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2023

REPORT – STABILITY INDEX

BURUNDI, ROUND 1

MEASURING PERCEPTION OF STABILITY IN BURUNDI

IOM
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Cankuzo, Cibitoke, Kirundo, Makamba, Muyinga, Rumonge, Rutana, Ruyigi | December 2022

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INTRODUCTION

In May 2020, Burundi held its first general elections since 2015. Since the inauguration of the new government in June 2020, the country has seen significant improvements in security, political and socio-economic conditions. This period has been marked by the voluntary return of a considerable number of Burundian refugees (204,301 from 2017 to September 2022)[1] to their communities of origin. Despite this improvement, the return of thousands of refugees without additional support is likely to increase tensions (JRRRP-2021) between returnee communities and residents facing lack of resources (land, livelihoods and basic services). Furthermore, given that Burundi has a large number of internally displaced persons (IDPs) (75,300 in October 2022)[2], the large proportion of IDPs (95%) who are staying in host communities increases the pressure already exacerbated by recurrent damage from torrential rains, floods, high winds, hail, etc. with its corollaries of house destruction. It is also noted that 11 per cent of IDPs are returnees who become IDPs following the destruction of their homes at their place of origin. This adds further complexity to the dynamics of return to the country, involving both internally displaced populations and returnees and posing challenges to the identification of durable solutions to their return and displacement.

In order to find durable solutions to return to communities of origin, reintegration, resettlement, and to prevent further displacement, it is essential to understand the relative levels of stability in places hosting returnees and IDPs. Therefore, the International Organization for Migration (IOM) in collaboration with the Directorate General of Repatriation, Resettlement and Reintegration of Returnees (DG RRR), launched on 26 December 2022 the first round of data collection (Round 1) on the Stability Index (SI) to assess the stability of areas of return and displacement in Burundi. The SI seeks to understand what factors influence the stability of a place, which can inform priority programmatic interventions along the Humanitarian-Development-Peace Nexus to build resilience, prevent future forced displacement and lay the foundation for sustainable return of returnees.

1. OVERVIEW

The Stability Index includes data collected through interviews with key informants at the local level in the target provinces affected by internal displacement and return movements of Burundian refugees from neighbouring countries. Key informants, IDP and returnee leaders, community workers and Red Cross volunteers, were interviewed at each location by surveyors during December 2022.

The key informant method has the advantage of allowing coverage of many hills. Several key informants were interviewed in each hill[3], allowing IOM to validate the information.

In total, 363 places of return and/or displacement were assessed in the provinces of Cankuzo, Cibitoke, Kirundo, Makamba, Muyinga, Rumonge, Rutana and Ruyigi. Using the results of the DTM baseline assessments and the mapping of returnees provided by UNHCR, hills were selected in order to identify areas where large numbers of IDPs and returnees are located concurrently. Indeed, natural hazards and the large number of returnees were a key factor in the selection of hills[1] (localities).

Figure 1 provides an overview of the latest figures for IDPs and returnees in Burundi.

Figure 1. Displacement numbers in 2022

75,300 IDPs OCT. 2022

Of which 11% were returnees

204,301 Returnees DEC. 2022

Information gathering from a key informant.
Cankuzo Province, Gisagara commune © IOM December 2022

[1] Document - Presence of returnees by province - 30 September 2022 (unhcr.org)
[2] **DTM**: Baseline Evaluation - October 2022
[3] A hill is administrative level 3 (the lowest level in Burundi) and the administrative authority at this level is the hill leader

2. METHODOLOGY

2.1 Calculation of the Stability Index

The Stability Index is an IOM tool whose methodology is adapted according to the context to estimate a single stability score for each hill assessed. For the Burundian context, the indicators chosen in collaboration with our various partners focus on three key themes essential to stability: livelihoods and basic services; social cohesion; and damage caused by natural hazards.

Indicators for each of these themes are grouped to create sub-indices to facilitate comparison of locations by theme (see Annex 7.4 for more information on the indicators included in this analysis). These indicators, taken together, highlight areas of opportunity for durable solutions for the target populations. Five 'anchor questions' on perceived stability in the community (community resilience capacity, future community intentions, trends in resilience to natural hazards, trends in overall deterioration of access to basic services and trends in social cohesion) are used to validate the relationship between the stability score and community sentiment. A comprehensive analysis showing the determinants of hillside stability is described in the following sections to guide decision-making.

The calculation of the Stability Index begins with the design of the survey: this data collection tool was developed with substantial input from experts in the field. It comprises a set of questions assessing conditions in a locality that 1) were determined to be potential indicators of stability; and 2) were possible to rank from worst to best case scenarios. The questions were divided into four categories: anchor/perception questions on stability, livelihoods and access to basic services, social cohesion and level of damage from natural hazards.

The Stability Index uses a mathematical method of multi-criteria analysis to demonstrate the impact of different indicators on each other and the proportional influence of a given indicator on a data set through its standard deviation.

Before the index is calculated, the responses are ordinally ranked from worst to best scenario and these classes are normalised. Then, the multi-criteria analysis is performed on all indicators, except for the "anchor questions". The determined weight of each variable according to its variability is combined with the ordered data of each locality to generate its overall stability score.

In addition to the stability score, three separate sub-indices are calculated using only variables from each of the three survey themes: the livelihoods and access to basic services, the social cohesion and the level of damage caused by natural hazards. These sub-indices facilitate the identification of hillsides that may require special attention in one of these areas. The Stability Index and sub-indexes range from 0 (poor stability conditions) to 100 (good stability conditions).

Finally, the Stability Index and the sub-indices are validated against the anchor questions on perceived stability. Using logistic regression, it was possible to determine that the Stability Index has a statistically significant and positive correlation with the intention to leave the place in the next six months. At the same time, the three sub-indices correlated more with feelings of deteriorating social cohesion, access to services and resilience to natural hazards.

2.2. Selection of hills and key informants

The hills selected were based on the high number of returnees in the eight targeted large return provinces according to the information shared by UNHCR and the DTM baseline data on IDPs. A total of 363 hills were selected.

The choice of key informants was based on the recommendations of the validation workshop during which participants identified the profile of people with knowledge of different aspects of the community. Thus, five key informants were chosen for each hill, including the hill leader, a member of the returnee community, a member of the displaced community, a member of the host community and a community leader who could be a community health worker or a Burundi Red Cross volunteer.

2.3 Partnerships

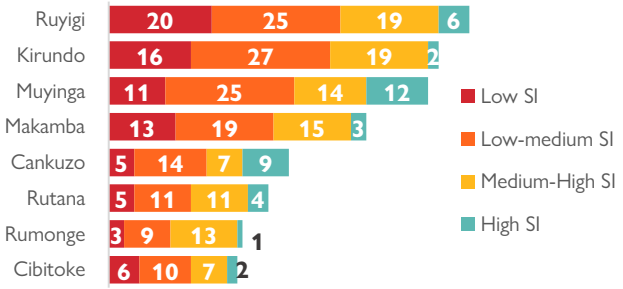
The adaptation of the Stability Index to the Burundian context is the result of a joint effort by IOM, the Ministry of Interior, Community Development and Public Security through the Directorate General of Repatriation, Resettlement and Reintegration and the Directorate General of Civil Protection and Disaster Management, the Ministry of Solidarity through the General Directorate of Sustainable Resettlement and Reintegration of Disaster Victims, the Ministry of Agriculture and Livestock through the General Directorate of Environmental, Agricultural and Livestock Planning, the Governors of the target areas, the National Institute of Statistics of Burundi, the Geographic Institute of Burundi, NGOs such as American Friends Service Committee (AFSC), Danish Refugee Council (DRC), "Association des Femmes Rapatriées du Burundi" (AFRABU), "Icirore C'Amahoro" (ICCA), Burundi Red Cross, civil society, UNHCR (which provides information on returnees), and other United Nations agencies. Indeed, IOM has been in contact with all key humanitarian, development and socio-economic reintegration partners to identify potential indicators that could explain the stability of areas with returnees and IDPs. These joint efforts were concretised during a workshop held from 8 to 9 December 2022 in Bujumbura to validate the indicators analysed in this report.

2.4 Limitations

The hills were selected from the database of Burundian Red Cross volunteers on IDPs and returnees. This may have introduced bias into the analysis as the number of returnees may have been over - or underestimated outside of an official database file.

It is important to note that the Stability Index is based on key informants' perceptions and reports of conditions in their communities and does not purport to provide an objective measure of this complex subject. Although key informants are expected to know more about the situation in their locality, they may have different views from some members of their community about the stability of their hill.

Figure 2. Number of hills evaluated by province



3. OVERVIEW OF STABILITY SCORES

3.1 Key results of the Stability Index

In December 2022, the average Stability Index score for the 363 hills in the eight provinces assessed was 55/100. It is also noted that on the natural hazards scale, the average score of only one province (Cankuzo) slightly exceeds the average SI score (56%). This low score is due to the recurrence of high winds and torrential rains. With regard to livelihoods and access to services, the average score (55%) is relatively similar to the overall Index score, while the average score for social cohesion is the highest (78%) but with little impact on the overall score.

Indeed, compared to the national average, the provinces of Cankuzo (58) and Rutana (58) are relatively stable with higher average stability scores. In contrast, Kirundo (53), where a large number of returnees are recorded, is the least stable with a lower average stability score.

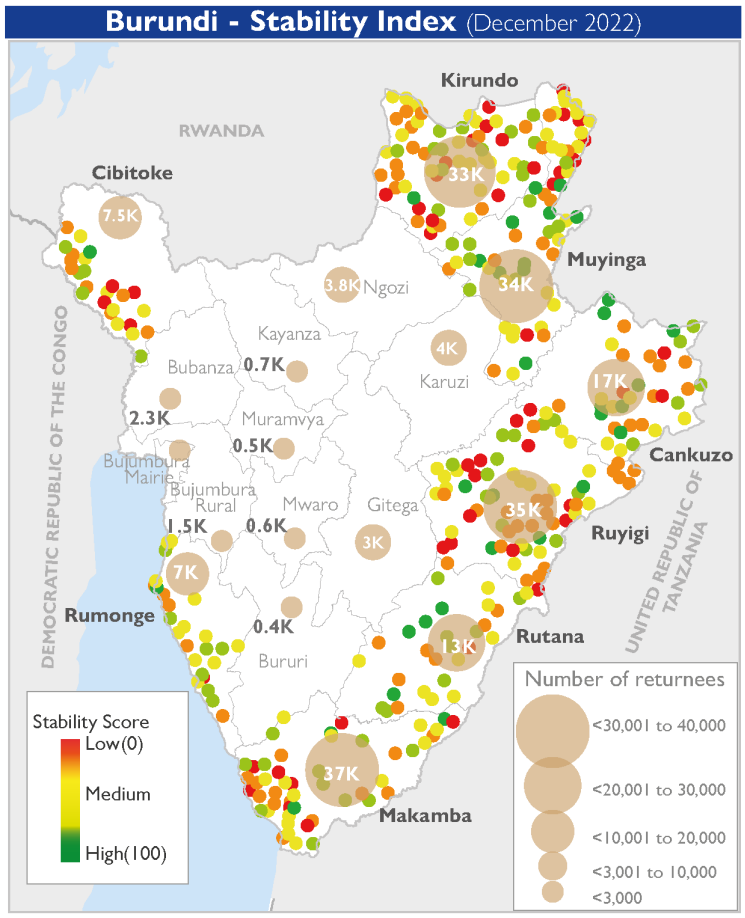
Comparative analysis between the sub-indices of each theme (Figure 5) shows that on the one hand the average of the social cohesion sub-index (scale 2) is higher (78), suggesting that the challenge of social cohesion remains lower in the assessed provinces. On the other hand, scores for damage from natural hazards (scale 3) are lower (49). This low score on scale 3 is consistent with emergency monitoring data that Cibitoke, Makamba, and Kirundo are among the provinces that have suffered considerable damage from natural hazards in the past two years. These include the flooding caused by the rising waters of Lake Tanganyika in Nyanza-Lac (Makamba province) in 2021, the high winds that severely affected Cibitoke province in September 2022, and the torrential rains and hail that damaged the fields of thousands of households in Kirundo province. In terms of livelihoods and access to basic services (scale 1), the scores are at the average level (55).

In addition, it should be noted that some indicators, although having minimal impact (low SI score) in determining the stability score, nevertheless provide information on the challenges in terms of programmatic interventions.

Among the indicators with the lowest weights, there are five that, when considered together in a programmatic intervention, contribute to improving hillside stability. These indicators are:

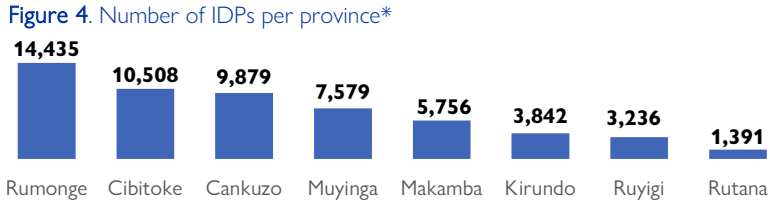
- Access to quality housing
- Registration of land with land services
- Access to electricity
- Participation of community members in mitigation activities
- Participation in simulation exercises to address natural hazard risks

Figure 3. Map of the stability score of the hills in the provinces of high return of the returnees



This map is for illustration purposes only. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the International Organization for Migration.

Figure 4. Number of IDPs per province*



* Data from the October 2022 Baseline Assessment

Figure 5. Average scores by province and scale

Province	IS Score	Services	Social cohesion	Natural hazards
Cankuzo	58	55	74	56
Rutana	58	58	81	51
Muyinga	57	53	80	53
Rumonge	57	59	81	48
Cibitoke	54	60	78	44
Makamba	54	56	77	46
Ruyigi	54	51	82	48
Kirundo	53	53	75	47
Average	**55**	**55**	**78**	**49**

3.2 Perception of communities

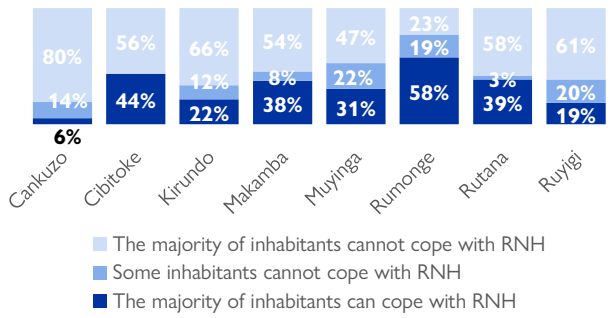
The first section of the questionnaire focuses on the perceptions of communities by key informants on the evolution of resilience (see Annex 7.1) and stability in the hills assessed. These 'anchor questions', agreed by the stakeholders at the validation workshop, were used to validate the Stability Index results against the reported perceptions in the community. The Stability Index score and sub-indices for the different themes are compared with the responses to the anchor questions, namely whether a hillside feels able to cope with the risks of natural hazards, its intention to leave the area and the community's perception of changes in livelihoods and access to services, social cohesion and community resilience to natural hazards.

3.2.1 Perception of resilience

Level of resilience of the inhabitants to the risks of Natural Hazards (RNH) in the hill?

When asked about the resilience of people to RNH, key informants indicated that the majority of people in over 57 per cent of the hills cannot cope with RNH. At the same time, key informants state that in 31 per cent of the hills, the majority of people can cope with RNH. Finally, only a few people cannot cope with RNH in a minority of hills (12%). In general, the perception of resilience is more prevalent in the provinces of Cibitoke, Rumonge and Rutana.

Figure 6. Perception of resilience

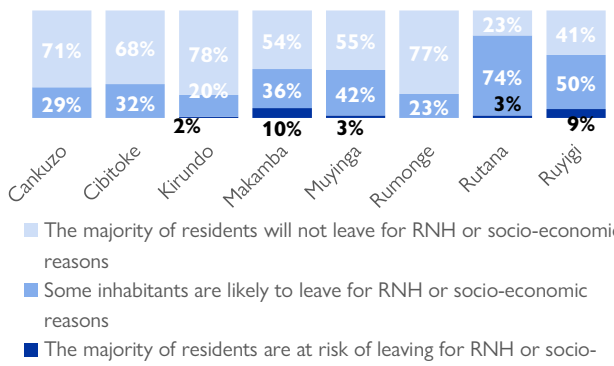


3.2.2 Future intentions of the population

Do the hill dwellers feel that they have to leave soon because of the Risks of Natural Hazards (RNH) or socio-economic reasons?

With regard to the need to move within 6 months due to recurrent natural hazards, between 9 and 10 per cent of key informants interviewed reported that residents of some remote hills in Ruyigi and Makamba provinces expect to move seasonally to return during the low hazard period. Thus, the perception of some people moving is very high in Kirundo, Rumonge, Cibitoke and Cankuzo provinces. On the other hand, the hills in Cankuzo have no intention of leaving their hills, which is consistent with its high stability score (Figure 7).

Figure 7. Future intentions

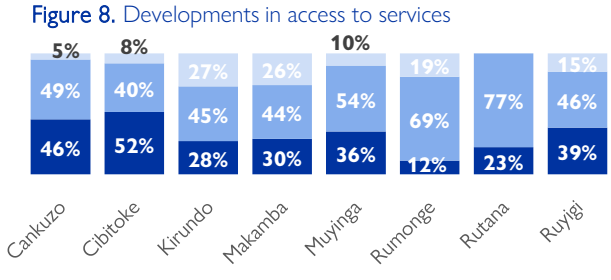


3.2.3 Perception on the evolution of access to basic services

Perception on the evolution of access to basic services in the last six months on the hill?

With regard to the evolution of access to basic services over the last six months, and in general, the key informants interviewed indicated that 15 per cent of the hills have seen a deterioration in access to services. The hills in Kirundo (27%) and Makamba (26%) are the most affected by this deterioration, in contrast to Cibitoke and Cankuzo, where almost 50 per cent of the hills have seen an improvement in access to services.

Figure 8. Developments in access to services

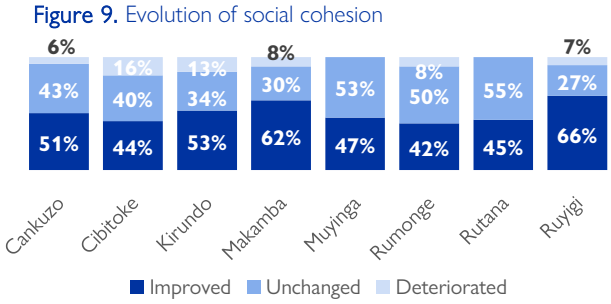


3.2.4 Perception on the evolution of social cohesion

Perception on the evolution of social cohesion in the last six months on the hill?

With regard to the evolution of social cohesion, apart from a minority of hills (6%) where it has deteriorated, in most hills the situation remains good. Thus, more than 50 per cent of the hills in the provinces of Makamba, Cankuzo, Ruyigi and Kirundo have seen their social cohesion improved.

Figure 9. Evolution of social cohesion

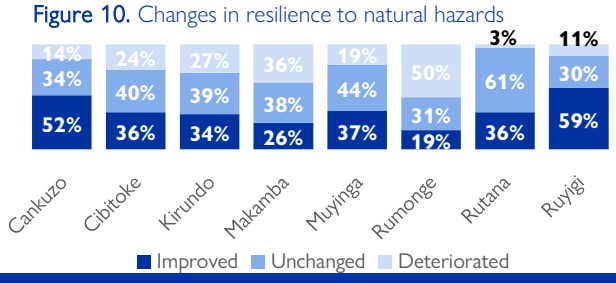


3.2.5 Perception on the evolution of resilience to natural hazards

Perception on the evolution of resilience to natural hazards in the last six months on the hill?

Regarding changes in resilience to natural hazards, key informants in 22 per cent of the hills indicated that their resilience had deteriorated. The provinces of Rumonge (50%), Makamba (36%), Kirundo (27%) and Cibitoke (24%) are the most affected.

Figure 10. Changes in resilience to natural hazards



3.3 Relationship between perception and Stability score

Figure 12 shows the top twenty hills with the highest stability scores and the bottom twenty hills with the lowest scores. It highlights the convergence between the perception of stability and the results obtained by measuring the key indicators of stability dynamics in the hills. Thus, it allows to read for each hill the stability score, the scores of the three sub-indices and the stability perception score. As expected, the perception questions on the feeling of resilience and the possibility that people might leave the hill are closely related to the Stability Index scores: all hills with the highest score, except one (Muyinga), also reported feeling resilient and stable, while almost all hills with the lowest score reported not being resilient and being areas prone to instability.

As for the question on whether communities felt that their situation had worsened between July and December 2022, the analysis indicates that the social cohesion score improved in more than 50 per cent of the hills, while the access to services and livelihoods score improved in only a third of the hills (figure 11).

At the same time, 39 per cent of hills indicate an improvement in their resilience to natural hazards. Figure 12 shows that community perceptions and hillside stability scores are consistent with the analysis, with little influence from social cohesion.

Figure 11. Sense of deterioration between July and December 2022

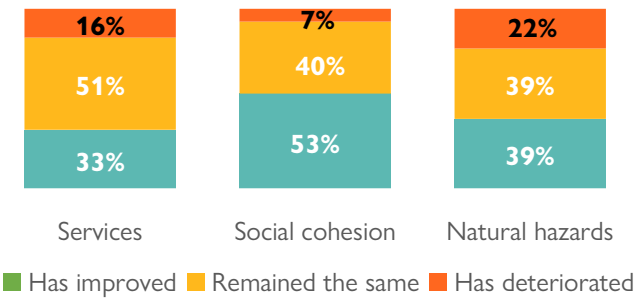


Figure 12. Scores per hill

The results are shown from the most stable to the least stable hill

	Province	Commune	Hill	IS Score (100–1)	Services (100–1)	Social cohesion (100–1)	Natural hazards (100–1)	Community resilience (10–1)	Community intention (10–1)	Perception of resilience (10–1)	Perceived state of access to services (10–1)	Perception of social cohesion (10–1)
Localities with the highest scores	Ruyigi	Butaganzwa2	Rugongo	84	78	95	84	10	10	10	6	6
	Rutana	Musongati	Shanga	80	81	100	74	10	10	10	10	10
	Muyinga	Gasorwe	Bwasare	79	82	80	77	10	10	10	6	6
	Muyinga	Gasorwe	Gasuru	79	75	86	80	6	6	6	10	10
	Ruyigi	Gisuru	Gisuru	79	82	87	75	6	10	10	10	10
	Ruyigi	Nyabitsinda	Gatare-Gasenyi	78	81	82	75	10	10	10	10	10
	Cankuzo	Mishiha	Muzenze	78	63	100	81	6	6	10	10	10
	Muyinga	Muyinga	Muyinga	77	79	74	77	1	10	1	1	10
	Makamba	Nyanza-Lac	Rangi	77	79	92	71	6	10	6	6	6
	Cibitoke	Mugina	Mugina	76	79	63	78	6	10	6	10	1
	Muyinga	Butihinda	Kamaramagambo	76	73	80	77	10	10	10	10	10
	Ruyigi	Kinyinya	Nyamigina	75	67	90	77	10	10	10	10	10
	Muyinga	Butihinda	Buhorana	75	64	96	77	6	6	6	6	6
	Ruyigi	Ruyigi	Sanzu	75	68	96	74	10	10	10	6	10
	Muyinga	Muyinga	Kinazi	75	72	72	77	10	6	6	10	10
	Muyinga	Muyinga	Kinyota	75	62	91	79	10	10	10	10	6
	Cankuzo	Cankuzo	Musenyi	74	55	91	83	6	6	10	10	10
	Cankuzo	Kigamba	Shinge	74	78	96	65	6	10	10	10	10
	Kirundo	Ntega	Rushubije	74	69	79	76	6	6	6	10	6
	Cankuzo	Kigamba	Rujungu	74	58	79	83	6	6	10	10	10
Localities with the lowest scores	Rutana	Giharo	Nkanka	39	39	73	30	6	6	6	10	10
	Cibitoke	Murwi	Ngoma	39	34	79	31	1	6	6	6	6
	Makamba	Nyanza-Lac	Mukimba	39	28	55	42	6	6	1	1	1
	Muyinga	Giteranyi	Rusenyi	39	34	65	35	1	10	6	6	10
	Kirundo	Vumbi	Gashingwa	39	20	55	47	6	6	10	6	10
	Cibitoke	Buganda	Ruhagarika	39	49	87	18	6	6	6	10	10
	Kirundo	Kirundo	Kavomo	38	42	70	26	1	6	1	1	6
	Kirundo	Busoni	Kivo	38	20	51	46	6	6	6	1	10
	Ruyigi	Gisuru	Munyinya	38	43	81	22	1	6	10	6	10
	Kirundo	Ntega	Gisitwe	38	41	55	30	1	6	1	6	1
	Makamba	Nyanza-Lac	Mugumure	37	35	74	28	6	6	6	1	6
	Muyinga	Giteranyi	Shoza	37	33	58	34	1	6	6	6	6
	Makamba	Nyanza-Lac	Kiderege	37	31	64	33	1	6	1	1	10
	Muyinga	Giteranyi	Kijumbura	36	35	68	28	1	10	6	6	10
	Kirundo	Kirundo	Runanira I&II	36	34	50	34	1	6	6	6	10
	Muyinga	Giteranyi	Rubenga	36	33	68	29	1	6	1	6	6
	Rumonge	Rumonge	Mugomere	36	35	73	25	1	6	6	6	10
	Makamba	Mabanda	Nyamugari	34	38	52	26	1	6	1	6	1
	Ruyigi	Gisuru	Nyarumanga	34	41	63	20	1	6	6	6	1
	Ruyigi	Butaganzwa2	Rubambagire	33	33	45	29	1	1	10	10	10

4. ANALYSIS OF THE MAIN INDICATORS INFLUENCING THE STABILITY SCORE

The Stability Index uses a mathematical method of multi-criteria analysis to understand the impact of each indicator on the variability of the data set. This method assigns greater weight to indicators with higher variability.
By exploring these key indicators, it is possible to identify important factors that may affect the perception of stability in a locality. For a more detailed overview of each indicator measured, see the Annex.

4.1 Main indicators

Figure 13 provides an overview of the ten most influential indicators in descending order of weight. For example, indicators relating to natural hazards damage and access to services and livelihoods are the most influential in the dataset.

On the one hand, changes in access to natural resources, ability to adapt to natural hazard risks and increased risk from natural hazards are the three most influential indicators from the hazard damage scale.

On the other hand, access to health facilities, coverage of the minimum health care package by health facilities, changes in access to services and market conditions are the four main influential indicators from the access to services and livelihoods scale.

Only one indicator of social cohesion is present in the top 10 most influential variables. This indicates that programming could have the most impact if it focuses on relevant indicators related to resilience to natural hazards and livelihoods and access to basic services. A more detailed analysis of the intervention options is provided in section 5.1 of the report.

Figure 13. The most 10 influential indicators (in descending order of weight)

The indicators are displayed from most to least important

SERVICES AND LIVELIHOODS	SOCIAL COHESION	DAMAGE DUE TO NATURAL HAZARDS
Changes in access to natural resources		
Ability to adapt to natural hazard risks		
Access to health services		
Increased risk from natural hazards		
Coverage of the minimum package of care by health facilities		
Changes in access to basic services		
Proximity of community disaster risk reduction committees		
Lack of water		
Development of social cohesion		
Market situation		

4.2 Highly influential indicators by scale

The weights obtained when calculating the scores allowed a classification by order of importance and by scale. Thus, a prioritisation based on the top five indicators could be given to each scale (figure 14).

Therefore, the presence of the first five indicators of the hazard damage scale in Figure 13 shows that they have a very significant impact (14%) on the hillside Stability Index.

This is followed by the livelihoods and access to services scale (11%). Finally, the indicators of the social cohesion scale have only an 8 per cent impact on hill stability.

Figure 14. The first five influential indicators by scale

MAJOR IMPACT | MEDIUM IMPACT | LOW IMPACT

NATURAL HAZARDS

1. Changes in access to natural resources
2. Capacity to adapt to natural hazard risks
3. Increased risk from natural hazards
4. Proximity to community disaster risk reduction committee
5. Water scarcity

SERVICES & LIVELIHOODS

1. Access to health services
2. Coverage of the minimum health care package by health facilities
3. Changes in access to services
4. Market situation
5. Ease of access to hospitals

SOCIAL COHESION

1. Development of social cohesion
2. Frequency of theft incidents
3. Participation in public affairs
4. Equitable access to basic services and resources
5. Understanding and trust among community members

4.3 Analysis of the key indicators of the Stability Index

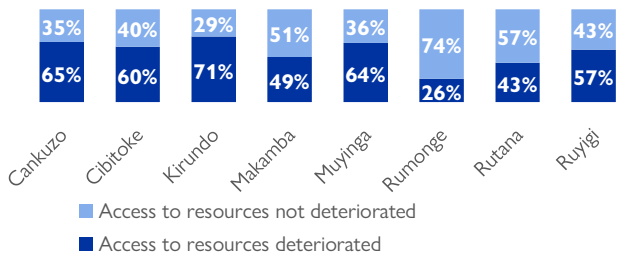
Of the most influential indicators, those relating to the level of damage caused by natural hazards are prominent. A considerable proportion of hillsides in different provinces expressed the view that natural resources are dwindling and that access to them has deteriorated.

4.3.1 Changes in access to natural resources

Scale of damage caused by natural hazards

Changes in access to natural resources are the most influential indicator on the Stability Index of the hills assessed. Of these hills, 57 percent reported that access to natural resources is deteriorating, contributing to the instability of their communities in the event of natural hazards. They are predominantly located in the provinces of Kirundo (71%), Cankuzo (65%) and Muyinga (64%).

Figure 15. Changes in access to natural resources

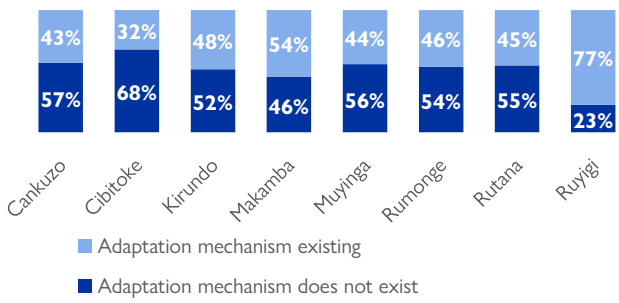


4.3.2 Ability to adapt to natural hazard risks

Scale of damage caused by natural hazards

In the majority of provinces, key informants estimated that more than half of the hills did not have adaptation mechanisms in place to increase community resilience to natural hazards. However, the vast majority of hills in Ruyigi (77%) reported that coping mechanisms such as communal contingency plans had been put in place. Cibitoke province is the most affected by the inability to adapt to natural hazard risks with 68 per cent. This figure confirms emergency monitoring data that Cibitoke is among the provinces most affected by recent natural hazards in Burundi.

Figure 16. Ability to adapt to natural hazard risks

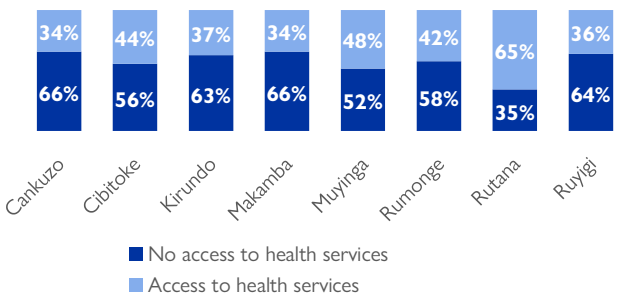


4.3.3 Access to health services

Scale of livelihoods and access to basic services

Access to health services was among the key indicators of stability in the different hills assessed. In 59 per cent of the hills, key informants said that community members had needed health care in the last 6 months but had not been able to access health centres. With the exception of Rutana, this lack of access to health centres was expressed by more than half of the hills in their respective provinces.

Figure 17. Access to health services

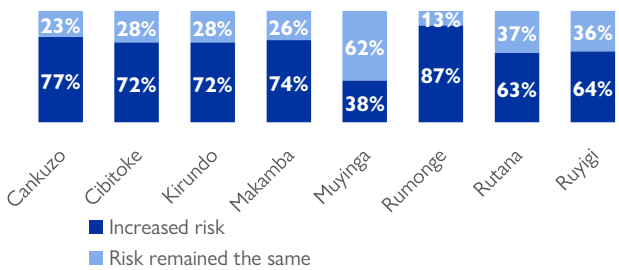


4.3.4 Increased risk from natural hazards

Scale of damage caused by natural hazards

Increased risk from natural hazards is a major concern of communities in the hills assessed. With the exception of Muyinga, key informants in the majority of hills reported that the increased risk of natural hazards prevents their hill dwellers from being resilient in the face of this risk until they consider leaving their hill.

Figure 18. Existence of risks from natural hazards

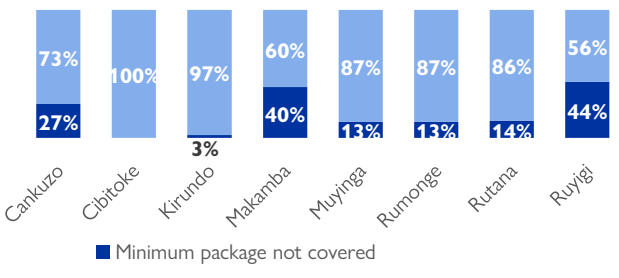


4.3.5 Coverage of the minimum health care package by health facilities

Scale of livelihoods and access to services

With regard to the coverage of the minimum package of care by the health structures, in the majority of hills (79%) where there is a health structure, the key informants affirmed that the latter were able to provide the primary curative care package for simple cases of illness, but also preventive care (family planning, vaccination, pre - and post-natal consultation), essential obstetrical and neonatal care as well as monitoring of nutritional status. The influence of this indicator is due to the fact that just over half of the hills assessed (51%) do not have a health centre.

Figure 19. Coverage of minimum package by health centres



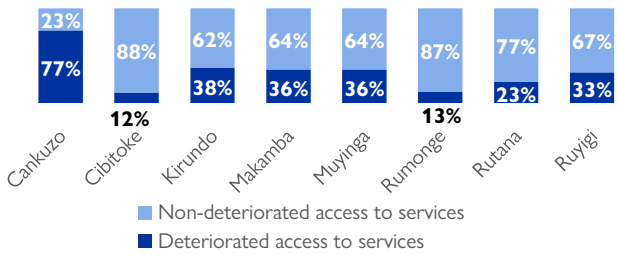
4.3 Analysis of the key indicators of the Stability Index (continued)

4.3.6 Changes in access to basic services

Scale of livelihoods and access to services

More than a third of the hills assessed reported that access to basic services had deteriorated compared to the previous six months. In the majority of hills in Cankuzo (77%), key informants reported that the deterioration in access to basic services contributes to the non-resilience of communities to natural hazards or to the fact that some residents are considering leaving their usual hill of residence.

Figure 20. Changes in access to basic services

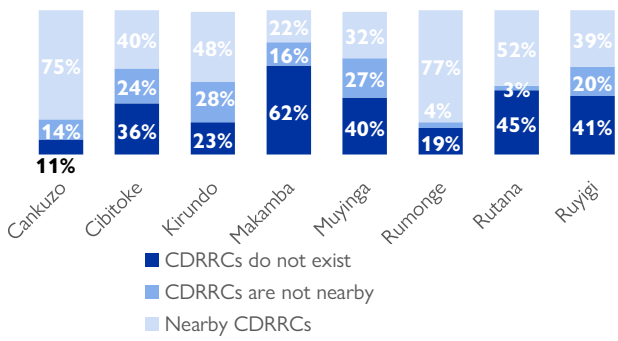


4.3.7 Proximity of Community Disaster Risk Reduction Committees (CDRRCs)

Scale of damage caused by natural hazards

Community disaster risk reduction committees (CDRRCs) have the role of raising community awareness of possible risks, preventing and leading the response to disasters.
The proximity of these committees is confirmed in the majority of hills in Rumonge (77%), Cankuzo (75%) and Rutana (52%) while they are non-existent or not known by community members in the majority of hills in other provinces.

Figure 21. Proximity of CDRRCs *

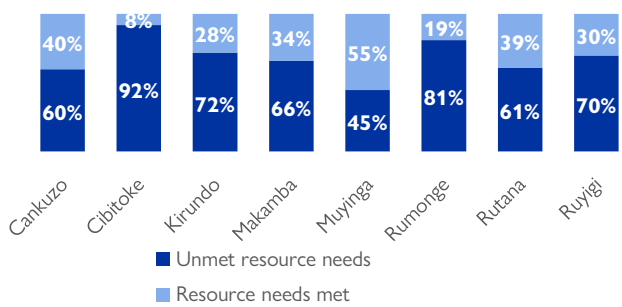


4.3.8 Insufficiency of natural resources

Scale of damage caused by natural hazards

In the majority of hills (66%), key informants stated that their needs for natural resources such as water, wood and cultivable land are not being met. With the exception of Muyinga, this lack of access to natural resources was expressed by over 60 per cent of the hills in their respective provinces.

Figure 22. Insufficiency of natural resources

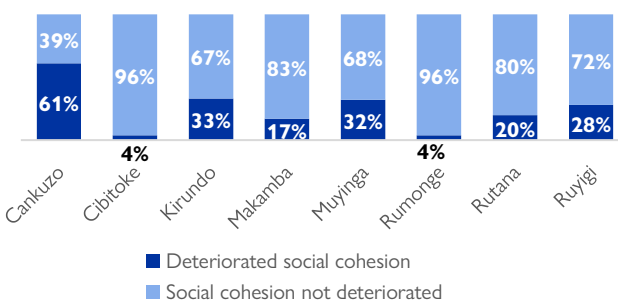


4.3.9 Development of social cohesion

Scale of social cohesion

Social cohesion is relatively good in almost all eight provinces with the exception of Cankuzo, where key informants reported that social cohesion has deteriorated in the majority of hills assessed (61%). Key informants indicated that this deterioration is due to residents experiencing resilience to natural hazards or that some residents would consider leaving the hill.

Figure 23. Development of social cohesion

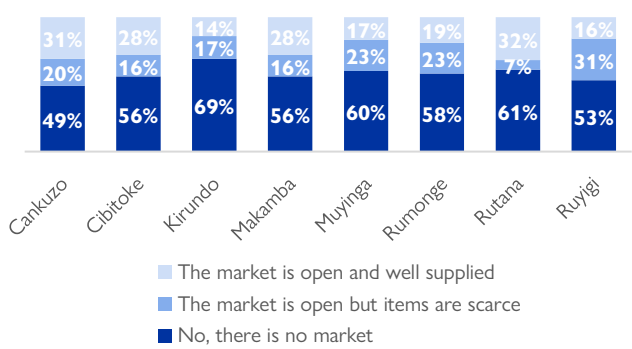


4.3.10 Market situation

Scale of livelihoods and access to services

It was found that markets are not systematically set up on all hills. A large proportion of the hills are supplied by markets in neighbouring hills. The majority of markets in Rutana, Cibitoke, Makamba and Cankuzo provinces are supplied regularly, while half of the hills with markets in Kirundo, Rumonge, Muyinga and Ruyigi provinces do not have enough items in their markets.

Figure 24. Market situation



* Percentages may add up to 99 per cent due to rounding.

5. COURSES OF ACTION

5.1 Areas of intervention

In the context of Burundi, programme areas could incorporate those aspects considered to have the greatest impact on the perception of stability in the hills.

For example, if the provinces of Kirundo and Ruyigi, where the Stability Index score is rather low, were to benefit from an intervention integrating the following areas: access to drinking water, registration of agricultural plots, establishment of an early warning system, then the majority of their hills would see an improvement in their Stability Index.

In addition, the exposure of hillsides to natural hazards should be taken into account in order to include activities that contribute to community resilience, such as the establishment of community disaster risk reduction committees (CDRRCs).

It should be noted that the indicators linked to social cohesion are not a determining factor in the instability of the population in general. However, it should be noted that there are some communes (Butanganzwa, Mabanda and Kirundo) where the social cohesion situation is deteriorating.

Finally, the strengthening of populations to cope with natural hazards and the deterioration of overall access to services should be taken into account in partners' programmes, particularly in places where the presence of displaced persons or returnees could undermine the already limited capacity to deliver services. Although the social cohesion situation is relatively better, additional interventions for prevention and resolution of inter-community tensions as well as for peace-building could be implemented in some hills. The priority hills in this respect are:

- Rubambagire (Commune of Butaganzwa),
- Runanira (Commune of Kirundo) ,
- Kivo (Commune of Busoni),
- Nyamugari (Commune of Mabanda)).
- Gashingwa (Commune of Vumbi)
- Mukimba (Comme of Nyanza-Lac)
- Gisitwe (Commune of Ntega)

Beyond addressing the key indicators described above, interventions could target other areas of low impact on stability. These, combined together in an intervention, would contribute significantly to improving the Hillside Stability Index (see section 3.1).

5.2 Strategy for the choice of intervention areas

Interventions should be based on geographical and contextual proximity to develop positive effects. The specificities of the local context must be taken into account to foster the development of a sustainable environment in neighbouring localities, as a positive leverage effect of interventions. A grouping of localities with a low Stability Index in the same municipality could be twinned with a grouping of geographically close localities with the same stability characteristics. These twinned clusters may benefit from a programme to supply medicines to health centres, for example, in order to achieve a "domino effect", while ensuring that returnees and IDPs have the same rights and equal access to services as the host populations in the beneficiary commune. Annex 7.2 shows pairs of communes where this type of intervention is possible.

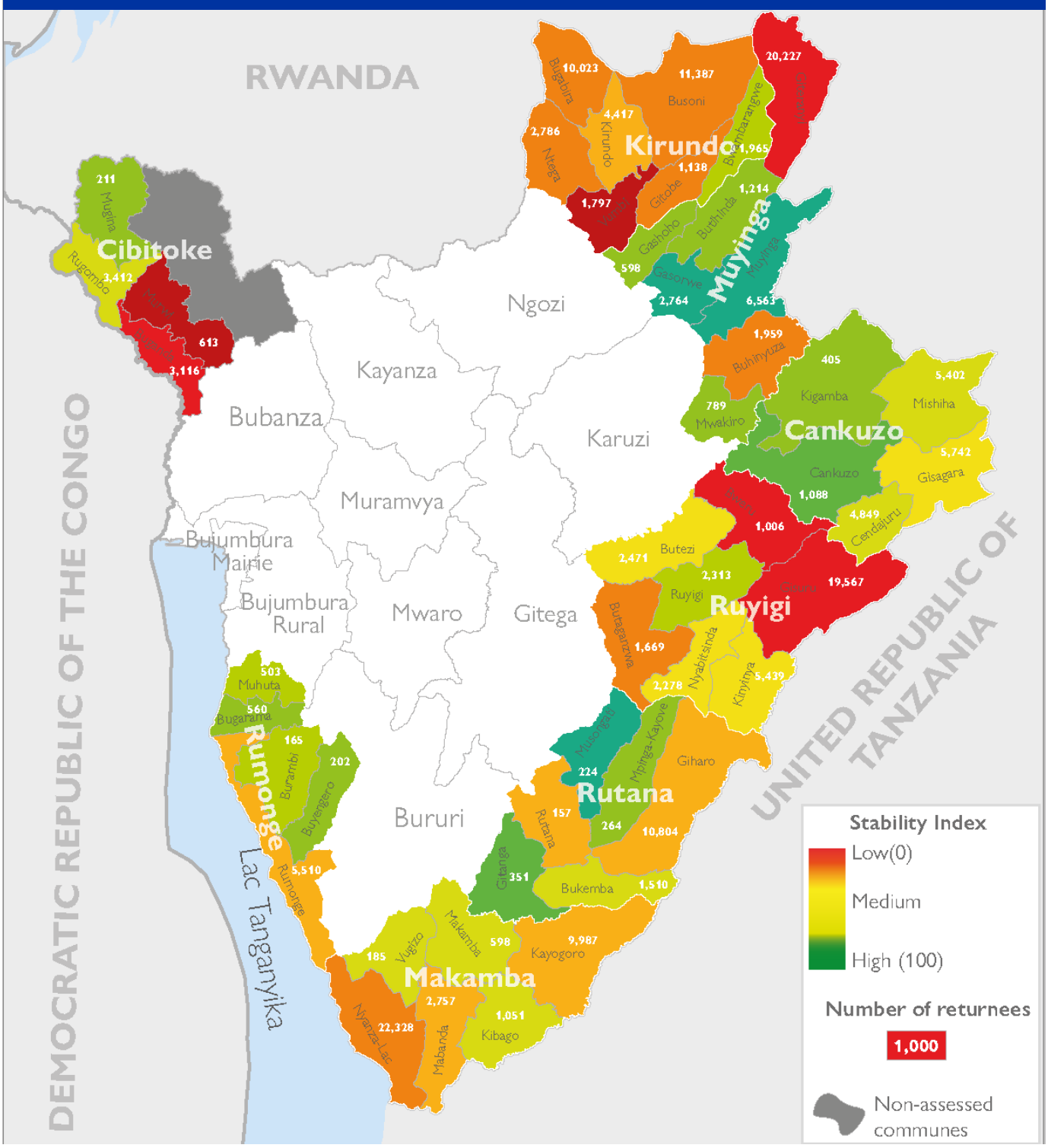
5.3 Identification of key variables for effective intervention

The ability of populations to remain in place over the coming months is linked to the increased risk of natural hazards and the socio-economic situation impacting 49 per cent of the hills. Interventions should either focus on ensuring that people can stay in place in the long term, or provide longer-term development interventions in hills where risk from natural hazards is minimal in line with the nexus approach, while prioritising service and livelihoods scale indicators that have a strong influence on stability.

Example of the NEXUS Approach on convergence communes

As a first step, a nexus intervention could focus on a commune with a low-to-medium SI score (33-75), hosting returnee populations and/or IDPs.
Bugabira**,** which hosts more than 10,023 returnees and 1,556 IDPs (DTM October 2022), has 50 per cent of hills where the resilience situation is estimated to have improved and where the population would not need to leave in the coming months due to the risk of natural hazards. In the event of intervention in this commune, Ntega with similar levels of stability could benefit from effective synergy of intervention given its proximity (see Annex 7.2).

Stability Index: Average score per commune



This map is for illustration purposes only. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the International Organization for Migration.

6. CONCLUSION

The analysis presented in this report provides a better understanding of the main influencing indicators and gives an insight into possible programmatic responses in the targeted communities.

The results of this first round of the Stability Index implemented in Burundi with the participation of all stakeholders reveal a number of indicators that have a greater impact on stability, the majority of which are related to resilience to natural hazards, livelihoods and access to basic services. Addressing these influential indicators in humanitarian or development interventions would contribute to the stability of most hills hosting returnees and IDPs.

It can also be seen that the level of resilience to natural hazards influences the overall stability score, as 5 out of 10 indicators with the greatest weight are related to the level of damage caused by natural hazards. Of particular note are indicators such as access to natural resources, resilience to hazard risk and increased risk from natural hazards.

Furthermore, the results suggest that the indicators belonging to social cohesion have a low impact on the overall Stability Index. Indeed, this scale is relatively good in all hills of Burundi, although the majority of hills are still vulnerable to natural hazards.

Main findings:

Comparative analysis between the hills with the highest and lowest stability scores (Annex 7.3) can provide useful information on programming priorities. For example, in locations with very low stability scores, programming should focus on interventions such as addressing deteriorating access to natural resources, accessibility of health services and disaster risk reduction**.** In contrast, in hills with high stability scores, programming should focus on development and durable solutions for returnees, IDPs or communities hosting displaced people, such as livelihoods promotion and access to basic services.

Given that half of the most influential indicators are related to damage from natural hazards, efforts should therefore focus on developing and promoting policies and programs that impact community resilience.

Data collection and analysis activities implemented by:

With financial support:

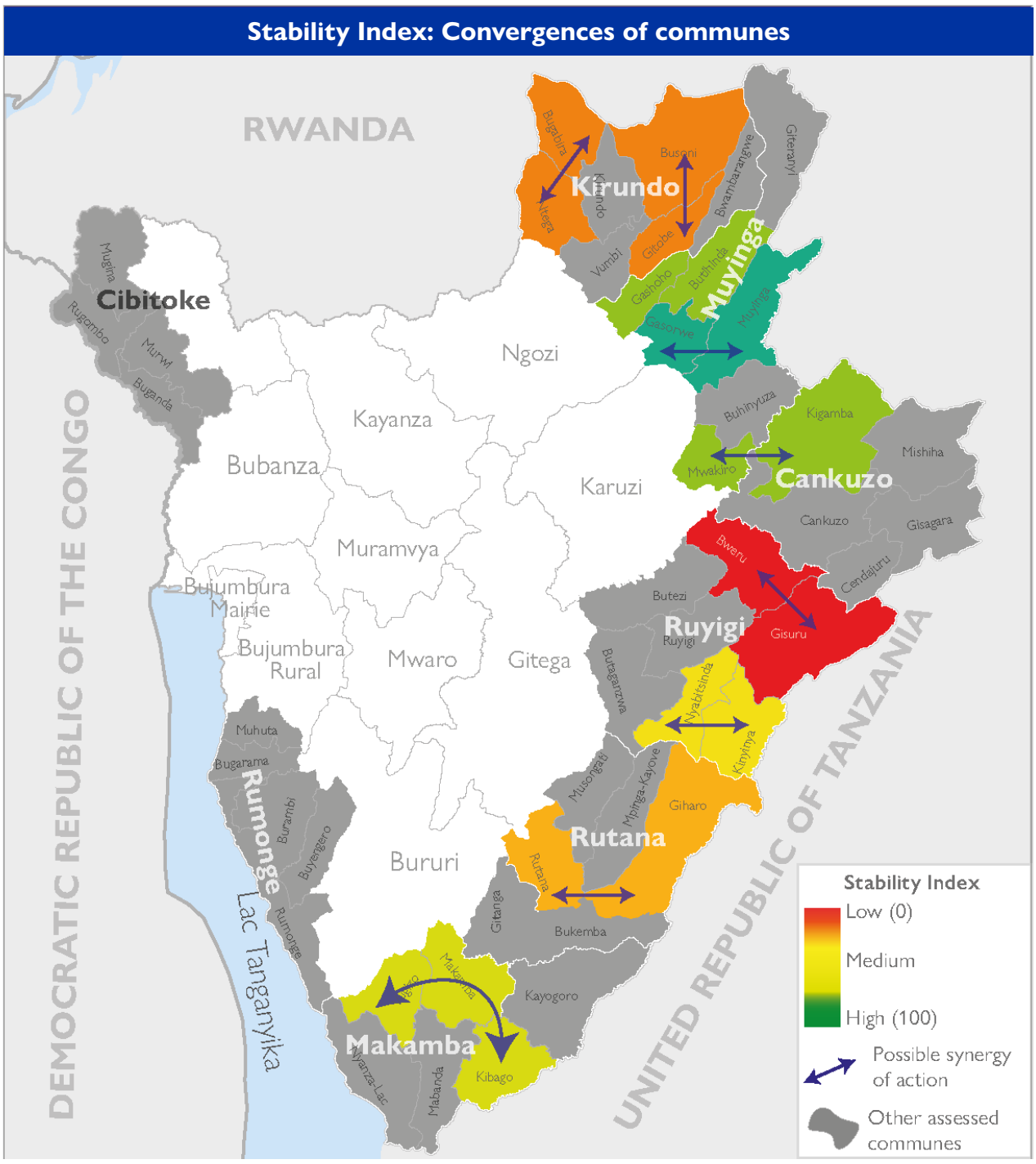
7. ANNEXES

7.1 Secondary sources and definitions

- **JRRP 2021** : 2021 Burundi Joint Refugee Return and Reintegration Plan
- **DTM**: Baseline Evaluation - October 2022
- **RESILIENCE**: capacity of communities living in areas exposed to the consequences of climate change to anticipate and adapt to the risks of natural hazards, and to absorb, respond to and recover from shocks and stresses in an effective and timely manner, without compromising their long-term livelihoods and livelihoods, and ultimately improving their living conditions (ARC-DToolkit_FrenchNeutral_Final_Oct2017.pdf (resiliencenexus.org)

7.2 Maps of convergence zones

This map displays pairs of communes that are geographically close and have the same stability characteristics, where a synergy of interventions is possible.



This map is for illustration purposes only. The boundaries and names shown, and the designations used on this map do not imply official endorsement or acceptance by the International Organization for Migration.

7.3 Table of IS scores and indicator scores (continued)

Province	Commune	Hill	IS Score	Changes in access to services	Development of social cohesion	Intensity of natural hazards	Changes in access to natural resources	Availability of the minimum package (Health)	Access to health services	Market access	Proximity of CDRRCs	Adaptability to DRR	Lack of water
Ruyigi	Butaganzwa2	Rugongo	84%	10	10	10	10	1	10	1	10	10	10
Rutana	Musongati	Shanga	80%	10	10	10	10	10	10	10	1	10	10
Muyinga	Gasorwe	Bwasare	79%	10	10	10	10	10	10	10	10	10	10
Muyinga	Gasorwe	Gasuru	79%	10	10	10	1	10	10	10	10	10	10
Ruyigi	Gisuru	Gisuru	79%	10	10	10	10	10	10	10	10	10	10
Ruyigi	Nyabitsinda	Gatare-Gasenyi	78%	10	10	10	10	1	10	10	10	10	10
Cankuzo	Mishiha	Muzenze	78%	1	10	10	10	10	10	1	10	10	10
Muyinga	Muyinga	Muyinga	77%	10	10	1	1	10	10	10	10	10	10
Makamba	Nyanza-Lac	Rangi	77%	10	10	10	10	10	10	1	1	1	10
Cibitoke	Mugina	Mugina	76%	10	1	10	1	10	10	1	10	1	10
Muyinga	Butihinda	Kamaramagambo	76%	10	10	10	10	10	1	10	10	10	10
Ruyigi	Kinyinya	Nyamigina	75%	10	10	10	10	1	10	1	10	10	10
Muyinga	Butihinda	Buhorana	75%	10	10	10	10	10	10	1	10	1	10
Ruyigi	Ruyigi	Sanzu	75%	10	10	10	10	10	10	10	10	10	10
Muyinga	Muyinga	Kinazi	75%	10	1	10	10	10	10	1	10	10	1
Muyinga	Muyinga	Kinyota	75%	10	10	10	10	1	1	1	10	10	10
Cankuzo	Cankuzo	Musenyi	74%	10	10	10	10	10	1	1	10	10	10
Cankuzo	Kigamba	Shinge	74%	10	10	10	10	1	10	10	10	1	1
Kirundo	Ntega	Rushubije	74%	10	10	10	1	10	1	1	10	10	10
Cankuzo	Kigamba	Rujungu	74%	10	10	10	10	1	10	1	10	10	10
Cankuzo	Cankuzo	Muyaga	74%	10	10	10	10	10	10	1	10	10	1
Muyinga	Mwakiro	Gahekenya	73%	10	10	10	1	10	1	10	6	10	10
Cankuzo	Cankuzo	Cankuzo	72%	1	10	1	10	10	1	10	10	10	10
Cankuzo	Cendajuru	Kiruhura	72%	10	10	10	10	1	1	10	10	1	10
Rumonge	Bugarama	Magara II	72%	10	10	1	10	10	10	1	10	1	10
Makamba	Kayogoro	Gatabo	71%	10	10	10	1	10	10	10	1	10	6
Makamba	Makamba	Makamba I	71%	10	10	10	10	10	1	10	1	10	10
Cankuzo	Gisagara	Nyuro	71%	10	10	10	10	10	10	1	6	1	1
Rutana	Rutana	Gasakuza	71%	10	10	10	10	10	10	1	1	10	1
Rutana	Mpinga-Kayove	Ngarama	70%	10	10	10	10	10	10	10	1	10	1
Rutana	Bukemba	Butare	70%	1	10	1	10	10	10	10	10	1	10
Muyinga	Giteranyi	Mukoni	70%	10	1	10	10	1	10	10	10	1	10
Muyinga	Muyinga	Murama	70%	10	10	10	10	1	1	10	10	10	1
Cibitoke	Rugombo	Rukanaii	69%	10	10	10	10	10	10	1	6	10	6
Muyinga	Muyinga	Rugari	69%	10	10	10	1	10	10	10	1	10	6
Ruyigi	Nyabitsinda	Nyabitsinda	69%	10	10	1	10	10	1	10	10	10	10
Cankuzo	Mishiha	Mishiha	68%	10	10	10	10	1	10	10	10	1	1
Muyinga	Giteranyi	Mika	68%	10	10	1	10	10	1	1	6	10	10
Kirundo	Vumbi	Gasura	68%	1	1	1	1	10	10	10	10	10	10
Kirundo	Ntega	Mugendo	67%	1	1	10	10	10	1	1	10	10	10
Rutana	Gitanga	Kinzanza	67%	10	10	10	10	10	10	10	1	1	10
Muyinga	Gashoho	Muzingi	67%	10	10	10	10	1	10	1	6	10	6
Kirundo	Busoni	Burara	67%	10	10	10	10	10	1	1	10	10	10
Makamba	Nyanza-Lac	Buheka	67%	10	10	1	1	10	1	10	10	10	1
Cankuzo	Cendajuru	Misugi	67%	1	1	1	1	1	1	1	10	10	10
Cankuzo	Gisagara	Mburi	67%	1	1	1	1	10	10	1	6	1	10
Ruyigi	Kinyinya	Kinyinya	66%	1	1	10	10	10	10	1	1	10	10
Muyinga	Gasorwe	Jani	66%	10	10	10	10	10	10	1	6	1	10
Kirundo	Bwambarangwe	Budahunga	66%	1	1	1	1	10	10	10	10	10	10
Rumonge	Rumonge	Mutambara	66%	10	10	1	10	10	10	10	10	1	10
Makamba	Vugizo	Gitaba	66%	10	10	1	1	1	10	1	6	10	6
Rutana	Musongati	Buhinga	66%	10	10	10	10	10	10	10	1	1	10
Cibitoke	Rugombo	Munyika Ii	66%	10	10	1	1	10	1	1	6	10	6
Kirundo	Busoni	Sigu	65%	10	10	10	10	10	10	1	1	10	6
Makamba	Nyanza-Lac	Mukungu	65%	10	10	1	1	10	10	1	6	1	10
Ruyigi	Ruyigi	Ruyigi Rural	65%	10	10	10	10	1	10	1	6	10	1
Cibitoke	Buganda	Nyamitanga	65%	10	10	1	10	10	10	1	10	10	1
Makamba	Mabanda	Karinzi	65%	10	10	10	10	1	10	1	1	1	6
Kirundo	Bwambarangwe	Mukenke I	65%	10	10	1	1	10	10	10	10	10	1
Kirundo	Kirundo	Runyonza	65%	10	10	10	10	10	10	1	1	1	6
Rutana	Giharo	Gakungu	65%	10	10	1	1	10	10	1	10	10	6
Kirundo	Bwambarangwe	Buhoro	65%	10	10	10	10	10	10	10	1	1	1
Ruyigi	Butezi	Nkongwe	65%	1	10	10	1	1	10	1	10	10	10
Kirundo	Busoni	Marembo	65%	10	10	10	10	1	1	10	10	10	6
Makamba	Nyanza-Lac	Kabondo	65%	10	10	1	10	1	1	10	1	1	1
Rumonge	Muhuta	Mubone	64%	10	10	10	10	1	1	1	10	1	1
Rutana	Mpinga-Kayove	Kiguhu	64%	10	10	10	10	10	10	10	1	1	10
Rumonge	Burambi	Gatobo	64%	10	10	1	10	10	10	1	10	10	1
Muyinga	Butihinda	Kavumu	64%	10	10	10	10	1	10	1	10	1	10

7.3 Table of IS scores and indicator scores (continued)

Province	Commune	Hill	IS Score	Changes in access to services	Development of social cohesion	Intensity of natural hazards	Changes in access to natural resources	Availability of the minimum package (Health)	Access to health services	Market access	Proximity of CDRRCs	Adaptability to DRR	Lack of water
Ruyigi	Kinyinya	Ruveri	64%	10	10	10	10	1	1	1	10	10	6
Cibitoke	Rugombo	Kagazi	64%	10	10	10	10	1	10	10	10	10	10
Rumonge	Rumonge	Gihwanya	64%	10	10	10	10	1	10	1	10	10	6
Makamba	Kayogoro	Nyantakara	64%	10	10	10	10	1	1	10	1	10	10
Rumonge	Buyengero	Mudende	63%	10	10	1	10	10	10	1	10	10	6
Ruyigi	Butezi	Gashurushuru	63%	10	10	10	10	1	1	1	10	10	1
Rutana	Giharo	Muzye	63%	10	10	10	10	10	10	10	1	1	1
Cibitoke	Rugombo	Cibitoke	63%	10	10	10	1	10	10	10	10	1	1
Rumonge	Rumonge	Gatete	63%	10	10	10	1	10	10	1	10	10	1
Makamba	Makamba	Ruremba	63%	10	10	10	10	10	1	1	1	1	6
Makamba	Mabanda	Mabanda	63%	10	10	10	10	10	1	10	1	10	10
Ruyigi	Ruyigi	Gasanda	63%	1	10	10	10	1	10	1	6	10	10
Makamba	Kibago	Rubimba	63%	10	10	10	10	1	10	1	1	10	1
Muyinga	Muyinga	Gasasa	63%	10	10	10	10	1	10	1	10	10	1
Kirundo	Kirundo	Yaranda	63%	1	1	10	1	10	1	1	1	10	6
Kirundo	Kirundo	Ceru	63%	1	10	10	1	10	10	1	1	10	10
Kirundo	Kirundo	Murama	62%	10	10	10	10	1	10	10	10	10	1
Ruyigi	Butezi	Rubaragaza	62%	10	10	1	10	10	1	1	10	10	10
Rutana	Gitanga	Nyamabuye	62%	10	10	10	10	1	10	1	1	1	10
Muyinga	Gashoho	Nkohwa	62%	10	10	10	10	1	1	1	1	10	6
Cankuzo	Mishiha	Rutsindu	62%	1	1	10	10	1	1	1	10	10	10
Rutana	Mpinga-Kayove	Buranga	62%	10	10	10	10	1	10	1	1	1	10
Ruyigi	Bweru	Gasenyi	62%	10	10	10	10	10	10	1	10	10	1
Rutana	Giharo	Kabingo	62%	10	10	1	1	10	10	1	10	1	10
Rumonge	Rumonge	Minago	61%	10	10	1	10	10	10	10	10	10	1
Makamba	Kibago	Bukeye	61%	10	10	10	10	10	1	1	1	10	10
Ruyigi	Ruyigi	Kigamba	61%	1	10	1	10	10	10	1	6	10	10
Cankuzo	Gisagara	Camazi	61%	1	1	1	1	10	1	1	6	1	10
Muyinga	Muyinga	Mukoni	61%	10	1	10	10	1	1	1	1	10	10
Muyinga	Gasorwe	Rusimbuko	61%	10	10	10	10	10	10	1	1	1	10
Ruyigi	Bweru	Rubavu	61%	10	10	10	10	10	10	1	1	10	1
Ruyigi	Gisuru	Kinama	61%	10	10	10	10	1	1	1	10	10	1
Ruyigi	Butezi	Munyinya	61%	10	10	10	10	10	10	1	1	10	1
Kirundo	Busoni	Nyagisozi	61%	1	1	1	1	10	10	1	10	10	10
Makamba	Mabanda	Ruvuga	61%	10	10	1	1	10	10	1	1	10	1
Ruyigi	Butezi	Mubira	60%	10	10	10	1	1	10	10	1	10	1
Ruyigi	Ruyigi	Kirambi	60%	10	10	10	10	1	1	1	10	10	1
Ruyigi	Butaganzwa2	Nyange	60%	10	1	1	10	1	1	1	6	10	10
Kirundo	Bwambarangwe	Rusara	60%	10	10	10	1	10	10	1	6	1	6
Kirundo	Bugabira	Rugasa	60%	10	10	1	10	10	10	1	6	10	10
Rumonge	Muhuta	Gitaza	60%	10	10	1	10	10	1	10	1	1	10
Ruyigi	Kinyinya	Karindo	60%	10	10	1	10	1	1	1	10	10	10
Kirundo	Busoni	Rutabo	60%	10	10	10	1	1	1	1	1	10	10
Cibitoke	Murwi	Manege	60%	10	10	10	10	10	1	1	1	1	1
Ruyigi	Gisuru	Nyabitare	60%	10	1	1	1	1	1	10	1	10	10
Makamba	Nyanza-Lac	Mukubano	60%	10	10	10	10	1	1	10	1	1	10
Cankuzo	Cendajuru	Rukoyoyo	59%	1	1	1	10	1	10	1	10	1	10
Muyinga	Gasorwe	Karira	59%	10	10	10	1	1	10	1	6	1	10
Rumonge	Rumonge	Birimba	59%	10	10	1	10	10	1	10	10	10	6
Rumonge	Bugarama	Mugendo	59%	10	10	1	10	1	1	1	10	1	10
Muyinga	Gasorwe	Kiremba	59%	10	10	10	10	1	10	1	10	1	1
Muyinga	Gashoho	Gishambusha	59%	10	10	10	10	1	10	1	1	1	10
Rutana	Giharo	Butezi	59%	10	10	1	10	1	10	10	10	1	6
Muyinga	Giteranyi	Kinyami	59%	1	10	1	10	10	1	1	6	10	10
Ruyigi	Butezi	Rugoti	59%	10	10	10	10	1	1	1	10	10	6
Cankuzo	Cankuzo	Kabeza	59%	10	10	10	10	1	1	1	10	10	1
Kirundo	Gitobe	Nyenzi	59%	1	1	1	10	10	1	1	6	1	10
Muyinga	Giteranyi	Kabogo	59%	10	1	10	1	10	1	1	6	10	10
Makamba	Mabanda	Budatekwa	59%	10	10	10	10	1	1	1	1	10	10
Cankuzo	Cendajuru	Gitaramuka	58%	10	10	10	10	1	10	1	1	1	1
Makamba	Nyanza-Lac	Nyabigina	58%	10	10	1	10	10	1	10	1	10	10
Rumonge	Rumonge	Kagongo	58%	10	10	10	10	10	10	1	1	10	6
Muyinga	Buhinyuza	Nyarunazi	58%	10	10	10	10	1	1	1	10	10	10
Rutana	Giharo	Musenyi	58%	10	10	10	10	1	10	1	10	1	1
Rumonge	Buyengero	Kirama	58%	10	10	1	10	10	10	1	10	10	1
Muyinga	Giteranyi	Rugese	58%	10	10	10	10	1	1	1	6	10	10
Makamba	Kibago	Nyarubanga	58%	1	10	1	10	1	10	1	6	10	6
Kirundo	Ntega	Kinyovu	58%	1	1	10	10	10	1	1	10	10	6
Kirundo	Gitobe	Shore	58%	10	10	10	1	10	10	1	1	1	1
Cibitoke	Buganda	Ndava-Village	58%	10	10	1	10	10	10	10	1	1	6

7.3 Table of IS scores and indicator scores (continued)

Province	Commune	Hill	IS Score	Changes in access to services	Development of social cohesion	Intensity of natural hazards	Changes in access to natural resources	Availability of the minimum package (Health)	Access to health services	Market access	Proximity of CDRRCs	Adaptability to DRR	Lack of water
Cibitoke	Rugombo	Rugeregere	58%	10	10	10	1	10	10	1	1	1	1
Kirundo	Busoni	Kagege	58%	10	10	10	1	1	1	1	1	1	6
Rumonge	Buyengero	Kinama	58%	10	10	10	10	10	10	1	1	1	1
Ruyigi	Kinyinya	Kigangabuko	58%	10	10	1	1	1	10	1	1	10	1
Rutana	Bukemba	Bukemba	58%	10	10	1	1	10	10	1	10	10	1
Rutana	Bukemba	Gihofi	57%	1	1	1	1	1	1	10	10	10	6
Cibitoke	Buganda	Kaburantwa	57%	10	10	1	10	10	1	1	1	1	6
Muyinga	Giteranyi	Tura	57%	10	10	10	10	10	1	1	1	1	10
Rumonge	Burambi	Buhinyuza	57%	10	10	10	1	10	1	1	10	1	6
Rutana	Giharo	Murara	57%	10	10	1	1	1	1	1	10	10	6
Kirundo	Kirundo	Kanyinya	57%	1	1	1	1	1	10	1	10	10	10
Ruyigi	Butaganzwa2	Muriza	57%	10	10	1	1	1	1	10	10	10	1
Ruyigi	Gisuru	Kireka	57%	10	1	10	1	1	1	1	6	10	1
Muyinga	Mwakiro	Bonero	57%	10	10	10	10	1	1	1	1	10	10
Ruyigi	Bweru	Busoro	57%	10	10	1	10	1	10	1	6	10	1
Kirundo	Bugabira	Ruhehe	57%	10	10	1	10	10	1	1	6	10	6
Ruyigi	Butezi	Kirasira	57%	10	10	10	10	1	10	1	6	10	6
Cankuzo	Cankuzo	Muterero	57%	10	10	1	1	1	1	1	10	10	1
Muyinga	Muyinga	Musenyi	57%	1	1	10	1	1	10	1	10	1	6
Muyinga	Buhinyuza	Gasave	57%	10	10	10	10	1	1	10	6	1	10
Kirundo	Busoni	Murore	57%	10	10	10	1	1	1	1	1	1	6
Rumonge	Rumonge	Mwange	56%	1	10	1	1	1	1	1	10	1	1
Cankuzo	Gisagara	Bunyerere	56%	1	1	1	1	1	1	1	6	1	10
Makamba	Nyanza-Lac	Mukerezi	56%	1	10	1	10	1	10	1	6	10	6
Rumonge	Rumonge	Mibanda	56%	10	10	1	10	1	1	1	10	1	6
Rutana	Giharo	Giharo	56%	10	10	1	1	10	1	10	10	10	1
Muyinga	Buhinyuza	Gitaramuka	56%	10	10	10	1	10	10	1	1	1	1
Cankuzo	Kigamba	Rusagara	56%	1	1	1	1	10	1	10	10	10	10
Muyinga	Giteranyi	Kinanira	56%	10	10	10	1	1	10	1	1	1	10
Ruyigi	Bweru	Kirambi	56%	10	10	10	1	1	1	10	1	1	1
Rutana	Gitanga	Nyagisambwe	56%	10	10	10	1	1	10	1	1	1	10
Rutana	Bukemba	Kabanga	56%	1	1	1	1	1	10	1	10	10	6
Makamba	Nyanza-Lac	Muyange	56%	1	10	1	1	10	1	10	10	1	6
Muyinga	Mwakiro	Mwakiro	56%	10	10	1	10	1	1	1	6	10	10
Rumonge	Muhuta	Gabaniro	56%	10	10	1	10	1	1	1	10	1	1
Kirundo	Gitobe	Bigombo	56%	10	10	1	1	1	10	1	10	10	10
Kirundo	Busoni	Gatare	56%	10	10	1	1	10	10	10	6	10	1
Muyinga	Giteranyi	Nonwe	56%	10	10	10	1	10	10	1	1	1	10
Makamba	Kayogoro	Mugeni	56%	10	10	1	1	10	1	10	1	1	1
Muyinga	Giteranyi	Gasenyi	55%	10	10	10	1	1	10	1	1	1	1
Makamba	Nyanza-Lac	Kazirabageni	55%	10	10	1	1	10	1	1	10	10	6
Kirundo	Busoni	Nyabisindu	55%	10	10	10	10	1	1	1	10	1	1
Muyinga	Buhinyuza	Jarama	55%	1	10	1	1	1	10	10	6	10	10
Kirundo	Bugabira	Kiyonza	55%	10	10	1	1	10	1	1	6	1	10
Cankuzo	Gisagara	Muganza	55%	1	1	1	1	1	1	1	10	10	10
Ruyigi	Ruyigi	Nyagutoha	55%	1	1	1	10	10	1	1	10	10	10
Makamba	Nyanza-Lac	Bukeye	55%	1	10	10	10	10	1	10	1	10	6
Muyinga	Giteranyi	Kidasha	55%	10	10	10	10	10	1	1	1	1	10
Kirundo	Busoni	Rwibikara	55%	10	10	1	1	10	10	1	10	1	1
Makamba	Vugizo	Nyarubano	55%	10	10	1	1	10	1	1	1	1	6
Makamba	Kayogoro	Kigomagoma	55%	10	10	10	10	1	1	1	1	1	1
Kirundo	Busoni	Kibonde	54%	1	1	1	1	1	10	1	10	1	10
Muyinga	Giteranyi	Rukusha	54%	10	10	10	1	1	10	1	1	1	10
Kirundo	Gitobe	Butahana	54%	1	1	1	10	10	1	1	10	10	6
Rumonge	Burambi	Gitongwe	54%	10	10	1	10	1	10	1	10	10	6
Ruyigi	Gisuru	Kinanira	54%	10	10	10	1	1	1	1	1	10	10
Makamba	Makamba	Makamba II	54%	10	10	10	10	1	1	1	1	1	10
Muyinga	Giteranyi	Murama	54%	10	10	10	10	1	10	1	1	1	10
Makamba	Nyanza-Lac	Kabonga	54%	10	10	1	10	10	1	1	10	1	10
Cibitoke	Murwi	Buhayira	54%	10	10	1	1	10	1	10	1	1	1
Ruyigi	Ruyigi	Gisoro	54%	1	1	1	10	10	10	1	6	10	1
Ruyigi	Kinyinya	Nyakibere	54%	10	10	10	1	1	1	1	1	10	1
Rumonge	Muhuta	Gasange	54%	10	10	1	1	1	1	1	10	10	1
Kirundo	Bugabira	Kiri	54%	10	10	1	1	10	10	1	6	1	1
Ruyigi	Gisuru	Rusange	54%	10	10	10	10	1	10	1	1	10	1
Cibitoke	Mugina	Rugajo	53%	10	10	1	1	10	1	1	10	10	1
Muyinga	Giteranyi	Ruzo	53%	1	1	1	1	10	1	1	10	1	10
Cibitoke	Buganda	Gasenyi-Rural	53%	10	10	1	1	10	10	10	6	1	1
Makamba	Kayogoro	Mugeregere	53%	10	10	1	10	1	1	1	1	10	10

7.3 Table of IS scores and indicator scores (continued)

Province	Commune	Hill	IS Score	Changes in access to services	Development of social cohesion	Intensity of natural hazards	Changes in access to natural resources	Availability of the minimum package (Health)	Access to health services	Market access	Proximity of CDRRCs	Adaptability to DRR	Lack of water
Kirundo	Bugabira	Gaturanda	53%	10	10	1	10	1	1	1	6	10	10
Kirundo	Vumbi	Rugeri	53%	1	1	10	10	1	1	1	1	10	10
Muyinga	Buhinyuza	Ruvumu	53%	10	10	10	1	1	10	1	1	1	1
Muyinga	Muyinga	Mwurire	53%	10	10	1	1	1	1	1	10	10	1
Kirundo	Ntega	Ntega	53%	10	1	1	1	10	1	10	10	10	1
Rutana	Giharo	Shembe	53%	10	10	1	10	10	1	1	6	10	1
Kirundo	Kirundo	Muramba	53%	10	10	1	10	1	1	1	10	1	6
Cankuzo	Gisagara	Bumba	53%	1	10	1	10	10	1	1	6	1	1
Ruyigi	Butaganzwa2	Biyorwa	53%	10	10	10	10	1	10	1	1	10	1
Ruyigi	Bweru	Ruvyagira	53%	10	10	10	10	1	10	1	1	1	6
Makamba	Nyanza-Lac	Gasaba	53%	10	10	1	10	1	10	1	10	10	1
Cankuzo	Mishiha	Mwiruzi	52%	1	1	1	1	10	1	10	10	10	1
Rutana	Musongati	Kagunga	52%	10	10	1	10	1	10	1	1	1	10
Cankuzo	Gisagara	Gisoko	52%	10	10	1	10	1	1	1	1	1	1
Kirundo	Bugabira	Nyakarama	52%	10	10	1	1	1	10	1	6	1	1
Cibitoke	Rugombo	Rusiga	52%	10	10	1	10	1	10	1	10	1	1
Makamba	Kibago	Murambi	52%	1	10	1	1	1	10	1	1	1	1
Cibitoke	Rugombo	Mparambo I	52%	10	10	1	10	1	1	10	10	1	1
Muyinga	Muyinga	Munagano	52%	10	10	10	1	1	10	1	10	1	1
Muyinga	Gasorwe	Higiro	52%	1	10	10	10	1	10	1	1	10	6
Kirundo	Vumbi	Vumbi	52%	10	10	1	1	1	10	1	10	10	6
Makamba	Vugizo	Karonge	52%	1	10	1	1	10	1	1	10	10	6
Rutana	Giharo	Nkurye	52%	1	10	10	10	1	1	1	10	1	1
Muyinga	Butihinda	Rabiro	52%	1	10	1	1	1	1	1	1	10	1
Makamba	Nyanza-Lac	kabo	52%	1	1	1	1	1	10	1	6	10	6
Muyinga	Gashoho	Gitwa	52%	10	10	10	10	1	1	1	1	10	10
Muyinga	Mwakiro	Rukanya	52%	1	1	1	1	1	10	1	1	1	10
Rutana	Mpinga-Kayove	Nyakabanda	51%	10	10	1	10	1	1	1	1	1	10
Cibitoke	Rugombo	Mparambo Ii	51%	10	10	1	1	1	1	1	10	1	6
Cankuzo	Gisagara	Gisagara	51%	1	1	1	1	1	1	10	10	1	1
Cibitoke	Buganda	Gasenyi-Centre	51%	10	10	1	1	10	1	10	6	1	1
Rumonge	Rumonge	Kizuka	51%	10	10	1	10	1	1	1	1	1	1
Ruyigi	Gisuru	Gacokwe	51%	1	10	1	1	1	1	1	10	10	1
Ruyigi	Kinyinya	Nyamusasa	51%	1	10	1	1	1	1	1	1	10	10
Kirundo	Kirundo	Cewe	51%	10	10	1	1	1	10	1	10	10	6
Rutana	Mpinga-Kayove	Nyakazu	51%	10	10	1	10	1	1	1	1	1	1
Rutana	Giharo	Nyamateke	51%	10	10	1	1	1	10	1	10	1	10
Makamba	Kibago	Nyakazi	50%	1	10	1	10	1	1	10	1	1	1
Cankuzo	Mishiha	Kibimba	50%	1	1	1	1	10	1	10	10	1	10
Makamba	Nyanza-Lac	Rubindi	50%	10	10	10	10	1	1	1	1	10	10
Makamba	Nyanza-Lac	Mugerama	50%	10	10	1	10	1	1	1	6	10	10
Cankuzo	Mishiha	Kaniha	50%	1	1	1	1	10	1	1	10	1	1
Cibitoke	Mugina	Rubirizi	50%	1	10	1	1	10	10	1	10	10	1
Cankuzo	Cendajuru	Kibande	50%	1	1	1	1	1	10	1	10	1	1
Ruyigi	Butaganzwa2	Rugata	50%	10	10	10	1	1	1	1	6	1	1
Kirundo	Ntega	Mihigo	50%	10	10	1	1	1	10	1	10	10	6
Muyinga	Muyinga	Sanzwe	50%	10	10	10	1	1	10	1	1	1	1
Kirundo	Busoni	Kumana	50%	10	10	10	1	1	1	1	1	1	6
Kirundo	Bugabira	Nyabikenke	50%	10	10	1	1	1	1	1	6	1	10
Ruyigi	Bweru	Caga	49%	10	1	1	10	1	1	10	1	1	6
Kirundo	Bwambarangwe	Bunywera	49%	10	10	10	1	1	1	1	1	1	6
Ruyigi	Kinyinya	Nyamunazi	49%	10	10	1	1	1	1	1	1	1	10
Cankuzo	Cankuzo	Kavumu	49%	1	10	1	1	1	1	10	10	10	1
Kirundo	Ntega	Nyemera	49%	10	10	1	1	10	1	1	6	1	6
Rumonge	Rumonge	Rutumo	49%	1	1	1	1	1	1	10	10	1	6
Ruyigi	Gisuru	Kigamba	49%	10	10	10	10	1	1	1	6	1	10
Ruyigi	Kinyinya	Bugongo	49%	10	10	1	10	1	1	1	1	10	10
Kirundo	Vumbi	Nyagatovu	49%	10	10	1	10	1	1	1	10	1	6
Makamba	Nyanza-Lac	Gisenga	49%	10	10	1	10	1	1	1	1	10	10
Muyinga	Giteranyi	Vumasi	49%	10	10	10	10	1	1	1	1	1	10
Kirundo	Bugabira	Rubuga	49%	10	10	1	1	1	1	1	1	1	1
Makamba	Mabanda	Musenyi	49%	1	1	1	1	1	1	1	10	10	1
Kirundo	Busoni	Munazi	49%	10	10	10	1	1	1	1	10	10	6
Muyinga	Buhinyuza	Karehe	49%	10	10	1	1	1	1	1	6	1	1
Rumonge	Bugarama	Magara	49%	10	10	1	10	1	1	1	10	10	10
Ruyigi	Gisuru	Ndemeka	48%	1	10	1	1	1	1	1	10	10	6
Ruyigi	Gisuru	Butarangira	48%	1	10	1	1	1	1	1	10	10	6
Kirundo	Bugabira	Kigoma	48%	10	10	1	10	10	1	1	6	1	6
Cankuzo	Cendajuru	Twinkwavu	48%	1	10	1	1	10	1	10	10	1	1
Muyinga	Butihinda	Kobero	48%	1	1	1	1	1	1	10	10	1	6
Cankuzo	Cendajuru	Gisoro	48%	1	1	1	1	1	10	1	1	1	1
Ruyigi	Nyabitsinda	Kirungu	48%	1	10	1	1	1	1	1	1	10	6
Ruyigi	Nyabitsinda	Nyarumuri	48%	10	10	1	1	1	1	1	1	10	1
Ruyigi	Ruyigi	Bugarama	48%	10	10	1	1	1	10	1	1	10	6
Ruyigi	Nyabitsinda	Bihembe	48%	10	10	1	1	10	1	1	1	1	1
Cibitoke	Murwi	Mugimbu	48%	10	10	1	10	1	10	1	1	1	6
Cankuzo	Kigamba	Gitanga	47%	1	1	1	1	10	1	10	10	1	1
Rutana	Rutana	Butambara	47%	1	1	1	1	1	10	1	10	10	1
Ruyigi	Gisuru	Rukobe	47%	1	10	1	1	1	1	1	6	10	1
Ruyigi	Gisuru	Muvumu	47%	10	1	10	1	1	1	1	1	1	10
Rutana	Bukemba	Rubanga	47%	1	1	1	1	1	1	1	10	10	1

7.3 Table of IS scores and indicator scores (Continued)

Province	Commune	Hill	IS Score	Changes in access to services	Development of social cohesion	Intensity of natural hazards	Changes in access to natural resources	Availability of the minimum package (Health)	Access to health services	Market access	Proximity of CDRRCs	Adaptability to DRR	Lack of water
Muyinga	Giteranyi	Giteranyi	47%	1	10	1	10	10	1	1	6	1	6
Muyinga	Butihinda	Butihinda	47%	10	10	1	1	10	1	1	1	1	1
Makamba	Nyanza-Lac	Ruvyagira	47%	1	1	1	1	1	1	1	6	10	6
Ruyigi	Gisuru	Musha	47%	1	10	1	1	1	1	1	10	10	1
Makamba	Nyanza-Lac	Biniganyi	47%	10	10	1	1	1	10	10	1	1	1
Kirundo	Bugabira	Kigina	47%	10	10	1	10	1	1	1	6	1	6
Makamba	Nyanza-Lac	Nyabutare	46%	10	10	1	1	1	10	1	1	1	1
Makamba	Kayogoro	Sampeke	46%	10	10	1	10	1	1	10	1	1	1
Rumonge	Rumonge	Gashasha	46%	1	10	1	1	10	1	1	6	1	1
Kirundo	Ntega	Sasa	46%	1	10	1	1	10	10	1	1	1	1
Kirundo	Ntega	Buringanire	46%	1	1	10	1	1	1	1	6	1	10
Ruyigi	Nyabitsinda	Nyagitika	46%	10	1	1	10	1	1	1	10	10	6
Cibitoke	Buganda	Nimba	46%	1	10	10	1	1	1	1	10	10	1
Cankuzo	Kigamba	Humure I	46%	1	1	1	1	10	1	1	10	10	1
Rutana	Rutana	Musenyi	46%	1	1	1	1	1	1	1	10	10	1
Ruyigi	Kinyinya	Musumba	46%	1	10	1	1	1	1	1	1	10	6
Makamba	Kayogoro	Buhema	46%	1	1	1	1	10	10	1	10	1	10
Rumonge	Rumonge	Muturirwa	46%	10	10	1	10	1	1	1	10	1	6
Ruyigi	Gisuru	Nyabitaka	46%	10	1	1	1	1	1	1	1	10	6
Cibitoke	Rugombo	Samwe	45%	10	10	1	1	1	1	1	1	10	6
Kirundo	Gitobe	Kivumu	45%	1	1	1	10	10	1	1	10	10	1
Ruyigi	Gisuru	Mwegereza	45%	10	10	10	10	1	1	10	10	10	1
Ruyigi	Gisuru	Kabuyenge	45%	1	10	1	1	1	1	1	6	10	6
Muyinga	Giteranyi	Mugano	44%	1	1	10	1	1	10	1	1	1	10
Makamba	Kayogoro	Buga	44%	1	1	1	1	1	1	1	1	1	6
Muyinga	Giteranyi	Rumandari	44%	1	1	1	1	1	1	1	10	1	6
Ruyigi	Butaganzwa2	Mugege	44%	10	10	1	10	1	1	1	6	10	1
Kirundo	Bwambarangwe	Ruyenzi	44%	10	10	1	10	1	10	1	10	1	6
Muyinga	Giteranyi	Gakoni	44%	1	1	1	1	1	1	1	10	10	6
Ruyigi	Bweru	Nkanda	44%	10	1	10	1	1	1	1	1	10	1
Ruyigi	Kinyinya	Vumwe	44%	10	10	1	1	1	10	1	1	1	1
Cibitoke	Murwi	Masha	44%	10	10	1	1	1	1	1	6	1	1
Cibitoke	Buganda	Kansega	44%	10	10	1	10	1	1	1	6	1	1
Ruyigi	Butezi	Sorero	43%	10	10	1	10	10	1	1	1	10	1
Rutana	Giharo	Nyabakara	43%	10	1	1	1	1	1	1	10	1	6
Kirundo	Gitobe	Gihinga	43%	10	1	1	1	1	1	10	6	1	1
Makamba	Nyanza-Lac	Mvugo	42%	1	1	1	1	1	10	1	10	10	1
Ruyigi	Bweru	Nyamugari	42%	1	1	1	1	10	10	1	10	1	1
Cankuzo	Cankuzo	Kabuga	42%	1	1	1	1	1	10	1	10	10	1
Cankuzo	Mishiha	Rukwega	42%	1	1	1	1	1	1	1	1	1	1
Muyinga	Buhinyuza	Buhinyuza	42%	1	10	1	1	1	1	1	1	1	1
Makamba	Nyanza-Lac	Mwimbiro	42%	10	10	1	10	1	1	1	6	10	1
Kirundo	Busoni	Gatete	42%	1	10	1	1	10	1	1	10	1	1
Ruyigi	Butaganzwa2	Batye	41%	10	10	1	1	1	1	10	1	1	1
Kirundo	Vumbi	Kavumu	41%	1	10	1	1	1	1	1	6	1	1
Kirundo	Busoni	Ruheha	41%	10	10	1	10	1	1	1	10	1	6
Kirundo	Busoni	Gisenyi	41%	10	10	1	1	10	1	1	10	1	6
Makamba	Makamba	Kizingoma	40%	1	1	1	1	1	1	1	10	10	1
Cankuzo	Gisagara	Gitwenge	40%	1	1	1	1	10	1	1	10	1	1
Muyinga	Giteranyi	Karugunda	40%	1	1	1	1	1	1	1	6	1	6
Ruyigi	Ruyigi	Nyarunazi	40%	1	1	1	1	1	10	1	6	1	1
Kirundo	Vumbi	Gahe	39%	10	10	1	10	1	1	1	10	1	6
Ruyigi	Bweru	Busuma	39%	10	10	1	1	1	1	1	1	1	1
Ruyigi	Butezi	Senga	39%	10	1	1	1	1	1	1	10	10	1
Rutana	Giharo	Nkanka	39%	10	10	1	10	1	1	1	1	10	1
Cibitoke	Murwi	Ngoma	39%	1	10	1	1	10	1	1	1	1	1
Makamba	Nyanza-Lac	Mukimba	39%	1	1	1	1	1	10	1	10	1	10
Muyinga	Giteranyi	Rusenyi	39%	1	1	10	1	1	10	1	6	1	1
Kirundo	Vumbi	Gashingwa	39%	1	1	1	1	1	1	1	10	10	1
Cibitoke	Buganda	Ruhagarika	39%	10	10	1	1	10	1	1	1	1	1
Kirundo	Kirundo	Kavomo	38%	1	10	1	1	1	1	1	6	1	1
Kirundo	Busoni	Kivo	38%	1	1	1	1	1	1	1	10	10	6
Ruyigi	Gisuru	Munyinya	38%	1	1	1	1	1	1	1	10	1	1
Kirundo	Ntega	Gisitwe	38%	1	1	1	1	10	1	1	1	10	1
Makamba	Nyanza-Lac	Mugumure	37%	10	10	1	10	1	1	1	1	1	1
Muyinga	Giteranyi	Shoza	37%	1	1	1	1	1	1	1	6	10	1
Makamba	Nyanza-Lac	Kiderege	37%	1	10	1	1	1	1	1	1	1	1
Muyinga	Giteranyi	Kijumbura	36%	1	1	10	1	1	1	1	1	1	1
Kirundo	Kirundo	Runanira I&II	36%	1	1	1	1	1	1	1	6	1	6
Muyinga	Giteranyi	Rubenga	36%	1	1	1	1	1	1	1	6	1	1
Rumonge	Rumonge	Mugomere	36%	10	10	1	10	1	1	1	1	10	1
Makamba	Mabanda	Nyamugari	34%	1	10	1	1	1	1	1	1	1	1
Ruyigi	Gisuru	Nyarumanga	34%	1	1	1	1	1	1	1	1	1	1
Ruyigi	Butaganzwa2	Rubambagire	33%	1	1	1	1	1	1	1	10	1	1

674 Survey Indicators

ANCHORING QUESTIONS: PERCEPTION OF STABILITY

These key indicators were used to measure the perception of stability in each locality. The key indicators were then tested against each of the following thematic indicators to identify the most influential thematic indicators on the perception of stability.

Sense of resilience to natural hazards on the hill

Perceived level of resilience to natural hazards on the hill

Ability to continue living on the hill

If the people on the hill feel they have to leave in the next six months

Changes in perception of resilience in the last 6 months

Community perception of changes in resilience to natural hazards than six months ago

Changes in perceived access to services in the last 6 months

Community perception of the evolution of access to services than six months ago

Changes in the perception of social cohesion in the last 6 months

Community perception of the evolution of social cohesion than six months ago

SCALE 1: LIVELIHOODS AND ACCESS TO BASIC SERVICES

Changes in access to basic services

If the community feels that access to basic services has deteriorated

Access to quality housing

Proportion of households with access to a permanent shelter

Level of housing destruction

Proportion of dwellings destroyed due to natural hazards in the last 2 years

Availability of health facilities

Existence of a health structure on the hill or on a neighbouring hill

Access to health facilities

If community members who needed treatment in the last six months were able to do so

Access to the minimum package of care provided at the health centre

If health centres are able to deliver the curative and preventive health care required at their level

Access to the health insurance card

Capacity of households to obtain health insurance cards

Access to safe drinking water

Access to drinking water and availability on the hill

Access to basic schooling

Access to basic education and availability of schools on the hill or nearby

Access to the market

If markets exist and are regularly supplied

Access to electricity

Proportion of the community that have access to electricity in their households.

Ownership of agricultural land

Proportion of households with access to arable land.

Access of returnees and IDPs to arable land

If returnees and IDPs have access to arable land like members of the host community

Access to the fishing area

Existence and accessibility of fishing areas in the hill

Presence of authorities during periods of instability

If the authorities were present in times of instability

Access to the phone network

Access to the telephone network on the hill

Access to civil status services

If civil registry services are available and provide satisfactory services

Access to judicial proceedings

If the judicial bodies are available and provide satisfactory services

Access to land law

Proportion of the community who have registered their land with the communal land services

Accessibility and effectiveness of conflict resolution mechanisms

If conflict resolution mechanisms in the community are effective

Access to civil status documents

Level of possession by community members of civil status documents (identity card, marriage certificate, birth certificate, etc.)

7.4 Survey Indicators (Continued)

SCALE 2: SOCIAL COHESION

Level of social cohesion

If the community feels that social cohesion has deteriorated

Illegal occupation of a house, land and property

Illegally occupied land, housing or property (without permission from family, neighbours, local authorities)

Theft of personal belongings

Vol d'effets personnels et bétail signalés dans la colline au cours des 6 derniers mois

Participation in public life

Whether residents are able to carry out basic activities without worry (going to the market, letting children play outside, street vendors, etc.)

Level of cohabitation and socialization

Level of participation of community members in social events

Level of mutual aid and cooperation

Level of cooperation between neighbours in case of problems (such as water or food supply) in the locality

Level of understanding and confidence

Level of trust between community members: can they lend money, leave custody of children,... to their neighbours

Dispute between returnees or IDPs and the host community

Disputes involving returnees or IDPs against the host community or vice versa

Clashes involving different social groups (religious, political)

Incidents or clashes involving two groups (religious, IDPs/returnees/host communities) on the hill

Participation in public affairs (associations, political parties, cooperatives, religious groups, etc.)

Level of participation in public and political affairs (political parties, cooperatives, associations, etc.)

Equitable access to services for all categories of the community (returnees, host community, IDPs)

People on the hill have equal access to basic services and resources, regardless of their age, gender or status (returnee, IDP, host community).

SCALE 3: LEVEL OF DAMAGE CAUSED BY NATURAL HAZARDS

Developments in access to natural resources

If the community feels that access to natural resources has deteriorated

Increased risk from natural hazards

If the community feels that it is often faced with the risks associated with increased natural hazards

Level of resistance of school infrastructures

If the community feels that the schools are built in a sustainable way

Level of damage to school infrastructures

Frequency with which schools are destroyed by natural hazards

Student access to school facilities

Do school children have easy access to schools

Level of market resilience

If the community considers that the markets are built in a sustainable way

Level of market damage

Frequency with which markets are destroyed by natural hazards

Food scarcity due to natural hazards

Frequency of food shortages due to natural hazards

Proportion of agricultural land affected by natural hazards

If natural hazards destroy crops

Level of disruption of activities due to natural hazards

If daily activities (ploughing, selling, studying, etc.) have been disrupted by natural hazards

Level of resistance of the shelters

If the community feels that the household shelters are built in a sustainable way

Destruction of latrines due to natural hazards

Frequency with which latrines are destroyed by natural hazards

Resilience of health infrastructure

If the community feels that the health infrastructure is built in a sustainable way

Access to health infrastructure

Do patients have easy access to health facilities

Shortage of medicines due to natural hazards

Frequency of medicine shortages due to natural hazards

Proximity of disaster risk reduction committees

Are disaster risk reduction committees active and close to the community?

Participation in simulation exercises

Level of participation of community members in simulation exercises for natural hazard response preparedness

7.4 Survey Indicators (Continued)

SCALE 3: LEVEL OF DAMAGE CAUSED BY NATURAL HAZARDS (CONTINUED)
Knowledge of the early warning system
Are community members aware of the early warning system on the hill?
Knowledge of the community gathering place
Are community members aware of the agreed community gathering place on the hill
Participation in mitigation activities
Level of participation of community members in mitigation activities to cope with natural hazards
Knowledge of information sources on natural hazard preparedness and response
Level of community members' knowledge of information sources on natural hazard preparedness and response
Agricultural land likely to be affected by natural hazards
Proportion of agricultural land potentially affected by natural hazards
Concern about the risk of loss of livestock
If community members are concerned about losing their livestock to natural hazards
Concern about the risk of insecurity due to natural hazards
If community members are concerned that natural hazards could cause insecurity
Existence of local hazard preparedness policies
Existence of policies implemented at local level to prepare for climate hazards
Measures taken to increase community resilience through adaptation mechanisms
Measures taken to increase community resilience through adaptation mechanisms
Community dependence on the earth as a natural resource
Whether the need for arable land is met or whether there are alternatives to fill any shortfall
Community dependence on wood as a natural resource
Whether the need for cultivable wood is met or whether there are alternatives to fill a possible deficit
Community dependence on water as a natural resource
Whether water needs are being met or whether there are alternatives to meet a possible deficit
Biodegradable waste management policy
Ways of managing biodegradable household waste
Non-biodegradable waste management policy
Ways of managing non-biodegradable waste from households