



Coconut Risk Management and Mitigation Manual for the Pacific Region



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25. SHIFT TO OTHER CROPS OR OTHER FORMS OF LAND USE

By R. Bourdeix, N. Tuivavalagi and J. M. Sourisseau

Description

The middle term risk here is that land devoted to coconut cultivation, research or conservation (gene banks) may be progressively cleared of coconut palms and used for other activities; This reduction in coconut area could impact the coconut value chain and its stakeholders at several levels, in medium and long term.

Occurrence and severity

Between 1800 and 1950, as already discussed in risk description n°17, the number of coconut palms in the Pacific region multiplied by 60 to 100 times. A lot of senile plantations are now slowly returning to bush. From the 1980s, following the fall of the copra price, many coconut plantations in Papua New Guinea were converted to oil palm, as the land was sold to large companies and the price of copra collapsed. In Madang province (PNG), three coconut plantations were recently turned to a Tuna factory. Similar situations are encountered in many Pacific countries.



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Plate 16. A modern oil palm nursery in the Solomon Islands. If the large companies succeed to manage such modern nurseries for oil palm, they can also do it for the coconut palm.

Where large-scale farms are concerned, the choice to shift from coconut to another crop is not a risk for them, rather an economic choice. But doing so, the eventual providers of the plantation and the actors downstream in the value chain are affected and for them, the industrial choice is a risk for their activity and livelihood.

When it concerns small scale agriculture, negotiated and accepted by farmers and previous landowners, this shift can be seen as a positive opportunity for them, but once again the consequences for the other stakeholders in the value chain may be negative. Therefore, it could be seen as a medium and long term risk. When the transformation in land use is not negotiated or can be assimilated to forced land grabbing, it's obviously a short-term risk for the farmers and their communities.

In Samoa, the Olomanu Seed Garden and gene bank, located in the West part of Upolu Island, was the place where coconut germplasm was conserved and where coconut hybrid seednuts were produced. In 2010 the Samoan government turned it to a Juvenile Rehabilitation Centre, under the Samoan Ministry of Police and Prisons, with no more link to the Ministry of Agriculture. Most of the accessions of the coconut gene bank have been partially cut off since from this time. Samoa is now trying to create a new coconut gene bank close to the old Olomanu site. Several coconut gene banks around the world, including some with international status, have encountered or are currently experiencing this problem.

Mitigation and adaptation

The way to reverse the trend against coconut is to demonstrate the value chain can be more profitable and environment friendly than other cash crops. This goes with a vision all along the value chain. Coconut may not be competitive regarding only short-term economic indicators, but life cycle analysis can prove its global performances are better

Connected with the industrial global transformation of the coconut value chain, the modernization of breeding and nursery techniques and processes can allow replantation and mitigate the risk of abandonment. In addition, for the actors up and downstream from production, reorganization of the value chain playing on better prices for the products or developing exchanges with other areas still producing are ways to adapt while maintaining activities around coconut production.

Ex situ gene banks and agricultural research centres are crucial for conserving and testing the planting material used for creating new coconut varieties. Be they Field, *Cryo* or *In Vitro*, the gene banks should be from the beginning conceived as multifunctional. Creating a new *ex situ* field gene bank for conserving only coconut, as presently envisioned in Samoa and PNG, seems not viable. The patrimonial value of this gene bank will not be sufficient to ensure its durability. One of these days, be it in 15 or 30 years, a local policy maker will decide to recover the land for other purposes and will destroy the gene bank. Some experts are of the opinion that such 'pure coconut' field gene banks are already dead even before being planted.

The case of Olomanu in Samoa needs more attention. Olomanu could have become a Juvenile Rehabilitation Centre and, in the same time, could have remained a coconut gene bank. Young prisoners could have been trained to the technical tasks required for gene bank and research activities, and to pay more attention to biodiversity and the importance of conserving traditional varieties. The media image of the Ministry of Police would have benefited from such a situation. But this kind of organization needs multifunctional flexibility and harmonious relationships among departments that remains rarely found in the Pacific region.

Actions to undertake

A wide set of actions is needed to make coconut more profitable and to allow coconut plantation to remain viable in the medium and long term. As described all throughout the present manual, this set comprises incentives to maintain and enhance production means, better production techniques (including the strategic issue of tree and fruit protection),

incentives to improve the quality and the diversity and therefore the price of coconut products and the income for farmers and traders, and finally to gain more rewarding markets.

Convince growers of other crops of the profitability of growing coconut for high value products; encourage these growers (large companies) to make coconut demonstration plots using modern and elaborate techniques that they already use (especially for nursery and beetle control);



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Plate 17. A modern coconut nursery in Brazil.

Land tenure systems, such as indivisible lands, in the Pacific countries create obstacles to agricultural intensification and the optimal utilization of land assets. Nevertheless, this system has a social advantage: it prevents foreigners from buying excessive amounts of land. In some Pacific countries, without this traditional barrier of undivided ownership, most of small islands (*motu*) would have bought by foreign investors.

Land Protection Policy may ensure smallholders are protected and ensure that larger companies not to grab all the land. Smallholders depends on their land for survival.

Government and non-government bodies aiming at assisting economic development in the Pacific islands should support local individuals and companies involved in buying, value-adding, selling, and exporting coconuts and coconut-products. Import substitution should also be promoted as there are numerous imported items e.g., body and hair lotions that could be substituted by local, coconut-based items.

Education and training on the various dimensions of the performance of the 'coconut tree' sector should be strengthened. With a thriving local, coconut industry, there will be little or no desire by coconut farmers to explore other forms of land use.

Considering some adverse experiences with certain coconut gene banks, we recommend the construction of new research stations, or the installation of new field gene banks should only

be established where the land on which these facilities will be located is legally recognized as being of public utility by the host government, prior to any project.

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"HONEY, OUR OUTFITS ARE BEAUTIFUL...
BUT DON'T YOU THINK WE DEMAND TOO MUCH
FROM OUR COCONUT PALMS?!!"

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