Multidimensional Assessment of Sustainable Agricultural Practices in Kampong Thom, Cambodia

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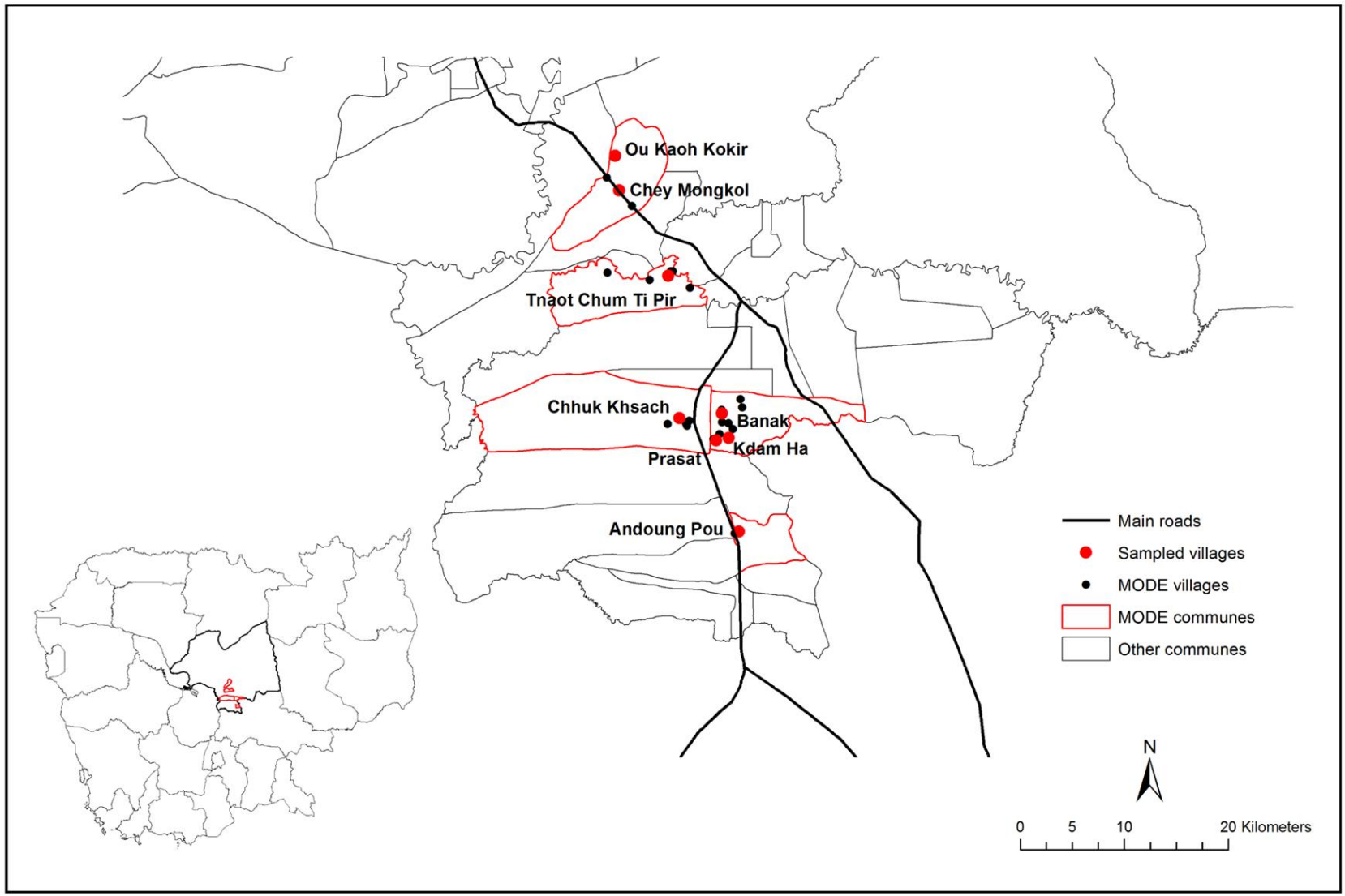
Context

- Agriculture is one of the mainstays of the Cambodian economy, accounting for almost 25% of GDP in 2016
- About 80% of rural households are engaged in some agricultural activities.
- Cambodian agriculture is characterized by traditional practices.
- Local organisations, Minority Organization for Development of Economy (MODE) & Mlup Baitong promote sustainable agricultural practices to vulnerable farmers in the central Cambodian lowland region in the Province of Kampong Thom to develop environmentally friendly crop production systems and to diversify their incomes.

Context



Localisation of project area in the South of Kampong Thom and sampled villages

Objectives

- To assess the multidimensional benefits of the transition towards sustainable agricultural practices to local smallholder farmers.
- To measure the level of sustainability of agriculture in Cambodia.
- To provide tools and support to the local organisation to assess project's achievements and interventions.

Methods

- The SAFA (Sustainability Assessment of Food and Agriculture systems) framework developed by FAO was applied to a total of 80 farmers divided into two groups (target & control)

21 Themes

56 Sub-themes

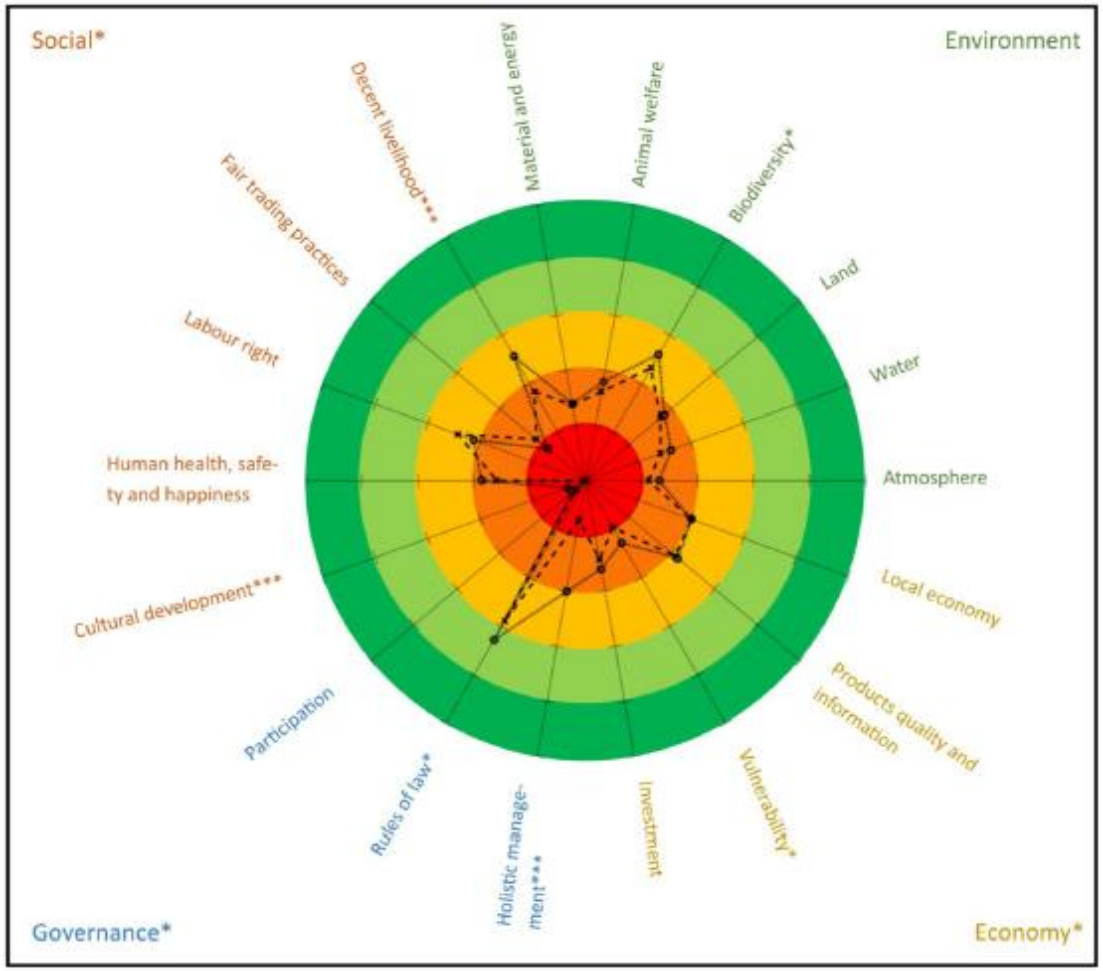
112 Core Indicators

- 53 out of the 112 core indicators were assessed, based on their local relevance, using on-field tested questionnaires.

Data collection preparation

Field data collection

Results (I)



Distribution of the smallholder farmers performance in the different themes of sustainability

orange = social

green = environment

blue = governance

yellow = economy

Performances comprised between 0 (inner red circle, low sustainability) & 1 (outer dark green circle, high sustainability)

Dotted/Solid dark line represents the target farmers performance

Dashed line show the control performance.

* significant at p = 0.05,

*** means significant at p = 0.01

Results (II)

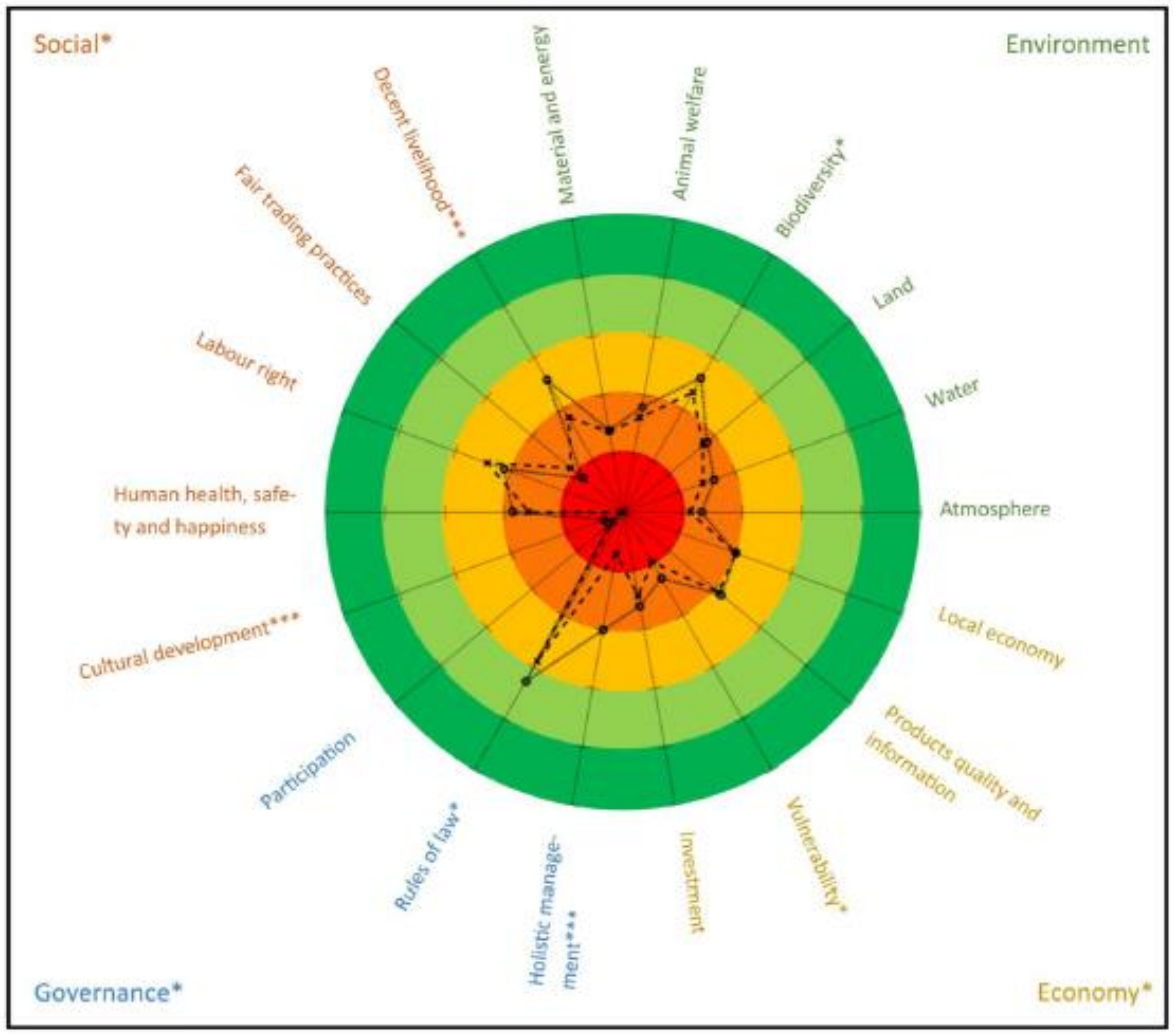
- The two groups (target and control) are similar in terms of vulnerability (same farm size, similar family structure, same access to natural resources or facilities) and can be confidently compared.

- Both groups (target = dotted, control = dashed) are characterized by an overall low level of sustainability for all four pillars: Good Governance, Environmental Integrity, Economic Resilience and Social Well-being.

- However significant differences could be brought out between the project beneficiaries and the control group for 12 core indicators and 6 sustainability themes distributed between the four pillars of sustainability.

- The increase was always in favour of the target group.

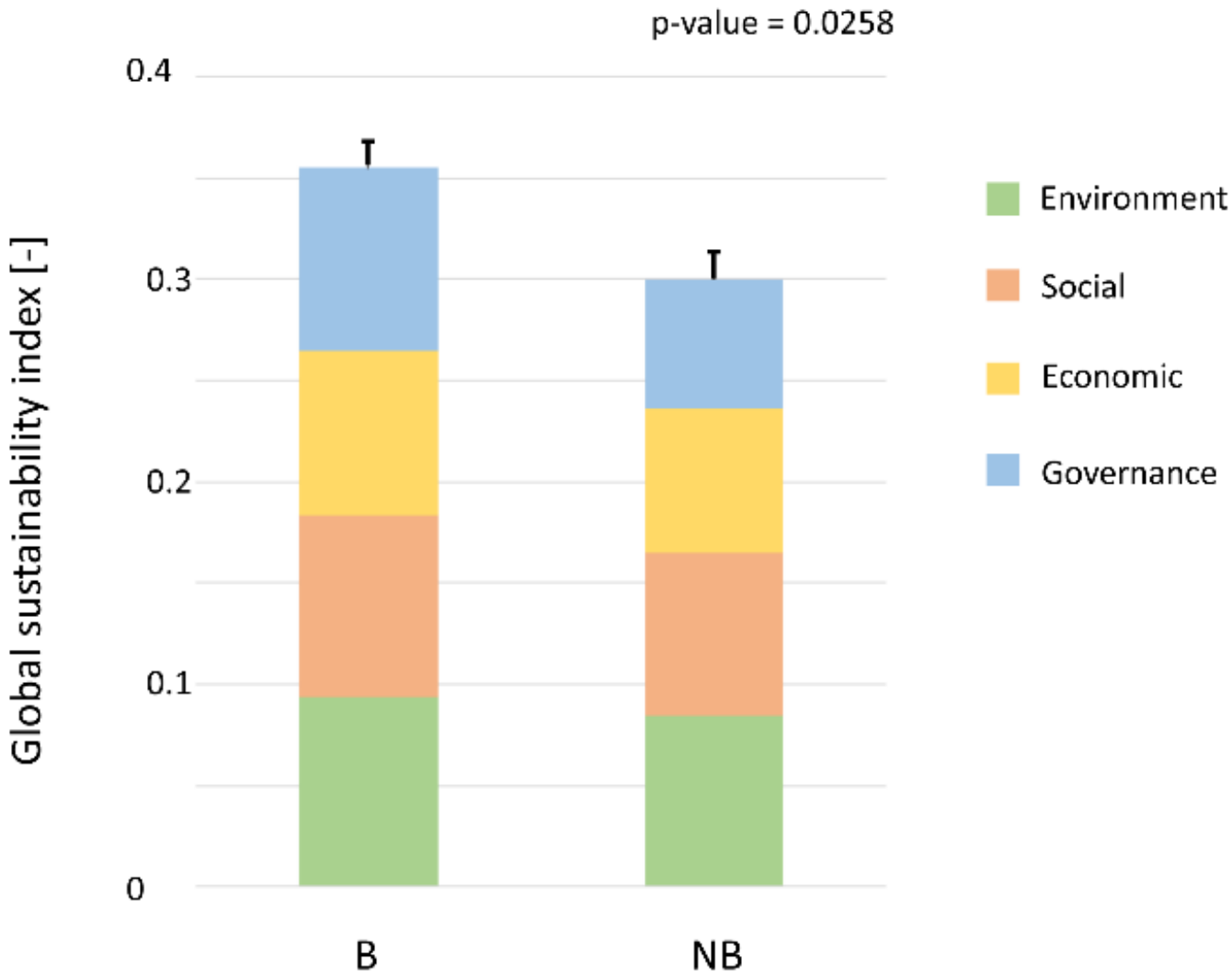
Results (III)



Several key aspects appeared different between both groups and include for the target group:

- a more diverse production especially with higher number of vegetable produced, planting trees and more diverse animal husbandry,
- higher net income,
- higher number of identified risks at farm level (especially related to soil, water quantity and quality, climate changes and the lack of agricultural knowledge)
- higher number of relevant risk mitigation actions taken and planned.

Results (IV) – Global Sustainability Index



Discussion

- When investigating sustainability, many changes are time-consuming and effects could only be seen on long-term. Study took place five after first interventions but some of interviewed farmers only followed trainings a year before data was collected.

- It highlighted the critical lack of agricultural knowledge of Cambodian farmers and their will to learn (more pronounced for project beneficiaries).

- Almost all target farmers interviewed were satisfied to very satisfied with the trainings and support delivered by MODE. Overwhelming majority of interviewees never followed other agricultural trainings than those delivered by MODE.

- It allowed MODE and its donors to target their future actions towards an increase of sustainability of Cambodian agriculture.

Conclusions

- The study highlighted the positive impacts of spreading and transitioning towards sustainable agricultural practices to smallholder farmers on the overall level of sustainability of Cambodian farmers in Kampong Thom province.
- The SAFA framework was successfully adapted to the local Cambodian context and applied to target and control groups.
- The study revealed the overall low level of sustainability of all interviewed farmers (which was always higher for project beneficiaries though).
- More research is needed to dig into the causality of the observed significant differences.

Thank you for your attention

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