

Water Stewardship at Nestlé: Vietnam To Produce More Coffee With Less Water

Carlo C.Galli / Claus Conzelmann
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We make Nestlé caring

*...by using water, the world's
most valuable resource,
responsibly.*



Our W.A.T.E.R. Commitments

Policy
Mandatory
June 2013

Po

Appendix to The Nestlé Policy on Environmental Sustainability

Nestlé Commitment on Water Stewardship

Nestlé recognises that the long term success of the company is built upon effective water stewardship in the watersheds where its raw materials are sourced from, where its factories are located, and where suppliers and consumers live. It believes that effective water stewardship will require that provisions are made firstly for water to meet the human right to water, then to ensure that ecosystems are able to function, and finally to ensure that water is used efficiently for agricultural and industrial use. Nestlé believes that Governments have to take the lead in establishing over-arching water policies within which Nestlé and other water users can operate. Nestlé is willing to assist in this process, is committed to develop its business in a way that facilitates effective water stewardship in the geographies that it sources from and operates within, and is committed to focus upon measures that are cost effective and relevant within a watershed. Water is an important natural resource for Nestlé: agriculture is the major user of water and Nestlé is one of the worlds' largest buyers of agricultural raw materials from farms and forests. Nestlé uses water at over 460 factories globally, and consumers use water to prepare and consume our products.

Nestlé has a long history of leadership on water stewardship¹ through continuous improvement in the efficient use of water at its factory operations and innovative programmes with farmers. More recently it has been an advocate for collaborative action globally and at a watershed level on water stewardship. In 2010, Nestlé formally reconfirmed its public support for the human right to water.

The Nestlé Commitment on Water Stewardship has been prepared to guide and align Nestlé's efforts to complement Nestlé's Corporate Business Principles, the Nestlé Policy on Environmental Sustainability, the Nestlé Supplier Code, Responsible Sourcing Guidelines, and Water Guidelines for Suppliers of Agricultural Raw Materials. This Commitment should be specifically read in conjunction with the Nestlé Commitment on Natural Capital.

Specifically Nestlé commits to:

1. Work to achieve water efficiency across our operations, by
 - Ensuring that our operations do not compromise the right to water of local communities
 - Excelling in the efficient use of water in all our facilities
 - Conducting water resource reviews across existing and new factory sites
 - Concentrating interventions in priority watersheds
 - Stimulating innovation in water use efficiency by investing in "Lighthouse Projects"
 - Implementing programmes to reduce water withdrawal, reuse water and use alternative water sources such as rainwater harvesting

¹ Water Stewardship for a water user is about acknowledging the responsibilities and implementing the actions, individually and/or collectively, needed for the sustainable management of shared water resources within a watershed.

Nestlé
Good Food, Good Life

Nestlé Commitment on Water Stewardship 1



Work to achieve water efficiency across our operations
Leading in water resource management and excelling in the reduction of the direct water use in all our facilities



Advocate for effective water policies and stewardship
Promoting public policies that place value on water at every level



Treat the water we discharge effectively
Setting strict targets for returning clean water to the environment



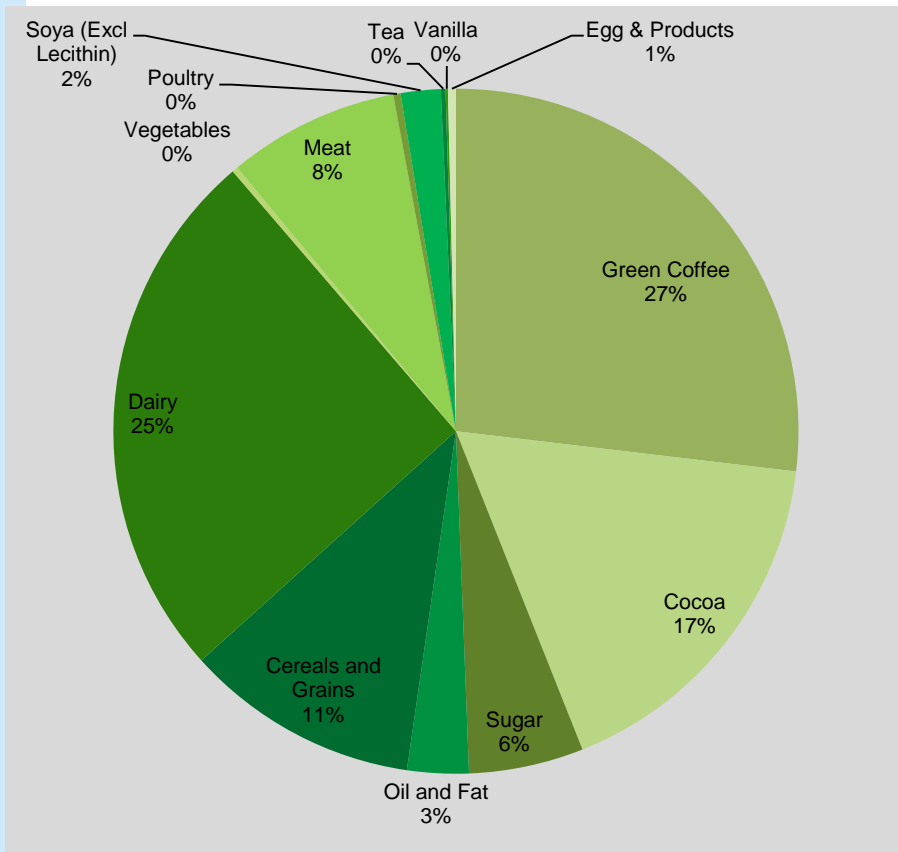
Engage with suppliers, especially those in agriculture
Helping to improve their water management with focus on impacts at watershed level



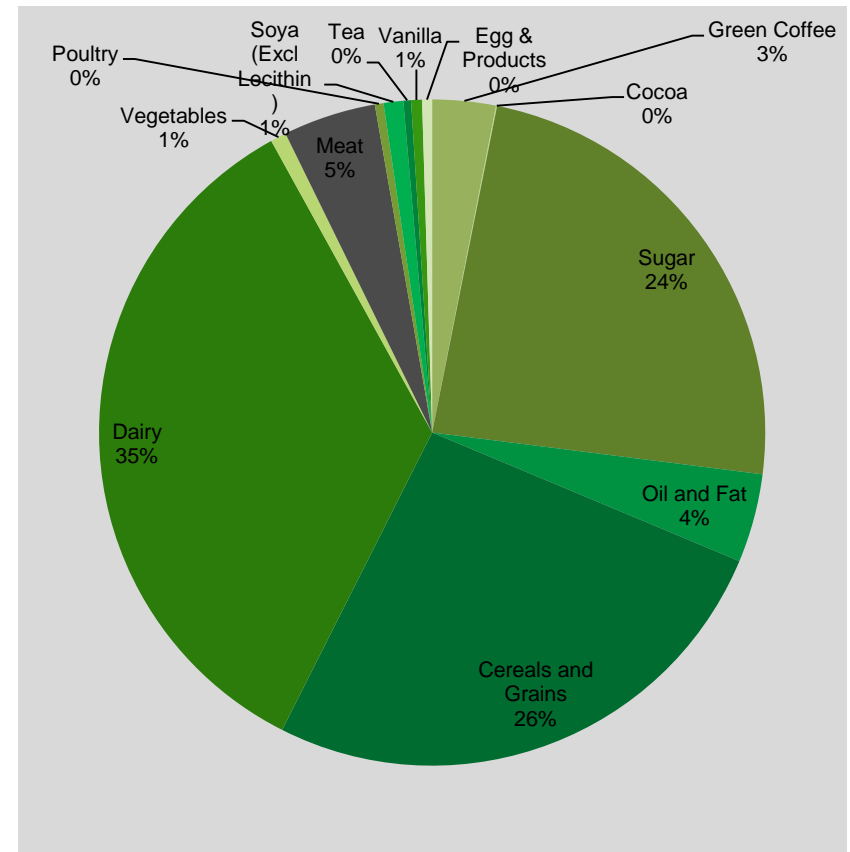
Raise awareness of water access and conservation
Engaging employees, communities and consumers in the water imperative

Our Impacts: Consumptive Water Use for Nestlé agricultural raw materials

Total CWU (rainwater + irrigation)
 (~ 44.8 billion m3)



Blue CWU (irrigation)
 (~ 2.9 billion m3)



✓ Blue CWU of 460 Nestlé factories ~ 0,1 billion m3

Responsible sourcing of agricultural raw materials

Total agriculture raw material procurement:
estimated 5 million farmers

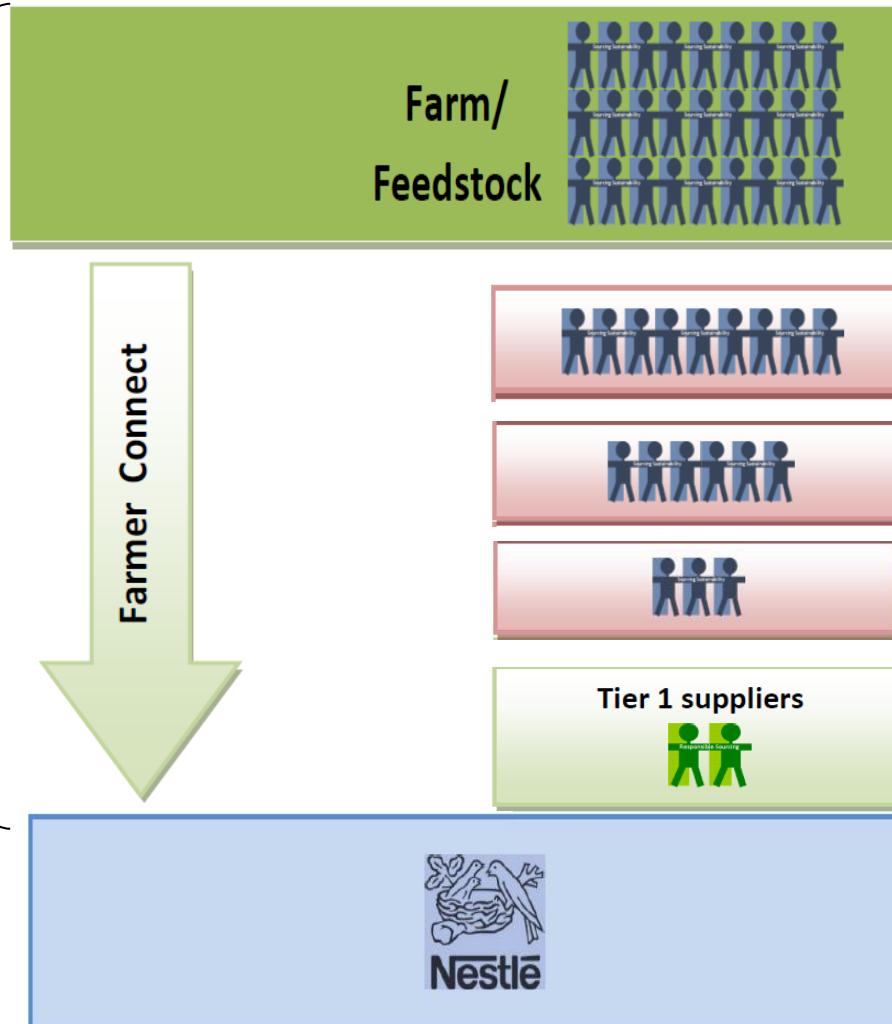
**Nestlé's Sustainable
Agriculture Initiatives**
Revised October 2010

**Direct engagement
with 690,000
farmers**

1'100 specialists
12,000 supply chain
support staff
(e.g. coffee, milk,
cocoa, fruits,
vegetables)



The Nestlé Supplier Code
Direct Procurement & Agri Services



Traceability Programme

For high risk
spend categories
12 categories (commodity)



Audit Programme vs. Nestlé Supplier Code

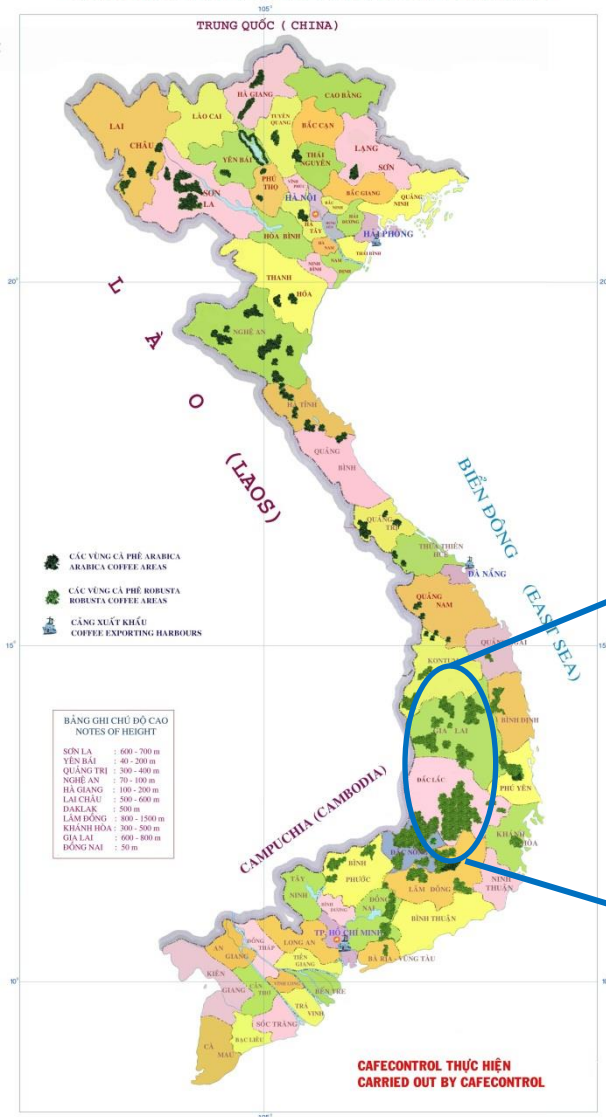
2010/2011:
2'200 audits
2012/2013:
4'000 audits



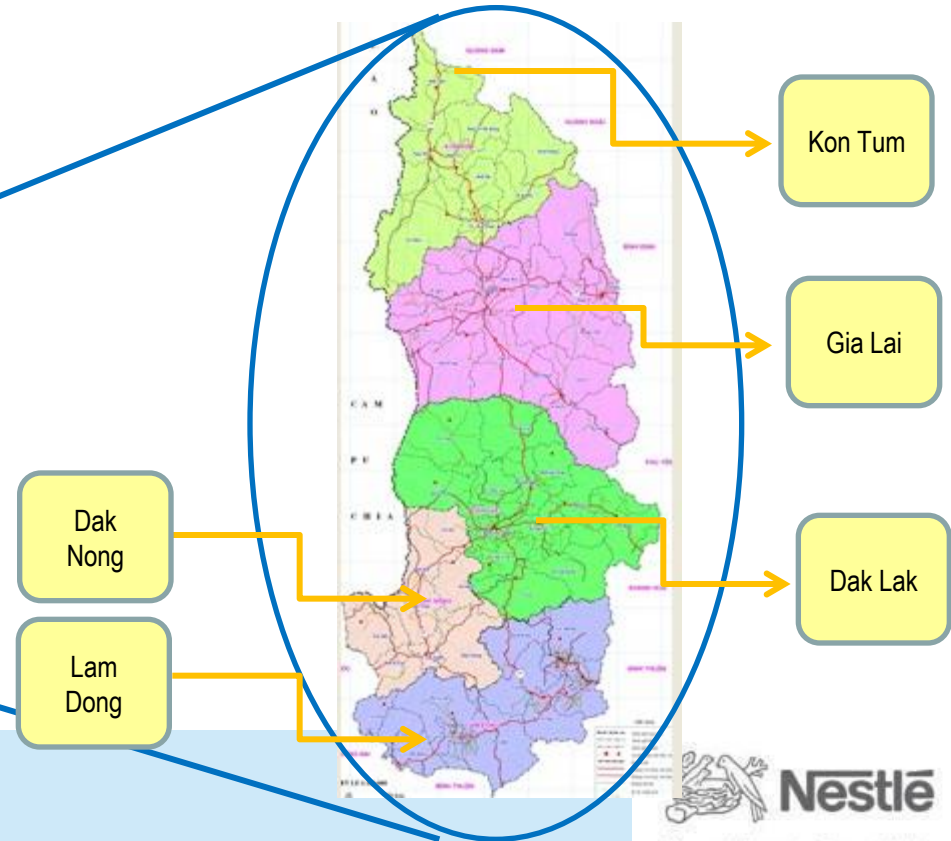
Nestlé Responsible Sourcing

“Farmer connect” in Vietnam

CÁC VÙNG CÀ PHÊ VIỆT NAM
COFFEE PRODUCING AREAS IN VIETNAM



Province	Gia Lai Kon Tum	Dak Lak	Dak Nong	Lam Dong	Total	+2013	Total
Business partners (farmers)	1,573	3,539	3,692	1870	10,674	1,024	11,698
Potential production (tons)	9,598	10,363	17,071	11,196	48,228	12,100	60,246
Coffee planting area (Ha)	2,464	2,941	5,756	3,448	14,608	3,365	17,972
Avg. Production (Kg/Ha)	3.90	3.52	2.97	3.25	3.30	3.35	3.35





Context:

- Vietnam second largest coffee producer globally (15%), **N.1 exporter** for robusta (40%), main supplier to Nestlé globally
- Dak Lak is **40%** national production, main income for **200'000** smallholder farmers
- Without **irrigation** coffee production would be economically not viable
- **Groundwater** is overused for coffee production and water levels declining
- CC studies show intensification of **droughts** and increase of **temperatures**



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

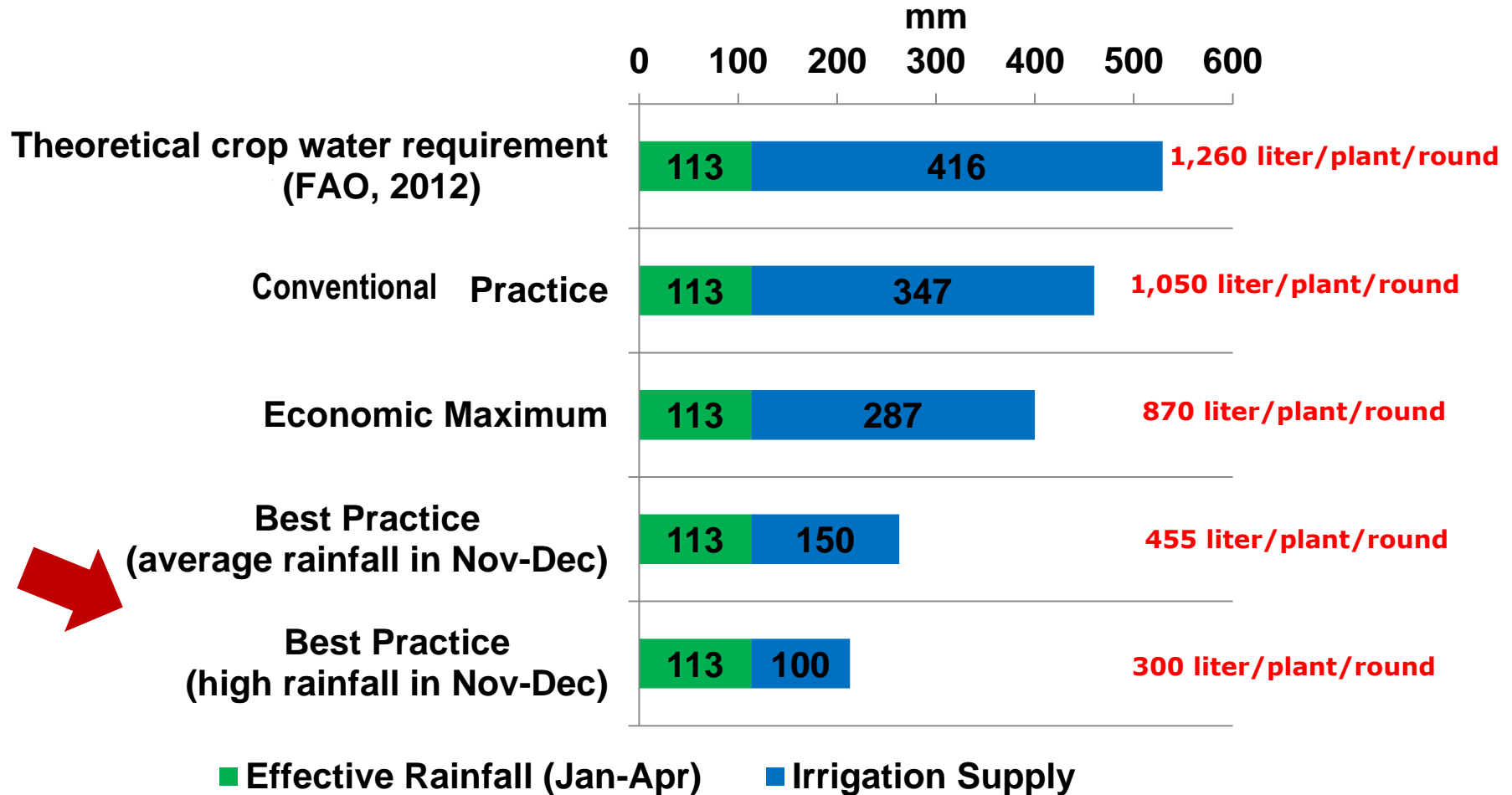
E.D.E. Consulting



Our project:

- Jointly funded by **Nestlé and SDC**
- Implemented by **EDE and IWMI**
- **3 years** project (July 2010 – December 2013)
- **Objective:**
Measure Consumptive Water Use of coffee production at farm level,
identify best practices and disseminate findings for scale up

Results - Irrigation Supply Practices in Jan-Apr



Recommended best practices in coffee irrigation allow:

- more sustainable use of fresh water resources
- higher income
- maintain productivity compared to the average

Sharing of findings

VIETNAM TO PRODUCE MORE COFFEE WITH LESS WATER

By 2020 a global coffee shortage equivalent to 1.5 times the current production of Vietnam – the world's largest Robusta coffee producer – is expected. On a parallel scale coffee production is under pressure because of looming water scarcity, exacerbated by climate change, while irrigation water is crucial for coffee production in Vietnam.

This paper reconfirms that it is possible to reduce the coffee water footprint while maintaining or increasing coffee yield through better irrigation scheduling and agronomic practices. Policy recommendations are provided to bring research into practice.

Recommendations

- Raise awareness among smallholder coffee producers on sustainable water use; 400 liter/plant/ irrigation round is adequate to achieve economically viable and sustainable yields up to 4 metric ton/ha.
- Design a standard training program and build capacity for coffee farmers on sustainable water management.
- Establish and monitor on-farm demonstrations to fine-tune the new recommendation in different agro-climatic zones.
- Integrate new water management recommendations in Standards Programs.

Global Coffee Supply Shortage

Global demand for coffee is increasing. Twenty to thirty million additional bags (60kg) of coffee – equivalent to 15% of current global production – will be required by 2020.

Vietnam is the world's leading Robusta coffee producer and coffee is the second largest export-earning crop, supporting the rural livelihoods of over 2 million people. Export volumes peaked at 27.8 million bags in 2012 generating revenues of 3.74 billion USD, or 3% of national GDP.

Excessive Irrigation Endangers Water Availability

In Dak Lak province, which contributes circa 40% to the national coffee production, irrigation between January and April is critical to make coffee farming an economically viable livelihood activity. In the past, smallholders irrigated up to 2 times more than the recommendation by MARD in 2002. Yet, field experiments under controlled conditions indicate that 40% less irrigation as compared to the recommendation would not reduce coffee yields (D'haeze, 2004). Irrigation makes up circa 15–20% of the total coffee production costs in terms of labor, energy and equipment costs. It is estimated that 57% of irrigation water is abstracted from groundwater sources (Cheesman and Bennett, 2005*) and 95% of this volume is used for coffee. Dak Lak province is facing severe groundwater depletion issues in dry years because current irrigation is exploiting up to 71% of the total water resources.

Reaching out to key stakeholders

- Policy Brief (Government and other key stakeholders)
- Provincial Workshop (March 2013)
- National Workshop (October 2013)



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How to scale up

❑ Nestlé Farmer Connect

- Demo Plots
- Training and implementation of IRR BPs (12'000 to 25'000 by 2016?)

❑ Phase 2 Nestlé/SDC PPP (scale up phase 2014/2018)

- Baseline WR inventory at catchment(s) level
- Sustainability assessment (prioritization of action)
- Response formulation
 - ✓ Sustainable farming (scale up of BPs to 50'000 farmers)
 - ✓ Climate early warning
 - ✓ Institutional capacity (improve governance, tools development)
 - ✓ Raise awareness (movies, education, training on water)
- Monitoring & Evaluation of impacts (groundwater levels)

❑ Coffee PPP / Coffee Coordination Board

- Nestlé/SDC PPP to be the «Water» Pillar within Coffee PPP/CCB
- Governmental support key for implementation towards 100% Vietnam coffee growers
- Inclusive of other key actors for further scale up (other donors, roasters, traders, certification bodies, civil society,...)

When implemented at 100% of coffee growing area (500'000 ha), this will mean water savings = 1 billion m³/yr (>40% drinking water use in Vietnam)



Special thanks to
Dr. Dave D'haeze

**Water Stewardship
at Nestlé:
Vietnam To Produce
More Coffee
With Less Water**

**Thank you!
Questions?**

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