

# FUELLING SUSTAINABLE GROWTH

## A research trust fund initiative from IWMI

When things aren't moving, it pays to move back to the drawing board. There is a disconcerting stagnancy in agricultural growth and poverty levels in some of the starkest socio-economic backwaters of the world. It not only keeps over half of the humanity languishing in abject deprivation, but also keeps huge economic possibilities in terms of growth and latent demand for products and services locked up. This underlines the pressing need of investigating what has gone wrong and discovering ways of reversing the dismal trend.

The International Water Management Institute (IWMI) intends to set up a trust fund that would act as an umbrella for **Research and Capacity Building** activities targeted towards generating sustainable growth in the impoverished regions of Sub Saharan Africa (SSA), the recently war-torn Sri Lanka, and South East Asia (SEA). The emphasis would be on the way these regions manage their

water resources to generate development. The focus would be on two components, as follows.

1. **Research:** in the areas of water management for agriculture. IWMI's various national and local level partners would be involved from design through implementation to evaluation stages.
2. **Capacity Building:** through Post Doc, PhD and Masters students, and Visiting Scholar programmes.

The private sector is expected to be the main contributor to this fund. The benefits flowing to the industry while partnering in this initiative would be valuable in terms of both their corporate as well as social objectives.

### THE SOCIAL SENSE OF AN ECONOMIC ACT

Water is at the center stage of both business as well as developmental discourse. Investors are already busy devising instruments for channeling investments in water. Index and hedge funds track the performance of the water industry. Goldman Sachs estimates the total size of the water and sanitation related industry at USD 400 billion annually – and growing. However, the real excitement lies in the relatively unexplored area of using impact investments in the grossly underinvested agricultural water sector to leverage cross-sectoral growth and investment

### Why invest in agricultural water management?

#### The social spinoffs...

- Food security
- Improvement in nutrition and health
- Secure livelihoods
- Public relations and corporate social responsibility

### Why invest in agricultural water management?

#### The financial sense...

- The multipliers generate cross sectoral economic growth
- Growth in market for conventional financial products and services, including value chain financing
- Growth in market for innovative financial products like social impact bonds

opportunities. For a more details on the importance of agricultural water management, please see the attached background paper.

## YOUR COMMITMENT AND OUR PLAN

IWMI research has already indicated broad areas where research and capacity building investments would yield the best returns in terms of development and growth. The proposed fund would be dedicated to activities in these domains. Major contributors to the fund would have titular rights in the capacity building programme and full say in the project selection process. Moreover, major contributions would be fully recognized in all outputs emanating from the trust fund supported projects. The investment options in the trust fund are as follows.

### *The investors' prerogatives...*

- *Full participation in project selection*
- *Regular updates on project performance*
- *Regular financial statements*
- *Full acknowledgement in project outputs*

<b>A. Research Programme Investment Options</b>			
<i>Option</i>	<i>Investment (US\$)</i>	<i>Benefits</i>	<i>Examples of what could be done</i>
1	50,000 – 100,000	<ul style="list-style-type: none"> <li>✓ Acknowledgement in project reports and publications</li> </ul>	<ul style="list-style-type: none"> <li>✓ Enhancing role of women in water management</li> <li>✓ Improving livelihoods through rehabilitation of degraded marginal lands</li> <li>✓ Identification of policy levers towards productive water management</li> </ul>
2	100,000 – 500,000	<ul style="list-style-type: none"> <li>✓ Involvement in determination of outputs</li> <li>✓ Acknowledgement in project reports and publications</li> </ul>	<ul style="list-style-type: none"> <li>✓ Livestock -environment interactions in watersheds</li> <li>✓ Improving the performance of wastewater , irrigation in peri-urban areas</li> <li>✓ Wastewater reuse in agriculture: water management, environment and human health aspects</li> </ul>
3	More than 500,000	<ul style="list-style-type: none"> <li>✓ Involvement in selection of project name</li> <li>✓ Involvement in determination of outputs</li> <li>✓ Acknowledgement in project reports and publications</li> </ul>	<ul style="list-style-type: none"> <li>✓ River basin development and management</li> <li>✓ Increasing water productivity in irrigation and inter-sectoral contexts</li> <li>✓ Implementing multiple-use water supply systems for enhanced land and water productivity</li> <li>✓ Management of sloping lands for sustainable agriculture</li> <li>✓ Planning ensembles of small multi-purpose reservoirs for the improvement of smallholder livelihoods &amp; food security</li> </ul>
<b>B. Capacity Building Investment Options</b>			
<i>Option</i>	<i>Description</i>	<i>Investment (US\$)</i>	<i>Benefits</i>
Post-Doctoral Fellow Programme	African students with fresh PhDs working on IWMI led projects for 2 years to gain experience in water management	190,000	<ul style="list-style-type: none"> <li>✓ Titular rights</li> <li>✓ Publicity through IWMI's publications and media appearances</li> </ul>
Visiting Scholar Programme	African scholars with PhDs in the age range of 35-45 years learning from IWMI's work in other countries	110,000	<ul style="list-style-type: none"> <li>✓ As above</li> </ul>
PhD Scholarship Programme	African PhD students working on IWMI led projects as part of their doctoral studies	40,000	<ul style="list-style-type: none"> <li>✓ As above</li> </ul>

We look forward to substantial and generous pledges of support towards this trust fund. IWMI estimates US\$ 5 million as the critical mass of funding pledges to start actuating this path breaking initiative. However significant projects could commence once US\$0.5m has been accrued. All projects would be developed with clear objectives and time-bound targets. The same would be shared and finalized with all major contributors.

The opportunity for creating a win-win situation for agriculture and investors lies right before us. We feel confident that the perspicacity of the finance industry renders it uniquely capable of sighting and capitalizing on it.

I really do hope that you will see this initiative as highly worthwhile both from corporate and humanitarian viewpoints and will be able to commit some resources to it.



Dr Colin Chartres

Director General, IWMI

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The IWMI Trust Fund

IWMI

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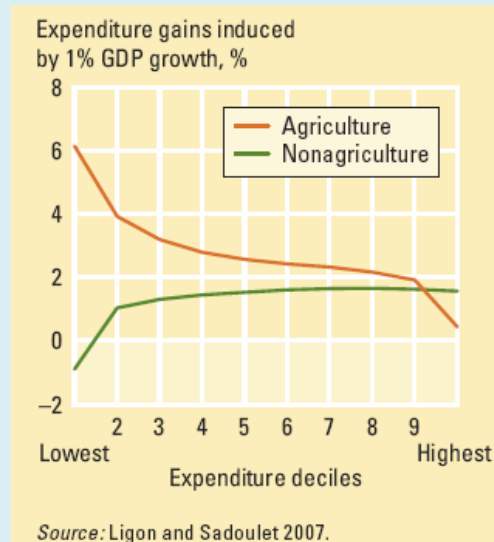
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## MANAGING WATER: THE WAY TO INCLUSIVE GROWTH

### Agriculture: an opportunity sidetracked for too long

According to the World Development Report 2008, GDP growth originating in agriculture is about four times more effective in raising incomes of extremely poor people than GDP growth originating outside the sector. It is estimated that 75 to 80 percent of the dramatic fall in national poverty in China during 1980 to 2001 was due to poverty reduction in its rural areas. Outside China, and especially in Sub Saharan Africa, the contribution of rural areas to overall poverty reduction shoots up to over 80 percent! This makes sense, since the persistent concentration of poverty in rural areas reflects the difficulty in redistributing wealth created outside the agricultural sector.

*Welfare gains from growth originating in agriculture are substantially larger for households in the poorer five expenditure deciles*



### Water: spokes to the agricultural wheel

Apart from reducing poverty, agriculture has an obvious role in feeding the world. FAO estimates that the world needs to invest US \$30 billion annually into agriculture if its food needs are to be met by 2050. However, the road to agricultural development lies through smart water management. The Comprehensive Assessment of Water Management in Agriculture (CA – a 700 scientist, 400 institute study led by IWMI) warns that without further improvements in water productivity or production patterns, water consumed by agriculture will increase by 70 to 90 percent by 2050 – an average annual increase of about three times the water supplied to Egypt through the High Aswan Dam every year. Of course, it wouldn't be easy for the world to come up with that kind of water. More efficient and productive water management would be the key to bridging this gap. The CA also points out that the greatest potential

*The Comprehensive Assessment verdict: the hope lies in increasing productivity of land and water*

- *Better water management plays a key role in improving agricultural productivity*
- *Target rainfed systems that produce 55% of the gross value of our food today*
- *Improve water productivity*

increases in yields are in rainfed areas, where many of the world's poorest rural people and smallholders live.

Research done by IWMI has brought to light clear pathways of achieving viable and self-sustaining agricultural growth in some of the most impoverished regions of the world through water management. Further, such growth would help the agronomies in these regions to attain a critical mass before cascading its impacts upon the wider economy. The financial sector could play a crucial role in this opportunity.

### Putting money where the mouth is

Evidence abounds with respect to the value of using impact investments in the grossly underinvested agricultural water sector to not only bring about a second green revolution, but also to leverage stronger farm livelihoods and income towards growth and investment opportunities in the non-farm sector. According to the World Bank, agricultural producers lacking credit use on an average only 50 percent to 75 percent of the purchased inputs of unconstrained producers and earn net incomes (returns on land and family labor) between 60 percent and 90 percent of the unconstrained.

Further, investments in agriculture could also go a long way in negating the well known financial regulator Lord Jonathan Adair Turner's contention that the financial industry has grown 'beyond its socially useful size'. Growth in smallholder agriculture in the poorest regions of the world have a clear potential of providing vibrant markets for conventional financial services, value chain finance and

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*“IWMI research in Ghana reveals that giving access to a permanent shallow well to a smallholder with just 0.2 hectares land can bring her a gross margin of USD 5380 in a dry season”*

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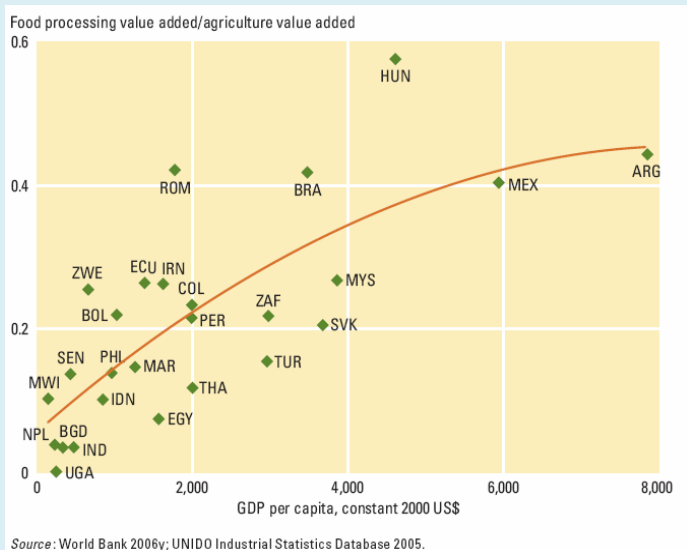
insurance products, apart from anchoring innovative financial instruments like 'social impact bonds'.

However, actual investment patterns in the sector tell a tale of missed opportunities. For example, in Africa, agriculture receives just one percent of commercial lending while contributing 50 to 70% of national incomes.

### Targeted research and capacity development to make sustainable growth happen

IWMI's mission is to improve the management of land and water

*Growth in rural nonfarm employment in many cases remains closely linked to growth in agriculture, as agriculture becomes a larger supplier of intermediate inputs to other sectors such as processed foods.*



resources for food, livelihoods and the environment. In this context, IWMI's work has indicated exciting possibilities of targeted and time bound research in selected high-returns areas of agricultural water management. The focus here gets naturally trained upon smallholders. Over 2 billion rural women and men in Africa, Asia and Latin America depend on smallholder farms. Smallholder farms in Africa number some 80 million and supply up to 80 per cent of African agricultural production. Research done by The Consultative Group on International Agricultural Research (CGIAR) shows that "the bottom of the pyramid really depends on agriculture." Rainfed and wastewater-based agriculture are two of the most promising areas of management interventions that could make a difference in the agricultural livelihoods of the smallholders. Further, for agricultural growth to be sustainable, it is necessary that it is supported in the long term by indigenous capacity building – this is especially relevant for regions like the Sub Saharan Africa (SSA).

### **Rainfed agriculture**

Water productivity in rainfed systems tends to be very low due to land degradation, crop losses and inadequate water management. Managing water in these systems would improve productivity and livelihoods. The priorities are:

- Better management of rain and soil moisture
- Encouraging investment in new small irrigation schemes and supplementary irrigation
- Improved understanding of land-water interactions
- Managing effects of water storage structure on health

### **Wastewater agriculture**

As demand for limited water resources increases from competing sectors, the sustainable use of urban wastewater will become an issue in overcoming water scarcity. Making a safe asset out of the increasing quantities of wastewater would be a win-win solution. The priority is:

- Understanding the related risks and developing viable and adoptable management options for risk mitigation while maintaining or enhancing crop yields.

The geographical focus of this initiative would be on SSA, South East Asia and Sri Lanka: characterized by some of the poorest farmers in the world along with a

#### ***Research goals for rainfed agriculture***

- *To upgrade rainfed farming systems and benefit smallholders through improved land and water management interventions and technologies*
- *To support improved water management in rainfed farming systems and rapid outscaling of innovations via identification and promotion of appropriate policies and institutional reforms*

#### ***Research goal of wastewater agriculture***

- *To make an asset out of urban wastewater by assessing and reducing possible health and environmental impacts in irrigated agriculture, especially at the urban–rural interface*

marked lack of global developmental focus, till very recently.

### Capacity Building

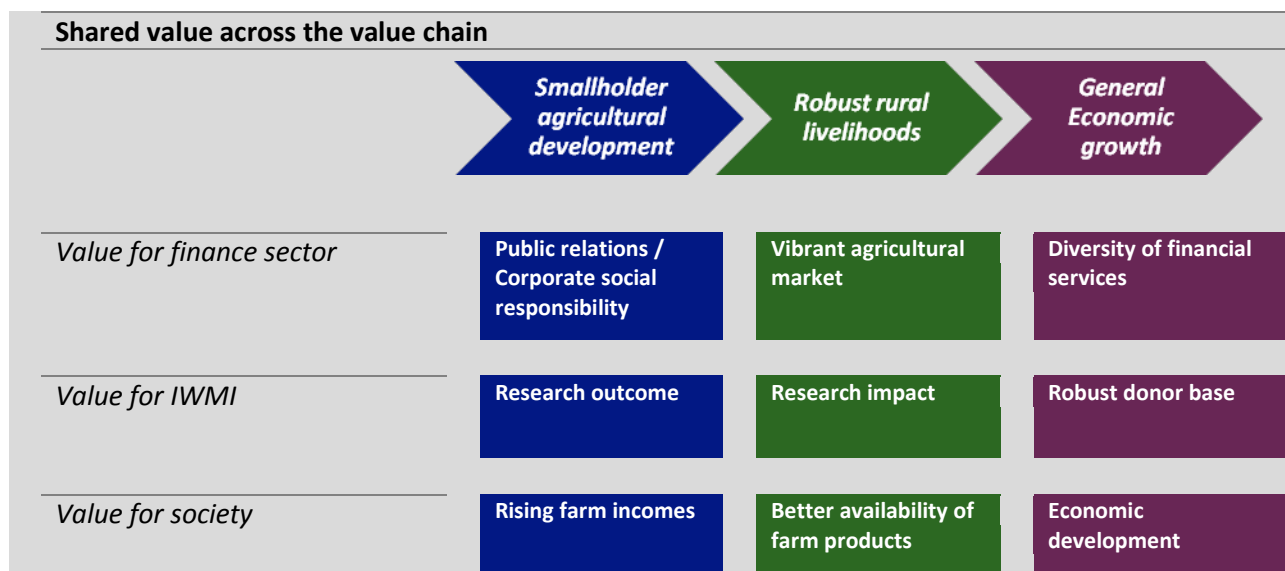
“In 25 years, Africa will be empty of brains” was the warning from Dr Lalla Ben Barka of the UN Economic Commission for Africa (ECA) in 2005. According to the International Organization for Migration (IOM), Africa has been losing 20,000 professionals each year since 1990. Given this, making any kind of management or technological intervention in African agriculture self-sustaining over the long term would be a tall order. Therefore, capacity building in the continent has to be concomitant with initiatives for agricultural water management. South and Southeast Asia have a comparatively lesser need for capacity building given their more effective National Agricultural Research Systems, (NARS).

### Why IWMI?

With about 25 years of experience in research on water management, IWMI enjoys top of the mind ‘brand recall’ in the area. It is known for the robustness of its science, independence of opinion and the assurance that its research leads to optimal decisions. IWMI has offices in 12 countries of Africa, Central Asia, South Asia and Southeast Asia where on the ground research and support staff ensures research quality and outreach/impact networks.

### Targeted investments can create shared value

Investments in agricultural water management can create shared value for all stakeholders. The finance industry benefits would feature in the entire spectrum from initial Public Relations spin offs to future growth in demand for financial products and services. IWMI looks forward towards research outscaling and impact, while creating a stronger investment climate for research. The societal benefits would be manifest in food security, cross-sectoral development and human resource development through capacity building.



All said and done, the shared values do nothing but augment the appeal of a categorical imperative. We simply need to put our resources into managing water if the world is to keep going about its business in the near future. The moot point is, can research and business come together to respond to the urgency of and the opportunity in the situation?