

SOLOMON ISLANDS

Earthquake 7.8 (December 9, 2016)

Livelihood Committee Initial estimates
All information needs to be verified and may change
Date released: 28 December 2016



Geographic impact

An undersea earthquake of magnitude 7.8 occurred at 4:39 am on Friday, 9 December 2016, 62km west southwest of Kirakira, Makira Province, Solomon Islands.

Following this earthquake, a tsunami warning was issued for Makira and Temotu, and a tsunami watch for Malaita, Guadalcanal, Renbel and Isabel was put in place.



Makira Island
main area of impact

5
wards highly affected



**Broad ridges, stable/
unstable slopes,
narrow ridges, and
valleys: narrow
floodplains and
bouldery terraces**



2065 households
affected



10325 people
affected



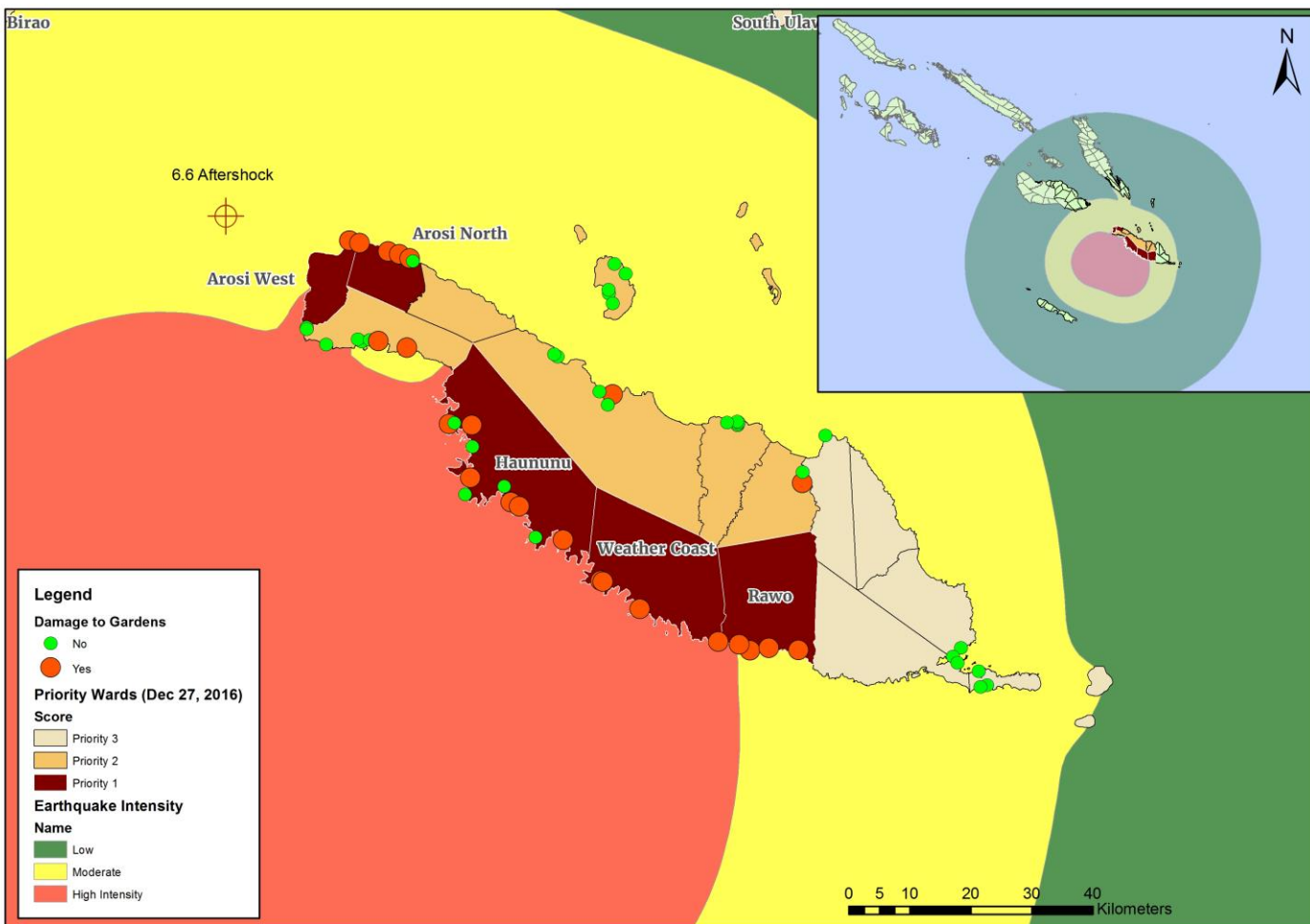
4,972 people in
need of assistance



**Subsistence
farming and
livestock
raising**
are the dominant
livelihoods



Fishing
is a key economic
activity



LIKELY FOOD SECURITY & LIVELIHOODS IMPACT

Priority 1 (high food security impact)

People engaged in subsistence farming and those not growing anything in the three (3) highly affected (geo-impact zone 1) wards in the island of Makira. These people are also assumed to be engaged in subsistence fishing.

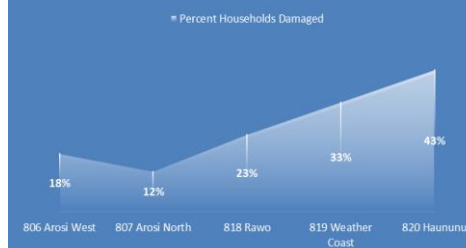
4,972
people

Priority 2 (moderate food security impact)

People engaged in subsistence farming and those not growing anything in the eight (8) affected (geo-impact zone 2) wards in the island of Makira. These people are also assumed to be engaged in subsistence fishing.

5353
people

PERCENT HOUSEHOLDS DAMAGED





Initial Damage Assessment\ (Livelihoods)

Initial Damage Assessment : Quickly, after the initial earthquake event, the NDMO dispatched field teams to complete an initial damage assessment (IDA) survey. On December 22nd results of the multisector rapid assessment were released to the sectoral committees engaged in disaster response, including the Livelihoods Committee. Based on the results of the IDA, the initial 72 hours assessment has been updated to reflect the new information.

Priority 1 Wards increase to five in total. Rawo, Haununu, the Weather Coast, as well as Arosi North and West show damages to food and livelihoods. Salt water intrusion, land slippages and locations on sandy loam soil have led to extensive garden damages.

Garden damage reported in 29 villages across the 5 affected Wards.



Food Access and Availability is strained. Between damage to subsistence gardens, as well as availability in shops and markets reported in the IDA, some villages report supplies will dwindle after a week if things have not stabilized.



Detailed Sectoral Assessment by the Livelihoods Committee

Detailed Sectoral Assessment (DSA): After the 72 hour assessment work through, and during the initial return of the IDA finding, the Solomon Islands Livelihoods Committee chaired by the Ministry of Agriculture, began intensive preparations for a Detailed Sectoral Assessment.

The Livelihoods Committee finalized the detailed assessment questionnaire, and this has been translated into Kobo Toolbox. FAO has kindly lent the committee 9 tablets to conduct the detailed assessment, complemented by three additional tablets from Oxfam. Oxfam will generously support the DSA with additional funding for logistics and planning.

The regional Pacific Food Security Cluster has assisted the Livelihoods Committee in this process, including advising on the survey design, implementing it in Kobo, and training extension officers in assessment survey deployment.

After much planning, and with the budget requirements starting to become clear, the Livelihoods Committee is planning on dispatching teams of extension officers and NGO partners to Makira during the first week of January.

The Livelihoods Committee DSA is proposed to be a household level survey which would sample 300 HHs in the Priority 1 wards. Although the IDA conducted by the NDMO has been extremely helpful in determining needs of affected people, the DSA will drill down into how the earthquake has affected food security and livelihoods, and allow for better targeting of affected people and more efficient allocation of valuable resources to do so.

The Detailed Sectoral Assessment will help the Livelihoods Committee collect additional and more in-depth sectoral information than the IDA.

Subsistence agriculture, cash cropping, livestock, agro-industry, fishing and details about wage-based industries and how they were affected will be captured.



Recommended Actions from IDA





Livelihood profile

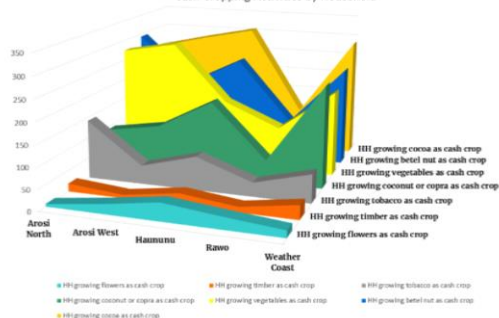
Livelihoods: The main livelihood activities in the Makira Province are mostly subsistence farming and small livestock raising. Fishing is done for both home consumption and sales to market. Small businesses include homestay and canteens. Timber milling activities are also practiced in the area.

Agriculture: The major agricultural activities are associated with cocoa and coconut plantation and processing units. Trading of cocoa and copra is also a major activity.

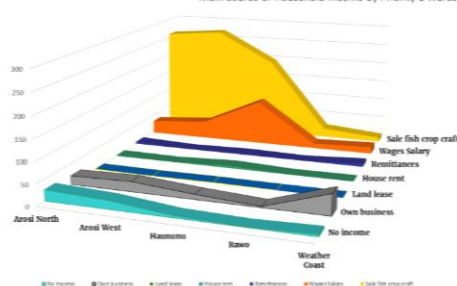
Fishing: Fishing is done all year round. People engaged in it both for home consumption and sales to market. Among the main marine produce harvested all year round is the trochus shell.

2009 Census Information (Income/Livelihoods)

Cash Cropping Activities by Household



Main Source of Household Income by Priority 1 Wards



? ASSUMPTIONS

Geographic impact: The impact zones were calculated using the Shakemap downloaded from the United States Geological Society (USGS) website. From the original 8 categories in the Shakemap, the impact zones were adjusted to three classes with 3 as the zone of highest impact.

The impact zones were not categorized into 4 classes (with 4 as the area of severest impact) as normally observed in past analysis since making four categories would show that no place in the island of Makira would have been directly hit by the earthquake.

Eventually, in consultation with the Committee members, the generated impact zones were further adjusted. Zone 3 was retained but Zone 2 was subdivided into two representing Zones 2 and 1.

Affected population: Population data were derived from the 2009 Census of the country. The census data was part of the datasets sourced from the PopGIS database. The affected population was computed using three food security and vulnerability indicators, namely type of housing materials, subsistence cultivation and source of drinking water. These indicators were selected from a total list of 11 indicators by a pool of provincial agriculture extension officers from the nine (9) provinces in the country. Total numbers of Priority 1 populations were derived using IDA results of villages showing damage to gardens and other livelihoods.

Priority areas for food assistance/validation: Wards located in impact zone 3 were assumed to be heavily affected by the earthquake and were therefore categorized as priority areas for food assistance / field validation. Based on the initial assessment, there are three areas that should be given immediate attention, namely: Weather Coast, Arosi West and Haununu. Based on IDA results, Rawo and Arosi North have been Priority 1 classification.

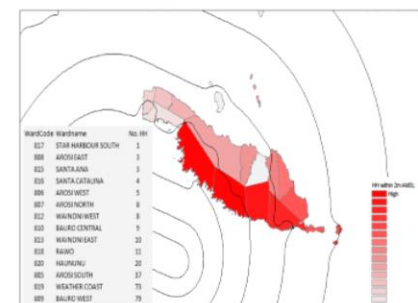
People in need of food assistance: The population in the priority areas who are subsistence farmers or do not grow food are assumed to be in need of food assistance.

Damaged / destroyed houses: Houses in the affected areas are assumed to have been impacted by the earthquake. Damage or destruction would be highest in Impact Zone 3 for houses made up of either makeshift materials or traditional style housing, particularly those that are raised above ground.

Market prices for key commodities: At the moment, there is no available price data for key commodities in the affected areas.



Total number of houses potentially affected by a 2m coastal inundation.
Map by Bryan Pitakia.
UNDP PRRP Hazard GIS Specialist



Contact Information

For more information, contact:

LIVELIHOOD COMMITTEE
Michael Ho'ota, Chairperson, Ministry of Agriculture & Livestock
Sipuru Rove, Risk Resilient and Development Officer

MINISTRY OF AGRICULTURE & LIVESTOCK
Jim Salea, Permanent Secretary
Michael Ho'ota, Director

REGIONAL FOOD SECURITY CLUSTER (FIJI)
Sandra Hart, Regional Cluster Coordinator (WFP)
Scott Higgins, Regional Information Manager (WFP)
Philippe Martins, Regional Cluster Coordinator (FAO)

WFP REGIONAL VAM TEAM
Simon Hollema, Senior Regional Programme Officer (VAM)
Amy Chong, Regional GIS Officer
Yingci Sun, Regional VAM Officer
Juanito G. Berja Jr., National VAM Officer (Philippines)
Elenoa Diani, VAM-GIS Officer (Fiji)

STATISTICAL PROFILE – IDA Livelihoods Results from NDMO

Ward	Village	Estimated total population	Estimated total household	Are food gardens damaged?	Extent of damage?	How long will food supply in the gardens last?	What are the food sources after the disaster?	Food supplies available in market outlets?	Is food supply available in shops?	How long will food supply in shop last?	What agriculture enterprises are affected?	What agriculture facilities are affected?	Are there damages to fisheries centres?	Is there loss or damage to fishing equipment and gear?	What are 3 agriculture and livelihood priority needs
806 Arosi West	Rumahu	320	44	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
806 Arosi West	Bwauraha	540	105	No				Yes	Yes	3 - 4 weeks	None	Cocoa drier	No	No	Food relief Distribution of seedlings Distribution of planting materials
806 Arosi West	Heranigau	600	60	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Distribution of seedlings Distribution of planting materials
806 Arosi West	Hawa'a	151	36	Yes	More damage	3 - 4 weeks	Fish and shells Local Vegetables Fruits/Nuts	No	No		None	Copra drier	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
806 Arosi West	Torowai community	130	30	Yes	More damage	Less than 1 week	Fish and shells Local Vegetables Fruits/Nuts	No	No		None	None	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
807 Arosi North	Ubuna	800	80	Yes	Some damage	More than 1 week	Fish and shells Local Vegetables Others	Yes	Yes	More than 1 week	Coconut Cocoa Piggery	Copra drier Cocoa drier	No	No	Other
807 Arosi North	Tawatana	1200	167	Yes	More damage	1 - 2 weeks	Fish and shells Local Vegetables Fruits/Nuts	Yes	Yes	1 - 2 weeks	None	None	No	Yes	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
807 Arosi North	Maranuu	500	60	Yes	More damage	Less than 1 week	Fish and shells Local Vegetables Fruits/Nuts	Yes	Yes	Less than 1 week	None	Cocoa drier	No	Yes	Food relief Distribution of seedlings Distribution of planting materials Distribution of fishing equipments Recommend DSA
807 Arosi North	Heranlau	160	30	Yes	Some damage	Less than 1 week	Fish and shells Local Vegetables Fruits/Nuts Others	No	Yes	Less than 1 week	None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials Distribution of fishing equipments Recommend DSA
807 Arosi North	Heuru	1200	54	No				No	Yes	3 - 4 weeks	None	None	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments Recommend DSA
818 Rawo	Parego	450	76	Yes	Some damage	1 - 2 weeks	Local Vegetables Fruits/Nuts	No	Yes	3 - 4 weeks	None	None	No	No	Other
818 Rawo	Marapul	150	25	Yes	Some damage	3 - 4 weeks	Giant Taro Local Vegetables Fruits/Nuts	No	Yes	3 - 4 weeks	None	None	No	No	Distribution of seedlings Distribution of planting materials
818 Rawo	Marazone	150	29	Yes	More damage	1 - 2 weeks	Local Vegetables Fruits/Nuts	No	No		None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
818 Rawo	Mange	200	32	Yes	Mostly damage	1 - 2 weeks	Fruits/Nuts	No	Yes	1 - 2 weeks	None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
818 Rawo	Waihaga	550	85	Yes	More damage	1 - 2 weeks	Giant Taro Fish and shells Local Vegetables Fruits/Nuts	No	No		Coconut	Copra drier	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
818 Rawo	Wouwa	370	66	Yes	Mostly damage	Less than 1 week	Fish and shells Local Vegetables Fruits/Nuts	No	No		Coconut	Copra drier	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
819 Weather Coast	Raa	282	32	Yes	Some damage	1 - 2 weeks	Giant Taro Local Vegetables Fruits/Nuts	No	No		Coconut Cocoa	Cocoa drier	No	No	Food relief Other
819 Weather Coast	Anganiwai	200	30	Yes	Some damage	1 - 2 weeks	Giant Taro Fish and shells Local Vegetables Fruits/Nuts	No	No		None	None	No	No	Other
819 Weather Coast	Piruma	370	43	Yes	More damage	3 - 4 weeks	Giant Taro Fish and shells Local Vegetables	No	No		None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
819 Weather Coast	Apurai	350	75	Yes	Some damage	3 - 4 weeks	Giant Taro Local Vegetables	No	No		None	Copra drier	No	No	Recommend DSA
819 Weather Coast	Marunga	502	112	Yes	More damage	3 - 4 weeks	Giant Taro Fish and shells Local Vegetables	No	No		None	None	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
820 Houamuu	Waimarega	233	48	Yes	Some damage	1 - 2 weeks	Fish and shells Local Vegetables Fruits/Nuts	Yes	No		None	Copra drier	No	No	Food relief Other
820 Houamuu	Houtarohagi village	130	12	Yes	More damage	More than 1 week	Giant Taro	No	No		Coconut Cocoa Piggery	Copra drier Cocoa drier Pig pen	No	No	Food relief Distribution of seedlings Distribution of planting materials
820 Houamuu	Marou	250	35	No				No	Yes	3 - 4 weeks	Cocoa	Copra drier	No	Yes	Distribution of planting materials Distribution of fishing equipments
820 Houamuu	Tawahnigau village	29	5	Yes	Some damage	Less than 1 week	Giant Taro	No	No		Cocoa	Copra drier Cocoa drier	No	No	Food relief Distribution of seedlings Distribution of planting materials
820 Houamuu	Aranhata village	60	5	No				No	No		None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
820 Houamuu	Tetere	550	100	Yes	Some damage	3 - 4 weeks	Giant Taro Local Vegetables Fruits/Nuts	Yes	Yes	Less than 1 week	Cocoa	Cocoa drier	No	No	Food relief Distribution of planting materials
820 Houamuu	Apamatawa	52	7	Yes	More damage	1 - 2 weeks	Fish and shells Local Vegetables	No	No		None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
820 Houamuu	Mwanihau	100	17	No				No	No		None	None	No	No	Distribution of planting materials
820 Houamuu	Walperia, Tautau	60	15	Yes	Some damage	3 - 4 weeks	Giant Taro Fish and shells Local Vegetables Fruits/Nuts	No	No		None	None	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
820 Houamuu	Salvation point	48	7	No				No	No		None	None	No	No	Distribution of planting materials Distribution of fishing equipments
820 Houamuu	Hinkawa	165	27	Yes	More damage	3 - 4 weeks	Giant Taro Fruits/Nuts	No	Yes	3 - 4 weeks	None	None	No	No	Distribution of seedlings Distribution of planting materials
820 Houamuu	Haura primary school	370	12	No				No	No		None	None	No	No	Distribution of planting materials Distribution of fishing equipments
820 Houamuu	Wainosi	300	26	Yes	Some damage	3 - 4 weeks	Giant Taro	No	No		None	None	No	No	Distribution of planting materials
820 Houamuu	Pangina	52	10	Yes	More damage	3 - 4 weeks	Giant Taro	No	No		Cocoa	Copra drier Cocoa drier	No	No	Food relief Other
820 Houamuu	Auraha	100	30	Yes	More damage	1 - 2 weeks	Giant Taro	No	No		Coconut Cocoa	Copra drier Cocoa drier	No	No	Food relief Distribution of planting materials
820 Houamuu	Parego	11	3	No				No	No		None	None	No	No	Other
820 Houamuu	Apaoi	360	60	Yes	More damage	3 - 4 weeks	Giant Taro Fish and shells	No	No		None	Copra drier Cocoa drier	No	No	Food relief Other

STATISTICAL PROFILE – IDA Livelihoods Results from NDMO

Ward	Village	Estimated total population	Estimated total household	Are food gardens damaged?	Extent of damage?	How long will food supply in the gardens lasts?	What are the food sources after the disaster?	Food supplies available in market outlets?	Is food supply available in shops?	How long will food supply in shop last?	What agriculture enterprizes are affected?	What agriculture facilities are affected?	Are there damages to fisheries centre?	Is there loss or damage to fishing equipment and gear?	What are 3 agriculture and livelihood priority needs
804 Ugi And Pio	Rurungna	50	5	No				Yes	Yes	More than 1 week	None	Copra drier	No	No	Distribution of seedlings Distribution of planting materials
804 Ugi And Pio	Hakanpua	200	29	No				Yes	Yes	1 - 2 weeks	None	None	No	No	Other
804 Ugi And Pio	Suena	556	86	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
804 Ugi And Pio	Hunuta	400	72	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
804 Ugi And Pio	Alangawla	14	4	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
804 Ugi And Pio	Pawa secondary school	465	26	No				Yes	No		None	None	No	No	Distribution of seedlings Distribution of planting materials
805 Arosi South	Anuta	200	40	No				Yes	Yes	3 - 4 weeks	Others	None	No	No	Distribution of seedlings
805 Arosi South	Waawa	148	19	No				Yes	No		Others	None	No	No	Distribution of seedlings Distribution of planting materials
805 Arosi South	Oneibia	300	76	No				Yes	Yes	More than 1 week	None	None	No	No	Distribution of seedlings
805 Arosi South	Giroia	120	20	Yes	Some damage	1 - 2 weeks	Local Vegetables Fruits/Nuts	No	No		Cocoa	None	No	No	Food relief
805 Arosi South	Hawaa logging camp	200	27	Yes	Some damage	3 - 4 weeks	Local Vegetables	Yes	Yes	3 - 4 weeks	None	None	Yes	Yes	Food relief Distribution of planting materials
805 Arosi South	Bia	230	50	No				No	Yes	Less than 1 week	Cocunut Cocoa	Copra drier	No	No	Distribution of planting materials Other
805 Arosi South	Tarahura'a	250	50	No				No	Yes	1 - 2 weeks	None	None	No	No	Other
808 Arosi East	Tawarahaimarae	220	22	Yes	Some damage	3 - 4 weeks	Others	No	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Manita	450	68	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Puira	50	12	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Pamua community	650	40	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Distribution of planting materials
809 Bauro West	Masidonia Village	1503	224	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Wango village	408	88	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Mwaniwaro village	55	32	Yes	Some damage	3 - 4 weeks	Fruits/Nuts	Yes	Yes	3 - 4 weeks	None	None	No	No	Distribution of planting materials
809 Bauro West	Kaukauragana	300	40	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Distribution of seedlings Distribution of planting materials Distribution of fishing equipments
809 Bauro West	Mamaka	56	9	Yes	Some damage	More than 1 week	Local Vegetables	Yes	Yes	1 - 2 weeks	None	None	No	No	Other
809 Bauro West	Wasu community	120	20	No				Yes	Yes	1 - 2 weeks	Cocoa	Cocoa drier	No	No	Other
809 Bauro West	Kakaona village	186	55	No				Yes	Yes	3 - 4 weeks	None	Copra drier	No	No	Other
809 Bauro West	Nukukaisi village	3000	300	Yes	Some damage	3 - 4 weeks	Giant Taro Fish and shells Masi Local Vegetables Fruits/Nuts	Yes	Yes	3 - 4 weeks	Cocoa	Copra drier Cocoa drier	No	No	Food relief Distribution of planting materials
809 Bauro West	Waimasi village	60	20	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Pogo village	28	6	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Kaonsugu village	2500	260	Yes	More damage	3 - 4 weeks	Local Vegetables	Yes	Yes	3 - 4 weeks	None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
809 Bauro West	Tawapuna village	102	16	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
809 Bauro West	Makirima	150	50	No				No	No		None	None	No	No	Other
809 Bauro West	Ago village	35	6	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Other
810 Bauro Central	Kirakira Zone 4	300	60	No				Yes	Yes	More than 1 week	None	None	Yes	No	Other
810 Bauro Central	Kirakira Zone 3	300	50	No				Yes	Yes	3 - 4 weeks	None	None	Yes	No	Other
810 Bauro Central	Kirakira Zone 2	500	40	No				Yes	Yes	More than 1 week	None	None	No	No	Other
810 Bauro Central	Kirakira Zone 1	300	100	No				Yes	Yes	More than 1 week	None	None	Yes	No	Recommend DSA Other
810 Bauro Central	Copeland Huro	500	100	No				Yes	Yes	More than 1 week	None	None	Yes	No	Other
810 Bauro Central	Warohinou primary school and community suwasi	400	47	Yes	More damage	1 - 2 weeks	Others	Yes	Yes	More than 1 week	None	None	No	No	Food relief Distribution of seedlings Distribution of planting materials
810 Bauro Central	Nawote community	76	16	No				Yes	Yes	More than 1 week	None	None	No	No	Other
810 Bauro Central	Nakume Village	19	9	No				Yes	Yes	3 - 4 weeks	None	None	No	No	Distribution of planting materials