

Living Income Webinar Series

CLOSING INCOME GAPS

Mars Wrigley and Tanager International Shubh Mint Project: How partnerships and project design helped raise incomes of Indian mint farmers

1 October 2019

The Living Income
Community of Practice

Supported by the



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Today's webinar facilitators



Stephanie Daniels
Sustainable Food Lab



Sheila Senathirajah
ISEAL Alliance



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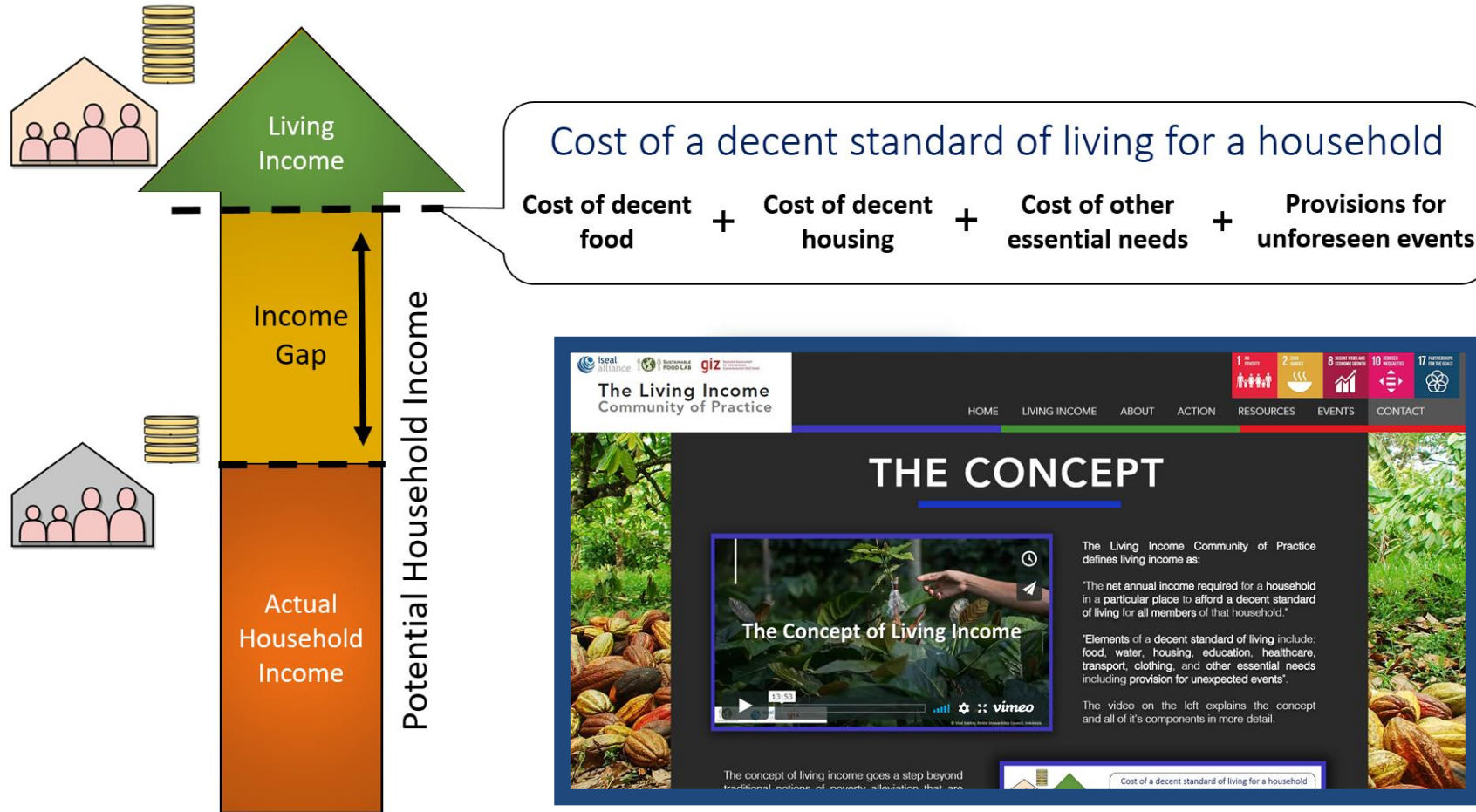
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The Living Income Community of Practice

Foster collaboration and support organisations in their journey towards improving farmer incomes, and enabling farmers to achieve a decent standard of living.



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Learn more: www.living-income.com

The Living Income Community of Practice

Fostering collaboration and support organisations in their journey towards improving farmer incomes, enabling farmers to achieve a decent standard of living.

Facilitate learning and exchange
around measurement

Understand the gap between
actual and living income

Identify and discuss strategies to
close the income gap

Learning across sectors
and helping organisations realise SDG commitments

Open community of practice

Sharing information about the efforts of different actors in this space

Learn more: www.living-income.com
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Today's guest speakers

The Shubh Mint Project: How partnerships and project design helped raise incomes of Indian mint farmers

Jeremy Schifeling

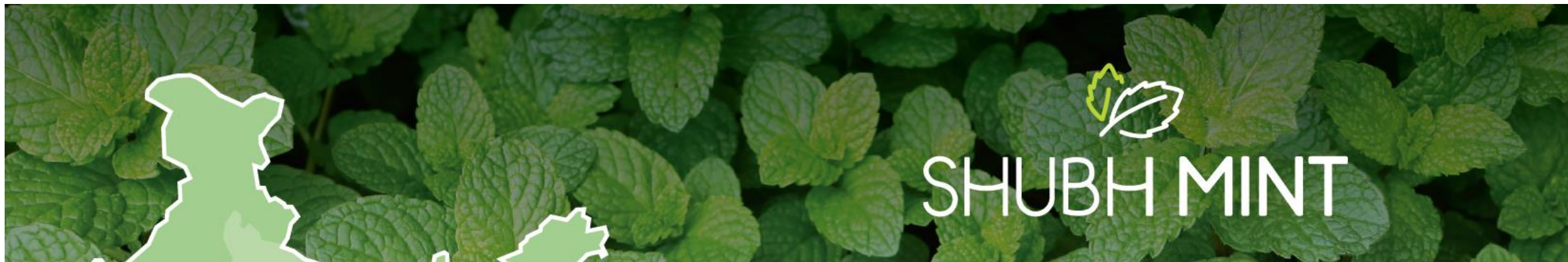


MARS WRIGLEY

Joseph Boulier



tanager
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In Uttar Pradesh,
India, mint farming
is a cash crop
for families.

Mint

- Uttar Pradesh is the largest producer of mint in the world
- Grown by more than 1 million smallholder mint farmers
- Mint oil and natural menthol are used in gums, confections, oral care and pharmaceuticals



The Challenge:

Small farms, declining yields and low farmer incomes

Our Shared Goals:

By 2021, in Barabanki and Lucknow, we aim to have:

20,000
farmers adopting
mint good
agricultural practices

**Double
incomes**
from mint

30% lower
water usage

Shubh Mint Impact for Farmers



MARS WRIGLEY



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250%
Increase in
net income
from mint



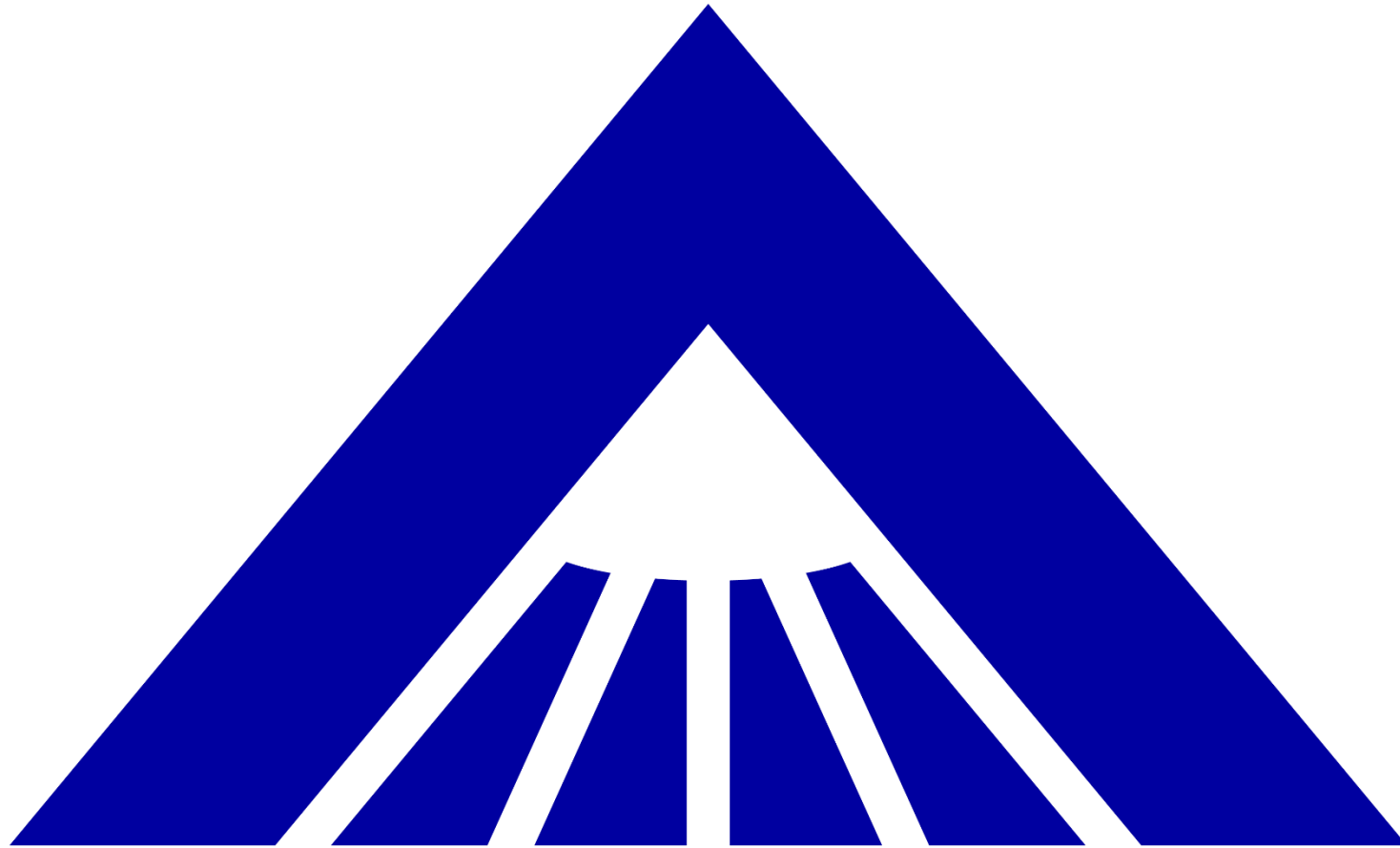
24%
Reduction
in cost of
production



40%
Reduction
in water
usage

**The world we
want tomorrow
starts with how we
do business today**

MARS



The Five Principles

Quality Responsibility Mutuality Efficiency Freedom



Sustainable in a Generation Plan MARS

It's time to embrace a sense of urgency.

- Since we set our initial sustainability ambitions and targets, we've gotten smarter about the very human issues the world faces.
- The science is better. The data is stronger. We now know we must be bolder.
- We must look beyond what's in our direct control – to affect change in our entire value chain.





Sustainable in a Generation Plan MARS

The world is facing significant challenges like poverty, food insecurity and climate change. Businesses like ours have a significant role to play in tackling these challenges and shaping a positive, sustainable future. Our actions are guided by our Five Principles and informed by science. Mars is proud to do its part as we pursue growth we are proud of.



We will reduce our environmental impacts in line with what science says is necessary to keep the planet healthy.



We will direct our innovation pipeline and market our products in ways that help billions of people and their pets lead healthier, happier lives.



We will significantly improve the working lives of 1 million people in our extended supply chains to enable them to thrive.

We can't do it alone...



Board Support

**Passionate
Mars Associates**

**Government &
NGO Partners**

**Suppliers &
Customers**

Consumers

Tanager: Growth For Good

Tanager, established in 1993 as an **ACDI/VOCA affiliate**, is an international non-profit with a global mission to help solve problems of poverty, food security, nutrition and gender inequity. We connect people and partners in markets around the world to co-create opportunities for life-changing, sustainable change.

Our Expertise

- Sustainable sourcing
- Nutrition and gender integrated agriculture
- New ideas and technologies
- Access to secure financial services
- Workforce development
- Market Readiness

For more details: visit www.tanagerintl.org
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Tanager: India Presence

MARS WRIGLEY

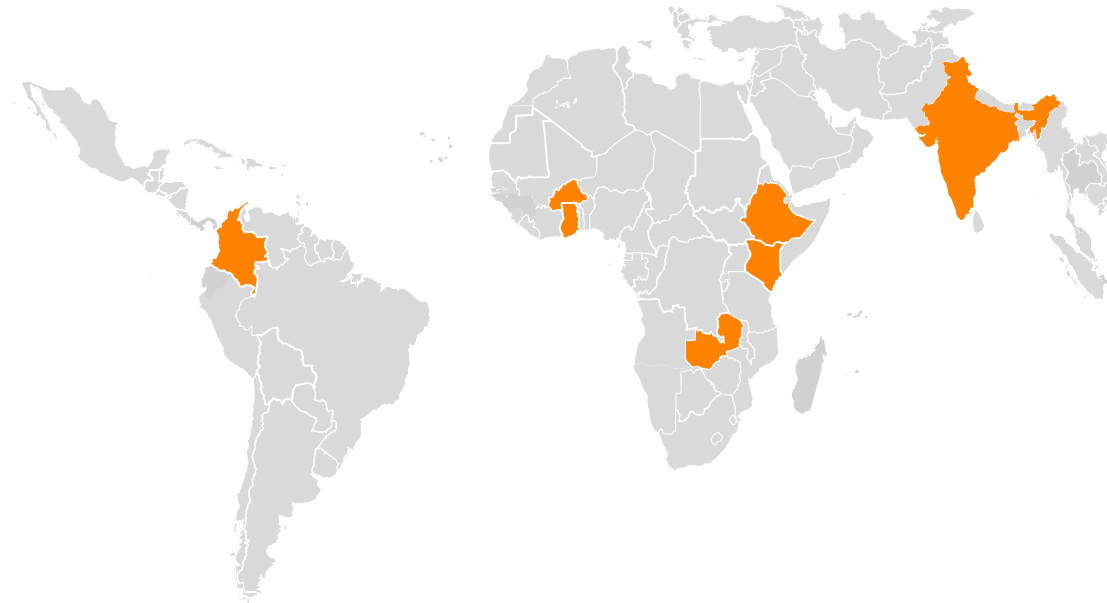


Philosophy of Co-creation

We align interests of producers, financial institutions, input suppliers, exporters, traders, processors, service providers, and end consumers to achieve common goals.



Partners



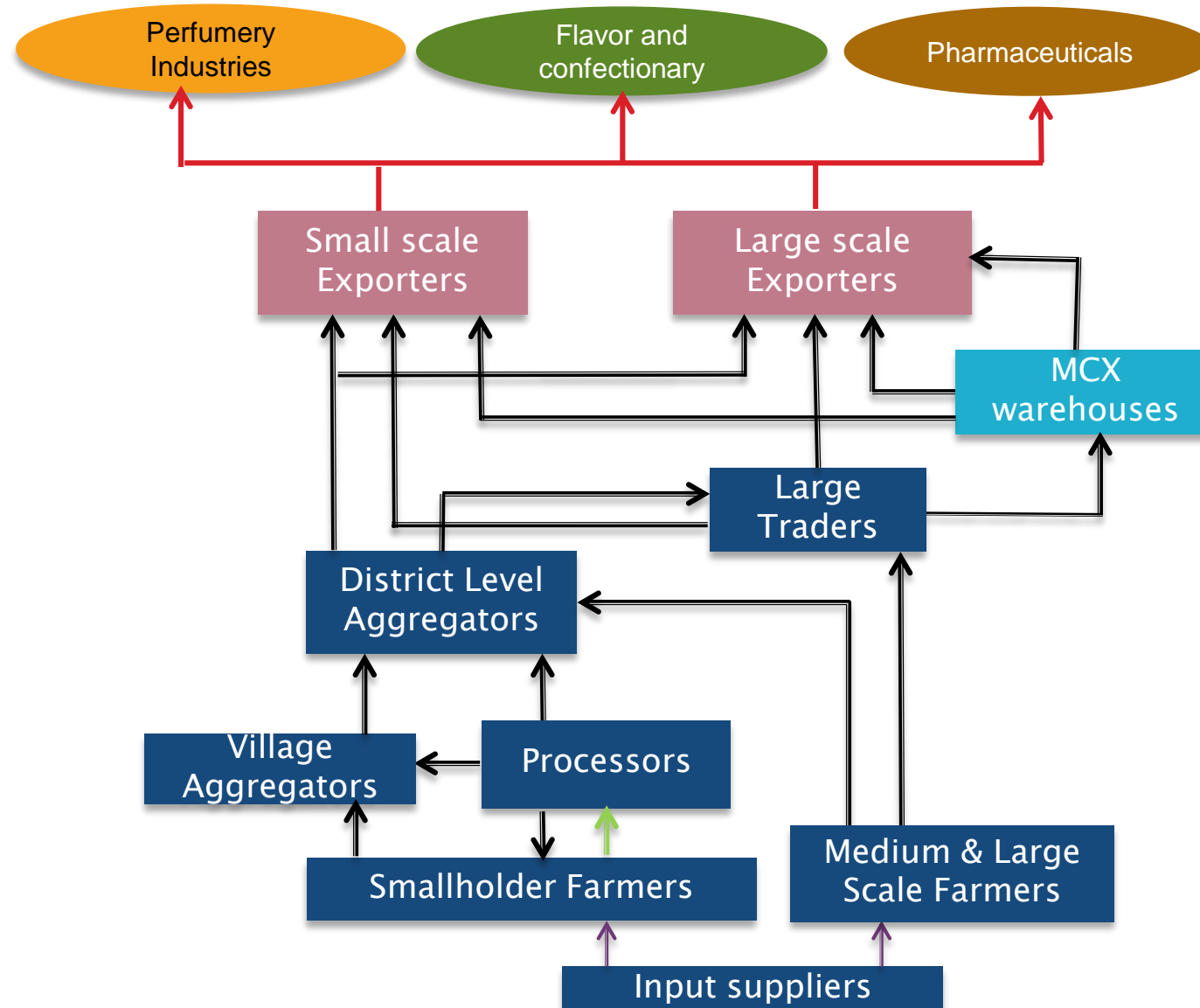
Mint in India

Context

- 70% of the world's mint oil production
- 92% of India's mint oil comes from small and marginal farmers (less than two acres)
- Short growing season
- Planted from stolons, transplanted from seedlings
- Block farming system
- Local distillation
- MCX Exchange commodity



Mentha arvensis Value Chain Map



Shubh Mint Project Timeline

2014

2015

2016

2017

2018

2019

2020

2021

Phase I: Assessments, Analysis, and Trials

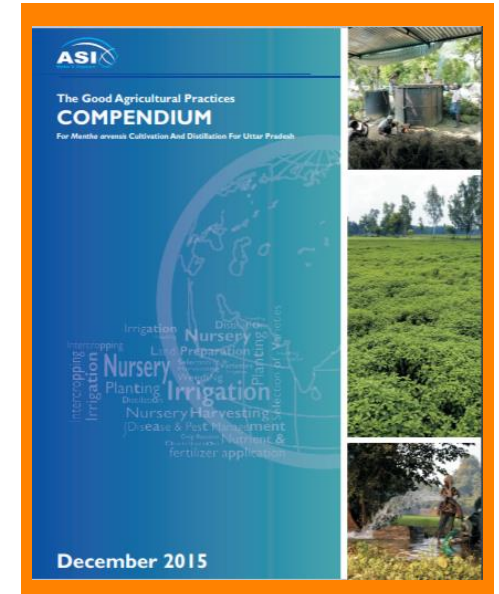
Phase II: Implementation and Research

Phase III: Coalition Building and Scale



Phase I: Research

- Mint Value Chain
- Mint Investment Workshop
- Living Income Benchmark
- Mint Compendium
- Mint Crop Research Trials
- Stolon Multiplication Trials
- Gender Analysis
- Barrier Analysis
- Institution & Resource Mapping



Mint Value Chain Analysis

Background

- Verify current assumptions
- Understand the challenges
- Understanding stakeholder behavior within the supply chain
- Understand levers to pull



Mint Value Chain Analysis

Methodology

- Completed in 2 districts of Uttar Pradesh, 300 farmers, 50 processors, 20 aggregators, 10 commission agents, 5 traders and 2 exporters
- Participatory Rural Appraisals
- Semi-structured interviews, questionnaires and focus groups



Mint Value Chain Analysis

Key Findings

- 25-35% decrease in yields over the previous decade due to poor quality planting material, lack of GAP
- Adulteration happens throughout the supply chain
- Increasing cost of production
- Extremely price volatile



Living Income Benchmark & Farm Economic Model

Background

- Estimate a living income for the mint growers in Uttar Pradesh
- Farm economic model
- Conducted in collaboration with Sustainable Food Lab providing technical support



Living Income Benchmark & Farm Economic Model

Methodology

- 80 mint farming households across two districts Sitapur and Barabanki of Uttar Pradesh
- Participatory rural appraisals
- Household interviews, weekly dietary diaries, focus group discussions, rapid market assessments, data tabulation and synthesis
- Estimated Cost of Living
- Inputs from value chain and analysis for income and cultivation costs



Living Income Benchmark & Farm Economic Model

Key Findings

- A mint growing household needs \$1.53 (USD) per person per day and farmers are achieving .67 cents per person per day
- A mint growing household is receiving 1,715 per year of which \$531 is from farm income from three crop seasons, \$800 other cash income from farming, and \$384 of off farm income
- Mint is 39% of available cash income
- Farmers were not aware of ways to reduce farming costs and enhance productivity



Research Trials

Background

- Developed mint compendium capturing best practices and costs
- Based on previous assessments, understand how the GAP performs against control farms
- Moving from lab to land
- Showcase the project prior to the implementation with farmers in the field
- Testing more organic techniques



Research Trials

Methodology

- Random Block Design
- Tracking mint oil yield, cost of production, plant statistics, oil content, biomass
- Control treatments for each factor
- Analysis of Variance Procedure (ANOVA)



Research Trials

Key Findings

- With better spacing, optimal fertilizer inputs, and quality planting material doubling yields is possible while reducing the cost of production
- Menthol percentages from the farm are 70-75% and the MCX exchange requirement is 68% - Adulteration is REAL!
- Increasing spacing, reducing fertilizer costs, and frequency of irrigation cost of production was drastically reduced
- Great for educating extension and field staff



Gender Analysis

Background

- Communities where women are empowered have better outcomes in terms of health, education, and productivity
- Previous studies confirm that women play an important role in cultivation and harvesting **but not** in sale and marketing
- Low engagements in off-farm work for women
- Understand who in the community has influences on behaviors



Gender Analysis

Methodology

- 395 adults (53% men and 47% women) in 12 villages across two districts of Lucknow and Barabanki in Uttar Pradesh
- Focus group discussions, in-depth interviews with local and international NGOs



Gender Analysis

Key Findings

- Women have limited control in household decision making related to budgets, household finances, and markets
- Both men and women are supportive of efforts to promote income generating activity interventions in their communities
- Limited mobility for women in the villages



Institution & Resource Mapping

Background

- Understand the physical distribution of farmer organizations
- Understand farmer perceptions of different institutions and stakeholders
- Understand the factors that influence farmer decisions on selling mint oil



Institution & Resource Mapping

Methodology

- Quantitative and qualitative methods
- 1,257 farmers participated in FGDs, semi structured interviews, and social and resource mapping activities, across 20 villages in Barabanki and Luknow



Institution & Resource Mapping

Key Findings

- No existing functional farm organizations, farmer groups, or self-help groups (SHGs)
- Only 1-2% of demand for quality planting material is met by the market
- Institution and stakeholder perceptions
- Farmers prefer cash
- Not receiving any support from extension services
- At harvest 70% is sold locally between June and September and 30% is stored to meet fixed and contingent expenses



Phase II: Implementation

Challenge

Engagement

Low Productivity & Declining Profitably

On-Farm Interventions

Gender Inequality

Women's Empowerment Activities

Supply Chain & Access to Services

Farmer Producer Companies

On Farm Interventions

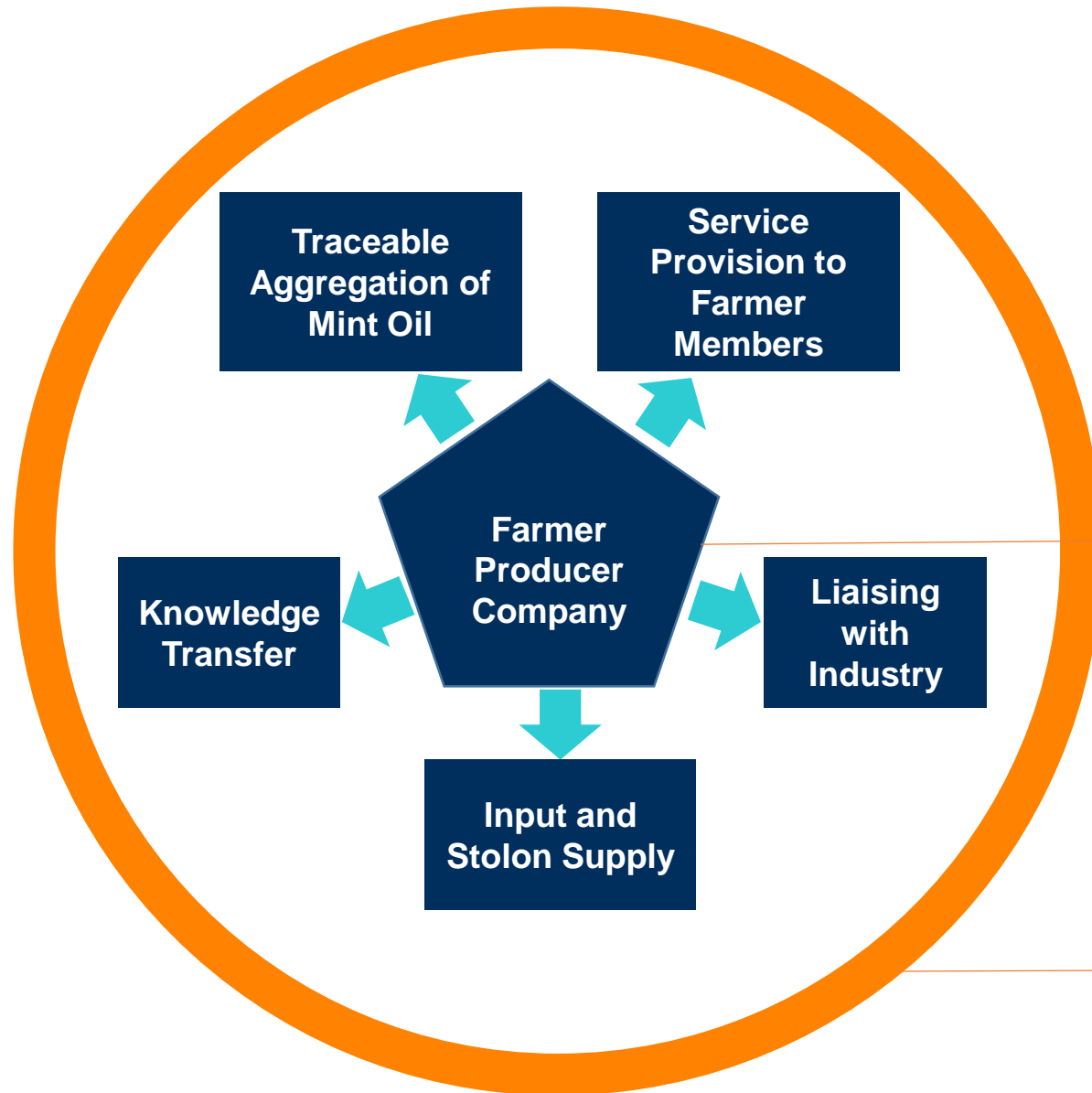


Women's Empowerment Activities



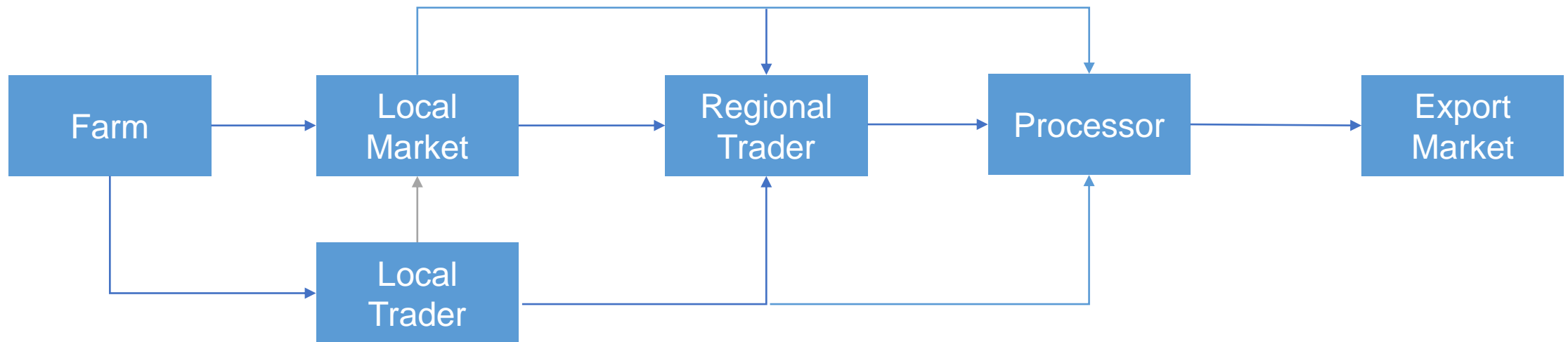
Community engagement with men in support of women's empowerment and the promotion of gender equality

Farmer Producer Companies



Promoting FPCs in the community to boost membership

Typical Mint Oil Supply Chain



- High velocity of transactions, everyone is a trader
- High levels of adulteration

New Mint Oil Supply Chain



- Shorter supply chain
- Traceable sourcing

Phase II: Results

Engagement

On Farm Interventions

- 16,373 Farmers with GAP
 - 41% Increase in Yield
 - 250% Increase in Income from Mint
 - 40% Reduction in Water Usage
-

Women's Empowerment Activities

- 354 Self Help Groups covering 4,580 women farmers
 - Savings increased by 72%
 - 90% of SHGs have established bank accounts
-

Farmer Producer Companies

- Four FPOs established including one all-women FPO (2,150 members)
- Forty tons of mint oil supplied into Mars Wrigley supply chain
- Input supply established
- Stolons supplied to 15,000 farmers

Phase III

Finding other sourcing partners
to support the whole-farm
approach



Scaling to new partners & new
programmatic areas



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Thank You!

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Mars: Jeremy.Schifeling@effem.com

Q&A from the audience

Question Asked	Answer Given
Does it mean that thru farmer producer company, you managed to move out from auction market in India?	Farmers do not sell via auction market in India. It is traded based on the Multi-Commodity Exchange prices, but selling is ubiquitous throughout. Our goal is to create a streamlined supply chain where farmers are selling more directly to the processing suppliers
How do you protect farmers income from the market volatility?	Since the mint oil market is large and there are only 22,000 farmers who will complete the program our primary focus has been reducing cost of production. By reducing the cost of production farmers can remain profitable, even with fluctuation in the price of mint oil. To date the average farmers reduction in COP is 24.6%
How are you planning to build/ensure sustainability for the FPCs?	Currently the project trains the board of directors of the FPCs and works with shareholders in the farmer producer companies to prepare them to be BODs. The project currently provides the management of the FPCs. Over the next 5 year period, once the FPC is established the project will transition the management of the company to an independent management team. the project is also exploring other service providers in the market place to assist the FPCs once Tanager leaves the project. Although practically the plan is to continue working with them likely for at least another 5 years to ensure an adequate transition time.
Please can you repeat the names of the partners your worked with on the ground in India - you mentioned two I think - one for farmer training and another on gender equality.	The Tanager India team is the lead. The implementation partners for this project include Tanager, Callison, Mars Wrigley, Read India, and Pratham.
How are you dealing to disease that affect mint?	As mint is a short season crop in India, it is only in the ground for 90-110 days and therefore does not get wilt or other diseases that are common in places where its kept in the ground for multiple years.
On the research trials, you don't touch anything on harvesting and post harvesting process?	We have run experiments in distillation efficiency and different dates of harvest. By improving the condenser units on the locally available distillation tanks we've seen yield increases from 10-15%. For different dates of harvest research has shown that its best to harvest 90 days after transplanting.

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Q&A from the audience

Question Asked	Answer Given
In Uttar Pradesh, Mint is becoming farmer's main crop and main livelihood income? Or only the complementary crop (meaning they have another main crop as farmer's main living income)?	Mint is the number one source of cash by percentage of annual crop income. Farmers also sell a number of other crops but primarily mustard or potato prior to the mint season, and rice afterwards. The project area supports three growing seasons throughout the year.
In Gender Analysis, how many % women vs men involved in mint farming?	Women in almost all of the households participate on the farm. Every mint farm has either labor that is performed by women during the year, either from the household or hired outside as farm labor.
FPC is a kind of farmer's partnership program with industry?	An FPC is a farmer producer company that is a legal entity in India that operates much like a limited liability company with two major exceptions. The first is that shareholders must also be member farmers and regardless of the number of shares, all shareholders only get one vote.
What is the real program to reduce water usage in mint farming? drip irrigation? sprinkler?	The main way the program has reduced the water footprint is through adding channels, improving water retention in the soils, and strategically irrigating the crop. On average the project has reduced the number of irrigation events by 2x per year. The project has experienced great results with drip, however there is not much adoption due to the fact that rice is grown immediately after the mint season so farmers are not willing to invest in a setup that can't be removed for the rice season. The project is exploring ways to lease equipment to farmers for the mint season as a service through the FPC. Research indicates sprinklers can have a negative effect on mint oil yields due to the water landing on the leaves affecting the plant's natural oil production process.
How is the yield evolution before vs after intervention to farmers you've done?	The yield from the baseline was 39 Kg per acre and now project farmers achieve 52 - 54 Kg per acre.
What form of caste / richer-poorer behavioural shifts did you identify?	The project has not completed the midline yet (will happen early 2020) so we don't have any behavioral data available related to social capital in the villages.
Impressive the drop from 270000INR to 200000INR - do you believe that you are now reaching optimal or is there another 10-20% to go in terms of reducing cost of production?	We believe that there is still some potential for further reduction of cost of production. By reducing diesel fuel usage from minimizing the frequency of irrigation, and mechanizing some of the farm activities could reduce labor costs from weeding, transplantation, and harvesting.

Community of Practice Updates

[Webinar | Exploring gender considerations in farmer and worker categorization – Experience sharing with Better Cotton Initiative - Oct 24, 2019 2:30 PM - 3:30 PM BST.](#)

[Webinar | Visualising research results: Effects of Supply Chain Initiatives on Yield, Price, Costs, and Incomes - Oct 31, 2019 3:30 PM - 4:30 PM GMT](#)

International Living Wage and Living Income Conference
5 & 6 November 2019 - Rotterdam (NL)
www.theonlywayisupconference.org

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Thanks!



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Living wage

<http://www.isealalliance.org/our-work/improving-effectiveness/global-living-wage-coalition>

[SIGN UP FOR GLWC BENCHMARK RELEASES](#)

Questions? Email us at:

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