Social Networks/Capital in Sustainable Agriculture

Wilfred Nyangena EfD-K/Kippra

UN Expert Group Meeting on Sustainable Land Management and Agricultural Practices in Africa

Presentation Outline

- ☐ The problem/challenge
- □ Why are social networks/capital important?
- How can social capital be produced
- Conclusions

Introduction

- Roughly 80 % of Africa's poor live in rural areas, and even those who do not will depend on increasing agricultural productivity to lift them out of poverty.
- Resource degradation remains the main threat, leading to food crisis & persistent poverty.
- New technologies offer great promise. E.g. rice breeders have created a radically new type of rice for Africa, one that combines the hardiness of African rice with the high yields of Asian varieties.
- How do we remove the resistance to such technologies?

Examples

- Success in poverty alleviation depends on uptake of technology and overcoming resource degradation problems.
- ☐ There are isolated success stories of resource restoration and improvements in Agriculture e.g:
- On the fertility of Africa's depleted soil. Researchers have identified ways to nurse the land back to health, in the process doubling the size of harvests.

Introduction-2

- Kenya- Milk production, is the fastest-growing source of income for small farmers in Kenya. Some 600,000 small farmers milking fewer then four cows apiece produce 80 percent of the country's milk.
- Burkina Faso-Building stone dikes, capturing water and preserving topsoil.
- <u>Liberia</u>- Village associations manage local fishing rights to prevent over-fishing during spawning season.
- Sudan-traditional leaders in the Butana Region manage grazing rights and water access.

Lesson(s)

- □ These stories teach two important lessons.
- First, agricultural research produces enormous benefits, and World's/African governments need to support it more generously.
- Second, farmer adoption of new technologies requires favorable incentives. These in turn depend on both domestic and international policies affecting farm markets and prices.
- BUT: an African "green revolution" won't be unleashed by a few magical inventions.

Lessons (2)

- Many pieces need to fall into place:
- -new technologies,
- -better education and social services,
- -functioning local and national institutions
- -communication and transportation
- infrastructure that allows farmers to find markets.

Lessons(3)

- The most inspiring success stories are those that describe farmers, <u>banding together to accomplish</u> things that they could not do individually and which <u>governments proved incapable</u> of doing.
- □ These successful experiences represent seeds of hope.
- They are signals of Africa's potential. Yet they remain too isolated from each other, supported by too few resources, and beset by too many environmental and financial pressures.

What is the real issue/challenge?

- Despite this success stories, it has not been possible to extend the success to national or regional or continental scales.
- Are there factors beyond "economics" that explain adoption of beneficial technologies?
- In this presentation we examine the role of social capital in beneficial technology adoption.

What are social networks/capital

- Stock of social capital and its relation to effective political institutions, economic development and solving social problems.
- Social capital refers to attributes of people & organizations that influence their responses to economic opportunities.
- Understanding these attributes is important for recommendations on how to increase SC for up scaling technology uptake.

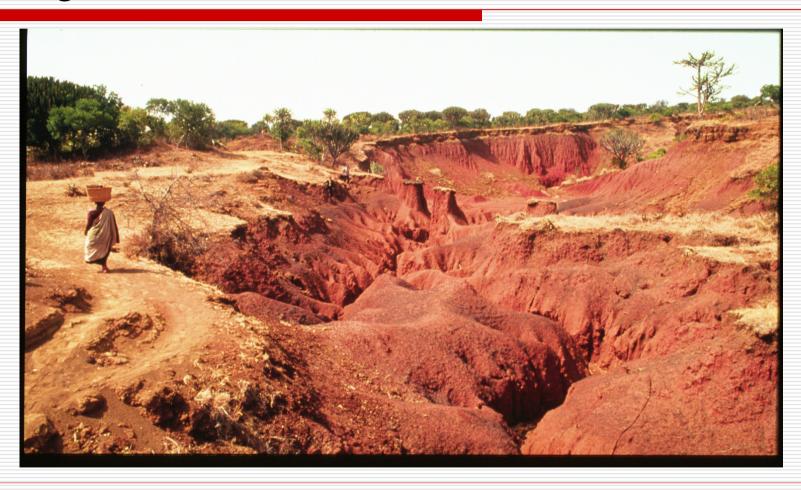
Need for collective action

- Successful management of land depends upon the collective decision making of individual land owners at a landscape scale.
- □ Farmers share information on prices, farm practices etc.

Soil erosion-Collective Action needed



Badly eroded land



Soil conservation structure in Melelo





Why is social/network capital important?

- Social networks can foster cooperative behaviour and ease coordination problems.
- Collective action is needed to: implement soil conservation on individual farms (e.g. through labour exchange, marking out contours, credit provision, risk sharing).
- Raise awareness of new technologies and provide farmer led, group based training in new practices, maintenance of links with government agencies

Social networks/capital contd

- Benefits from farm investments are uncertain, and may materialize with a lag. Faced with no possibility to save or borrow, as is typical in rural low wealth societies, investment is made at the expense of current consumption.
- Under these circumstances, social ties through support networks and reciprocity norms fill the gap in consumption smoothing. - implicit insurances.

Social networks/capital cont'd

- While technologies are employed on individual farms, the techniques operate at the landscape level, thereby making collective action particularly relevant.
- Technologies that operate on a watershed scale are more feasible where traditions of cooperation are strong.
- Farm technologies like terracing (or pesticide application, cattle spraying) require widespread and coordinated adoption in order to be effective.

How can Social Capital be produced?

- Social capital promotes cooperation among agents-(La Porta et al., 1997).
- Notwithstanding the lack of a precise definition,
- Promote the Putnam "P" group of associations and not the rent seeking Olson "O" Groups.

Conclusions

- Social capital has public good nature
- It leads to trusting & entrepreneurial atmosphere suitable for investment & growth
- Economic incentives to form and participate in P-groups should be provided.

Conclusions

- ☐ Incentives could include:
 - Group loans at concessionary rates
 - Tax concessions to group activities
 - Agricultural insurance to groups
 - Supply of agricultural inputs through farmer groups
 - Free/subsidized technical assistance to farmer groups