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**Information Needs for Climate Change  
Adaptation among Farmers in Fiji**

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# INTRODUCTION

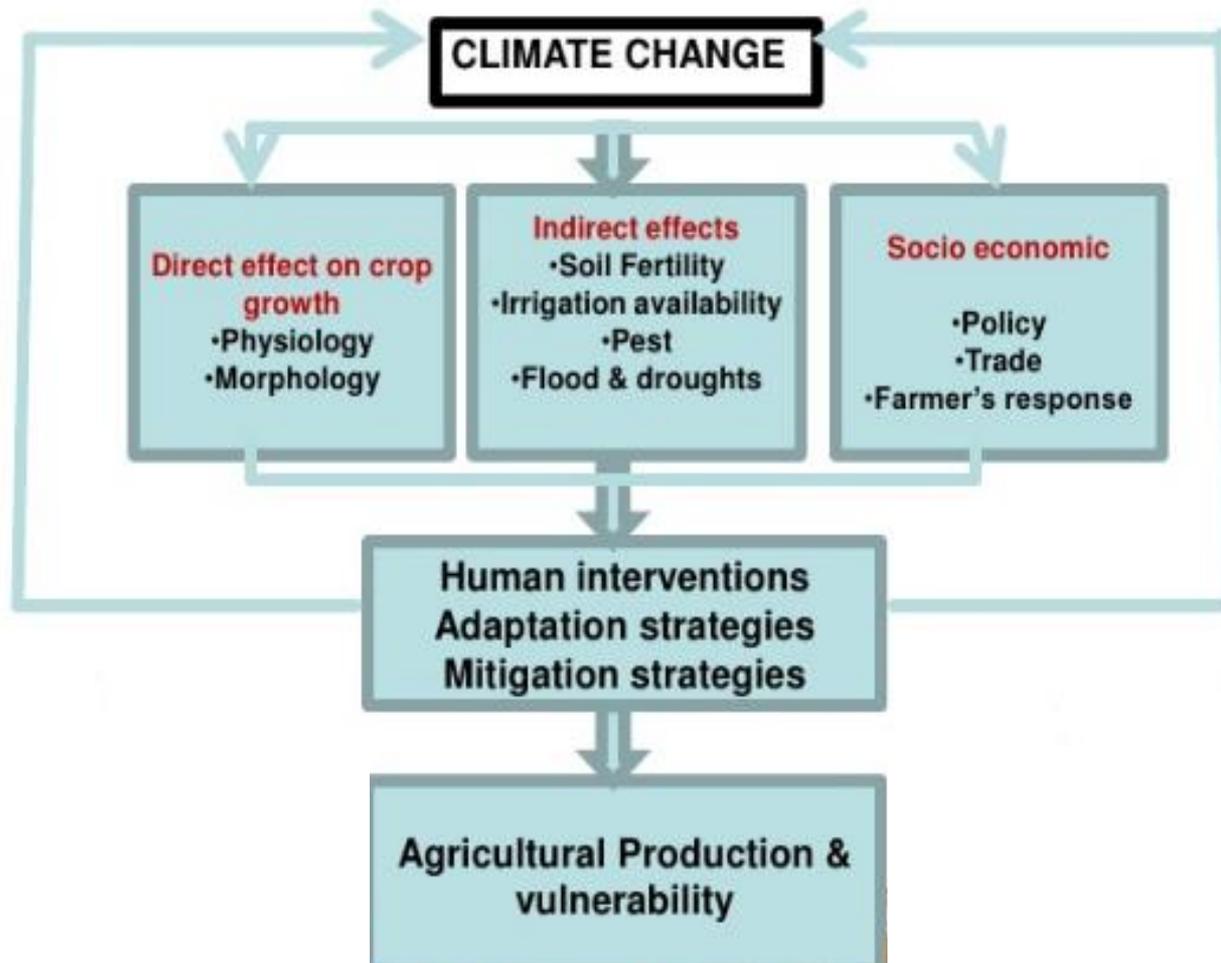
Agriculture is metaphorically referred to as the backbone of Fiji. The sector, however, is not immune to obscurity and faces many challenges.

**Two of such challenges are the lack of agricultural information being disseminated to needy farmers along with traditional negative stereotype towards agriculture and adapting to climate change.**

- **Climate change poses a direct and growing threat to the livelihoods of people in agriculture.**
- Poor rural households, whose livelihoods depend predominantly on agriculture and natural resources, will bear a disproportionate burden of adverse impacts of climate change and thus should be the focus of adaptation interventions.
- **The Pacific Islands are the most vulnerable to climate change due to its geographical remoteness and size.**

(Satapathy et,al. 2011, Mendelsohn et al. 2007, Kates 2000)

## PREDICTED CLIMATE CHANGE IMPACTS ON AGRICULTURE



## **Scientists have projected that by 2100 Pacific Islands would experience:**

- sea-level rise by about 0.39 metres.
- surface air-temperature to increase by 2.3°C.
- rainfall could either rise or fall with predicted impacts of 8.36% to 20.2%.
- El- Nino conditions possibly more frequently
- tropical cyclones becoming more intense
- saline intrusion into freshwater lenses
- increased flooding

Ref: FAO, **Regional Training Workshop on Adaptation for the Pacific Least Developed Countries, 28 September – 3 October 2012, Funafuti, Tuvalu**

## **Climate hazards will affect agriculture through:**

- heat stress on plants,
- changes in soil moisture and Temperature
- loss of soil fertility through erosion of top soil,
- less water available for crop production
- changes in height of water table
- salinization of freshwater aquifer, and loss of land through sea level rise.

# Problems for climate change adaptation

- The uncertainty of availability of climate information at a local scale (Dessai 2007)
- Complexity of scientific information on climate change
- Financial and infrastructural constraints (IPCC 2007)
- Lack of tailoring the information to meet needs of local stakeholders (Gauthier 2005, Srinivasan 2012)
- Non integration of local institutions
- Cultural practices and experience into actionable adaptation decisions (Ensor and Berger 2009)
- Failure to use media that is easily accessible to rural communities (Carpenter et al. 2012)

## Information and Knowledge needed for Climate Change Adaptation

Climate knowledge is the appropriate use of climate information for reducing economic and environmental risks and strengthening resilience against climate variability. (Glantz 2005)

To overcome challenge of adapting to the impacts of climate change, researchers are identifying the importance of climate change information and knowledge systems which includes climate information for adaptation like :

- scientific meteorological and hydrological information
- agro-ecological information
- socio-economic information

(FAO 2007, Lebel 2011, Srinivasan 2011, Khan 2012)

Information

Knowledge

Climate change adaptation

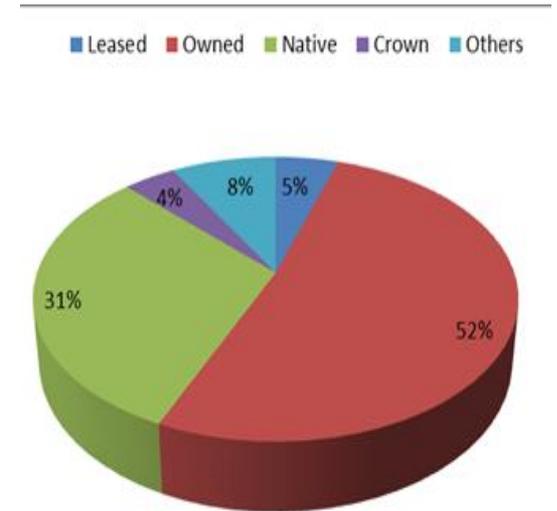
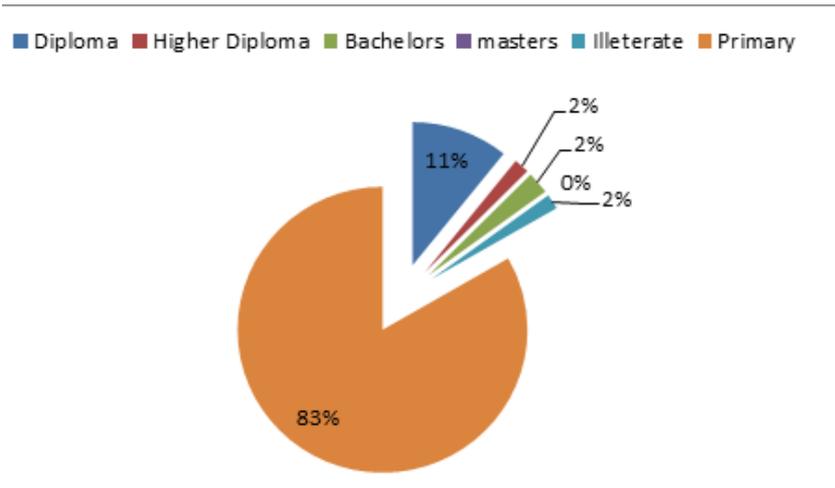
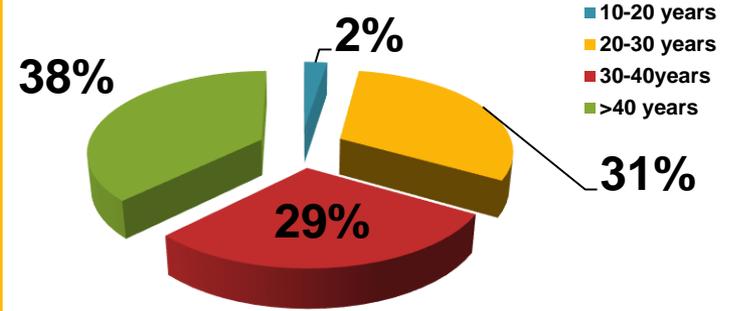
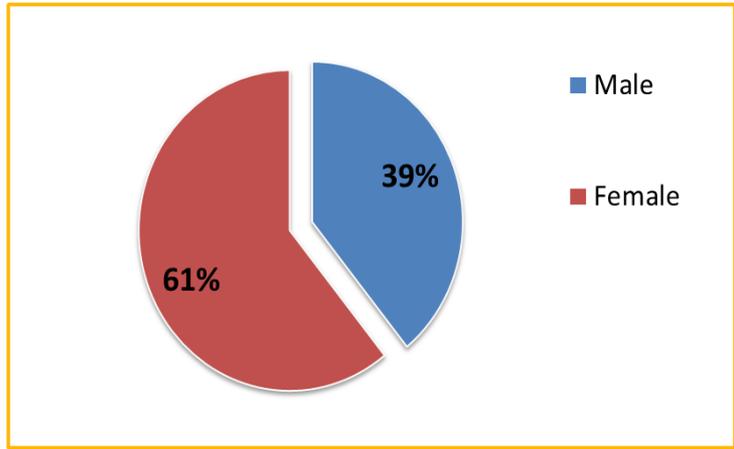
- Information on climate, warnings and forecasts can help to prepare rural farmers for climate change adaptation.
- Communicate appropriate and relevant climate change information to the farmers at the right time as climate change communication may be backbone of climate change adaptation and adaptive planning.
- Communication will not only create awareness but can also provide information and prepare communities thus inspiring behavioral change.

Information

Knowledge

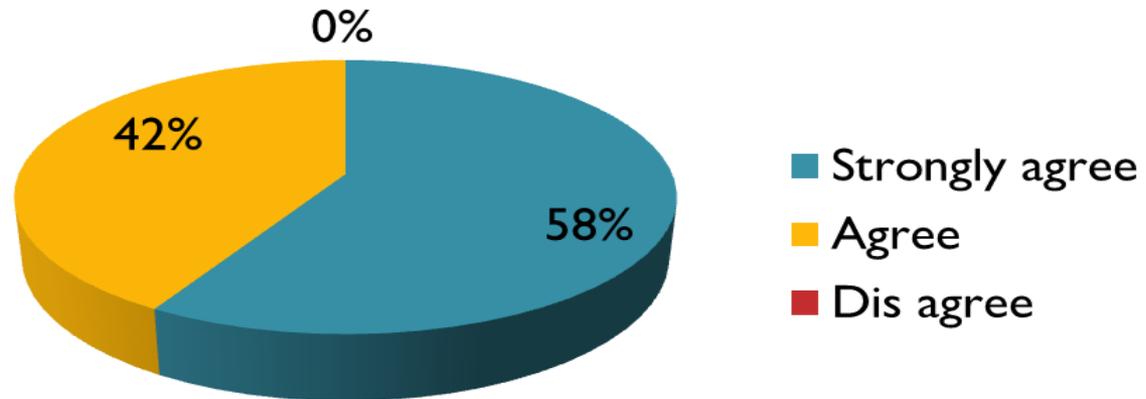
Climate Change Adaptation

- Climate information and prediction services enable better management of climate variability and change.
- Better adaptation through the incorporation of science-based practices into planning, policy and practices on the global, regional and national scale.
- Enables farmers to take decisions regarding their choice of practices in order to avert or reduce risks related to climate change and promote sustainable production. (World Meteorological Organization (2011))

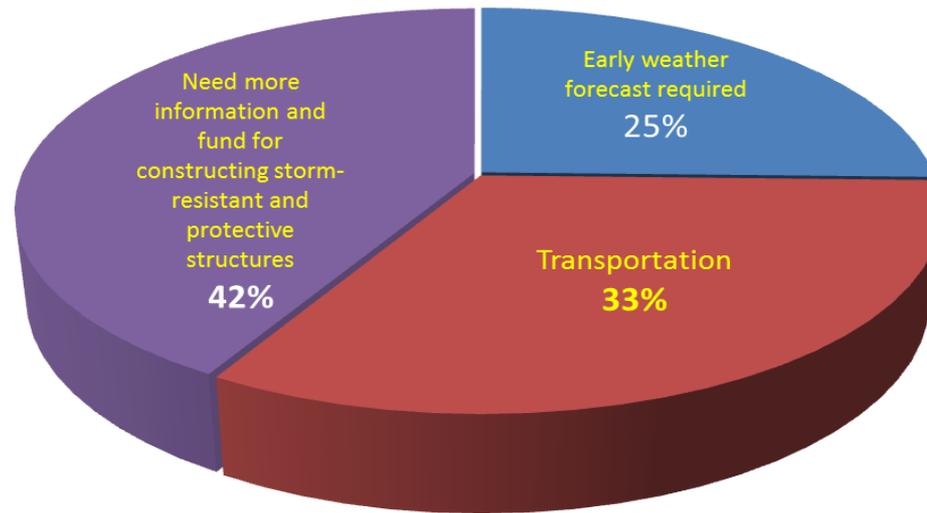


**Fig: 1. Demographic Characteristics farmers characteristics (Gender, Age, Educational level and land types)**

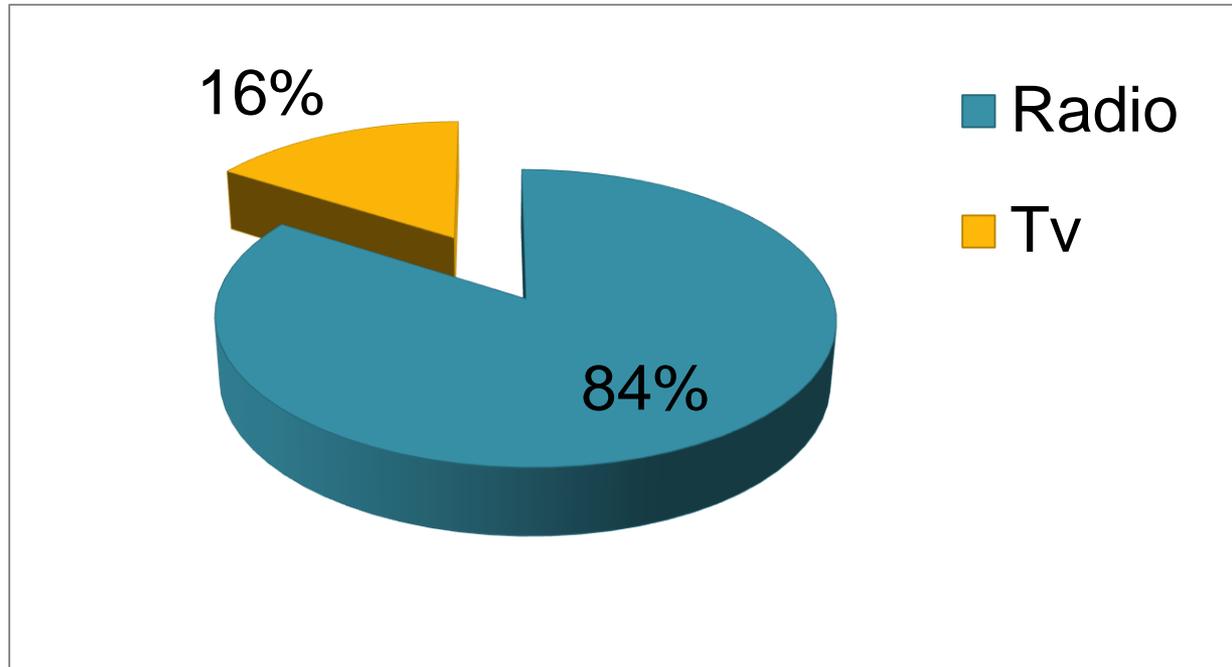
## Need for Weather information by farmers



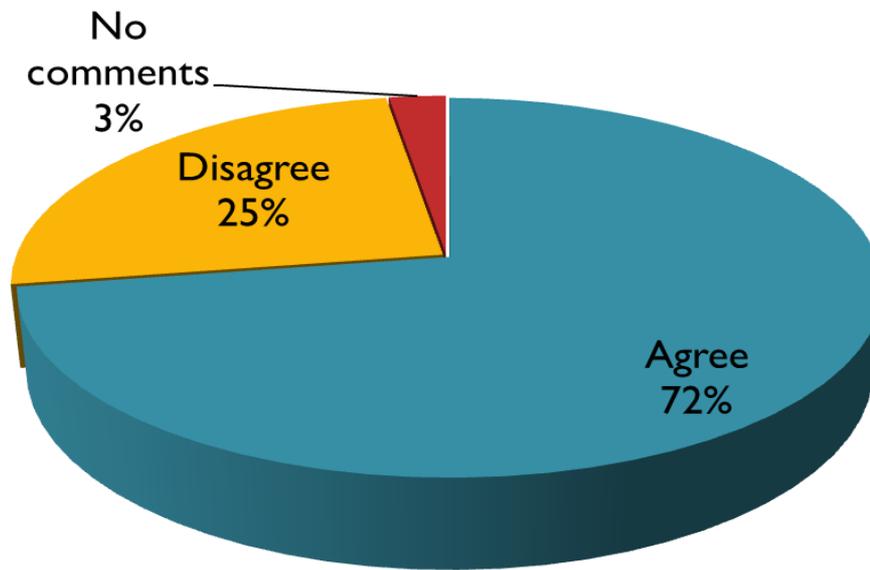
**Fig.2. Information required by farmers on weather parameters in study area**



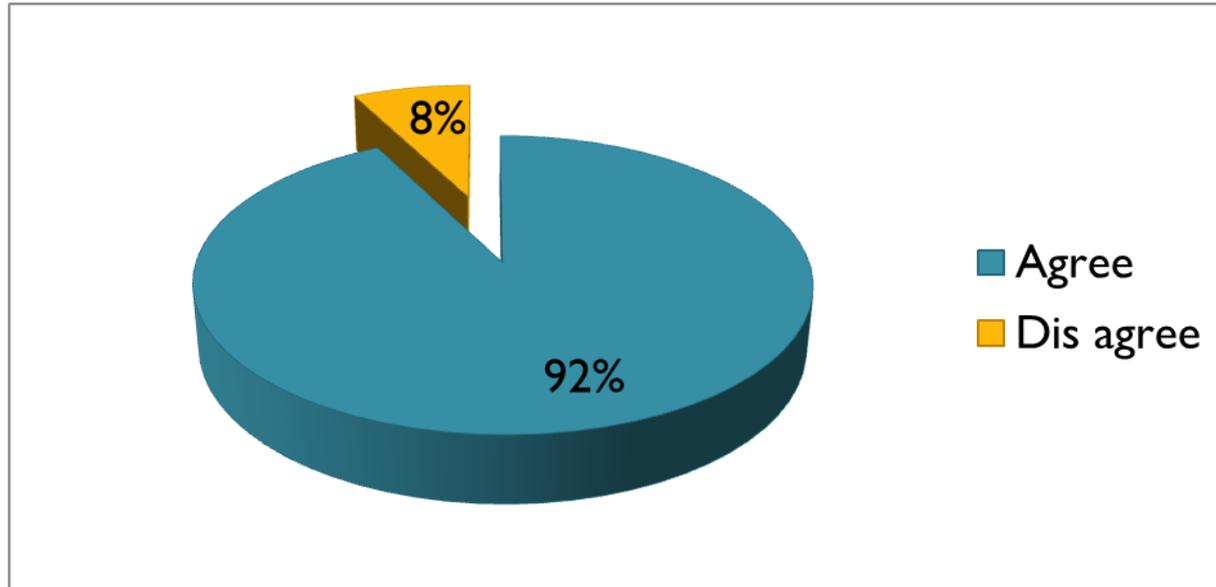
**Fig.3. Challenges Facing Farmers in accessing information in study area**



**Fig.4. Farmers find Radio and TV as the best source of information on weather forecasting in accessing information in study area**



**Fig.5. Farmers find awareness programme useful for climate change information in study area**



**Fig.6. Information on input availability for crop production in study area**

# Conclusion and recommendation

- Farmers require information on climate parameters. Warnings and forecasts can help to prepare farmers for climate change adaptation.
- The farmer needs information on production technology that involves cultivating, fertilizing, pest control, weeding and harvesting.
- Government to scale up, especially use of radio and TV in agricultural information system which can help the researchers to disseminate and farmers to access information. Efforts should be made to increase airtime for agricultural programmes on radio and television; prevalent media reaching most remote areas.
- Use of mobile phones ,technology that can be harnessed for great benefit to the farmers.



**Vinaka !!**  
**Thank you for your attention!!**