Impact is widespread and will be difficult for receptors to reverse or compensate for.	High risks to diseases, injuries as well as exposure to project operational risks to both workers as well as local community.
Major	Diverse primary and secondary impacts that will be impossible to reverse or compensate for; will lead to widespread impoverishment, or societal breakdown.	Loss of life, severe injuries or chronic illness requiring hospitalisation. Exposure to and incidence of diseases not common previously in the area.

## 4.1 ASSESSING CULTURAL HERITAGE IMPACTS

Because of the specific requirements involved in assessing potential impacts to cultural heritage although the same technique will be used to assess significance the definitions for magnitude and sensitivity will vary.

Table 4.1 and Table 4.2 specify the definitions for magnitude and cultural heritage site sensitivity.

Table 4.1 Cultural Heritage Magnitude Definitions

Magnitude Level	Definition
Negligible	No discernible change in the physical condition, setting, or accessibility of the site.
Small	Small part of the site is lost or damaged resulting in a loss of scientific or cultural value; setting undergoes temporary or permanent change that has limited effect on the site's perceived value to stakeholders; stakeholder/public or scientific access to site is temporarily impeded.
Medium	A significant portion of the site is lost or damaged resulting in a loss of scientific or cultural value; setting undergoes permanent change that permanently diminishes the site's perceived value to stakeholders; stakeholder and scientific access to site is permanently restricted.
High	The entire site is damaged or lost resulting in a loss of all scientific or cultural value; setting is sufficiently impacted to cause site to lose nearly all cultural value; site becomes permanently inaccessible to stakeholders or scholars.

Table 4.2 Cultural Heritage Site Sensitivity Definitions

Cultural Heritage Site Sensitivity Level	Definition
Low	Site is not protected under local, national, or international laws or treaties; site has limited or no cultural value to local, national, or international stakeholders; site has limited scientific or social value or similar information or social functionality is available at numerous other sites in the region.

Cultural Heritage Site Sensitivity Level	Definition
<b>Medium</b>	Site is protected by local or national laws but laws allow for mitigated impacts; Site can be moved or replaced in consultation with stakeholders; Site has considerable cultural value for local and/or national stakeholders; Site has substantial scientific value but similar information can be obtained at a limited number of other sites in the region.
<b>High</b>	Site is protected by local, national, and international laws or treaties; Site cannot be moved or replaced without significant loss of cultural value; Site has substantial value to local, national, and international stakeholders; site has exceptional scientific value and similar site types are rare or non-existent.

Annex E

## Inventory of Cultural Heritage Sites Identified at the Project Site

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
1	CH-1	Oct 10, 2012, 8:27	Military Shooting Blind	Low	Poor	no	Not clear if a site, no obvious markers, maybe evidence for square interior structure	636314	1563339	-107
2	CH-2	Oct 10, 2012, 11:27	Circular Cairn	High	Good	no	Recent tent circle	636289	1563679	-109
3	CH-3	Oct 10, 2012, 11:34	Conical Cairn	Medium	Destroyed	no	conical-cairn that has had its top removed and dug into.	636402	1563721	-112
4	CH-4	Oct 10, 2012, 16:17	Stacked Circular Cairn	Low	Poor	Yes - NW corner of Proposed Plant Area	Medium stacked-circular-cairn mostly covered over by later water activity and rubble.	634536	1566465	-82
5	CH-5	Oct 10, 2012, 16:28	Stacked Circular Cairn	High	Good	Yes - NW corner of Proposed Plant Area	Large stacked feature in NW corner of plant. Previously identified from remote sensing.	634240	1566442	-73
6	CH-6	Oct 10, 2012, 16:30	Conical Cairn	High	Moderate	Yes - NW corner of Proposed Plant Area	Medium stone conical-cairn with small simple circle located directly to the west. Again following similar pattern from further east	634226	1566443	-73
7	CH-7	Oct 10, 2012, 16:33	Stacked Circular Cairn	High	Good	Yes - NW corner of Proposed Plant Area	Large stacked-circular-cairn feature in plant area. Near others of similar size and quality	634213	1566413	-71
8	CH-8	Oct 10, 2012, 16:35	Stacked Circular Cairn	High	Moderate	Yes - NW corner of Proposed Plant Area	Another large stacked-circular-cairn	634194	1566386	-71
9	CH-9	Oct 10, 2012, 16:37	Stacked Circular Cairn	Medium	Moderate	Yes - NW corner of Proposed Plant Area	Very small stacked-circular-cairn just north of a large one	634194	1566381	-71
10	CH-10	Oct 10, 2012, 16:40	Stacked Circular Cairn	Medium	Poor	no	Poorly preserved stacked-circular-cairn	634169	1566340	-69
11	CH-11	Oct 10, 2012, 16:41	Stacked Circular Cairn	Medium	Moderate	no	Small stacked feature near larger one	634164	1566338	-69
12	CH-12	Oct 10, 2012, 16:43	Stacked Circular Cairn	High	Poor	no	Medium stacked-circular-cairn badly eroded by water	634153	1566343	-69
13	CH-13	Oct 10, 2012, 16:49	Stacked Circular Cairn	Low	Destroyed	Yes - NW corner of Proposed Plant Area	Bradley eroded stacked-circular-cairn	634200	1566299	-69

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
14	CH-14	Oct 11, 2012, 7:51	Modern Grave	High	Good	no	Probably a modern Muslim grave with head pointed towards Mecca (NE). Little soil accumulation between stones. But there is some. Maybe a couple of decades old.	635598	1566104	-109
15	CH-15	Oct 11, 2012, 8:00	Modern Grave	Medium	Moderate	no	Small infant grave that is rectangular and probably recent and Muslim. This is a chronological clue.	635599	1566069	-109
16	CH-16	Oct 11, 2012, 8:04	Modern Grave	High	Moderate	no	Maybe recent rectangular grave but not aligned toward Mecca. However is seems modern and only has some sand that has filled in some crevices.	635607	1566053	-109
17	CH-17	Oct 11, 2012, 8:09	Circular Cairn	Low	Moderate	no	A recent tent circle that is somewhat poorly made. This seems common to the recent period. There are also a number of rectangular burials directly nearby.	635616	1566042	-109
18	CH-18	Oct 11, 2012, 8:13	Circular Cairn	Low	Moderate	no	A small poorly built tent ring with a slightly different alignment than the one adjacent to it. Here we found one ceramic sherd that appears to be modern. It has a light creamy orange fabric with very large stone inclusions. Here we have a chronologic	635621	1566044	-109
19	CH-19	Oct 11, 2012, 8:57	Circular Cairn	High	Moderate	no	A strange double circle grave feature. Somewhat small but nicely built. Both circles have two small stele on their north and south ends. Mimics the larger ceremonial circle with large stele to the west that was visited yesterday. This type of architect	635550	1566207	-108
21	CH-21	Oct 11, 2012, 9:11	Conical Cairn	High	Moderate	no	Small conical-cairn found close by double stone circle with N and S markers. Like a smaller version of the big ceremonial one Doub to the west.	635550	1566217	-108
22	CH-22	Oct 11, 2012, 9:13	Conical Cairn	High	Moderate	no	Another small conical-cairn tomb in ritual complex. This is a much smaller ritual complex than the one to the west. But it is probably if the same age.	635557	1566211	-108

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
23	CH-23	Oct 11, 2012, 9:17	Stacked Circular Cairn	High	Moderate	no	Small stacked-circular-cairn feature located directly south of medium sized conical-cairn structure. Probably a mortuary complex. Mimics patterns scene to the west of conical-cairn/stacked-circular-cairn combo. This is probably quite old.	635594	1566256	-110
24	CH-24	Oct 11, 2012, 9:21	Conical Cairn	High	Moderate	no	A medium conical-cairn just north of small stacked-circular-cairn	635594	1566263	-110
25	CH-25	Oct 11, 2012, 9:29	Circular Cairn	High	Moderate	no	An oblong semi-circle with an upright stone pointing towards the north.	635580	1566306	-109
26	CH-26	Oct 11, 2012, 9:32	Conical Cairn	High	Moderate	no	Medium conical-cairn in burial complex	635578	1566300	-109
27	CH-27	Oct 11, 2012, 9:34	Conical Cairn	High	Moderate	no	Large conical-cairn in burial complex	635572	1566303	-109
28	CH-28	Oct 11, 2012, 9:36	Circular Cairn	High	Good	no	A oval circle of stones with 5 upright stones mimicking other scene across the project area.	635564	1566300	-109
29	CH-29	Oct 11, 2012, 9:39	Circular Cairn	High	Moderate	no	A large stone circle with a hard packed interior surface. The soil that makes up this surface is fine, has few pebbles and is replete with small particles of burnt carbon. This is one if two such features in this complex.	635571	1566289	-109
30	CH-30	Oct 11, 2012, 9:42	Circular Cairn	Low	Good	no	A very small circle but seems to be part if larger burial complex	635571	1566293	-109
31	CH-31	Oct 11, 2012, 10:00	Circular Cairn	High	Good	no	Maybe Muslim and more recent placed within an older burial complex.	635388	1566668	-108
32	CH-32	Oct 11, 2012, 10:03	Conical Cairn	High	Moderate	no	conical-cairn amongst many more recent graves	635381	1566671	-108
33	CH-33	Oct 11, 2012, 10:08	Modern Grave	High	Good	no	Recent rectangular Muslim grave facing NE	635379	1566671	-108
34	CH-34	Oct 11, 2012, 15:05	Stacked Circular Cairn	High	Moderate	no	Stacked stone with 5 small upright stones on top.	633835	1568763	-108
35	CH-35	Oct 11, 2012, 15:07	Stacked Circular Cairn	High	Moderate	no	Stacked stone circle with 4 small stones on top aligned from E-W. This complex is removed from modern villages and does not have any evidence if later Islamic graves. It is a pristine site and important for chronology.	633829	1568757	-108
36	CH-36	Oct 11, 2012, 15:11	Conical Cairn	High	Moderate	no	Small conical-cairn, seems to be quite old	633832	1568755	-108
37	CH-37	Oct 11, 2012, 15:13	Stacked Circular Cairn	High	Moderate	no	Short stacked stone circle	633837	1568754	-108

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
38	CH-38	Oct 11, 2012, 15:15	Circular Cairn	High	Moderate	no	Very small stone circle in larger burial complex	633839	1568751	-108
39	CH-39	Oct 11, 2012, 15:17	Stacked Circular Cairn	High	Moderate	no	Three tiered stacked stone circle	633842	1568756	-108
40	CH-40	Oct 11, 2012, 15:19	Stacked Circular Cairn	High	Moderate	no	Stacked stone circle with coral on top	633844	1568761	-108
41	CH-41	Oct 11, 2012, 15:24	Stacked Circular Cairn	Medium	Moderate	no	One of two stacked stone circles, fairly isolated	633934	1568910	-109
42	CH-42	Oct 11, 2012, 15:26	Stacked Circular Cairn	Medium	Moderate	no	Short stacked stone circle	633943	1568914	-110
43	CH-43	Oct 11, 2012, 15:32	Modern Grave	Low	Poor	no	Probably a recent Muslim grave as it is rectangular and points NE	634041	1569015	-112
44	CH-44	Oct 11, 2012, 15:34	Modern Grave	Low	Poor	no	Another simple rectangle grave. Maybe these poorly made graves represent the graves of those who fell to conflict with Eritrea. They are a quick burial method.	634048	1569019	-112
45	CH-45	Oct 11, 2012, 15:38	Modern Grave	Low	Poor	no	Another potential modern conflict burial	634050	1569017	-112
46	CH-46	Oct 11, 2012, 15:39	Modern Grave	Low	Poor	no	Another potential modern conflict burial	634059	1569025	-112
47	CH-47	Oct 11, 2012, 15:41	Modern Grave	Low	Moderate	no	Another potential modern conflict burial	634071	1569028	-112
48	CH-48	Oct 11, 2012, 15:53	Modern Grave	Low	Poor	no	All of these are modern graves from conflict. Court those in the cluster	634184	1568938	-112
49	CH-49	Oct 11, 2012, 16:00	Circular Cairn	Low	Poor	no	Small, possibly old, grave	634164	1568685	-112
50	CH-50	Oct 12, 2012, 8:14	Stacked Circular Cairn	High	Good	no	3 stack circle, two upright stone	635181	1566741	-105
51	CH-51	Oct 12, 2012, 8:21	Stacked Circular Cairn	High	Moderate	no	3 stack circle	635171	1566735	-105
52	CH-52	Oct 12, 2012, 8:24	Stacked Circular Cairn	High	Moderate	no	4 stack circle with small coral chunks on top	635168	1566739	-105
53	CH-53	Oct 12, 2012, 8:30	Stacked Circular Cairn	High	Good	no	4 stack circle two large coral chunks on top	635165	1566741	-105
54	CH-54	Oct 12, 2012, 8:34	Stacked Circular Cairn	High	Moderate	no	3 stack circle with 4 small flat upright stones.	635163	1566741	-105
55	CH-55	Oct 12, 2012, 8:38	Stacked Circular Cairn	High	Good	no	4 stack circle, no markers in top	635163	1566743	-105
56	CH-56	Oct 12, 2012, 8:41	Stacked Circular Cairn	High	Poor	no	4 stack circle two large upright stones - broken.	635165	1566743	-105
57	CH-57	Oct 12, 2012, 8:49	Stacked Circular Cairn	High	Moderate	no	6 stack circle with 4 upright stones in top	635151	1566738	-105
58	CH-58	Oct 12, 2012, 8:51	Stacked Circular Cairn	High	Poor	no	2 stack circle with no stones on top	635151	1566737	-105
59	CH-59	Oct 12, 2012, 8:54	Stacked Circular Cairn	High	Moderate	no	6 stack circle with 2 coral uprights on top	635149	1566737	-105
60	CH-60	Oct 12, 2012, 8:56	Stacked Circular Cairn	High	Moderate	no	2 stack circle with two fallen upright stones on top	635149	1566739	-105

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
61	CH-61	Oct 12, 2012, 8:59	Stacked Circular Cairn	High	Moderate	no	4 stack circle no stones on top	635148	1566737	-105
62	CH-62	Oct 12, 2012, 9:01	Stacked Circular Cairn	Medium	Destroyed	no	A looted stack circle that exposes the interior chamber	635146	1566735	-105
63	CH-63	Oct 12, 2012, 9:14	Conical Cairn	High	Good	no	Large conical-cairn structure biggest one so far	635034	1566822	-100
64	CH-64	Oct 12, 2012, 9:18	Stacked Circular Cairn	High	Poor	no	2 stack circle that has been eroded by time and wind. Large pebbles inside	635032	1566820	-100
65	CH-65	Oct 12, 2012, 9:21	Stacked Circular Cairn	Medium	Destroyed	no	3 stack circle, now 2 stack, looted out interior.	635034	1566815	-100
66	CH-66	Oct 12, 2012, 9:24	Stacked Circular Cairn	Medium	Destroyed	no	3 stack circle, now 2 stack, looted exposing interior	635023	1566822	-100
67	CH-67	Oct 12, 2012, 9:27	Conical Cairn	High	Good	no	Second largest conical-cairn	635014	1566821	-100
68	CH-68	Oct 12, 2012, 9:29	Stacked Circular Cairn	High	Moderate	no	1 stack circle large pebbles inside	635016	1566819	-100
69	CH-69	Oct 12, 2012, 9:34	Stacked Circular Cairn	High	Poor	no	3 stack circle, big external stones, small pebbles inside	635022	1566916	-101
70	CH-70	Oct 12, 2012, 9:37	Conical Cairn	High	Good	no	Medium sized conical-cairn large stones throughout	635002	1566895	-101
71	CH-71	Oct 12, 2012, 9:40	Stacked Circular Cairn	High	Moderate	no	2 stack circle with large pebbles as fill	635000	1566892	-101
72	CH-72	Oct 12, 2012, 9:43	Stacked Circular Cairn	High	Poor	no	Partially looted 3 stack circle with large pebbles as fill	634988	1566866	-101
73	CH-73	Oct 12, 2012, 9:47	Circular Cairn	Low	Good	no	Recent tent circle with a piece of a rubber sandal found inside. Opening to south west	634976	1566863	-101
74	CH-74	Oct 12, 2012, 9:51	Conical Cairn	High	Good	no	One of the largest conical-cairns, made of large stones throughout	634959	1566886	-101
75	CH-75	Oct 12, 2012, 9:54	Stacked Circular Cairn	High	Moderate	no	3 stack circle with large pebbles as fill	634957	1566882	-101
76	CH-76	Oct 12, 2012, 9:58	Stacked Circular Cairn	High	Moderate	no	Large 4 stack circle with small pebbles as fill	634945	1566870	-99
77	CH-77	Oct 12, 2012, 10:00	Conical Cairn	High	Moderate	no	Medium conical-cairn with large stones throughout	634940	1566881	-99
78	CH-78	Oct 12, 2012, 10:03	Conical Cairn	High	Moderate	no	Smaller conical-cairn with large stones throughout	634939	1566877	-99
79	CH-79	Oct 12, 2012, 10:06	Stacked Circular Cairn	High	Moderate	no	Small 1 stack circle with large pebbles as fill	634939	1566871	-99
80	CH-80	Oct 12, 2012, 10:13	Stacked Circular Cairn	High	Moderate	no	Large 3 stack circle with single large upright stele in centre	634918	1566875	-99
81	CH-81	Oct 12, 2012, 10:16	Stacked Circular Cairn	High	Good	no	Medium 2 stack circle with large stones inside. A large stele stands in the middle	634900	1566877	-99

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
82	CH-82	Oct 12, 2012, 10:19	Stacked Circular Cairn	High	Good	no	1 stack circle with large stele sticking out of middle	634909	1566875	-99
83	CH-83	Oct 12, 2012, 10:22	Circular Cairn	High	Good	no	Large ceremonial circle on NS and EW access	634909	1566879	-99
84	CH-84	Oct 12, 2012, 10:29	Stacked Circular Cairn	Medium	Destroyed	no	2 stack circle with big pebbles as fill but mostly looted.	634901	1566875	-99
85	CH-85	Oct 12, 2012, 10:32	Stacked Circular Cairn	High	Moderate	no	3 stack circle with small pebbles as fill	634895	1566875	-99
86	CH-86	Oct 12, 2012, 10:35	Stacked Circular Cairn	High	Moderate	no	2 stack circle with small pebbles as fill	634894	1566872	-99
87	CH-87	Oct 12, 2012, 10:37	Stacked Circular Cairn	High	Moderate	no	2 stack circle with small pebbles as fill	634891	1566873	-99
88	CH-88	Oct 12, 2012, 10:39	Stacked Circular Cairn	High	Moderate	no	Very small 1 stack circle with small pebbles as fill	634892	1566876	-99
89	CH-89	Oct 12, 2012, 10:41	Stacked Circular Cairn	High	Moderate	no	Very small 2 stack circle with large stone fill	634887	1566875	-99
90	CH-90	Oct 12, 2012, 10:43	Stacked Circular Cairn	High	Moderate	no	Very small 1 stack circle with large pebbles as fill	634887	1566872	-99
91	CH-91	Oct 12, 2012, 11:33	Conical Cairn	High	Moderate	no	Large conical-cairn with large stones at base and fill	634885	1566864	-99
92	CH-92	Oct 12, 2012, 11:36	Stacked Circular Cairn	High	Moderate	no	1 stack circle with large pebbles as fill and large Stone on top	634884	1566862	-99
93	CH-93	Oct 12, 2012, 11:39	Conical Cairn	High	Moderate	no	Large cairns with large base stones and large stones through out	634862	1566857	-99
94	CH-94	Oct 12, 2012, 11:41	Stacked Circular Cairn	High	Moderate	no	Small two stacked-circular-cairn with large pebbles as fill and large stone atop	634859	1566852	-99
95	CH-95	Oct 12, 2012, 11:44	Stacked Circular Cairn	High	Good	no	4 stack circle with small pebbles as fill and late stone on top (2 large stones)	634851	1566800	-95
96	CH-96	Oct 12, 2012, 11:46	Conical Cairn	High	Moderate	no	Large double conical-cairn not so well preserved	634842	1566785	-95
97	CH-97	Oct 12, 2012, 11:48	Conical Cairn	High	Poor	no	Not so well preserved conical-cairn, large base stones	634838	1566781	-95
98	CH-98	Oct 12, 2012, 11:50	Conical Cairn	High	Poor	no	Poorly preserved pyramid	634842	1566773	-95
99	CH-99	Oct 12, 2012, 11:52	Conical Cairn	High	Poor	no	Poorly preserved pyramid	634851	1566777	-95
100	CH-100	Oct 12, 2012, 15:25	Stacked Circular Cairn	Medium	Destroyed	no	1 stack circle which had a E-W slab lined tomb. Heavily looted.	636223	1563562	-108
101	CH-101	Oct 12, 2012, 15:30	Circular Cairn	High	Poor	no	Like other sheik circle far to the north, this circle has upright stones pointing due north and its entrance is to the south. The interior grave is aligned e-w but it has been robbed	636225	1563560	-108

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
102	CH-102	Oct 12, 2012, 15:34	Stacked Circular Cairn	Medium	Poor	no	1 stack circle with interior rock lined tomb, heaviest looted	636225	1563555	-107
103	CH-103	Oct 12, 2012, 15:36	Conical Cairn	High	Moderate	no	conical-cairn partially looted, top part removed. Medium sized made with medium sized rocks	636221	1563557	-107
104	CH-104	Oct 12, 2012, 15:39	Stacked Circular Cairn	Low	Destroyed	no	1 stack circle that has been completely destroyed, only portion of outer ring is left. Local village of Alai lai probably used stones to weigh down their thatched huts.	636220	1563551	-107
105	CH-105	Oct 12, 2012, 15:42	Stacked Circular Cairn	Low	Destroyed	no	1 stack circle, completely looted	636221	1563547	-107
106	CH-106	Oct 12, 2012, 15:45	Conical Cairn	Low	Poor	no	Top portion has been removed of stones	636223	1563549	-107
107	CH-107	Oct 12, 2012, 15:47	Stacked Circular Cairn	Medium	Moderate	no	Small 1 stack circle with large pebbles as fill, SW of small conical-cairn	636218	1563555	-107
108	CH-108	Oct 12, 2012, 15:58	Conical Cairn	High	Moderate	no	Medium sized conical-cairn but with no stacked-circular-cairn to its SE or SW	636218	1563550	-107
109	CH-109	Oct 12, 2012, 16:01	Stacked Circular Cairn	Low	Destroyed	no	1 stack circle badly looted with interior shots lined tomb facing EW	636216	1563557	-106
110	CH-110	Oct 12, 2012, 16:03	Stacked Circular Cairn	Low	Destroyed	no	1 stack circle completely looted with interior chamber aligned E-W	636213	1563552	-106
111	CH-111	Oct 12, 2012, 16:06	Circular Cairn	High	Good	no	Large circle grave similar to the big one further north except this does not have an interior bench. two upright stele demarcate due north. The interior grave is oblong and is aligned E-W. there is also a 1 stack circle made of large stones	636211	1563548	-106
112	CH-112	Oct 12, 2012, 16:14	Stacked Circular Cairn	High	Moderate	no	2 stack circles with large exterior stones, belongs to medium conical-cairn to NE. This seems to have been built before the large circle with interior grave was built, incorporating existing architecture into a new burial practice.	636211	1563547	-106
113	CH-113	Oct 12, 2012, 16:22	Circular Cairn	High	Moderate	no	Another large circle with stone erected that points north and an opening to the south. The interior grave has been looted. This suggests the burial is not Muslim. However, Muslims might reuse the graves after they are looted.	636209	1563552	-106
114	CH-114	Oct 12, 2012, 16:29	Stacked Circular Cairn	High	Moderate	no	5 stack circle filled with small pebbles	636211	1563555	-106

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
115	CH-115	Oct 12, 2012, 16:32	Stacked Circular Cairn	High	Poor	no	7 stack circle eroded by natural forces. Small pebble fill with a large chunk of coral on top	636204	1563544	-106
116	CH-116	Oct 12, 2012, 16:35	Stacked Circular Cairn	High	Moderate	no	2 stack circle with small pebble fill and 4 upright stele on top	636202	1563541	-106
117	CH-117	Oct 12, 2012, 16:37	Stacked Circular Cairn	High	Poor	no	3 stack circle with small pebble inclusions	636199	1563543	-106
118	CH-118	Oct 12, 2012, 16:39	Stacked Circular Cairn	High	Moderate	no	4 stack circle with small pebble fill and 2 stele atop aligned E-W	636197	1563540	-106
119	CH-119	Oct 12, 2012, 16:42	Stacked Circular Cairn	High	Moderate	no	3 stack circle with 2 small stele and a chunk of coral	636195	1563540	-106
120	CH-120	Oct 12, 2012, 16:44	Stacked Circular Cairn	High	Moderate	no	6 stack circle with small pebble fill and no stele.	636190	1563540	-106
121	CH-121	Oct 12, 2012, 16:48	Conical Cairn	High	Moderate	no	Small conical-cairn me of small stacked circle	636242	1563594	-108
122	CH-122	Oct 12, 2012, 16:50	Stacked Circular Cairn	Medium	Destroyed	no	Maybe 2 stack small circle that has been dismantled. But followed pattern with late conical-cairn	636240	1563591	-108
123	CH-123	Oct 13, 2012, 8:02	Military Shooting Blind	Low	Good	no	There are dozens of military shooting blinds sour rounding Alai lai village. Not important to cultural heritage	637959	1557688	-88
124	CH-124	Oct 13, 2012, 8:23	Modern Grave	High	Good	no	A group of 105 modern graves	637774	1557826	-86
125	CH-125	Oct 13, 2012, 8:54	Military Shooting Blind	Low	Good	no	A semi-circular military blind	636323	1563374	-107
126	CH-126	Oct 13, 2012, 8:58	Military Shooting Blind	Low	Good	no	Another military blind. They tend to appear in small clusters and upon the top if a small ravine	636318	1563376	-107
127	CH-127	Oct 13, 2012, 9:00	Military Shooting Blind	Low	Poor	no	Another military blind	636309	1563374	-107
128	CH-128	Oct 13, 2012, 9:06	Modern Grave	Low	Moderate	no	Small recent rectangular grave.	636282	1563404	-107
129	CH-129	Oct 13, 2012, 9:13	Modern Grave	Low	Moderate	no	Small rectangular grave	636282	1563428	-107
130	CH-130	Oct 13, 2012, 9:16	Modern Grave	Low	Good	no	Small rectangular grave probably recent from adjacent village. This represents rural burial practices of the modern day.	636269	1563430	-107
131	CH-131	Oct 13, 2012, 9:23	Modern Grave	Low	Moderate	no	There are about 7 or 8 small to medium modern rectangular graves in this immediate area. They are all of low importance.	636254	1563405	-107

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
132	CH-132	Oct 13, 2012, 10:10	Circular Cairn	Low	Moderate	no	A recent tent circle, the stones are not formed into a wall, they just served to weigh down the tent	636112	1563545	-104
133	CH-133	Oct 13, 2012, 10:14	Conical Cairn	Medium	Poor	no	A small poorly built conical-cairn with southern circle feature. There are about seven such conical-cairns here all poorly made without southern feature	636107	1563546	-104
134	CH-134	Oct 13, 2012, 10:18	Conical Cairn	Medium	Poor	no	Another poorly built conical-cairn without the ring of large base stones found at better made conical-cairns with associated southern circular feature	636110	1563579	-105
135	CH-135	Oct 13, 2012, 10:20	Conical Cairn	Medium	Poor	no	A poorly built conical-cairn that has had it's top stones removed. This seems like a different sort of feature distinct from the nicer conical-cairns with associated southern circular feature.	636121	1563585	-105
136	CH-136	Oct 13, 2012, 10:24	Conical Cairn	Medium	Poor	no	Perhaps these poorly built conical-cairns are used as storage for local villagers, making them different than the older conical-cairns found elsewhere	636112	1563602	-105
137	CH-137	Oct 13, 2012, 10:27	Conical Cairn	Low	Destroyed	no	Again a poorly built conical-cairn that has had stones removed away exposing the interior. Maybe modern storage?	636098	1563616	-105
138	CH-138	Oct 13, 2012, 10:30	Conical Cairn	Medium	Moderate	no	Again, no southern circular feature, no ring of large base stones and it is poorly made. This is a different type of conical-cairn, and may be functional.	636065	1563617	-105
139	CH-139	Oct 13, 2012, 10:35	Conical Cairn	High	Good	no	Here is a much better made conical-cairn that is large and has large base stones. But it has no southern circular feature. Perhaps all of these conical-cairns in this cluster have been heavily damaged and their southern features have washed away. Maybe t	635990	1563710	-103
140	CH-140	Oct 13, 2012, 10:41	Modern Grave	Low	Moderate	no	A recent rectangular grave, typical of rural burial practice. Maybe from recent conflict	636069	1563684	-105
141	CH-141	Oct 13, 2012, 10:45	Military Shooting Blind	Low	Good	no	A military shooting blind next to a small ravine. There are recent graves nearby as well.	636058	1563669	-105

No	CH ID	Date/Time	Site Type	Importance	Preservation	Within Footprint	Descript	UTM_X	UTM_Y	Elev
142	CH-142	Oct 13, 2012, 10:50	Conical Cairn	Low	Destroyed	no	A poorly built conical-cairn without southern circular feature that has been cut in half by a ravine. It has to be old to a degree.	636104	1563704	-105
143	CH-143	Oct 13, 2012, 10:56	Circular Cairn	Low	Good	no	A recent tent circle with debris	636134	1563672	-107
144	CH-144	Oct 13, 2012, 11:01	Military Shooting Blind	Low	Moderate	no	A long military blind	636166	1563662	-107
145	CH-145	Oct 13, 2012, 11:05	Circular Cairn	Low	Good	no	A recent tent circle with entrance to SW and an hearth on SE side. This is a pattern found with other recent tent circles.	636191	1563657	-107

# In-Migration Risk Assessment

Version 2.0

December 2012

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Document Ref.	Prepared By	Reviewed By	Date Submitted to Allana for Review
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## LIST OF ACRONYMS

Abbreviation	Full Definition
IMRA	In Migration Risk Assessment
PIIM	Project-Induced In-Migration
ESHIA	Environmental, Social and Health Impact Assessment
SSA	Social Study Area
AoI	Area of Influence
ANRS	Afar National Regional State
IDP	Internally Displaced Person
DPPB	Afar Disaster Prevention and Preparedness Bureau
FGDs	Focus Group Discussions
SRPMP	Sourcing, Recruitment and Procurement Management Plan
SES	Stakeholder Engagement Strategy
CHMP	Cultural Heritage Management Plan
WkMP	Worker Management Plan
CHSSMP	Community Health, Safety and Security Management Plan
GoE	Government of Ethiopia

## *DEFINITIONS*

*Social Study Area:* The area where primary social baseline data was collected

*Social Area of Influence:* is indicative of the potential geographic extent of social impacts that may occur due to the proposed Project. This has been developed based on the prediction of social impacts during the scoping phase of the Environmental Social and Health Impact Assessment (ESHIA).

# 1 INTRODUCTION

## 1.1 BACKGROUND AND CONTEXT

Allana Potash Corp. (Allana) holds one consolidated potash concession created from the amalgamation of their four original licenses (Exploration license Numbers - 2952-2954/2000, 2949-2951/2000, 2955-2957/2000 and 1878/2002 from the Ethiopian Ministry of Mines and Energy), in the Danakil Depression, Afar National Regional State in the Woreda of Dallol and Berahale, in north eastern Ethiopia. Allana propose to develop a potash mine within their concession area. As part of the approval process for the proposed Project, an Environmental, Social and Health Impact Assessment (ESHIA) has been developed. In order to compliment that ESHIA this document, an In-Migration Risk Assessment (IMRA), has been developed to consider the potential for in-migration into the Social Study Area (SSA) of the ESHIA.

## 1.2 OVERVIEW

This document considers the potential for the proposed development of the Dallol Potash Project (the proposed Project) to lead to significant levels of Project-Induced In-Migration (PIIM), either to the Project site directly or indirectly to areas that are affected by the Project.

## 1.3 LIMITATIONS

A number of key points need to be borne in mind, regarding the assessment and management of PIIM for the proposed Allana Project:

- The location of the proposed Project is in an area that is the focus of numerous development activities being pursued simultaneously, and which are outside of the scope of the proposed Project. These activities could act as additional drivers of in-migration and may affect the potential scale of in-migration associated with the proposed Project in ways that cannot be controlled directly.
- Human migration is a complex phenomenon shaped by numerous variables that may change independently of Project activities. These may have a profound effect on the actual demographic patterns that emerge. For practical purposes, predictions and projections are made on the basis of existing available data and the assumption of stability of 'external variables'. Predictions and recommendations may therefore have to be revisited and revised over time, as more updated information on changes to existing social, political, cultural and economic circumstances becomes available.

- In many instances, in-migration is both a positive and necessary condition for Projects to be able to make meaningful contributions to local development. Short sighted attempts to control or limit PIIM may therefore unintentionally mitigate against efforts to promote local development, by inhibiting the establishment of a critical mass of local producers and consumers that are so integral to development.
- Attempts to control or limit in-migration and other forms of human mobility engage fundamental questions related to international human rights as well as domestic rights related to freedom of movement and the pursuit of livelihoods. It is in the interest of the Project to ensure that any efforts to control migration or human mobility remain in accordance with established legal and social norms.

#### 1.4

#### *APPROACH TO ASSESSING IN-MIGRATION*

The IMRA will draw on the IFC's handbook on PIIM (IFC 2009). The approach includes relevant tools and suggestions outlined by the IFC that will be necessary to confront the challenges of PIIM effectively in this context.

Given that the project is located in close proximity to an international border that has been affected by conflict in the past, the framework will bear in mind relevant standards and international best practices related to refugees, international migrants (documented and undocumented) as well as internal migrants.

The approach of the IMRA includes four main inter-related components:

- **A Baseline Description and Situation Analysis** (*Section 2*): This should cover all sites that are likely to attract in-migrants as a direct or indirect consequence of project activities. It should include, as far as possible, both historical and contemporary socio-economic and demographic data related to human mobility and provide a context-specific and empirically informed analysis of local migration dynamics.
- **In-Migration Probability and Risk Assessment** (*Section 3*): This draws on the baseline study to predict the possible rate, pathways and magnitude of increased in-migration to particular project-affected areas. This is used to determine both the nature and level of risk that PIIM represents to the project, reflected in an In-Migration Risk Assessment (IMRA). It is important to bear in mind that the determination of risks related to in-migration are not simply an expression of the anticipated scale of PIIM, but rather considers the ability of local environments to accommodate anticipated levels of in-migration. The reliability and accuracy of the probability and risk assessment is directly dependent on the integrity of the baseline study as well as the detail of the project description over the life of the project.

- **Social and Environmental Impacts Related to In-Migration** (*Section 4*): The results of the IMRA will be used to inform the identification and analysis of various social and environmental impacts associated with the project. The consideration of PIIM should therefore take place on the basis of significant and on-going exchange with a broader impact assessment process. In some cases, PIIM may identify new impacts whilst in other cases it may inform a reconsideration of the scope and scale of more general social, environmental and health-related impacts. Project-related impacts that occur independently of in-migration may affect both the probability and risks associated with in-migration.
- **Management Approaches to In-Migration** (See *Section 5* and Volume III *Annex K* the In-Migration Management Plan): Depending on the anticipated scale of the challenge, effective management interventions may range from a general framework for approaching in-migration over the life of the project to a detailed management plan. Specific management interventions may range from measures to limit access or restrict human mobility to the use of development as a tool for mitigating the negative aspects of unrestricted migration. Depending on the results of the risk and impact assessments, management approaches may vary across different project locales and change over different phases of the project.

## 2.1 INTRODUCTION

This review of the social baseline conditions from an in-migration perspective highlights certain features of the social environment and considers the extent to which these may contribute towards increasing levels of PIIM. In some instances these factors are relatively generic and tend to impact patterns of movement and settlement, regardless of context. Other factors are more specific to the proposed Project context.

## 2.2 SETTLEMENT AND POPULATION CHARACTERISTICS

An appreciation of the settlement and population characteristics of a population that may be affected is essential for predicting the potential scale, direction, rate and impacts of PIIM. In the case of the Dallol Potash Project, the data gathered as part of the Social Baseline suggests that, despite the Afar association with mobile or semi-mobile pastoralist groups, the Social Study Area (SSA) is characterised by a relatively low mobility potential.

Although some people relocate seasonally for livelihood activities (typically associated with the artisanal salt mining industry) the majority of people lead relatively sedentary lives and remain in close proximity to their settlements. Whilst this suggests that levels of PIIM may be lower in other contexts, significantly increased levels of PIIM may have a greater impact, relative to areas where migration is a more established social and cultural practice.

### 2.2.1 Household Size and Population Density

In general, the Afar Region is characterised by a low population density, compared to the average for Ethiopia (15 persons per square kilometre, compared to a national average of 83 persons per square kilometre). In common with many other regions in Ethiopia, rates of urbanisation are low.

The Woredas where the proposed Project falls, Berahale and Dallol, exhibit particularly low rates of urbanisation (7.7% in Berahale Woreda and 2.1% in Dallol). This suggests relatively low existing levels of in-migration and relative isolation of the local population from broader social and economic networks.

Household size varies across the potentially affected Woredas of Berahale and Dallol, ranging from 4.74 persons per household in Dallol Town to 7.48 persons in Bheyta. These data are summarised in *Table 2.1* and *Table 2.2*.

**Table 2.1 Berahale Woreda Population Distribution**

<b>Kebele Administrations/Town</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>	<b>No. of Households</b>	<b>No. Housing Units</b>
<i>Sabana Demale</i>	9,517	5,711	3,806	1,432	1,410
Berahale	2,954	1,712	1,242	401	389
Kora	8,222	4,674	3,548	1,137	1,094
Dear	6,797	3,981	2,816	913	871
Bure	9,941	5,690	4,251	1,571	1,540
Ala	13,823	7,779	6,047	2,178	2,137
Lela Ala	10,751	6,251	4,500	1,601	1,558
Goben	5,896	3,274	2,622	949	930
Serea	4,882	2,869	2,013	661	649
<b>Rural Total</b>	72,783	41,941	30,845	10,843	10,578
<b>Berahale Town (Urban Total)</b>	6,098	3,563	2,535	863	823
<b>Total (Rural +Urban)</b>	78,881	45,501	33,380	11,706	11,401

Source: Population Census Commission - Statistical Report for Afar, 2007

**Table 2.2 Dallol Woreda Population Distribution**

<b>Kebele Administrations/Town</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>	<b>No. of Households</b>	<b>No. of Housing Units</b>
Iynedeb	9,001	4,940	4,061	1,603	1,567
Leasgedi	2,842	1,646	1,196	462	444
Ma Awo	7,309	3,921	3,388	1,293	1,259
Sabiba	4,659	2,534	2,125	782	774
Berih	9,001	5,040	3,961	1,422	1,386
Adiaro	5,361	2,833	2,528	964	953
Asegara	8,039	4,736	3,303	1,225	1,212
Adkuwa	8,968	5,282	3,686	1,258	1,239
Simbilali	3,725	2,023	1,702	677	670
Alefan	3,314	1,840	1,474	506	506
Bheyta	3,405	1,835	1,570	455	426
Garsat	5,893	3,336	2,557	703	687
<i>Bada Admerug</i>	3,730	2,079	1,651	581	570
Bada Ramile	6,926	3,878	3,048	988	973
<b>Rural Total</b>	82,173	45,923	36,250	12,910	12,655
<b>Dallol Town (Urban Total)</b>	1,757	1,050	707	371	334
<b>Total (Rural +Urban)</b>	83,930	46,973	36,957	13,281	12,989

Source: Population Census Commission, 2007

The Proposed Project area situated within the Sabana Demale Kebele (Berahale Woreda) and the Bada Admerug Kebele (Dallol Woreda). The average household size was established through the household survey to be as 5.2 persons per household ranging from 4.6 persons per household in Hamad Ela and 6.1 in Berahale. The lower average household size, compared to many other surrounding Woredas could be the result of numerous factors, and the full significance of this is not clear. In general, however, migrant households are often defined by smaller domestic units, relative to non-migrants.

Variations in household size may therefore be suggesting that changes related to migration and household structure are already taking place in settlements like Hamad Ela. This was corroborated by qualitative data collective which indicated that Hamad Ela is the centre for in-migration associated with the artisanal salt mining industry.

The ratio of males to females is disproportionate, with 1.36 males for every female in the region. The Social Baseline survey reflected a similar pattern, with 53.5% of the population surveyed being male. Assuming the data are correct and representative, the reason for this unusually low percentage of females is not clear and the implications for PIIM cannot be determined with absolute certainty. Research conducted by the Ministry of Agriculture's Pastoral Extension Team (using the results of the 1994 census) for the Afar Region attributed the phenomena to the high prevalence of gender based violence including female genital cutting (FGC) <sup>(1)</sup>, domestic abuse and bridal abduction (frequently involving rape) thereby forcing women into marriage <sup>(2)</sup>. At the local level, this gender imbalance may reflect the effects of a gendered pattern of existing or historical in-migration that is predominantly, associated with the salt trade and new employment opportunities in tourism and mining. More men may be moving into the area, relative to women. Other migration-related data considered below, however, is not always consistent with this interpretation.

The household survey suggests that 27% of households were female-headed. Comparative research across Ethiopia suggests that female-headed households are highly vulnerable to discrimination and poverty. According to a local Office of Women's Affairs, 94% of female-headed households were food insecure. Locally, this is exacerbated by the fact that women are largely unable to participate in the economically important salt mining sector. Domestic violence appears to be widespread and accepted aspect of male-female interaction, especially within a marriage relationship. Low existing levels of protection for women may further eroded by PIIM, especially if it is defined primarily by male migration and overwhelming male entitlement to Project-related benefits and opportunities.

## 2.2.2

### *Migration*

Existing data suggests that there has been very little population increase as a result of migration into the Social Study Area thus far. According the data form the household survey, 477 out of 583 persons surveyed (81.8%) were born within the community. A further 63 (10.8% of total sample) were born 'elsewhere in Berahale Woreda'. Only 6.7% (39 out of 583) of the sample population were born outside of the Afar region.

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(1) Both female genital mutilation and cutting are used to refer to the practice of removing parts of female genitalia for non-medical reasons. The practice is referred to female genital cutting in this report as it is a more neutral term. The Special Rapporteur (ECOSOC Commission on Human Rights) identify it as a less emotive and judgemental term to use.

(2) International Institute for Environment and Development (IIED), 2009

Perceptions within the surveyed villages suggest that the population is declining, characterised by out-migration. Only 28.6% (30 out of 105) of the household survey respondents expressed the view that the local population was increasing over time. A further 23.8% (25 out of 105) suggested that population levels remained fairly constant, whereas 53.3% (56 out of 105) of the population expressed the view that the local population had decreased in recent times.

In contrast, FGDs conducted in Berahale and Hamad Ela reported that the population in these settlements had increased significantly in recent years. Reasons were attributed to the following:

- The end of the civil war in 1991;
- The construction of the road from Mekele to Berahale and Hamad Ela;
- Foreign tourists visiting the Danakil Depression including Erte Ale and Mount Dallol;
- New mining companies coming into the area; and
- The influx of Eritrean refugees following the Ethiopian-Eritrean war.

Although these data may appear contradictory, they suggest coexisting pressures for out-migration as well as in-migration. Declining rural livelihoods, for example, may represent a significant pressure on people to explore economic prospects outside of the region, whereas new 'pockets' of opportunity may be attracting new migrants as a consequence of a conditions outlined above.

### 2.2.3 *Ethnicity*

More than 97% (570 out of 587 persons surveyed within the household survey) were Afar, whilst a very small minority were Tigray and Amhara (2.3% and 0.7% respectively). This ethnic homogeneity further confirms a strong recent history of relative isolation and points to a situation of low levels of migration in the Project area. It is significant that non-Afar were only located in Hamad Ela and Berahale, suggesting that these settlements may be developing a more 'cosmopolitan' character, compared to others. It was observed that many government officials were non-Afar. This could have effect of reinforcing these destinations as sites of in-migration, largely because new migrants are able to find the social and cultural 'space' to integrate into them more easily.

### 2.2.4 *Tourism*

Tourism to various sites in and around the Danakil Depression appears to be an important emerging local industry. Some of the main tourist sites fall within the proposed concessions and Hamad Ela appears to becoming an important local tourism centre. Tourism to the area has reportedly increased

over the last two decades, although limited by the Ethiopian-Eritrean war and current levels of insecurity on the border. Tourism operators and local government appear to be confident that the area represents significant potential for tourism in the future, suggesting that this activity is likely to increase. Presently, most tour groups are relatively self-sufficient and do not depend on a supply of local goods and services.

Income derived from activities related to tourism tended to be 'secondary' to other occupations, such as working for the government or working in the salt trade. This is evidenced within the household survey where between 0.5% and 0.2% of respondent households surveyed claim to derive secondary income from tourism. Those households and individuals involved in tourism suggested that this activity did not generate levels of income that enabled them to improve their standards of living.

Not surprising, tourism ranked lowest (along with working for large scale mining companies) on a qualitative scale of importance of livelihoods, by participants in focus group discussions. However, involvement in local tourism activities appears to be an activity that is of most interest to the youth, possibly related to the comparatively high potential income it can generate.

Local economic opportunities to participate in tourism are highly limited at present. This may, however, change in the coming years, as the local industry matures, and access to the area is increased through the construction of the new road from Mekele to Bada. This may lead not only to more tourists, but also to the arrival of more migrants seeking opportunities within tourism. However, low levels of education and proficiency in English will mean that many local opportunities in tourism will favour Ethiopians from outside the region who have received more access to education.

### 2.2.5 *Conflict Related Displacement*

Social relations are shaped and impacted by conflicts and this is the case within the Social Area of Influence (AoI). These include:

- The Ethiopian-Eritrean War from 1998 to 2000. In 1999 it was estimated that 27,720 persons were displaced within the Afar National Regional State (ANRS) and a further 94,242 were at risk of displacement. It appears as though significant numbers of Eritrean Tigray have been displaced across the border into Ethiopia, increasing the proportion of the population that are Tigray;
- The long series of civil conflict in Ethiopia that ended in 1991; and
- Localised community conflicts over access to land and water resources: Demographic, ecological and environmental factors have led to increased pressures on pastoralist communities that have a history of resulting in conflict.

In general, large numbers of refugees and displaced persons that live in protracted situations of displacement frequently exhibit a higher mobility potential than those that have found durable solutions. Large numbers of refugees and Internally (or otherwise) Displaced People (IDPs) would contribute positively towards the potential for higher rates of PIIM.

Across the villages surveyed one village (Mororo) was identified to have moved due to the border conflict and therefore are identified as Internally Displaced Persons (IDPs) <sup>(1)</sup>. Although only one village was identified to have recently relocated, the regional level statistics indicate it is likely that there is a larger group of IDPs within the Study Area. A camp for IDPs is located in Berahale, and the Afar Disaster Prevention and Preparedness Bureau (DPPB) reported 2,720 displaced people (both from Eritrea and Ethiopia) existed in Berahale <sup>(2)</sup>.

### 2.2.6 *Livelihoods*

The Social Study Area is characterised by a low degree of livelihood diversity. In the Afar region, 90% of residents rely on pastoralism as a primary source of livelihood<sup>3</sup>. This practice is highly vulnerable to the effects of drought and land degradation, sometimes leading to conflict over available resources.

Within the Social Study Area livelihoods appeared to be more diverse, compared with the Afar region as a whole, with survey respondents indicating a range of livelihood sources including local government workers (22.8%), the salt trade (21%), in addition to livestock rearing (17.5%). According to respondents of the household survey rates of formal employment seem to be relatively high, with 40.4% of households surveyed declaring that they had at least one member of their household who was employed in one or more of the following:

- A mining company;
- Construction company;
- The military; and / or
- The government.

Whilst some households were involved in the salt cutting, very few local residents reported being involved in the transportation of salt; an activity that appears to be dominated by seasonal migrants from the highlands. Other livelihood activities included working for a mining company, working in tourism, farming and shop keeping/trading.

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(1) Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human made disasters, and who have not crossed an internationally recognised State border - UN OCHA, 2004

(2) UNDP, 1999

(3) Philbott et al., 2005

Participants in Focus Group Discussions (FGDs) ranked artisanal salt mining as the most critical livelihood activity, followed by the collection and sale of reeds, livestock rearing, tourism and other companies in the region. A significant number of persons involved in artisanal salt mining were (mostly Tigray) migrants, who tended to be more involved in digging, whereas Afar were more involved in cutting. Within the SSA, Hamad Ela reflected the lowest percentage of households with livestock (22.5% as opposed an average of 45.6 for all settlements in the SSA).

Information obtained through FGDs suggested that whilst men were involved in a wide range of livelihood activities, the commercial activities of women were largely limited to palm collecting and the creation of woven palm products. All villages within the Social Study Area were involved in palm collecting and weaving. In some cases, women became involved in petty trading. In Hamad Ela, some women ran tea houses and some of these women also reportedly supplemented this income through sex work (although it was reported that Afar women do not participate).

Observations and qualitative information gathered suggests that Hamad Ela in particular functions as a centre for the provision of food, salt packing materials and accommodation to Tigray and Amharic migrants. This type of service industry is being developed in Hamad Ela further by a growing tourism market, where demand for accommodation appears to be increasing. Many tourists also stay in the village of Asabolo. It should however be noted that currently tourists do not rent rooms or houses but tend to stay in tents or a few buildings (built by tourist companies) that operate as tourism accommodation to many different groups.

In general, livelihoods appear to be vulnerable with 50% of household food consumption being ensured by food aid (according to respondents to the household survey), with additional food purchases comprises the largest percentage of the average household budget.

A high reliance on animal husbandry at the regional level, along with widespread chronic food shortages, suggests that there may strong future demand for alternative sources of income. New employment opportunities related to mining, tourism and construction (and a range of associated services) appears to be largely confined to selected settlements within and around the Social Study Area. The diversification of livelihoods at the local level, especially compared to the regional level, points to a greater potential for increased rates of in-migration. A highly gendered basis for accessing livelihood activity may also suggest that the incentives for in-migration may be different for men and women respectively. In this case, there appears to be much more opportunity for men.

The effective management of PIIM depends on the capacity of local-authorities to monitor levels of in-migration, prevent or limit forms of in-migration that are considered to be undesirable and build on the potential benefits of in-migration for affected communities. The capacity of the formal authorities (at regional, Woreda and Kebele level) to plan for and respond to significant levels of in-migration appears to be somewhat limited.

Woredas are responsible for planning and implementing development activities and social programmes within their areas. They oversee the Kebeles that come under their jurisdiction. Each Woreda has a council and an executive committee; the council consists of elected representatives from the Kebele and the committee consists of approximately 12 members, namely bureau sector chiefs <sup>(1)</sup>.

Kebeles are the lowest government administration units; however, alongside the Woredas and religious leaders; they were identified by FGD participants to be one of the most important decision makers and institutions for the villages. Each Kebele has an elected leadership which includes a Council, a Cabinet and a Court. The latter is composed of a chairperson, an executive committee and a social justice committee. Kebeles act as mediators between local government authorities and local villages.

Historically established traditional forms of government exist alongside formal structures, with occasional overlaps, mostly at the level of the Kebele. This is organized in terms of tribes, clans, lineages and families, and appears to work most directly with government at the level of the Kebele. FGD participants reported that clan leadership represented the most effective forms of traditional governance. The ongoing significance of traditional authorities, and their role in determining entitlements at the local level, suggests that these could shape both the characteristics and pathways of PIIM.

Although Kebele governance was indicated to be the most significant to villages it is anticipated this is due to their close association with the traditional governance (who are often the Kebele leaders). Capacity at the Kebele level is not believed to be high and the Woreda level of government appears to be the level of local government that is most likely to be faced with the majority of challenges and decision-making associated with migration into the Social Study Area. The limitations of local government are discussed further below, with regard to the provision of social services.

In general, the location and quality of social infrastructure may play a significant role in shaping the rate of PIIM and patterns of settlement

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(1) Yilmaz and Venugopal, 2008

associated with it. This may have a greater determining role in the present context, given the limited availability of social infrastructure across the study area. The following types of social infrastructure are most likely to impact on patterns of PIIM:

- Education;
- Health;
- Transport; and
- Communications.

#### **2.4.1**      *Education*

The location, quality and accessibility of schools may play a significant role in shaping patterns of PIIM, depending on the social profile of migrant communities. Compared to national figures, education levels within the Afar region are relatively low. Whilst schools can be found in Ambule, Hamad Ela, Morrora and Berahale, not all grades are taught. In Ambule, the school caters for children aged five to nine years old (grades one to four); in Morrora, the school has two teachers and grades one and two are taught in the morning and grade three in the afternoon.

The only high school within the vicinity of the Social Study Area is located in the town of Berahale. The early marriage of girls, primary care requirements on children and the limited degrees of mobile or semi-mobile lifestyles of some residents is believed to contribute to low school attendance and education rates. Furthermore, participants in FGD groups commented on the poor quality of education as an enduring frustration. The absence of schools in the immediate area may reduce the number of migrants that arrive with dependent minors or accompanied by families. The lack of availability of educational infrastructure may therefore contribute towards a migrant profile that is overwhelmingly male, single and maintaining strong ties to sending areas. This may not necessarily apply to migrants that are attracted to the area from similarly deprived or isolated areas.

#### **2.4.2**      *Health*

Health infrastructure and access to healthcare in the Social Study Area is also highly limited. There are four hospitals in the Afar region, and none of these are located in either Berahale Woreda or Dallol Woreda. The closest hospital is located in Mekele, 70 kilometres away from Berahale. Berahale Woreda has one Health Centre and ten Health Posts, whilst Dallol Woreda has five Health Centres and 37 Health Posts. It should be noted that many of the Health Posts in both the Berahale and Dallol Woredas are not permanently manned or poorly equipped.

The absence of functioning healthcare services in the area may also mitigate against the arrival of migrants with large numbers of dependents. The availability of emergency care at the project site may encourage some

migrants to settle in close proximity to the proposed Project site. However, this is unlikely to be a major factor.

### 2.4.3 *Transport Infrastructure*

Road infrastructure is poor, contributing to the isolation of the area from broader networks and possibilities of exchange. At present, there are very few options for the majority of the local population to gain access to goods and services from outside the area. Beyond a commercial bus service that currently operate weekly between Berahale and Mekele and traffic associated with tourism, mining, construction and governance, the vast majority of the population rely on walking.

There are suggestions that road infrastructure will be improved substantially over the short to medium term, with the GoE undertaking the construction of a road from Mekele to Bada. If these improvements occur, it would increase the potential for PIIM significantly. For example, new road construction in the 1960s led to a significant influx of in-migrants from drought stricken parts of the highlands into the Awash areas of the ANRS, entering the area in search of work on commercial farms. Baseline data suggests that improvements to road infrastructure have led to increased migration to some settlements within the Social Study Area and increased movement of people to new sites that are in close proximity to the roads.

Qualitative data gathered around the perceived numbers of road traffic accidents suggests increased traffic on local roads. This increase in local traffic may be driven partly by increases in activities related to tourism and mining.

Within the Social Study Area, the communities of Ambule, Morror, Hamad Ela and the town of Berahale are positioned in close proximity to the main road (unpaved) which links the Project area to Mekele. The construction of a planned new road, to be completed in 2013, would lead to significantly improved road connections between Hamad Ela and Mekele and a greater potential for people to settle within these areas.

Significant changes to transport infrastructure can affect migration patterns in important and positive ways. Improvements to transport infrastructure may lead to an increased opportunities and lower costs for the exchange of people, goods and services. This may also strengthen local government capacity and lead to improvements in basic service delivery, such as education and health services. All of these linked processes may produce the effect of increasing both the accessibility and desirability of the project site as a destination site for migrants. Importantly, such connectivity is also vital for communities to develop the capacity and resources to manage such connectivity in positive ways.

#### 2.4.4

#### *Communication Infrastructure*

In general, mobile phone coverage in Ethiopia appears to be low, in comparison to other Africa countries. In March 2012 the expansion of mobile phone network in the Social Study Area has meant that a significantly higher percentage of local residents could potentially have access to mobile phone technology. Anecdotal evidence indicates that construction of a mobile phone mast started up to five years ago however the lobbying of the large scale mining industry helped to drive the finalisation of construction.

According to the household survey, 38.4% of households had access to mobile phone technology. Of the seven communities surveyed (including Berahale), six fell within the current coverage area. Anecdotal evidence indicates that the operation of a cell phone is affordable to most residents and that 'pay-as-you-go-credit' is purchased throughout the Social Study Area.

Some residents stated that apart from the improvements to the road, the introduction of a mobile phone network has been the most significant improvement to their lives. It already appears to be affecting the ways that price of salt is negotiated between the salt selling associations and the salt buying association in Mekele.

Whilst many of the local Afar communities still rely on traditional communication networks and practices for exchanging information, the introduction of affordable and accessible mobile technology could play a significant role in shaping potential scale of PIIM associated with mining development. Access to mobile phone networks may contribute to the potential scale of PIIM and is also likely to influence the destination choices of in-migrants, which are highly likely to value the possibility of maintaining communication links with their home areas. This is likely to be particularly important for oscillatory migrants<sup>1</sup>.

#### 2.4.5

#### *Access to Land and Security of Tenure*

Legally, all land in Ethiopia is owned by the Ethiopian state. However, the current constitution grants specific rights to citizens that occupy and use land. Farming and pastoralist communities are guaranteed rights to use land to generate their livelihoods. These do not include the right to sale and mortgage of the land. The government may also lease land to various interest groups for specific purposes. Once again, these rights are exclusive of the right of sale.

In the context of Afar society, land tenure systems are based on common property forms of ownership. Land is typically owned and managed by clans, which possess 'primary rights' to land. People who are not from Afar communities may lease land through the local concept of *Isso*. This has mainly

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<sup>1</sup> Oscillatory or circular migration refers to human movement patterns between a source and destination that exhibits characteristics of temporariness, renewability, seasonality and fluidity. It may refer to migration patterns between 'home' and destination that occurs for temporary periods but continue over more than one period of movement.

been developed to accommodate non-Afar pastoralists, usually defining the terms of their grazing rights on Afar land.

Within the Social Study Area, all formal land rights are formally allocated by the Kebele of Sabana Demale. However informal systems, based on traditional norms and practices also shape land tenure arrangements to a significant extent. This does not appear to be highly formalised or institutionalised at the moment.

Land and property management systems in Hamad Ela appear to be evolving in ways that reflect the changing character of this settlement. FGDs revealed that members of the *Arho* (migratory salt diggers and transporters were increasingly finding ways to 'reserve' land in Hamad Ela, to build their own houses on, instead of renting accommodation from local Afar residents).

The potential for outsiders to access land in certain areas (like Hamad Ela) could potentially impact on the dynamics of in-migration. Apart from migrants seeking to access land directly, entrepreneurs from outside of the area may seek to access land and develop accommodation for the purpose of renting to migrants. The limitation of these practices to specific areas with shape patterns of in-migration and settlement, contributing to a greater concentration of migrant communities.

## 2.5

### *SOCIAL AND ECONOMIC VULNERABILITY*

PIIM may lead to relatively rapid social and economic changes to affected areas. The pace and intensity of social change may have particularly adverse impacts on vulnerable groups. Vulnerable groups may experience increasing stress resulting from PIIM, this may include:

- Households reliant on artisanal salt mining;
- Women and female headed households;
- Internally displaced persons;
- Households reliant on livestock;
- Sex workers;
- People with physical / mental health illnesses and disabilities;
- Children; and
- Elderly.

The impact of high levels of PIIM may create new risks and opportunities for vulnerable groups, depending on the scale of in-migration, patterns of settlement and profile of migrant communities. The more positive aspects of PIIM may contribute to developments that reduce levels of vulnerability whereas the negative impacts may exacerbate these. This analysis is developed in more detail in *Section 3*.

The accuracy and reliability of attempts to anticipate the probability of PIIM and isolate potential risks related to PIIM are directly dependent on the level of detail and reliability of the baseline description (summarised in *Section 2*).

It is important to bear in mind that migration is a complex phenomenon that is shaped by multiple factors. It is not possible to identify all of the events and processes that are likely to affect migration in the future, such as conflict, natural disasters and broader economic transformations. Many such variables have to be assumed to remain static in order to develop predictions. Such predictions are therefore subject to change, as broader environmental, social, economic and political conditions develop. Despite this limitation, an assessment of the probability of PIIM is necessary to underpin a detailed In-Migration Risk Assessment (IMRA). The IMRA will seek to disaggregate the various social and environmental risks related to the specific pattern of in-migrations that are anticipated through the probability assessment.

### 3.1 PROBABILITY OF PIIM

Based on the IFC suggestions in their guidance titled '*Projects and People: A Handbook for Addressing Project-Induced In-Migration*', the probability of the in-migration may be determined with reference to the following:

- *The mobility potential of the local population:* This includes factors such as environmental, age, gender, demographics, employment rates, per capita Gross Domestic Product, population displacement rates and existing observations of in-migration.
- *Project characteristics and PIIM:* The specific characteristics of the project play a significant role in determining the probability of in-migration. These include labour requirements and project demand for goods and services during construction and operation, improvements to local infrastructure (such as roads), unintended facilitation of access to new resources and new opportunities for land speculation.
- *Capacity to meet project needs:* The likelihood of PIIM may decrease if the local area can meet project demands for labour and local procurement.

#### 3.1.1 *The Mobility Potential of Local Population*

Compared to many other mining project sites, the mobility potential of the local population within the migration catchment area is relatively low. With reference to the baseline, the following factors will contribute towards relatively low levels of mobility potential for the area surrounding the proposed Project. These include:

- Harsh environmental conditions make living in large, concentrated settlements difficult;
- Historical patterns of human mobility are linked to mobile settlement patterns related to pastoralism, rather than migration in search of wage labour;
- Poor infrastructure within the immediate vicinity, specifically related to water, housing, sanitation, education and health will discourage many prospective migrants from travelling to the area. It should be noted, however, that the Mekele to Bada road which is currently under construction will significantly increase the accessibility of the area;
- Current low levels of industrialisation in the region suggest that wage labour is not a prominent local livelihood pursuit;
- Low levels of education and skill suggest that a relatively low levels of employment potential within local communities;
- Traditionally, local Afar social and economic power lies in claims of ownership over land, animal-rearing and salt-cutting and not in wage labour opportunities;
- A chronic reliance on food assistance may reduce the demand for wage-earning opportunities among the local population; and
- Many Afar settlements are organised around clans, lineages and families. It will not be easy for migrants to be incorporated into such settlements. Migrant settlement will therefore be limited to settlements that have developed into more urbanised or cosmopolitan centres that allow for the social and economic incorporation of outsiders.

Whilst these factors contribute towards a relatively low population mobility potential, this potential may be increased by ongoing developments, specifically related to the following:

- Improvements to road and communication infrastructure is likely to increase the level of attractiveness of the area to in-migrants, specifically more skilled and experienced migrants from regions further away, such as the Highlands. This movement of migrants who are seeking work opportunities with Allana directly will likely settle in concentrated settlements in close proximity to the project site; and
- The development of tourism and large scale mining in the area represents a new concentration of economic opportunity. The collective promise offered by a range of current and potential future developments may have the effect of encouraging new economic speculators of various kinds.

These may include migrants seeking direct work opportunities on the mine, or providers of a range of goods and services seeking to benefit from the new cash economy that is likely to develop around the mining industry and other mines present in the area (and other activities such as tourism).

The most significant forms of PIIM related to expectations of employment opportunities are likely to be concentrated in centres in close proximity to the proposed Project site. This includes the settlement of Hamad Ela, which is likely to receive the highest number of in-migrants that are attracted by the Project. It should be noted that the proposed Project intend to construct worker accommodation and offices in a separate location to the current exploration camp (which is very close to Hamad Ela). However, given the proximity of the proposed site for the camp and Hamad Ela (less than five kilometres), and the 'pull factor' of Hamad Ela already containing some basic infrastructure it is anticipated that this will receive the highest number of in-migrants.

New suppliers of a range of goods and services to the mine community may also be drawn to Berahale, given the location of the town in relation to the project site, access to existing (and new roads that will also pass through Berahale) and communication networks and the availability of some basic social services.

### **3.1.2** *Project Characteristics*

Project exploration, surveying and drilling activities do not appear to have prompted significant levels of in-migration, although anecdotal evidence indicates that Hamad Ela has grown over the past one year. Following the successful completion of an ESHIA, construction is planned to begin in 2013.

It is not clear what the exact unskilled labour requirements will be during the construction phase and neither is it clear how any unskilled labour may be recruited locally. At present it is estimated that Allana will require 1,000 staff at peak construction. During operation Allana will require a maximum of 442 permanent staff for the operation and maintenance of the mine. This is estimated to be made up of approximately 98 skilled staff, 344 semi-skilled and 100 unskilled workers. It is assumed that to maximise efficiencies, wherever possible workers will be sourced from villages in proximity to the proposed Project; at a local regional or national level. Given that levels of educational achievement and formal employment experience in relevant sectors are low within the Study Area, it is assumed that the majority of local labour sourced may be unskilled or at most semi-skilled. It is unclear of how much of the workforce can and will be recruited locally. Once operational the potential life of the mine will be 19 to 30 years.

Labour recruitment policies play a critical role in the effective management of PIIM. Where labour is recruited in a haphazard way and in a manner that lacks transparency, from the perspective of the local community, it can often

produce the effect of encouraging high level of speculative in-migration, by individuals that hope to find employment 'at the gate'. This can also lead to high levels of conflict within the community, over entitlement to limited employment opportunities. For a labour recruitment policy to avoid encouraging undesirable levels of in-migration, it should be clearly communicated, adhered to rigorously and reflect a sensitive and engaged balance of the expectations of the local community and rights and entitlements of outsiders.

In addition to direct labour requirements, project intentions related to the procurement of local goods and services could also potentially impact on the levels of PIIM. Some instances of in-migration may be speculative attempts to provide goods and services that can benefit from mine contracts or the cash-based economy that develops around the mine. Once again, mine adherence to strong policies that balance the need for the mine to promote local community development with the expectations and entitlements of in-migrants are most likely to reduce the negative impacts of in-migration.

### **3.1.3 *Area Capacity to Meet Project Needs***

The Social AoI's capacity to meet the needs of the proposed Project varies from town to village, but remains low:

- The local population density is relatively low and settlements are somewhat dispersed, suggesting that some concentration of settlement is inevitable, to meet the local labour requirements of the Project;
- Education and skill levels of the population living within the Social Study Area is low, suggesting that labour may need to be brought in or enabled from further afield, increasing rates of PIIM; and
- The existing level of public infrastructure is extremely low. Project investments in infrastructure that are necessary for operations are likely to increase levels of in-migration, both to meet the labour requirements of upgrading infrastructure as well as in-migrants that hope to benefit from project-sponsored improvement to basic public infrastructure.

The limited ability of the Social Study Area to meet the needs of the proposed Project is likely to act as a significant driver of PIIM. The social changes brought about by the proposed Project, through local employment, infrastructure development and institutional development, are likely to be achieved to through a certain level of in-migration. In-migration may therefore be critical to realizing the potential community benefits offered by the proposed Project.

### **3.1.4 *Quantification of PIIM***

At present, there is insufficient historical localised population data to enable quantification of the potential scale of PIIM in the future. The relationship

between current migration patterns and trends and new project developments in the area has not been established in sufficiently quantifiable terms to enable future predictions.

Based on the household survey 7.4% of respondents were not born in the Woredas of Dallol or Berahale and a large majority indicated that they had lived in their village for the duration of their life.

Comparable projects in other contexts have shown that in-migration rates may lead to sustained annual population growth rates of between 10 and 15%. The conditions around the proposed Project would not suggest that in-migration (beyond what is experienced annually associated with the artisanal salt mining industry) would be any larger than this.

### 3.2

#### *SOCIAL RISKS OF PIIM*

In absolute terms, the evidence to date suggests that the scale of PIIM may be relatively low when compared to mining projects in other parts of the world. This may suggest, incorrectly, that the social risks related to PIIM are similarly low. In addition to scale (and rate of population influx) there are a number of other criteria that contribute towards the social risk calculation for PIIM. Once the probability of in-migration is established to a reasonable degree of reliability, it is necessary to determine the extent to which anticipated levels of in-migration and associated patterns will define social risks that could represent a significant liability to the proposed Project. It is important to bear in mind that whilst the scale of in-migration is an important risk factor, it is not always a determining factor and does not necessarily correlate directly with risk. In some cases high levels of in-migration may represent relatively low risks, whilst comparatively lower levels of in-migration in other contexts may represent significantly higher risks. In general, the key factors that determine risks related to in-migration include:

- *Levels of dependency and concentration:* The level and distribution of infrastructure, services, utilities and general economic activities. Environments that are characterised by low levels or highly concentrated of infrastructure and services are typically impacted more severely;
- *Assimilative/absorptive capacity of the project area:* This refers to the ability of a project area to accommodate anticipated levels of in-migrants. Factors that influence this include the availability of land, the state and extent of public infrastructure, the capacity of local authorities, prevailing health and security risks and the willingness of the local population to accommodate strangers. The baseline information considered above suggests that the Social Study area is characterised by a relatively low assimilative/absorptive capacity overall;

- *The rate and magnitude of in-migration:* As mentioned above, the rate and magnitude of in-migration generally correlates positively with increased risk; and
- *Location-specific factors:* These may include a range of context specific factors such as levels of conflict and the potential for cross-border migration, relations between ethnic groups, environmental factors and public health considerations. Harsh environmental conditions, chronic food insecurity and the risk of armed conflict in the area represent significant potential increases to the social risks related to PIIM.

### 3.2.1 *High Probability and High Social Risk Areas: Hamad Ela*

The settlement of Hamad Ela is likely to receive the majority of in-migrants associated with the Project. It is also most at risk of generating negative impacts as a direct consequence of PIIM. The combination of a high probability of PIIM and high social risks associated with it suggest that Hamad Ela should be a priority area for managing the effect of PIIM. The specific factors that enhance the risks of in-migration include:

- An increasing concentration of settlement associated with the burgeoning mining and tourism industries, located in close proximity to the proposed mine site;
- Low capacity amongst governance structures (formal and informal);
- Increase in observed patterns of undesirable behaviour, such as prostitution;
- Very low levels of basic social infrastructure, such as healthcare, education, water supply and sanitation;
- A potential for conflict between local residents and outsiders over claims to land and property;
- Highly transient population, associated with construction, large scale mining exploration and tourism; and
- The absence of effective policing capacity in the town, to ensure the safety and security of residents, as the village is subjected to rapid social change.

### 3.2.2 *High Probability and Medium Social Risk Areas: Berahale*

As the largest and 'most developed' town in the Social Study Area, Berahale is likely to emerge as a destination for in-migrants, mostly attracted by indirect opportunities related to the proposed Project. Given the location and connectivity of the town in relation to the proposed Project site and the major regional centre of Mekele, it is unlikely that in-migrants seeking direct employment opportunities will concentrate in Berahale. As a centre of local

government and trade in the area, Berahale is likely to benefit from the development of the proposed Project. New opportunities that are created indirectly by the project find their location in Berahale and encourage new forms of associated in-migration into the town.

### **3.2.3 *Low Probability and Medium Social Risk Areas: Ambule***

The road between Berahale and Hamad Ela is likely to experience significant upgrading, through the construction of a new road by government from Mekele to Bada. This will lead to an expected increased traffic, and increased exchange of goods and services. This is likely to prompt people to move towards Ambule, located on the roadside and near to the proposed worker accommodation, in order to access the benefits of proximity.

This is likely to lead to an expansion of Ambule. Whilst the majority of these in-migrants are likely to be Afar, they may also witness the influx of growing numbers of ethnic outsiders. As many of the villages are governed through traditional structures, one of the effects of the influx of migrants that are non-Afar would be to undermine the authority and legitimacy of traditional institutions.

### **3.2.4 *Low Probability and Low Social Risk Areas: Morrор***

The village of Morrор is an amalgamation of several smaller villages along the road from the site to Berahale including:

- Tahasuli;
- Asgubi;
- Oilayle;
- Ondamodgalu;
- Armdeli; and
- Kahniyeb.

For the purposes of this report we will refer to these villages collectively as Morrор.

Villages located in more remote areas such as Morrор, some distance from the proposed Project and without substantial existing services and infrastructure, are unlikely to be affected by in-migration to the degree that it represents significant levels of social risk.

The IMRA has been used within the Social Impact Assessment (refer *Chapter 11*) to inform the identification and assessment of impacts. It should be noted that in-migration can contribute to both positive and negative impacts.

The following impacts that may be generated or exacerbated by PIIM:

- ***Increased Income Generating Opportunities***

Influx and the associated increased demand for accommodation, goods and services will benefit service-providers, business owners or entrepreneurs who can provide the requirements needed by in-migrants. Those who will be most suited to capitalise on this positive impact include those who have the financial capacity and experience allowing them to offer goods and services to potential migrants. This may include existing business owners in Hamad Ela and Berahale or local people with savings or entrepreneurial knowledge allowing them to respond quickly to an increase in demand related to potential influx.

- ***Increased Cost of Living due to Localised Inflation***

Influx and resultant increase in population could result in additional demand for goods and services causing an increase in the cost of basic goods. This will be most pronounced where influx is highest, namely Hamad Ela and Berahale. Increased cost of living due to localised inflation may result in a worsening of the health profile where food, goods and services become prohibitively expensive or in short supply.

- ***Erosion of Traditional Governance Mechanism***

The traditional leadership will be challenged by in-migration of new and different groups to redefine and/or assert itself on the population of the Social AoI, many of who will now be outsiders, some neither accustomed to, nor bound by, allegiance to traditional leadership structures. This may place pressures on the traditional authority. Opinions about the correct approach to manage changes may differ, potentially leading to internal conflict, undermining their role in providing a consolidated 'voice'.

- ***Decreased Social and Cultural Cohesion***

In-migration will introduce a range of new social and cultural norms with the potential to challenge social and cultural systems. This may undermine the existing cultural system of kinship support and resource sharing, impacting people's abilities to cope with environmental shocks and food and infrastructure shortages. Where informal social support systems and

welfare structures create stability and security, the disruption is likely to create some anxiety and insecurity.

- *Decline In Health Profile due To Decreased Availability and / or Quality of Water*

In-migration may increase demand and extraction of surface / groundwater resources and the increase the chance for contamination of water sources. This may directly impact human health and potentially increase malnutrition associated with failing livelihood productivity.

- *Increase in Vector Borne and Communicable Diseases*

In-migration may increase population densities and generate crowded conditions. The absence of adequate sanitation will be likely to increase the incidence of vector borne and communicable disease.

- *Increased Injuries and Mortality from Traffic Accidents*

The increased population may result in greater potential for traffic accidents, injuries and mortality.

- *Increased Intra and Inter Community Competition and Conflict*

The in-migration of highlanders and the perceived disproportionate receipt of benefits from the proposed Project by non-locals has the potential to create social tensions over resources and social conduct, potentially causing increased conflict.

- *Increased Anti-social Behaviours*

In-migration has the potential to change the way that the local community function and increase the practice of activities that are currently taboo in the Afar area, but more widespread across the rest of Ethiopia (e.g. alcohol and substance abuse, the use of sex workers, crime and violence).

- *Reduced Access to Physical and Social Infrastructure*

With very little absorptive capacity in terms of existing social infrastructure and services, in-migration may result in pressure or overburdening of local infrastructure and services (including health services), potentially reducing levels of availability and quality.

- *Disturbance and Damage to Cultural Heritage and Archaeological Sites*

In-migration may increase the potential for looting or damage to cultural heritage or archaeological sites due to lack of knowledge.

The Social Impact Assessment (refer to *Chapter 11*) discusses specific means to avoid, mitigate or compensate for negative impacts and enhance positive impacts. Detail around these measures is included within the Worker Management Plan (WKMP), Sourcing, Recruitment and Procurement Management Plan (SRPMP), Community Health, Safety and Security Management Plan (CHSSMP), Archaeology and Cultural Heritage Management Plan (ACHMP) and the Stakeholder Engagement Strategy (SES - Volume III *Annexes H to N*).

The overall management of population movements and migrant communities is summarised in this section and discussed within this Section and described in detail within the In-Migration Management Plan (IMMP, Volume III *Annex K*). The management of in-migration refers specifically to efforts to either enable and develop, or reduce and discourage, new forms of settlement that emerge in relation to the proposed Project activities.

In general, contemporary measures to manage in-migration comprise a broad range of strategies that range from active measures to discourage population influx or settlement, to development initiatives to improve the situation of communities affected by in-migration (including both migrants and hosts) and to manage the potential impact that in-migrants may cause.

Relevant management and mitigation measures include:

- *Recruitment and Procurement Policies and Systems*

As discussed in the SRPMP recruitment and procurement policies and systems will seek to manage worker recruitment; reducing the appeal of the Social Study Area as a migration destination for opportunistic migrants looking for economic gain.

- *Monitoring Systems*

As discussed in the IMMP Allana will begin an in-migration monitoring programme that seeks to understand and track the potential changing population dynamics in key in-migration affected areas. This may include population censuses and food price monitoring.

- *Settlement Planning*

As discussed in the IMMP the identification and demarcation of zones for accommodation, businesses and informal trading will be undertaken in consultation with local and traditional leadership with the aim of directing future settlement patterns and planning growth.

- *Project Buffer Zones*

As discussed in the IMMP the use of buffer zones and camp management policies will be used to prevent encroachment near to and surrounding Project infrastructure. This will be particularly relevant at the site of the worker accommodation where Allana will have to police camp squatters.

- *Education and Awareness Programmes*

As discussed in the CDP, health education and awareness programmes will help to improve capacity in managing community sanitation and infrastructure use, helping to reduce the impact of pressure and stresses on sanitation and waste management systems.

- *Infrastructure and Services*

As discussed in the CDP, based on the assumption that some in-migration will occur Allana will work with local government and relevant partners to strengthen waste management systems, water infrastructure, sanitation systems and health infrastructure.

- *Micro-Finance Provision and Enterprise Development*

As discussed in the CDP, recognising that in-migration can also lead to some economic development for local people Allana will develop of specific interventions to promote these as a means of 'offsetting' or mitigating some of the negative impacts that cannot be avoided. For example higher population concentrations may accelerate the development of the local economy through the increased mobility of people, goods and services. In order to facilitate these economic opportunities Allana will work with a partner organisation to develop a targeted micro-finance system.

- *Stakeholder Engagement*

As discussed in the Stakeholder Engagement Strategy (SES) Allana will undertake a programme of stakeholder engagement that seeks to continue to engage relevant stakeholder groups concerning topics related to in-migration including recruitment and procurement, community investment, etc.

- *Emergency Food Aid*

As discussed in the CHSSMP Allana will liaise with relevant food aid providers to establish a precedent to inform and provide logistical support to relevant NGOs / Government providers where environmental shocks, food shortages or sharp increases in prices cause pronounced short term food insecurity.

- *Worker Management*

As discussed in the WKMP, a personnel code of conduct and camp management policies will limit unplanned interactions between workers and in-migrants.

- *Incentivise Settlement in Berahale*

As discussed in the IMMP, recognising that the proposed Project will inevitably lead to some degree of permanent in-migration, the impact may be limited by confining the impacts of in-migration to specific geographical areas. In consultation with local traditional leaders (and other relevant stakeholders such as the Woreda and Kebele administration), Allana should identify areas where in-migrant settlement would have the least impact and develop incentives for in-migrants to settle in these areas. This may include the development of residential plots that are accessible to outsiders, or the centralisation of basic services that in-migrants are likely exhibit some demand for.

- *Collaboration with Local Government and NGOs*

As discussed in the CDP, Allana will identify and collaborate with NGOs who are working on hygiene and sanitation projects in the Study Area. In addition Allana will work with relevant partners, local leaders and the relevant Kebele or Woreda officials to promote an education and awareness programme targeted at managing anti-social behaviour.

- *Support Integrated Youth Programmes*

As discussed in the CDP, Allana will work with local leaders and community groups to support integrated youth programmes related to sport, arts and culture seeking to build bonds and coordination between different ethnic groups as part of their Community Development Plan. This may involve partnership with relevant organisations.

- *Promote Local Conflict Resolution Programmes*

As discussed in the IMMP, Allana will work with the traditional governance network and the relevant Kebele or Woreda government to promote conflict resolution programmes through a consultation process, including sponsoring discussion between different communities where necessary.

IFC, (2009) *Projects and People: A Handbook for Addressing Project-Induced In-Migration*

International Institute for Environment and Development (IIED), 2009, *Bulletin of the Drylands* Number 54

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