Fighting Poverty With Water

Jeff Raikes
May 4, 2009
How We Got Started

1998

Bill and Melinda read an article about rotavirus

2000

They officially create the foundation

2006

Warren Buffett decides to give Berkshire Hathaway stock
Our Grantmaking Areas

50% Global Health Program

Discover, develop, and deliver lifesaving health solutions to the people who need them most

25% Global Development Program

Increase opportunities for people in developing countries to lift themselves out of hunger and poverty

25% United States Program

Foster greater opportunity for all Americans through secondary and postsecondary education

$2.8 billion in grants in 2008
# The Challenge: Hunger and Poverty

Hunger and poverty are solvable, as we’ve seen in the past, **BUT…**

<table>
<thead>
<tr>
<th>Poverty is highly concentrated:</th>
<th>This year, for the first time ever,</th>
<th>The world population will exceed</th>
</tr>
</thead>
<tbody>
<tr>
<td>78% of the ~1 billion people who live on $1/day live in South Asia and Sub-Saharan Africa</td>
<td>1 billion people will go hungry</td>
<td>9 billion by 2050</td>
</tr>
</tbody>
</table>
A Compelling Solution: Agriculture

Agriculture is key to reducing hunger and poverty

• Most people living on $1/day rely on agriculture for food and income
• No country has managed a rapid rise out of hunger and poverty without increasing its agricultural productivity

In Sub-Saharan Africa, farming accounts for 2/3 of employment…

...But only 1/3 of Gross Domestic Product
A Solution Ignored

Developing countries have underinvested in agriculture

Donor countries are increasingly disinvesting

Sub-Saharan African Governments

![Bar chart showing agriculture as % of GDP and government budget.]

Percentage of foreign aid directed to Ag, 1985-2005

![Line chart showing percentage of foreign aid directed to agriculture.]

As a result, hundreds of millions of farmers realize just a fraction of their potential
Our Approach

Our work is guided by a few core principles:

• Emphasize small farmers
• Put women at the center of our work
• Focus on Sub-Saharan Africa and South Asia
• Build strong partnerships
• Support the full range of farmers’ needs
Support the Range of Farmers’ Needs

1. Science and Technology
   - R&D on crop improvement

2. Farmer Productivity
   - Quality seeds
   - Irrigation
   - Fertilizer
   - Training

3. Market Access
   - Access to information
   - Access to markets
   - Structured demand

4. Policy and Statistics
   - Data and statistics
   - Research and analysis
   - Advocacy and policy change
   - Learning and improvement
Your Challenge: Water
## The Water Crisis in Context

<table>
<thead>
<tr>
<th>U.S. farmer</th>
<th>Indian farmer</th>
<th>African farmer</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="U.S. farmer image" /></td>
<td><img src="image2" alt="Indian farmer image" /></td>
<td><img src="image3" alt="African farmer image" /></td>
</tr>
<tr>
<td><strong>&lt;20%</strong> irrigated</td>
<td><strong>&gt;40%</strong> irrigated</td>
<td><strong>&lt;5%</strong> irrigated</td>
</tr>
<tr>
<td>Changing Policy</td>
<td>Outdated policy</td>
<td>Lack of policy</td>
</tr>
<tr>
<td>Yields: 9.5 tons/ha</td>
<td>Yields: 2.4 tons/ha</td>
<td>Yields: 1.8 tons/ha</td>
</tr>
</tbody>
</table>
Different Contexts, Different Challenges

- Overuse
- Underuse
- Inefficient Use
- Changing Water Demands
- Changing Water Supply
Overuse

Overexploited areas of India

Ministry of Water Resources, Government of India.
Underuse

Investment Potential for Irrigation

IRRIGATED LAND (% of Crop Land)

- South Asia
- Middle East & North Africa
- Sub-Saharan Africa

Inefficient Use

Water use per unit of maize production, 2005 (m³/kg)

- Nigeria (5.34)
- India (3.05)
- USA (0.57)
Changing Water Demands

Hoekstra and Chapagain (2007)
Changing Water Supply

Projected shift in precipitation, 2090

IPCC (2007).
Water: Our (Early) Approach

- **R & D**
  - “Drought Tolerant Maize for Africa”

- **Tools & Technology**
  - “Radically Affordable Irrigation Technology”

- **Community Engagement**
  - “Using Water Sustainably”

- **Public Policy**
  - “A Roadmap for Better Water Management”
My Challenge to You

All lives, no matter where they are being led, have equal value

• What lessons learned? Mistakes most critical to avoid?
• What metrics and targets will galvanize innovation?
• What science & technology advances should be prioritized?
• What key information gaps can you fill?
• How can you partner with other players, both public and private, to have the greatest impact?
Thank You