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Coconut Risk Management and Mitigation Manual for the Pacific Region



Compiled by R. Bourdeix, J. M. Sourisseau and J. Lin

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36. STAKEHOLDERS' BELIEFS ABOUT COCONUT

By R. Bourdeix, N. Tuivavalagi and N. Hussein

Description

The risk is that some stakeholders remain convinced of their false beliefs e.g., that their coconut farmers and varieties from the Pacific region are the best, that farmers do not need any help regarding coconut, and that coconut palms can grow without any management. If these wrong beliefs continue to be widespread, improvement of the coconut value chain in the Pacific region will be challenging. People do not change practices while they are convinced that they are the best and that they do not need to change their practices.

Such beliefs are encountered even at the highest levels; It is part of the psychological constraints to development in general and agriculture in particular. This feeling is not a risk in itself but it can be responsible for the lack of farmers and policy makers' capacities to react during and after a negative shock, may it be economic, climatic, agronomic or organizational.

At the last COCOTECH conference in 2018, we presented a paper on incentives for boosting coconut production. The conclusion of this paper stated that the most important incentive relates to communication with farmers. Relevant Ministries should make the relevant technical information fully available for farmers; they should ensure that a maximum number of farmers will be aware of this information, will read it, will believe it and will use it

The main contribution of Pacific Islanders to coconut farming does not rely on sophisticated cultivation methods. Other countries, such as Brazil, Thailand and India, have recently developed methods of coconut cultivation that are much more productive than those practiced in the Pacific region. Indeed, this occurs even if, as noted by R Thaman, 'traditional agroforestry practices once made Pacific islanders amongst the most self-sufficient and well-nourished peoples in the world'.

On the other hand, the truly extraordinary contribution of the Pacific region comes from the innumerable and precious coconut varieties that elders created when travelling from island to island, carrying seed nuts. In this aspect, in our opinion, the Pacific remains unmatched.

The exclusive use of traditional knowledge does not resolve all the constraints and may refrain farmers capacity to react in case of a chock. Traditional coconut's representation of Islanders shouldn't limit farmers' access to innovations. The attitude of the Pacific people towards the coconut palm is sometimes special, a kind of mixture of reverence and contempt. This situation has deep historical roots. For reasons linked to both colonization and globalization, many Pacific islanders both 'love' and 'hate' this emblematic palm embedded in traditional social management. This old dynamic may be fading because the image of the coconut palm has evolved significantly over the last decade.

Occurrence and severity

Policy makers, and sometimes even their advisers, do not always have an appropriate level of technical knowledge. For example, in some Pacific regions, erroneous advice from leaders on planting coconut palms by adding portions of aluminium cans to the soil is known. Indeed, cans which contain iron are sometimes added to coral soils when planting coconut palms, missing this metal (iron, not aluminium). Aluminium pollutes the soil severely, and such a can

needs between 100 and 500 years to disappear in the wild. The lack of technical knowledge is not at all specific to the Pacific region: quite recently, an agricultural political leader in the Western world admitted publicly that he did not know which area corresponded to one hectare. This becomes a risk when associated with the opinion that national farmers are the best.

Those who want to monopolize the public's attention are not always the most knowledgeable. For example, a reader of the Tahiti Herald tribune recently explained that by putting a tin in the ground when you plant, it allows the coconut palm to grow directly with a pre-positioned anti-rat ring, as though the can would grow with the tree. The very unsure claim that 'Coconut trees are native to the Pacific' is found in many official documents, and even in a 'Coconut Value Chain Review' published in 2011 by PARDI and SPC. In 2006, the first contributor to this section was explaining on a live TV show that the coconut palms did not originate from Tahiti Island, but was introduced by Tahitian ancestors coming from Asia and Papua New Guinea when they reached Polynesia; the show's listeners did not respond well to this statement.

Why is it so difficult to sustainably fund coconut gene banks and research? The ambivalent and multifaceted symbolisms associated with the coconut palm sometimes make stakeholders and even decision-makers forget that coconut cultivation strongly influences the livelihoods of millions of poor farmers. An ethnological approach to coconut symbolisms and their consequences was recently developed for the Pacific region (Bourdeix et al., 2013; Hegde et al., 2018). The modern representation of the Pacific people's coconut palm often appears as ambivalent. In the collective Western imagination, the coconut palm has become the ubiquitous and anonymous symbol of exoticism and tropical beaches. It is well-known that the image of the coconut palm is widely used to promote tourism and numerous associated products ranging from fashion accessories to financial investments. The combination of coconut with 'hammocks' or 'monkeys' sometimes reinforces the stereotype of peaceful and lazy paradise, far from the stresses of everyday life, an image which does not reflect the real situation of Pacific people. Islanders become disengaged when confronted with such counterfeit representations that standardize the tropics and deny their cultural identities.

Mitigation and adaptation

Regarding coconut cultivation methods, Pacific people still have much to learn from other countries. To illustrate this claim, CIDP and CIRAD recently released two short movies (see the 'References' section). This first one is about coconut nurseries, and compares methods used in Brazil and Côte d'Ivoire (West Africa) to those of six Pacific countries. The second movie illustrates how Thai farmers cultivate the Aromatic Dwarf with an organic canal-based system (see also risk description n°32).

It is challenging to transfer a cultivation method from one country to another. It becomes more difficult when you deal with people who resist change. For instance, concerning the channel cultivation system presently used by Thai people, one can worry that this system, if not to other countries, may induce human diseases due to the abundance of sleeping waters.

The CIDP's effort to send Pacific technicians to practical courses in Sri Lanka is excellent; those who come back from these trips will have a less self-centred vision of the coconut world. This initiative should be pursued by sending a few agricultural officers to Brazil and Thailand, two countries that have developed highly efficient methods of growing coconut.

Fortunately, the western representation of the coconut palm is evolving from a 'holiday and comic' to a 'healthy and natural' palm. This new representation of a single plant is impacting

the western perception of tropical island countries. It will also facilitate the raising of international funding for coconut R&D activities.

Actions to undertake

Continue to share in the Pacific region all the technological advances carried out in the other countries, by reinforcing the direct contacts of the Pacific stakeholders with the best performing producing countries.

Strengthen the participation of Pacific Island countries in associations, networks and forums such as ICC (International Coconut Community, formerly APCC), COGENT (International Coconut Genetic Resources Network) and the 'Coconut Google Group' created by Hugh Harries.

Protect and value more highly the aspects where Pacific Island countries are really the best, i.e., the creation and maintenance of traditional varieties. The amazing work was achieved by islanders' elders. It seems that the modern generation sometimes do not care about conservation of different coconut varieties. Tonga is probably the place where elders made the most amazing contribution and where people now pay less attention to traditional varieties.

References

- Bourdeix, R., & Leroy, T. (2018). Preparation of the world first regional coconut varietal contest. In: Bourdeix, R., Labouisse, J.P., Mapusua, K., Ollivier, J. and Kumar, V. (2018). *Coconut planting material for the Pacific Region*. <https://replantcoconut.blogspot.com>.
- Bourdeix, R. and Namory, T. (2018). *Coconut nurseries from Brazil, Cook Islands, Côte d'Ivoire, Fiji, French Polynesia, Samoa and Solomon Islands*. [Film]. In R. Bourdeix, J. P. Labouisse, K. Mapusua, J. Ollivier, & V. Kumar (Eds.) *Recommended seedbed and nursery management techniques. Coconut planting material for the Pacific Region*. <https://replantcoconut.blogspot.com>.
- Bourdeix, R. and Namory, T. (2018). [Film]. *Cultivation of the Aromatic Green Dwarf coconut in Thailand*. Diversiflora Expertise.
- Bourdeix, R., Johnson, V., Saena Tuia, S.V., Kapé, J., & Planes, S. (2013). Traditional Conservation areas of Coconut Varieties and Associated Knowledge in Polynesian Islands (South Pacific Ocean) In S. Larrue, *Biodiversity and Societies in the Pacific Islands* (pp. 199-222). University Press of Provence (PUP), France.
- Hegde, V., Pilet F., & Omuru E. (2018). 1.1.5 Major threats to coconut genetic resources - Chapter 1. Introduction to the Global Coconut Strategy In R. Bourdeix & A. Prades (Eds.), *A Global Strategy for the Conservation and Use of Coconut Genetic Resources 2018-2028*.(pp. 19-22). Montpellier, France. Bioversity International.
- PARDI (2011). *Coconut Value Chain Review. Pacific Agribusiness Research & Development Initiative*. <http://www.pacificfarmers.com/wp-content/uploads/2014/07/PARDI-CoconutChainReview-Nov-11.pdf>
- Thaman, R. R., Elevitch, C. R., & Wilkinson, K. M. (2000). Multipurpose trees for agroforestry in the Pacific Islands (pp. 3–45). In C.R. Elevitch & K.M. Wilkinson (Eds.), *'Agroforestry Guides for Pacific Islands', Permanent Agriculture Resources*, Holualoa, Hawai'i.



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