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## *Tobacco Control Social Impact Bond (T-SIB)*

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*For Economically Viable and Environmentally Sustainable Livelihoods*

### **At a glance**

**This proposal is for the world’s first social impact bond on tobacco control (T-SIB).** The T-SIB is an innovative finance mechanism under design which aims to assist small-holder tobacco farmers in Zambia transition to more profitable and sustainable livelihoods. The expected outcomes include 7,360 farmers transitioned away from tobacco growing; 70% increase in household resources of small-holder farmers who transition; and 17,000 hectares of protected forests. We call outcome payors and investors to engage in developing a model results-based instrument that is expected to be disruptive and highly replicable across the globe in generating social and environmental impact.

**Why transition from tobacco cultivation?** Tobacco cultivation harms farmers’ health, drives deforestation, pollutes water, soil and air, and is associated with child labour and poverty. Many farmers earn poverty wages and are trapped in exploitative contracts.

**If tobacco cultivation causes so many problems, why do farmers continue to grow it?** The main reason is that they lack viable alternatives, or the capital required to make the switch. Independent farmers (and most of them operate and sell independently) are often ‘locked’ into long-term contracts with tobacco companies.

**Can alternative livelihoods programmes be successful?** UN-led and UN-assisted alternative livelihoods programmes have demonstrated important successes in major tobacco producing countries such as Bangladesh, Brazil, Kenya and Zambia. Most tobacco farmers are willing to abandon tobacco cultivation and switch to alternative crops and livelihoods if assisted with viable crop selection, easy access to inputs, extension and marketing services, crop protection and stable product prices. Access to education, training and skills development are also needed.



*Photo Doug Badcock*

**Why a social impact bond?** Alternative livelihoods projects need to provide tobacco farmers a complete range of services: from inputs, education and training, farm and market education, to credit and insurance. The comprehensive nature of such interventions requires large up-front investments, and low-income countries often do not have the required resources. Aid investments in alternative livelihoods programmes have also been insufficient relative to need.

**Why are alternative livelihoods for tobacco growers an excellent candidate for a social impact bond?** Social impact bonds require robust metrics to measure successful performance. Success in alternative livelihoods can be measured both quantitatively and qualitatively – for example number of hectares reduced, increases in farmers’ incomes, improved farmer and family health, reduced waste and pollutants, reduced rates of deforestation and farmers trained and employed in alternative livelihoods etc. Cost savings can also be estimated, e.g. costs linked to the overall ill-health/disease burden of farmers and their families, social welfare costs and productivity losses. The T-SIB will demonstrate outcomes over a 7-year period.

**What is the value proposition to funders?** This proposal is for the world’s first social impact bond applied to tobacco control. It provides partners with an opportunity to be pioneers in innovative finance approaches. The T-SIB will unlock and frontload new capital for important social and environmental interventions while also shift the focus on results. For outcome funders, this approach eliminates risks associated with programme delivery. The T-SIB model also provides for the involvement of multiple stakeholders.

*Alternative Livelihoods to Tobacco: An Accelerator for the SDGs*

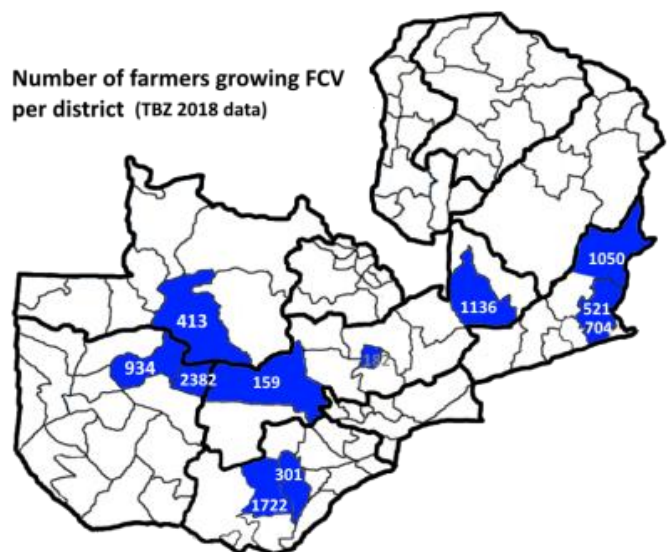
In addition to helping countries achieve their commitments under the WHO FCTC and Sustainable Development Goal on health and well-being (SDG 3), supporting alternative livelihoods will also drive progress towards other SDGs by reducing poverty, increasing food security, providing better and more sustainable employment, and by mitigating the negative environmental impact of tobacco production (SDGs #1 No Poverty, #2 No Hunger, #5 Gender Equality, #8 Good Jobs and Economic Growth, #13 Climate Change, #14 Life Below Water, #15 Life on Land).

## How would the T-SIB work?

**What are the target group and areas?** The Tobacco SIB will target small-scale farmers growing tobacco in Zambia and will focus on the Western, Eastern and Southern areas, where Virginia tobacco production is prominent to achieve both social and environmental benefits.

**What is the implementation period?** The implementation period will be seven years with four years of intensive interventions including new transitioning farmers each year followed by less intensive support and monitoring for a period of three years to sustain the transition.

**What is the proposed intervention strategy?** The proposed interventions will focus on providing farmers with viable alternative livelihoods and the capital supporting the transition. To encourage diversification away from tobacco production, the T-SIB initiative will promote “Farming as a Business”. This approach encourages farmers to look at all resources they have and then plan their crop production, marketing and other activities to maximise these resources. This approach goes beyond simple crop substitution and helps smallholder farmers to develop longer term plans.



Interviews with tobacco farmers in Zambia indicate that among the constraints to shifting to more viable livelihoods are lack of inputs, information services, credit, marketing and product aggregation services. The T-SIB will finance intervention models that deliver access to these resources and services through 1) an integrated model, whereby a few or a single organisation provides inputs and services, and also receives the

final product from the farmer providing additional value- and supply-chain services, and or 2) a market facilitation model, whereby organisations are financed to move into new areas and provide extra services to clients in their existing areas.

The T-SIB will likely finance interventions using both models in different areas of Zambia,<sup>1</sup> phasing-in support to farmers over a number of years. Both models require wide range of expertise, and operations need to be completed at a number of levels to ensure successful impact and sustainable diversification away from tobacco production. Cooperation of several service providers coordinated through an experienced intermediary/project manager is therefore crucial. The T-SIB will adopt the implementation model under Appendix A.

### Tobacco farmer interviews for T-SIB feasibility study in Zambia, Feb. 2019



<sup>1</sup> The Eastern province has the advantage of significant private sector integrated operations already present, such as COMACO and Good Nature Agro. Western and Southern provinces have fewer of these existing outgrower schemes, but are covered by market facilitation organisations (iDe, Musika, Winrock) and large scale extension support services (CFU).

**What are the expected results?** The T-SIB financed interventions aims to reach most small-holder tobacco farmers in ten districts, and successfully transition 80% of all farmers reached. This is a conservative estimate, based on local evidence on other conservation type schemes (e.g. COMACO). Expected outcomes by transitioning a total of ~7,360 away from tobacco growing include:

- 50 % reduction in number of small-holder farmers in tobacco production across Zambia;
- 50 % reduction in hectares under small-holder tobacco cultivation across Zambia;
- 70 % increase in household resources for farmers through alternative livelihoods;
- 17,000 ha of forests protected;
- \$12.6 mil in total financial benefits through increased household resources and protection of forests;
- Max. 11 % of IRR to investors after 7 years.

In addition, there are several direct and indirect benefits expected from the T-SIB initiative, which are not directly measured due to measurement challenges and relative lack of attributable data, but these outcomes can be evaluated within the impact evaluation if stakeholders agree. Other results include:

- increased food security due to production of a more diverse range of crops;
- reductions in green tobacco sickness due to no handling of green tobacco;
- reductions in child labour as other crops are much less labour intensive; and
- environmental benefits through reduced waste generation and chemical use and water protection.

**What are the outcome indicators and payment metrics?** The primary outcome indicator for the project will be “Number of target population transitioned from growing tobacco to growing alternative crops or pursuing other livelihoods that are equally or more profitable.” The estimated financial benefits associated with reductions in tobacco cultivation are \$273,32 per hectare, as measured under the secondary outcomes of the T-SIB which include:

- 1) increases in household resources and profitability from alternative economic activities, estimated to be \$116.48 USD / hectare,<sup>2+3</sup> and
- 2) reductions in deforestation and increased carbon sequestration value at \$156.84 USD per hectare.<sup>4</sup>

**How will the T-SIB monitor and evaluate results?** A historical baseline methodology is recommended to assess achievement of primary and secondary outcomes before, during and after T-SIB funded interventions. The success of the primary outcome will be measured through the hectareage of tobacco cultivated by farmers before and after the intervention. Secondary outcomes indicators are attributable to the achievement of the primary indicators and will support the cost-benefit analyses and evaluation of a T-SIB. However, these may be measured as well, if required.

Alternatively, the T-SIB can also use an outcomes tariff that pays a fixed amount for every hectare of land converted from tobacco cultivation to alternative, more productive uses. To mitigate for the deadweight outcomes (i.e. outcomes which would have happened anyway, regardless of an intervention) using an outcomes tariff methodology, outcomes payments would be structured to be lower than cost savings.

<sup>2</sup> Goma F, Labonté R, Drope J, Li Q, Zulu R, Kangwa E. 2019. *The Economics of Tobacco Farming in Zambia: Tobacco Farmers Survey Report 2019*. Atlanta: American Cancer Society and Lusaka: University of Zambia.

<sup>3</sup> To measure farming households' economic situation, Goma et.al<sup>3</sup> employed a survey that considers assets that the household produces for home consumption which are not sold. These assets are considered alongside other household financial costs, such as agricultural inputs or school fees, and other revenue streams, such as earned wages or produce sold, to assign an appropriate value to the household's broader economic production.

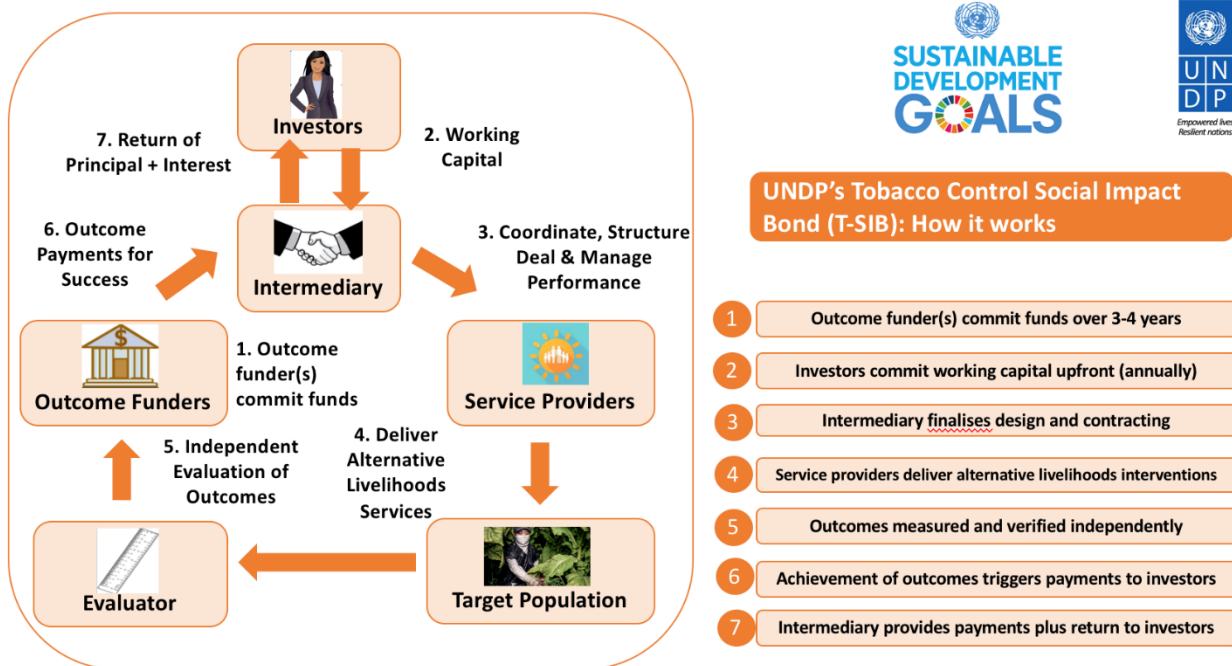
<sup>4</sup> To estimate the cost of deforestation caused by tobacco farming, we used the World Bank estimate on the social cost of carbon, which is \$10/ton. According to Geist (1999), 0.3705 hectares of forest are cleared for every tonne of tobacco produced. From Food and Agriculture Organization (FAO) data, tropical forests can sequester 3.2 tonnes of carbon per hectare per year. When the \$10/US ton price is converted to metric tonnes and is multiplied by the volume of carbon diverted per tonne of tobacco produced, the negative cost of tobacco production is valued at \$130.70 USD per metric tonne, which translates into \$156.84 USD per hectare. It is assumed here that land is protected from deforestation by the project for ten years.

**What financing is required?** A 7-year T-SIB would require an estimated amount of \$8.15 mil in upfront capital and \$10.4 mil as outcome payments. Estimated investors' internal rate of return will be a maximum of 11% per annum. Costing is based on similar alternative livelihoods project in Zambia. During the first four years the required capital for interventions is USD \$805 per farmer reached, whereas during the following less intensive period of three years, supportive interventions, monitoring and evaluations would require USD \$250,000 per year (see Table 1 below).

**Table 1) T-SIB required investment, outcome benefits and investor payments: cash flows**

Year	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	TOTAL
New farmers transitioned	1,600	3,600	3,000	1,000				<b>9,200</b>
Cumulative # of farmers transitioned	1,280	4,160	6,560	7,360	7,360	7,360	7,360	<b>41,440</b>
Financial benefit per year*	\$ <b>391,831</b>	\$ <b>1,273,451</b>	\$ <b>2,008,135</b>	\$ <b>2,253,029</b>	\$ <b>2,253,029</b>	\$ <b>2,253,029</b>	\$ <b>2,253,029</b>	\$ <b>12,685,535</b>
Cost of intervention	-\$ <b>1,288,000</b>	-\$ <b>2,898,000</b>	-\$ <b>2,415,000</b>	-\$ <b>805,000</b>	-\$ <b>250,000</b>	-\$ <b>250,000</b>	-\$ <b>250,000</b>	-\$ <b>8,156,000</b>
Outcome payments to investors		\$ 391,831	\$ 1,273,451	\$ 2,008,135	\$ 2,253,029	\$ 2,253,029	\$ 2,253,029	\$ <b>10,432,505</b>
Net investor cash flows	-\$ 1,288,000	-\$ 2,506,169	-\$ 1,141,549	\$ 1,203,135	\$ 2,003,029	\$ 2,003,029	\$ 2,003,029	\$ <b>2,276,505</b>
Max IRR to investor							<b>11%</b>	

**Stakeholders and responsibilities.** Key stakeholders and the T-SIB process are presented in the figure below. The design will be completed together with interested outcomes payors and investors, supported by UNDP as an intermediary.



**UNDP as a partner of choice.** UNDP works in over 170 countries and territories worldwide. It supports countries to implement the 2030 Agenda for sustainable development. As part of its efforts to help countries achieve the 2030 Agenda, UNDP works intensively to help countries mitigate the harm caused by tobacco use and its production in partnership with both local and international partners. To help countries access innovative development finance, UNDP has developed – and is implementing – several social impact bonds across the health, environmental and alternative livelihoods domains. UNDP can help identify promising countries for the T-SIB approach, convene local and international partners in a dialogue around alternatives to tobacco cultivation, support T-SIB design and implementation, share lessons learned and support policy changes at the country level.

**T-SIB partners.** UNDP is working in cooperation with the Secretariat to the Framework Convention for Tobacco Control (FCTC), the UN Food and Agriculture Organisation, the World Health Organisation, Tobacco Free Portfolios, American Cancer Society (ACS), the Zambia UNDP Country Team, and the Zambian Ministry of Health and Ministry of Agriculture.

**Contacts:**

Daniel Grafton, [daniel.grafton@undp.org](mailto:daniel.grafton@undp.org)

Massimiliano Riva, [massimiliano.riva@undp.org](mailto:massimiliano.riva@undp.org)

Dudley Tarlton, [dudley.tarlton@undp.org](mailto:dudley.tarlton@undp.org)

## Appendix A. T-SIB implementation model

