More Coffee with Less Water
Vietnam

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Background

- Global demand for coffee increasing by 8 – 10% per year
- Vietnam is the world’s leading coffee producer supporting rural livelihoods of 2 million people
- Dak Lak contributes to 40% of national production
- Without irrigation coffee production would be economically unviable
- Groundwater is overused for coffee production and water levels are declining
- Climate Change studies show intensification of droughts and increase of temperatures
Approach

- 3 year project (July 2010 – December 2013)
- Jointly funded by Nestlé/SDC; Implemented by EDE and IWMI
- Objective 1: Measure the Consumptive Water Use of coffee production at farm level and recommend best practices
- Objective 2: Develop farm management tool containing Water Footprint monitoring
- Objective 3: Disseminate recommendations to improve water use
Consumptive Water Use

Dak Lak province: 175,000 ha of coffee

Data used:

- Climatic data 2002 - 2009 at 3 stations
- Records of coffee production in Krong Pach district between 2005 and 2009 by over 300 farmers
- Sample survey of 300 farmers in Krong Pach district and Buon Ma Thuot city in 2012
Monthly Crop Water Requirement

Rainfall sufficient from May to November
Irrigation required from Jan to Apr
Marginal Income and Cost

Rainfall CWU + irrigation supply (mm)

Yield, gross income, production cost

Marginal income, marginal cost

Creating Shared Value
Nutrition | Water | Rural Development

Nestlé
### Scenarios

<table>
<thead>
<tr>
<th>Maximum yield (6000 kg/ha)</th>
<th>Effective rainfall + irrigation supply</th>
<th>CWU+induced water stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Etc (January-April)</td>
<td>529</td>
<td></td>
</tr>
<tr>
<td>Effective rainfall + irrigation supply</td>
<td>113</td>
<td>260</td>
</tr>
<tr>
<td>CWU+induced water stress</td>
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<td>260</td>
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</tbody>
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<tr>
<th>Average yield (2400 kg/ha)</th>
<th>Effective rainfall + irrigation supply</th>
<th>CWU+induced water stress</th>
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<th>Locally feasible yield (4000 kg/ha)</th>
<th>Effective rainfall + irrigation supply</th>
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Legend:
- **ETc**
- **Rainfall CWU**
- **Irrigation CWU**
- **Irrigation seepage**
- **Induced water stress**

30% water saving
Recommendations

- Ministry of Agriculture and Rural Development: revise official irrigation supply standards and raise awareness on improved irrigation management through local media
- National Agricultural Extension Centre: design a uniform capacity building programme for farmers
- Western Highlands Agriculture and Forestry Science Institute: establish multiyear on-farm demonstration plots
- International and National Standards Programme (4C, UTZ Certified, Rainforest Alliance, Vietgap): integrate new water management recommendations in compliance criteria
What we are doing

- Nestlé Farmer Connect Programme
- Implementing optimised irrigation and good agricultural practices
- By end 2013, 10,000 farmers
- By end 2016, additional 15,000 farmers

Expanding beyond our sphere of influence → Scale up to 50,000 farmers by 2020.

Cannot do alone, need partners!
Thank you