



Highlands El Niño WASH and Agriculture Resilience Project

Reporting Period:	December 2015 – December 2016
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Introduction and Current Situation

El Niño affects the weather in large parts of the world, depending strongly on location and season. The strongest effects for the 2015-16 event was lower than usual precipitation in South-East Asia and the western Pacific Ocean¹.

The PNG highlands experienced localised frost events in addition to a widespread reduction in rainfall between May and December 2015. The provinces most affected by the drought did not have significant rain for six months and this hot dry spell resulted in food and water scarcity.

Drought killed or damaged many crops and made them more vulnerable to pests – most notably the sweet potato weevil, which is most damaging in dry conditions. Reduced cloud cover resulted in several frost events at higher altitudes – with a particularly severe event from 11-14 August 2015. This destroyed a wide range of crops, most notably sweet potatoes, which are the main staple in most of the affected areas.

In addition, many small streams dried up as a result of the drought with the result that larger and more polluted streams and rivers had to be used as sources of drinking water, resulting in a higher incidence of diarrhoeal disease. As water sources dried up more time was required to fetch water, which primarily affected women.

To respond to the need for improved access to clean water, CARE proposed a WASH response to the Australian High Commission in PNG and was granted 450,000AUD to carry out the proposed activities. After the signing of the grant agreement, the Australian Government gifted 35,000 jerry cans to the project – which meant the project was able to reallocate some of the funds to drought adaptive agriculture activities.

CARE's approach to Gender and Equity in this project

CARE actively promotes gender equity and women's voice in all of its work. This was evident throughout the El Niño response. An El Niño Highlands Rapid Gender Analysis was conducted in October 2015, with balanced gender teams. This gender analysis and a detailed assessment was utilised in the design of emergency response activities in November/ December. Population and government hotspot data of the impact of El Niño were further utilised to support assessment findings in identifying vulnerable districts for these activities to focus response interventions.

Beneficiary selection was based on "hotspot" monitoring, including those based on differential gendered impacts of the crisis. As such, the response included people with specific vulnerabilities, including single and women headed households and people living with disability. Protocols were developed during the inception workshop to ensure gender sensitive field teams consulted men and women during registration (collecting SADD around household profiles), socialisation and identification of beneficiaries. As well as set-up and design of appropriate distribution processes

¹ OCHA 2015

(identifying site, considered household daily activities/calendar to adapt activities etc), there was discussion across program support and program teams around the choice of relief items (i.e. collapsible jerry cans), gender balanced recruitment in the composition of field teams and mechanisms that included targeted collection of feedback from males and females of different ages.

Specific examples of gender consideration included nutrition activities and screening. When malnourished children were identified, consultation was undertaken with both parents about referral to health centres and parents were supported financially to accompany their children. One example is of a CARE staff member who made a commitment to a father to travel with his partner and their daughter to the nearest town health centre – where they had not visited for some time; the father followed several days later, enabling him to support the referral. The father was reported as being thankful to CARE once he arrived at the town and found his wife and child safe and well.

During socialisation of all activities, CARE field teams had clear protocols that outlined how teams would inform communities (both women and men) of the planned activities. Village leaders were approached for formal introductions to communities, and women and men were brought into community household registration processes and decision making to ensure more accurate and complete registration processes were undertaken. Feedback mechanisms were set-up (phone, field team monitoring, Post Distribution Monitoring-PDM, focus groups and key informant interviews). In addition, PDM's were able to collect some examples of behaviour change around gender roles, particularly in relation to collection of water - where it was reported by community members that men increased their participation in water collection as the new jerry cans were 'fun' to carry.

M&E systems collected Sex and Age Disaggregated Data (SADD) information on a systematic basis across PDMs, Household registration and feedback mechanisms. This information was used to adjust programming where necessary. For example, during initial analysis of Hygiene Promotion training attendance, significant numbers of men were attending although women are traditionally responsible for household hygiene and health, cleaning and cooking. Follow-on hygiene activities re-doubled efforts to identify larger percentages of women participants. Targetted single headed households were able to access distribution items due to the consideration of protection risks ensuring access to relief items. Household registration data was also used to identify more vulnerable households - single headed, elderly - and ensure that they were supported in accessing distribution items.

Key Achievements

The aim of CARE's El Niño response in Papua New Guinea was to provide immediate assistance to the most vulnerable communities and to protect and strengthen food security/livelihoods resilience.

WASH NFI Distributions

Under this grant, CARE reached **10,013 households (HHs) - approximately 50,064 people - in 8 districts within 3 provinces (Eastern Highlands, Chimbu, and Morobe)**. The sex and age breakdown of people reached was:

M 0-5	F 0-5	M 6-14	F 6-14	M 15-49	F 15-49	M 50+	F 50+
4,868	4,522	7,035	5,941	11,698	10,994	2,298	2,708

Each household WASH Kit included:

- Two 10L collapsible jerry cans
- 360 Aquatabs (three-months supply)
- 10 bars of soap
- WASH Information, Education and Communication (IEC) materials

In addition, CARE and its partners provided information awareness at distribution points on use of aqua-tabs and basic hygiene to the entire community. Over 20,000 individuals attended these sessions. As well, 286 (189 male; 97 female) health workers and Village Health Volunteers were trained to provide advice on hygiene promotion, sanitation and drought coping measures.



WASH Infrastructure Repair and Construction

With support from local partner CSO Village Kit, CARE was able to complete WASH infrastructure repairs at 4 health facilities (Segima, Kangir, Garasa and Wonenara) and one elementary school (Kangir).

After more than five years of going without water due to a broken hand pump, the Wonenara health sub-centre received a new pump with installation completed on 20 September 2016.

Garasa health sub-centre in Waria LLG, Bulolo District Morobe was supported with repairs to leaking pipes and installation of a tapstand at the health staff house on 17 August, 2016.

Kangir Health Centre Water Supply and Community Water Supply was completed on 13 October 2016. Apart from the hardware installation, WASH promotion and training was conducted for health facility staff and the community. Achievements included:

- 1) Community WASH Committee Terms of Reference and Bylaws developed.
- 2) A 9000L storage tank installed which functions as a storage and break-pressure tank
- 3) Three parallel supply lines installed.
- 4) A total of 35 taps installed and functioning effectively.
- 5) The Officer in Charge's house was connected with the existing plumbing.
- 6) The Health Centre was connected with existing plumbing.
- 7) A public shower was installed by the Officer in Charge near the health centre.

Segima Health Centre Water Supply and Community Water Supply was completed on 16 October 2016. Like Kangir, WASH promotion and training was also conducted for the health facility staff and the community. Achievements included:

- 1) Community WASH Committee Terms of Reference and Bylaws developed.
- 2) Catchment dam built.
- 3) Three chamber sediment and sand-filter installed and functioning effectively.
- 4) A total of seven taps installed and functioning effectively.



Photo on right: Tank base work in progress at Kangir

Photo on left: Tippy Tap and Hand-wash session at Kangir Health Centre



Photo on right: 9000L tank with three parallel lines hooked up. The first service line supplies the community. The second line supplies the health centre and health staff residence. The final line supplies the elementary school including the hamlets along the way.

Photo on left: Final inspection and commissioning of water supply at Segima by the Village Kit Technical Team on 16 October 2016. CARE International Staff; John Omahe and Sebastian Womola testing out the tap at one of the staff houses at Segima. A total of seven taps were installed.

Agriculture Resilience

CARE carried out Agricultural Drought Recovery and Adaptation Trainings (ADAPT) training for 408 people² in selected sites in Bulolo and Menyamy Districts, Morobe Province. Training was originally planned for four badly drought affected local level government areas of Hela and Enga. However, that training did not go ahead due to a local deterioration in security due to tribal fighting. As planned, 20 district-based extension workers and other key stakeholders, such as farmers, participated in the CARE-run training. More than half of the participants trained by the extension officers were women. The purpose of the district level training was to provide district staff with the skills and knowledge to transfer key messages for the training. The expectation was that they would provide five skills' training sessions to farmers at sites where CARE could not reach. Due to time constraints related to the crop cycle, this did not happen as planned. One of the contributing factors was the maturation period of seedlings, especially kaukau (sweet potato). These seedlings take 4-5 months to mature. However, the timing of the trainings only allowed

² 198 men and 210 women)

for a one month maturation – not enough time to be replanted as part of the training process. As such, the training plans were disrupted. However, those who were trained did pass on the skills and knowledge that they learnt, especially relating to rebuilding of food gardens in a resilient way and pest management, to other farmers in their close vicinity. This was done in an informal way and skills sharing was verified during a monitoring visit in December 2016 when it was confirmed that the information was passed on to other farmers. For example, plant derived pesticides was a topic of great interest and knowledge identified during the Post Distribution Monitoring.

CARE worked closely with PNG's National Agriculture Research Institute (NARI), which assisted with the establishment of Morobe province replication sites in Menyamya District at Hengwe, Pispon, Pinaka, Jipa and in Bulolo District at Garasa, Gurako, Watut, Yawat. These sites acted as local suppliers of seeds, seedlings and cultivars to communities within those districts. The starter kits included planting materials from the three food groups; carbohydrates (Sweet and Irish potatoes, cassava and corn), plant protein (all the beans and peas) and vegetables. Impact could only be measured at the activity (process) level. Participants were appreciative of how the training was conducted (at the household level) and also of how the training encouraged more women to participate. After the training, women in Menyamya and Garasa stated that they had never had such training before especially from Department of Agriculture and Livestock or their Rural District Officers. The initial training was open to women and men who were invited to bring along someone of the opposite sex (sometimes a partner but often another family member); this was to encourage greater understanding between men and women in terms of work distribution and equity – a core principle in all of CARE's work. It was also an indirect but non-threatening way of addressing significant gender disparities and high rates of gender based violence in Menyamya District that emerged in research from CARE's ongoing work in the District. It was not explicitly stated that participants should bring their partner along but feedback after the training, particularly from women in Menyamya, indicated that it would be beneficial in future if their husbands could attend the training with them because it would be easier to transfer skills and knowledge. This touches on some of the gender challenges associated with the response (see challenges section for more details). Nonetheless, the training that was conducted (51% of whom were women) was well received by the participants and monitoring indicates that the knowledge was being used in farming techniques. There was an overwhelming number of requests from participants for more training in both districts as they explained that district officers don't have the resources to implement such training.

Community-level accountability and transparency was promoted through the signing of land use agreements. The land use agreements were designed to prevent any disagreements over land, particularly in the Highlands' region where land ownership is at a premium. The land agreements' purpose was: 1. Recognition of the landowners 2. Establish assets (including crops) connected to the land; (this helped to mitigate theft) 3. Reduce conflict between clans, particularly around seed distribution by clearly outlining what would be grown, multiplied and distributed. Agreements were signed in the Highlands' Provinces of Simbu and Western Highlands. However, local leaders advised CARE that there was no need for agreements in Morobe Province; informal agreements were reached that were abided by all parties. Generally, participants thought it was a good thing that the agreements were signed and in place as they restricted theft (which was a major problem in the communities where the training took place prior to the commencement of the project).

M&E

While the achievements are mentioned in the table below, it is worth highlighting some results of note, particularly given the challenging environment in which the program was implemented:

- Outcome 1 - Improved household access to safe water treatment and storage within target communities – was almost totally completed. 93% of all households used the aquatabs that they were given and 96% of households still had water containers at the time of Post Distribution Monitoring
- Output 1.1 - distribution of WASH kits – was exceeded

- Output 1.2 - training on water treatment and storage completed in 21 communities – this was exceeded by more than 100%
- Output 2.2 - hygiene promotion activities completed in 21 communities – was exceeded by around 476%

Goal : Target communities in Chimbu, Morobe ,Eastern Highlands, Enga and Hela are better prepared to cope with and recover from water and agricultural impacts related to El Niño.																			
	Indicator	Verification	Actual																
Outcome 1: Improved household access to safe water treatment and storage within target communities	% of households that report treating their water appropriately % of households that have clean water containers in the house	Post distribution monitoring (PDM) reports	93% of HH used aquatabs that were given. 96% of HH still had water containers at time of PDM																
Output 1.1 WASH kits distributed	10,000 households have received WASH kits	Distribution Lists Distribution Reports	10,013 HH																
Output 1.2 Training on water treatment and storage completed in 21 communities	10,000 individuals have attended training on water treatment and storage	Participant lists Training Reports	20,000+ individuals attended training held at the time of distribution. The PDM found that participants remembered the following water treatment and storage related hygiene practices: <table border="0"> <tr> <td>Treating drinking water</td> <td>42%</td> </tr> <tr> <td>Safe collection & storage of water</td> <td>35%</td> </tr> <tr> <td>Cleaning water containers</td> <td>29%</td> </tr> <tr> <td>Keeping water containers out of reach of children and animals</td> <td>17%</td> </tr> </table>	Treating drinking water	42%	Safe collection & storage of water	35%	Cleaning water containers	29%	Keeping water containers out of reach of children and animals	17%								
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Outcome 2: Increased awareness on good hygiene practices in water scarce environments within target communities	% of households that can identify 3 hygiene practices that are important in preventing illness % of households with soap located near their hand washing facility	Post distribution monitoring reports	During PDM, respondents listed the following hygiene practices were important for preventing diarrheal disease: <table border="0"> <tr> <td>Washing hands with soap at critical times</td> <td>91%</td> </tr> <tr> <td>Using a toilet</td> <td>47%</td> </tr> <tr> <td>Treating drinking water</td> <td>42%</td> </tr> <tr> <td>Covering Food</td> <td>41%</td> </tr> <tr> <td>Safe collection & storage of water</td> <td>35%</td> </tr> <tr> <td>Cleaning water containers</td> <td>29%</td> </tr> <tr> <td>Using clean plates and utensils</td> <td>22%</td> </tr> <tr> <td>Keeping water containers out of reach of children and animals</td> <td>17%</td> </tr> </table>	Washing hands with soap at critical times	91%	Using a toilet	47%	Treating drinking water	42%	Covering Food	41%	Safe collection & storage of water	35%	Cleaning water containers	29%	Using clean plates and utensils	22%	Keeping water containers out of reach of children and animals	17%
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			<p>Safe disposal of children's feces 9%</p> <p>The presence of soap near hand washing facilities was not measured during PDM. However, 95% of respondents to PDM claim they now wash their hands with soap. As well, 100% claimed to have used the soap distributed and 51% still had soap from the distribution at the time of the PDM.</p>
Output 1.2 Hygiene promotion activities completed in 21 communities	4,200 people have attended hygiene promotion events	Participant lists Training Reports	<p>20,000+ individuals</p> <p>286 health workers and VHV's received more in-depth training on sharing hygiene promotion messages.</p>
Outcome 3: Increased knowledge and skills in vulnerable communities affected by El Niño on drought resilient agriculture	# of district level trainings for Department of Agriculture and Livestock, local extension workers, women leaders and local NGOs	Participant lists Training Reports	<p>11 trainings were conducted at: Kome, Wapi LLGs in Menyamya district and in Waria (Garasa), Mumeng, Watut LLGs of Bulolo district.</p>
Output 3.1 Newly targeted El Niño affected communities have received ADAPT training and associated support	# of attendees of community agricultural resilience trainings	Participant lists Training Reports	<p>408 people were trained (198 men and 210 women) on simple agriculture drought recovery and resilience methods</p> <p>Seeds and cuttings of sweet potato, mung bean and corn containing the following traits were distributed: drought tolerant; pathogen tested; better taste; high plant protein content; open pollinated. In line with the national recovery plan (draft 2015), tools and stored bought seeds were given out.</p>

Challenges, Issues and Lessons Learned

Operations in the highlands of PNG can be complex and challenging. CARE has significant experience running activities in these contexts and has strong processes and systems in place to manage this complexity. CARE PNG's Safety and Security Management Plan is comprehensive and guides the protocols for operating in CARE's operational areas. Specific distribution security protocols were developed prior to distributions and assessments taking place. Reflections to date on the assessments and Safety and Security issues include:

- Issues related to community misconception/understanding. DFAT funding has not extended to food distributions, only WASH NFI distributions. Although this was explained to communities during the sensitization stage, many communities still requested food distributions. CARE's Accountability mechanisms

has recorded concerns and feedback raised by communities around the need for food however CARE distribution staff were able to handle and respond to these issues amicably which helped prevent further issues arising or develop into a security incident.

- Despite significant investment in Household (HH) registration, distributions still experience isolated cases of individuals not being registered. Registration was undertaken in close consultation with male and female village leaders and Ward Community Development councilors. The sensitisation process highlighted the responsibility of these community leaders around HH registration. Re-emphasising the HH registration process and in some cases ensuring a buffer of additional stock per distribution site in case of unregistered HHs, teams were able to address these isolated cases when they arose.
- In one site planned under ANCP, in Lufa District, the team flew in on a Friday. After walking two hours to the site of the health centre – where they planned to base their activities, they were approached by a group of youth with weapons and advised that issues related to a recent death meant tribal fighting was imminent and that the team should leave the area immediately. CARE organized for the team to be evacuated the following day and the distribution be cancelled. As this was a fly-in site, the costs were high. During debriefing, the team confirmed that the day before they travelled they confirmed their trip with contacts on the ground and were not informed of the tensions. CARE consulted with Lufa District administration and identified a different site for the distribution - which was successful.
- The number of households in each site has proven very difficult to estimate. CARE used official government figures as a base but has sought confirmation from ward councillors, district administration staff and local health staff. The number of households that the CARE team found actually living in the area was consistently less than 70% off the triangulated estimate received from those sources. Given that this was consistent across all sites, it could be an indication of errors in official population data. This meant the schedule had to be reworked frequently to add or remove sites in order to reach the target beneficiary number
- Despite targeting and analysis of design interventions, field teams still had difficulty in working with communities and ensuring female numbers and level of participation in training was as balanced as possible (e.g. initial difficulties around hygiene promotion). To overcome this in future CARE will develop generic gender tip-sheets to assist field teams get the female numbers and level of participation needed in trainings
- Feedback mechanisms struggled to get equal numbers of female respondents across the voluntary options (phone). This was largely due the greater likelihood of men controlling credit and phone access. In future, CARE will develop feedback mechanism review lessons post response and emphasise the paper/field team feedback collection alongside voluntary feedback (phone).

CARE PNG is continuously reviewing and refining its detailed socialisation and explanation phase to manage community expectations and feedback from the targeted areas. Also the utilisation of the local partners, local community leaders and Church elders had a major influence in maintaining the needed support whenever required.

CARE is an active member of the national humanitarian coordination structure, through the Disaster Management Team in PNG. During all stages of the El Niño response, CARE took a lead role in co-ordination of key stakeholders. CARE remains actively engaged in the sector; it is currently a co-leader on the Gender and Protection and Food Security clusters. The Cluster system pre-exists the El Niño drought and while some clusters (namely Health, Shelter/Camp Coordination) have been active in non-disaster time, their effectiveness and capacity to support genuine sectoral coordination is limited. CARE was able to assist Provincial authorities in Eastern, Simbu and Western Highlands Provinces undertake humanitarian stakeholder coordination meetings between provincial authorities and non-government actors. The first meetings in both Provinces were well attended by all major humanitarian actors, including Church organisations but provincial engagement of Provincial Disaster Coordinators has been variable. In Eastern Highlands Province, significant political unrest between outgoing and incoming provincial administrations over the past six months has brought provincial government services to a standstill and limited the engagement of provincial authorities in coordination activities.

CARE has been undertaking electronic data management for assessment, registration and baseline work through mobile phone technology (KoBo). The utilization of KoBo for monitoring has been a positive step for data collection

and information management. There has been significant learning in utilizing smart phones in this context, and CARE will document this learning at the end of the response.

Visibility

CARE ensured significant visibility around the El Niño emergency response, which included DFAT funding through this bilateral ANCP grant, the Humanitarian Partnership Agreement and Gift in Kind Jerry Cans. Photos of CARE distributing DFAT supplies have been shared with DFAT Canberra. An example, is the below social media items that were re-tweeted by DFAT Social Media. Links here:

<https://twitter.com/CAREAustralia/status/697293083197583360>

<https://twitter.com/CAREAustralia/status/697273573879119872>

Two examples of media where Australian Government assistance is referenced or shown

ABC Radio - Urgent need for food in PNG's highland communities – Interview with Blossum Gilmour:

<http://www.abc.net.au/news/2016-01-26/urgent-need-for-food-in-png's-highland-communities/7114724>

ABC News 24 – The World - Interview with CEO Julia Newton-Howes: <http://www.abc.net.au/news/2016-02-24/rains-break-png-drought,-food-crisis-lingers/7197938>

In addition, at the beginning of 2017 CARE International produced a report on the 10 most under-reported emergencies in the world in 2016. The PNG El Niño emergency was included. This report was widely distributed internationally and garnered significant media attention in PNG and abroad: <http://www.emtv.com.pg/news/2017/01/pngs-food-crisis-among-unreported-humanitarian-disasters-of-2016/>

Financial report

	Budget	Actual
	AUD	AUD
Staffing	98,236	93,334
WASH intervention	218,169	227,845
Agriculture Intervention	59,686	56,049
Coordination	4,574	4,536
Operational and management costs	28,426	29,196
Sub-total	409,091	410,960
CARE Australia ICR 10%	40,909	41,096
TOTAL	450,000	452,056
Interest Earned and acquitted	2,056	2,056