



THE NATIONAL
RESEARCH INSTITUTE
PAPUA NEW GUINEA

Adverse Impacts Of Climate Change in Papua New Guinea: Are we ready to adapt and manage disasters?

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Background information

- ❑ Livelihoods of many people in PNG are strongly linked to agriculture.
- ❑ Most people in PNG live in rural areas and depend on agriculture and forest for livelihood.
- ❑ Climate change can have adverse impacts on agriculture and services supplied by forests.
- ❑ The poor and weak are often hit harder by the adverse impacts of climate change.

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- ❑ PNG has witnessed various disaster that are associated with climate change such as drought and frost.
- ❑ PNG must have an effective and efficient strategy for managing natural disaster and adapting to climate change.

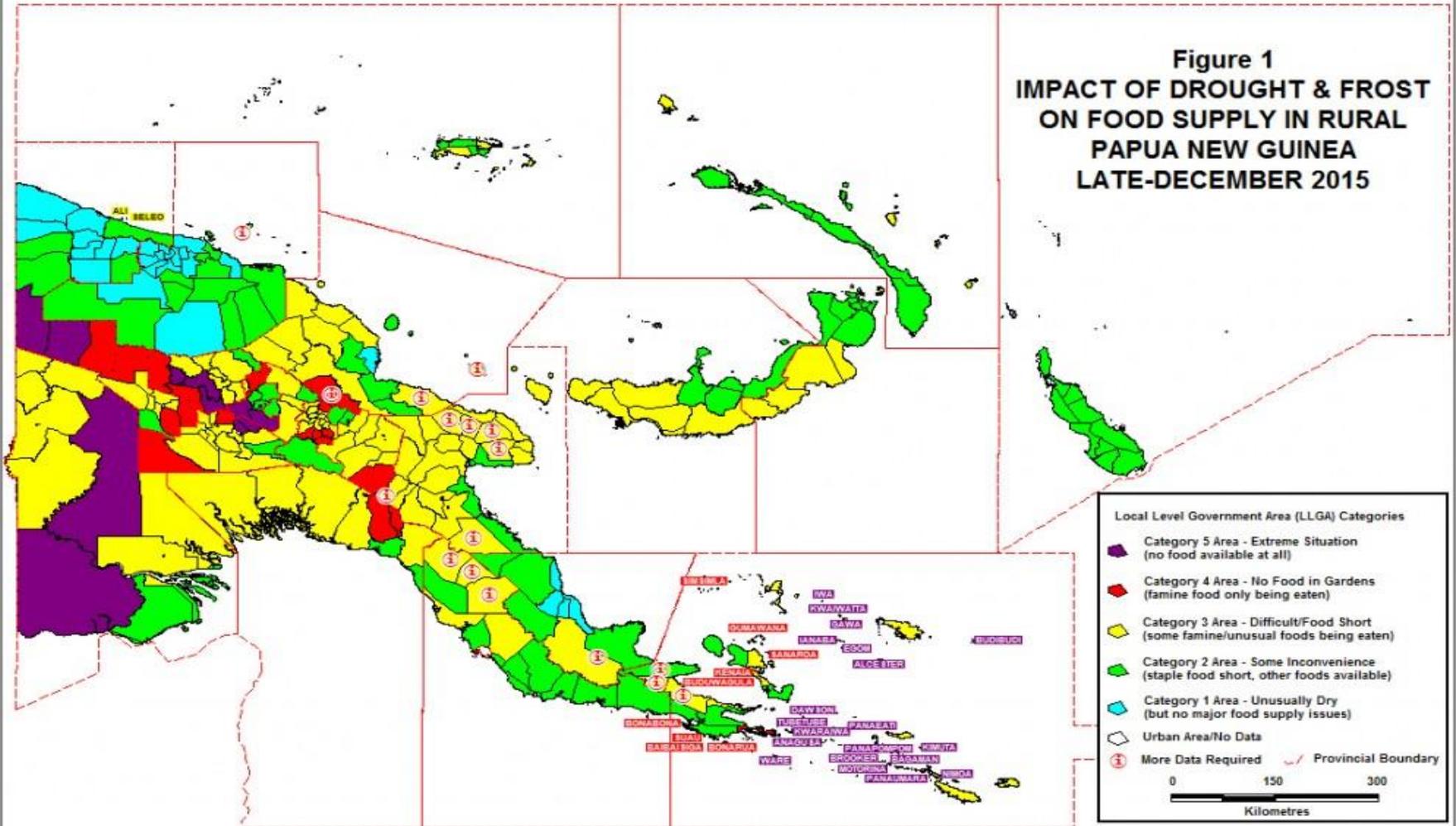
Objectives of the study

1. To examine the preparedness of PNG to adapt to climate change and manage natural disasters using drought and frost incidence of 2015 as a case.
2. To explore potential interventions required for agriculture sector in PNG to adapt to climate change.
3. To Identify potential interventions for promoting effective management of natural disasters.

Methods

- ❑ Review of publications in *The National* and *Post-Courier* newspapers related to drought and frost incidence that affected several provinces in 2015.
- ❑ Personal communications with people who have experience on climate change adaptation strategies.
- ❑ The review focused primarily on how people were affected, extent of damage and how provincial disaster offices managed the situation.

Figure 1
IMPACT OF DROUGHT & FROST
ON FOOD SUPPLY IN RURAL
PAPUA NEW GUINEA
LATE-DECEMBER 2015



Impact of EL Nino 2015-2016



Frost-burnt food garden in KANDEP, ENGA Province. (Photo by, Roy Trivedy, UN Resident Coordinator for PNG
<http://www.abc.net.au/news/>

Impact of EL Nino 2015-2016



Orphans looked after by Bible Faith Outreach in Mt Hagen showing off burnt sweet potato leaves
(Photo by Rose Kepo, Bible Faith Out Reach) <http://www.abc.net.au/news/>

Findings

- Relevant government agencies were not well equipped and prepared to manage problems triggered by natural disasters.
- Provincial Disaster Offices are underfunded.
- Distribution of relief materials were poorly managed.
- Officials of agencies involved in managing disasters require more training in planning and management.
- Poor institutional arrangement and coordination exist among relevant governmental agencies.

Continuation of findings

- The state appears not to have funds set aside for provision of relief materials.
- Farmers are not well informed about climate change and its adverse impacts on agriculture.
- Farmers do not have the capacity to adapt to climate change.
- Road networks are either poor or non-existent in some rural areas.

Impact of El Nino 2015-2016



Frost- affected sweet potato crop, TAMBUL, WHP (Photo by Kud Singato, NAR)

<http://www.anu.edu.au/events/drought-and-famine-relief-in-papua-new-guinea-2015-2016>

Climate change adaptation strategy

- ❑ Introduce agricultural extension services that focus on teaching farmer climate change (CC) adaptation techniques.
- ❑ Promote an effective public awareness and education program on CC.
- ❑ Encourage agricultural systems that combine agriculture with forestry on the same land (agroforestry)
- ❑ Make drought and frost tolerant crop varieties more accessible to farmers

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- Provide facilities for irrigation to promote crop production throughout the year.
 - Train farmers on various farming practices that could be used to conserve soil water.
 - Support training of farmers on food storage and preservation techniques.
 - Improve monitoring of drought incidence and other adverse effects of CC in PNG.
 - Provide more funds for research on drought and frost tolerant crop varieties.

Effective management of disasters

- ❑ Allocate more funds to provincial disaster offices.
- ❑ Train more PNG citizens in planning and management of natural disasters.
- ❑ Strengthen collaboration between agencies involved in managing disasters.
- ❑ Some funds must be set aside by the state for buying relief materials in the event of disaster.
- ❑ Improve existing road networks and construct new Ones.

Conclusions

The incidence of drought and frost of 2015 & 2016 show that:

- PNG is not well prepared to manage natural disasters.
- Farmers are not well equipped to adapt to climate change.
- There is a need for Provincial Disaster Offices to receive adequate funds and their staff receive more training.

- NARI should receive more funds for developing drought and frost tolerant crop varieties.
- Introduce agricultural extension services that focuses on farming techniques for adaptation to climate change.

References

Thomas, M., & Ezebilo, E. (2017). Adverse impacts of Climate Change in Papua New Guinea: Are we ready to adapt and manage disasters?
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PNG NRI website and social media

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THANKS FOR YOUR ATTENTION

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