

Subject: Review of final thesis

Thesis title: Food, agrobiodiversity and diet: the nutritional ethnobiology of the Minangkabau and Mandailing indigenous food systems in West Sumatra

Thesis candidate: Ing. Bc. Lukáš Pawera

Type of thesis: Dissertation thesis

Thesis supervisor: doc. Ing. Zbyněk Polesný, Ph.D.

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The overarching purpose of the doctoral research carried out by Mr Pawera is to assess the diets and food security of agriculturalist communities of West Sumatra in relation to their socio-ecological characteristics. The final aim of such a research is to contribute to food and nutritional security of the considered communities by strengthening and diversifying their local food systems, through raising knowledge and awareness on the importance of food biodiversity. In order to fulfill this goal, Mr Pawera conducted fieldwork comparatively among neighboring communities of two distinct ethnic groups, Minangkabau and Mandailing, living in the Pasaman Regency situated in the northern part of West Sumatra Province.

The research protocol was based on 1-individual semi-structured interviews, 2- ethnobiological food inventories within all units of the respective land-use systems, and 3- focus group discussions. Through these investigation protocols, Mr Pawera collected a broad range of data that included information on socio-economy, food security, food consumption, health basics, attitudes and perceptions, local knowledge, agrobiodiversity levels, and trends in biodiversity use.

Beside mentioning that the main data collection for dietary assessment was conducted within March-April 2018, **it is however not clear for the reader of the manuscript, when extensive fieldwork was conducted** (how many visits were carried out in the field and how long did they last? When did fieldwork start, and when did it finish? When did multi-stakeholder meetings occur? How long after fieldwork was the guidebook produced and disseminated? A timeline of scientific assessment and other activities would be useful).

The final thesis manuscript submitted for review by Mr Pawera is composed of a main body of 91 pages, that is completed by 44 pages of references (187 refs) and appendices (8 appendices, including 1 table, 4 figures and 36 pictures). The main body contains 24 tables and 27 figures, which appropriately illustrate the text, efficiently sustain the narrative and the arguments, and demonstrate the richness of a substantial and solid dataset.

The doctoral thesis is outlined in 9 parts: 1- introduction, 2- literature review, 3- research framework and research questions, 4- goal and objectives, 5- materials and methods, 6- results, 7- discussion, 8- recommendations for action, and 9- conclusion. This fairly classic outline well sustains the argumentation of the thesis, although **it seems that parts 3 and 4 would gain to be merged into a single part.**

Furthermore, and very importantly, the doctoral thesis is significantly complemented by the production of 2 published journal papers, 2 journal papers in preparation, 3 oral or video communications, and by an outstanding community guidebook (156 pages in Bahasa Indonesia) enriched with a few posters and policy briefs. Last but not least, this extremely rich material is accompanied by an active contribution of Mr Pawera to the most recent stakes around indigenous food systems: He is a core member to the Global Hub on Indigenous Food Systems that was launched on September 2020 by FAO, and that is currently engaged in supporting the contribution of Indigenous peoples to the 2021 UN World Food System Summit.

Mr Pawera's doctoral thesis is very well written and pleasant to read and is supported by a sober yet efficient iconography which is used wisely. A few minor typo mistakes persist here and there in the document, and some of them would gain to be corrected, for instance:

- page 86: *traditional knowledge on wild food plants was higher among Minangkabau women who listed on average 14 plants compared to ~~14~~ 10.2 listed by Mandailing women on average.*
- page 90: *The comparison revealed that despite having ~~higher~~ lower agrobiodiversity and higher food insecurity, Mandailing women reached better dietary outcomes.*

Mr Pawera's doctoral thesis is advantageously distinguished by two remarkable aspects:

- Firstly, Mr Pawera implemented an original "nutritional ethnobiology" approach where the analysis of the interface between biological and cultural factors, through the prism of nutrition, is fully developed as a means to propose a holistic analysis exploring the interrelationships between the agroecosystem and the food system of the two considered societies. This required the mobilization of multiple research disciplines and methods including ethnobotany, anthropology, and nutrition.
- Secondly, Mr Pawera further attempted an ambitious research-for-development approach, and successfully managed to combine his scientific assessments with applied intervention in practice. This difficult combination results in very useful recommendations for action addressing each of the 9 specific sub-objectives of the thesis, but also in outputs such as community publications and multi-stakeholder workshops involving government officials.

The major cultural trait that distinguishes the Minangkabau from the Mandailing is that the former have a matrilineal heritage system, while the latter have a patrilineal one. **My main regret regarding the discussion of the thesis is that the results are not discussed in light of this cultural contrast.** The main differences observed between Minangkabau and Mandailing seem to be attributed to proximity to main road (Mandailing) versus more remote location (Minangkabau), with limited influence of the cultural affiliation. If it appears that the respective heritage systems are of little influence regarding the possible links between agrobiodiversity, dietary diversity and nutritional status, the reason of such "neutrality" should be tentatively commented.

In spite of this aforementioned criticism that may usefully be further discussed during his oral defence, my overall appreciation of the dissertation thesis of Mr Pawera is highly positive and complementary. I hereby unreservedly recommend Mr Pawera's doctoral thesis to proceed to the final stage of oral defence.

In Jakarta, on 13 December 2020



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