



# Good practices for diversity, livelihoods and ecosystem services: what can we learn from tropical fruit farming communities in Asia?

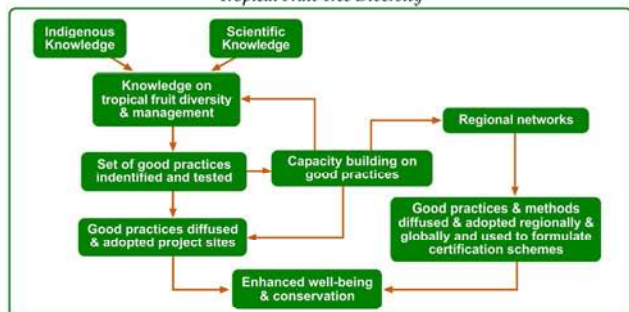
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## INTRODUCTION

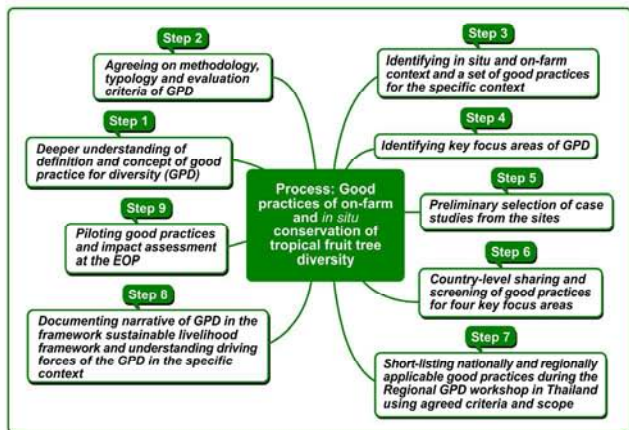
Farmers have several good reasons for maintaining and using diverse traditional tropical fruit species and varieties. They have developed a wide range of mechanisms to make optimal use of local diversity for their own welfare and benefit. Although, we often claim to understand the benefits of diversity for farmers and rural households, such as reducing risks or its multi-purpose use, there are few systematic studies and hardly any empirical evidence to back this up. Furthermore, a coherent analytic framework to find, describe, evaluate, and select most successful mechanisms or practices for further strengthening or up-scaling do not exist. This paper synthesises outcomes of good practices of conservation and sustainable use of wild and cultivated tropical fruit genetic diversity available with some farming and forest communities in India, Indonesia, Malaysia and Thailand. Good practices are often misunderstood with the more common Good Agriculture Practices (GAPs). In this study a good practice is defined as a system, organization or process, that over time and space maintains, enhances and creates crop genetic diversity and ensures their availability to and from farmers and other actors for improved livelihoods on a sustainable basis (Shapit et al., 2003); good practice for maintaining diversity in the system, GPD for short. The fundamental approach for achieving the stated Goals and Outcomes of the tropical fruit tree (TFT) Project Conservation and Sustainable Use of Cultivated and Wild Tropical Fruit Tree Diversity: Promoting Sustainable Livelihood, Food security, and Ecosystem Services (UNEP/GEF), is illustrated in the impact pathway (see box at below) which requires deeper understanding of the local context where good practices are developed. Scaling up of such practices in local situation requires empowerment of farmer and user groups that facilitate the process of blending both traditional and scientific knowledge of farming community and service providers and promote local innovation that benefits family well being and on-farm conservation of tropical fruit genetic resources (TFTGR). This poster describes selected set of good practices for diversity maintenance that were studied and systematically documented from 36 communities from India, Indonesia, Malaysia and Thailand.

Impact Pathway for Enhanced Well-being and Conservation of Tropical Fruit Tree Diversity



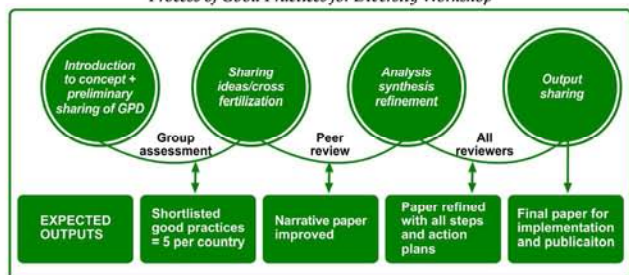
## METHODOLOGY

The practices of local farmer innovations or modifications of research outputs that are widely adopted and adapted successfully to the local context and provide benefits to farmers without resulting in genetic erosion of local diversity are the focus of documentation.



During a workshop held in Thailand a set of good practices in four thematic areas were documented: i) propagation and nursery management, ii) production and management of tropical fruit tree genetic resources (TFTGR), iii) linking farmers with markets (commercialization that supports diversity maintenance and livelihoods for the poor) and iv) policy and organization that consolidate the community role in management of TFTGR. Method of documentation is illustrated below. Criteria used for final selection of GPD are: 1) supports livelihood without loss of diversity, 2) scale and scope, 3) immediate effect, 4) relevance and alignment, 5) target species 6) practical, simple and cost-effective, 7) comparative advantage/attractiveness, and 8) sustainability. These iterative processes are illustrated in figure below. Case study approach was used to identify practices used and describe trigger/driving factors and enabling environment of the success of the good practice based on analysis of kinds of livelihood assets that were enhanced. In addition, the context in which the identified good practice was observed was described.

Process of Good Practices for Diversity Workshop



## RESULTS

Farmers perceived that increased crop genetic diversity within the home garden, orchards and agricultural ecosystems has an untapped potential to sustain greater pollinator diversity, temporally and at local and landscape scales resulting in better orchard productivity. A total of 34 good practices were presented by four countries, of which 13 fell in the category of propagation and nursery management, 16 in production and management of TFTGR, 8 in markets (commercialization that supports diversity maintenance and livelihoods for the poor) and 7 in policy and organization that consolidate the community role. Based on the context, it was realized that only a few GPD could be directly scaled up in all four countries. Many GPD reported are site specific and therefore, scaling up of all GPD as an intervention would not be feasible. However, ideas and experiences can potentially be used to develop locally adapted practices that might be proven successful (which itself is a GPD) in each country. Few selected case studies are illustrated. Farmer's techniques and methods of taxon specific propagations were found to be variable as per the geographic situation and have potential to learn from each other. Thus the project can demonstrate its impact by identifying farmer selected best trees and deploying them in larger areas by mass propagation by local nurseries to optimize use of high value traits. Commercialization and access to markets is often associated with loss of biodiversity, however, the poster illustrates a few striking examples of good practices that support conservation and sustainable use of cultivated and wild tropical fruit tree species in Asia that, at the same time help the farmer to benefit directly from growing tropical fruit species. Unfortunately, limited good practices were reported that strengthen community role in conservation and sustainable use of TFTGR.

## CASE STUDIES

### 1. Propagation and nursery management

Side grafting of mango scion is a good practice for diverse scion maintenance in dry parts of Thailand.



### 2. Production and management of tropical fruit tree genetic resources (TFTGR)



### 3. Linking farmers with markets (commercialization that support diversity maintenance and livelihood)



## CONCLUSION

Good practices that support maintenance of genetic diversity of target tropical fruit tree genetic resources are context specific. Identifying a set of practices to enhance natural, human, social, financial and physical assets are critical to design the interventions for piloting good practices in new areas. The deeper understanding of such context and driving force for innovating and/or adapting such good practices needs quality interactions with farming community, local institutions with use of both pragmatic and scientific methods and tools. This process of GPD documentation is providing platform for sharing and learning both the system of knowledge.

## ACKNOWLEDGEMENTS

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## REFERENCE

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Shapit BR, PK Shrestha and MP Upadhyay 2006. On-farm Management of Agricultural Biodiversity: Good Practices 1-20. NARC, LI-BIRD, IPGRI.