

Executive summary

[100WEEKS](#) is a Dutch NGO committed to lift poor households from poverty by empowering local communities ([see website](#)), they currently have cash-transfer and financial education programmes in place in West Africa ([Annual Report 2020](#)). Given the recent opportunity to secure corporate partners ([Annual Report 2020](#)), the NGO is now exploring the option of designing training for [Good Agricultural Practices \(GAP\)](#) in cocoa farming. The programme would be focused on Ivory Coast and Ghana, where much of the global cocoa production is carried out by farming households that currently live below the [Living Income benchmark](#), due to sub-optimal agronomic practices, growing costs of production and value chain imbalances of power. The adoption of GAP has the potential to improve their incomes by improving yields. The organisation turned to [Wageningen Science Shop](#) looking for support in collecting the knowledge necessary to design such a programme. We as [ACT team](#) collaborated with WUR Science Shop for this project.

Our main research objective **has been to better understand what are necessary considerations for a programme of this kind to be effective and efficient in delivering a positive impact**. In order to do so, **we investigated the links among GAP and cocoa farming, researched previous training projects, identified the characteristics that make a training effective with a focus on ensuring the continuity of positive outcomes even after the project completion, and assessed the role that the context can have on the outcome of an intervention**.

The method

We conducted an extensive literature review and interviewed several stakeholders ranging from scientific researchers to West African cocoa farmers. The literature review has been carried out through the vast [library present at WUR](#), and with the support of online journal websites, [Google Scholar](#), [Scopus](#) and other collections of scientific peer-reviewed material. Additionally, we used grey literature such as reports from organizations on the ground and national governments. We also conducted two kinds of interviews: some were informal while others were formal and semi-structured, these second ones were transcribed and cited in the final output. The choice of these two interview forms was motivated by their potential to systematically provide us with relevant and valuable insights, from the beginning of the project. Both literature search and interviews were integrated in a common strategy: at first for a general assessment of the topic,

necessary to create a solid foundation to the further evolution of the study; and in a second moment to collect more detailed insight from specific stakeholders, to exhaustively investigate the most relevant aspects of the issue.

During our entire research we followed the [WUR's guidelines](#) for good scientific research, and those detailed in the [Netherlands Code of Conduct for Research Integrity](#), along with other ethically oriented concerns.

To support our study, we developed a **conceptual framework** based on the theory of *empowerment* (Hennink et al., 2012; Guttierrez, 1990; Nikkhah and Redzuan, 2009), to which the ideas of *Sustainable Livelihood* (Chambers, 1991) and *Knowledge Appropriation* (Gyekye, 1994) were integrated as encompassing structures. Thanks to our investigations, we were able to collect the following knowledge.

Preliminary Considerations

For the design of a coherent, realistic, and valuable intervention, some founding elements should be granted:

- **The clear definition and discussion of a specific goal for the programme.** This determines the **feasibility** of the target objective(s) and it will provide the bedrock for establishing **accountability** through **monitoring and evaluation** practices. We identified three main strategies that could be considered when setting realistic goals to improve the living conditions of cocoa farming households: a minimum price for cocoa could be granted on the international market, the yields of cocoa could be improved, or a more comprehensive approach that includes the two aforementioned goals can be considered (van Vliet et al., 2021; K. Giller, personal communication, June 7, 2022; Y. Waarts, personal communication, June 3, 2022; Ruben, 2022).
- **The planning of monitoring and evaluation practices.** This allows the formulation of **objective assessment** on the **real impact** of an intervention, to grant that **accountability** is fully satisfied, and to provide a **solid knowledge** for **future developments** towards the larger goal of following interventions.

Agronomic aspects

A **stepwise approach** could strategically support the delivery of this knowledge (see Appendix A)

- Correct pruning, weeding and sanitization should be prioritised since they lay the **necessary premises to optimal production**
- Fungicide and insecticide application will follow, these practices can in fact help greatly in **improving yields**. Such practices should also guarantee minimum negative environmental impact
- Soil nutrient replenishment shall then also be addressed with the use of available resources and fertilisers **to provide long-term benefits**. Environmental impact shall also be considered in this step.

Agronomic training

Training can be an effective method to foster technology appropriation of agronomic knowledge. The relevant scientific literature favours the **use of practical demonstrations** and methods, since these enable the farmers to try the techniques themselves on small plots, and evaluate afterwards (Oladele & Olufemi, 2022). An example of this is the use of **Farmer Field Schools**, which aim at localised and multidisciplinary knowledge production in the specific context of application (Akinmolafe & Ajoyi, 2022; Muilerman & Vellema, 2017). Lack of context specificity tampers the benefits of training for farming households (F. Obeng Adomaa, personal communication, June 10, 2022). **Extension offices or agents** can support in this, since they make GAP training meaningful for farmers by visiting farms and adapting the practices to specific conditions (F. Obeng Adomaa, personal communication, June 10, 2022). Thus, an intervention that effectively improves incomes of cocoa farming households should consider both the benefits and the pitfalls of technical aspects of training. **Technical training can be beneficial for farmers but only if certain contextual factors are considered.**

Access to resources

Actual (material) **inputs are also needed**. Providing farming households with inputs through service delivery or creating opportunities for access to such resources can empower them (Hennink et al., 2012). However, **resources are often scarce and/or access to them is limited**.

- There is **generally a low satisfaction of the service delivery and inputs**, such as the supply (and prices) of fertilisers and farming machines (Bymolt et al., 2018; Nova Cocoa Farmers Cooperative, personal communication, June 15, 2022)

- The **infrastructure** often **is relatively poor**, tampering the ability to provide necessary inputs (K. Giller, personal communication, June 7, 2022). Generally, this also limits access to information and markets (Ruben, 2022).
- **Land is scarce**, preventing optimal yields (Kiewisch & Waarts, 2020). A proposed approach of land reform is claimed to have pitfalls, such as already existing arrangement of land rights (Ruben, 2022; Kiewisch & Waarts, 2020).
- **Shortage of labour**, caused by a decrease of the youth's interest in farming, is another challenge for farming households (Nova Cocoa Farmers Cooperative, personal communication, June 15, 2022).

Sustainability Concerns

Considerations on sustainability must be made when designing a program, we discussed environmental, social, and economical views.

- Environmental: attention should be paid towards **replenishing the missing nutrients back into the soil**, to guarantee satisfactory levels of productivity per hectare and to stop deforestation practices. Also, the issue of efficient management/avoidance of negative spill-over effects from pesticides and fungicide use should be addressed at a higher level than individual farmer households is necessary. Local governments could coordinate large scale operations to limit the need for complementary sprayings. Finally, the fertiliser use recommendations should be context specific to ensure optimization (Kiewisch & Waarts, 2020).
- Social: It is **crucial to consider behavioural drivers for adopting and engaging with certain skills and training** (Ruben, 2022). The specific context should again be taken into account when developing a training, because it determines needs and incentives. It is firstly important to consider what motivates farmers to participate in training. Additionally, the **incentives of extension agents should be considered**, since their action can result in long-term resilience within the targeted community (Shikuku et al., 2019). Attention should be paid to the community structure as well. An effective training addresses individual farmers, their households, and communities as well (Bymolt et al., 2018). It is also important to consider the matter of gender roles, which could affect adoption of certain skills. Training should therefore be gender-responsive (Kiwauka et al., 2020). **The development of training should value a bottom-up approach, to tailor its design to specific local needs** (Y. Waarts, personal communication, June 3, 2022)

- Economical: **NGOs can provide inputs either directly or indirectly**, they should support farmers by facilitating service delivery and providing unconditional inputs (cash transfers, seeds, tools), generating direct impact and positive spillovers. 100WEEKS could use its international influence to **push for a better balance of power along the supply chain of cocoa**, resulting in better returns to farmers (van Vliet et al., 2021; K. Giller, personal communication, June 7, 2022; Y. Waarts, personal communication, June 3, 2022; Ruben, 2022). Finally, given the inelastic characteristic of the agricultural commodity, **support from institutions as well as the diversification of investments** should be fostered to screen farmers from the dangers of market volatility (Piot-Lepetit & M'Barek, 2011; Tothmihaly, 2017).

Ethics

These aspects must be considered when designing an intervention:

- The core focus of the *technology appropriation* concept on local expertise
- the NGO should be aware of different interests at stake (own organisation, financial supporters, farmers, coaches, etc.) (van Wessel et al., 2019), to make objectively choices
- local stakeholders' *Agency* is necessary to establish a long-term change (Partos, 2022).
- Local context is key, targeted interventions have better chances of being ethical, and pre-existing social/cultural dynamics could determine unforeseen relevant concerns (Y. Waarts, personal communication, June 3, 2022; Nova Cocoa Farmers Cooperative, personal communication, June 15, 2022; Ruben, 2022).

Integrative approach

Since a **simple solution is not possible** to the complexity of improving living conditions of poor West African cocoa farmers, the initiation of a **long-term virtuous process of change** is necessary. Such a process will be the result of successful endeavours, which **should be all realistic in their target, exhaustive in their approach, coherent in their evaluation, and consider the interests of all involved stakeholders** (Ruben, 2022).

Conclusions

The adoption of **GAP has the potential to significantly improve the cocoa production and consequently the household's income**, they should therefore be considered a valuable strategy for development programmes. Optionality, seasonality, social and ethical aspects are all

essential for the design of effective trainings. **The critical importance of context specificity** was evident in all the interviews and in the literature review we conducted. Based on that, we propose a **paradigm shift** of the way in which NGOs deliver knowledge to local communities. We believe that 100WEEKS should focus on promoting *knowledge appropriation* at the level of extension agents, coaches, and Farmers Field Schools; and spend the remaining resources to grant a facilitating environment: by granting access to inputs, fostering favourable policies, and supporting social organisations schemes (see Appendix B). Finally, we highlight that a possible **solution cannot come from a simple linear process, but instead it should approach the matter holistically, as it should account for the interests of all the relevant stakeholders involved.**

All the amount of the collected knowledge gave us a more complete perspective on the issue, and it allowed our team to develop our own point of view. **Further research is still needed** on the matter, but as we said, "*it is a process*", and we believe that this report could contribute positively to the progress towards the greater goal.

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Appendix A

A stepwise approach to agronomic practices

A STEPWISE APPROACH



Figure 1 - A stepwise approach. Inspired by K. Giller (personal communication, June 7, 2022)

Appendix B

A shift in paradigm in the way NGOs design interventions

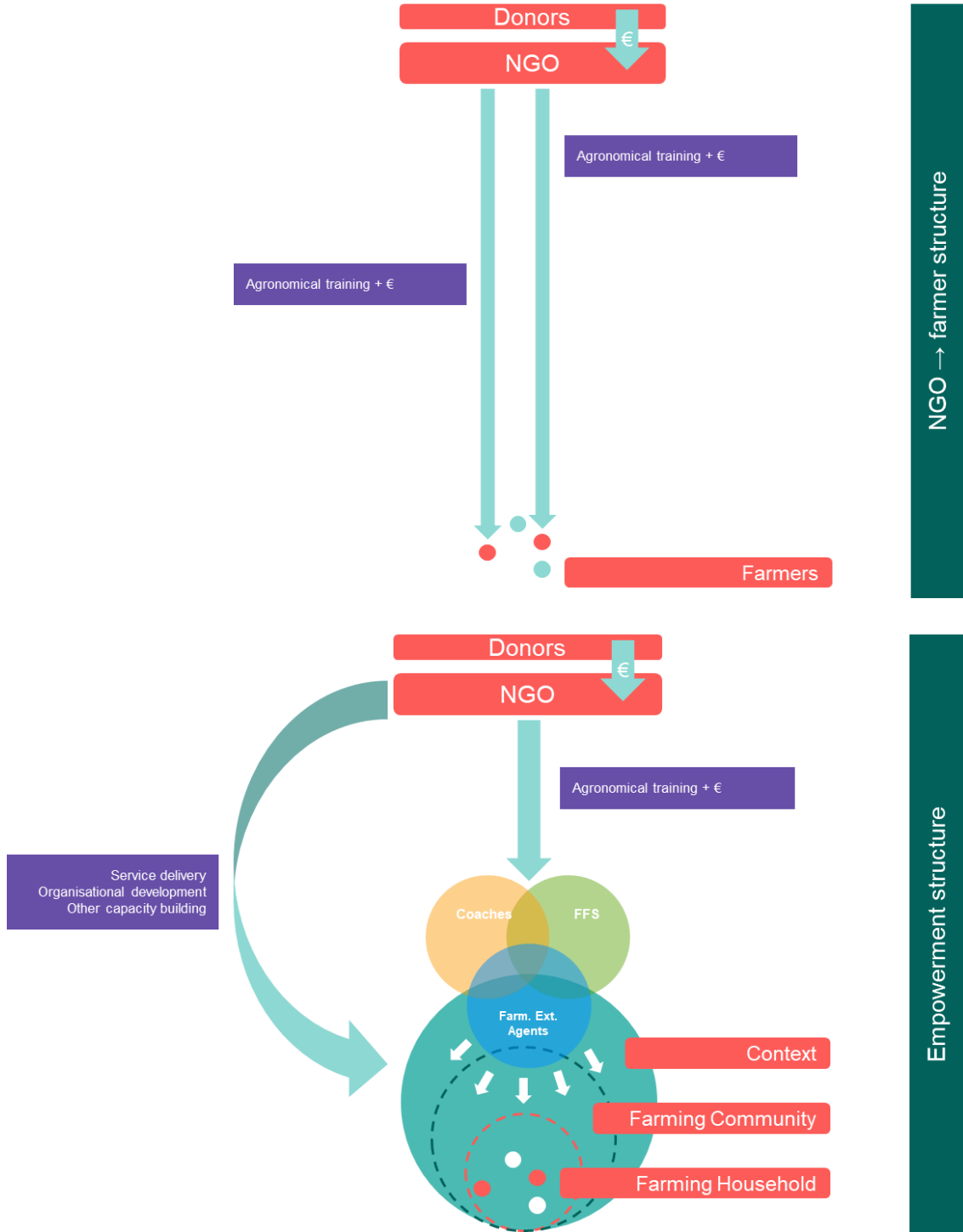


Figure 2 - Suggested change in paradigm representation. Source: own production