

The Future of Agriculture: a Driver for Social Change in the South of the World



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Annex to Main Documentation
(Full Presentation)

A view from
China:

A view on the
future of the
World

What do we
actually see?

Beginning or end
of small holder
farming?





What do we see?

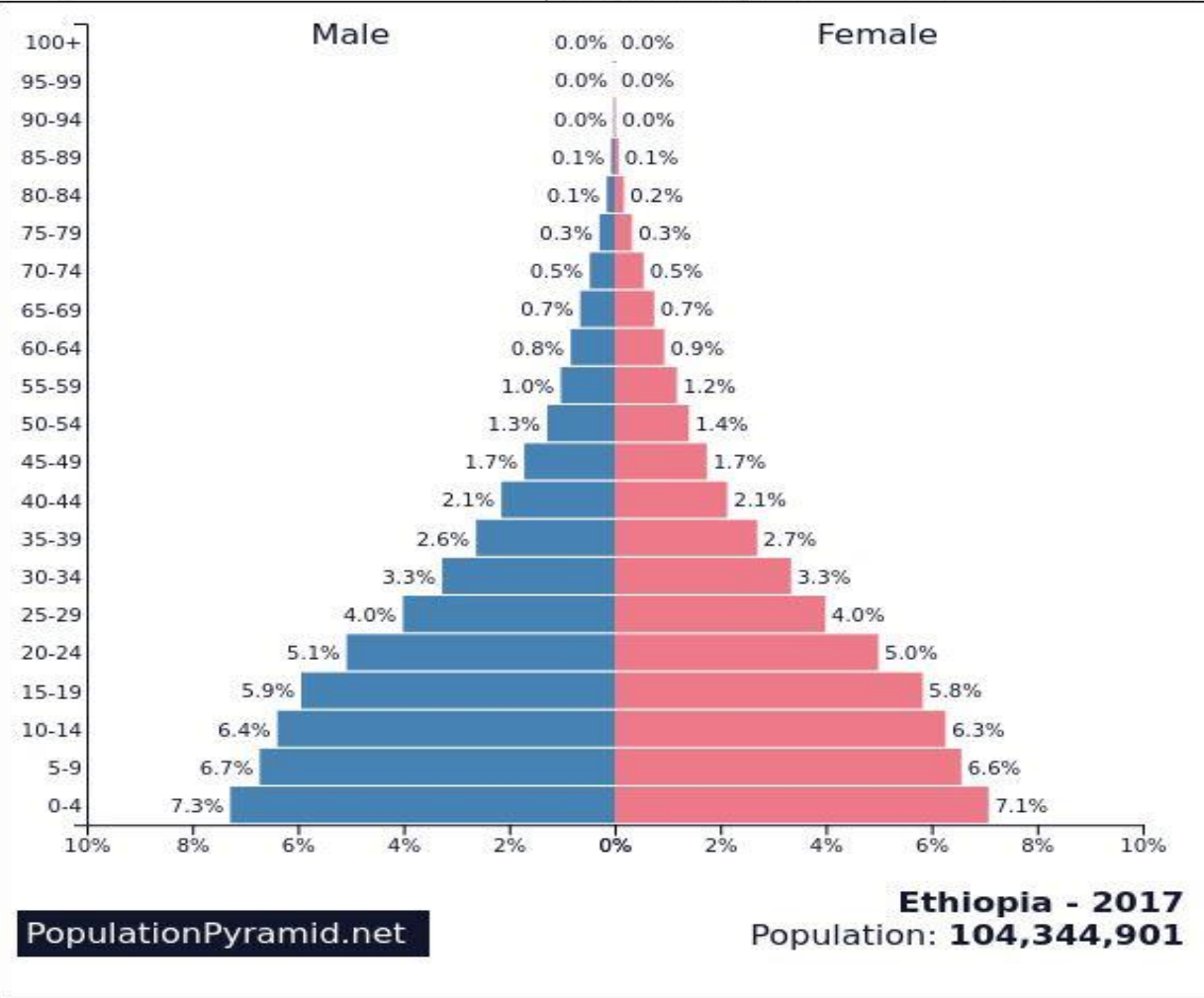
Aging farm population

Youth bulges – but access to land is blocked

Main staple crop agriculture stagnant

Some dynamic new niches (horticulture, agroforestry)

Population Pyramid of Ethiopia-2017



83% of population is rural

64% of the population of Ethiopia is below the age of 25. 20.1% is between 15-24 years.

The average Ethiopian is 17.8 years.

Population pyramid Projections for 2030 and 2050: proportionately larger working age population compared with number of dependent children and elders, almost balanced ratio of men and women. UN, 2013

Only 9% of young people see future in agriculture

Larger 'bulge' is still to come

Well being surveys on Youth and Agriculture - Ethiopia



What came out

- Most youth want a good life
- Ambition levels are high, fed by local examples (local business people, chat farmers, cow fattening business) and stories of emigration middle men
- Most see the opportunity for better life outside of their parents' farm
- Some of them whose dream is to stay and work in agriculture were compelled to migrate to find a job and support their families because the farm is too small to sustain a large number of family members and there are no business opportunities in the rural areas
- The common system of farming is considered physically too demanding and unrewarding – they look for forms of smart agriculture
- Parents may discourage their children to go for farming. In some cases there is competition and tension between parents and children over who uses the land
- A lot of hope is vested that education is the gateway to a better (salaried) life – but competition is high

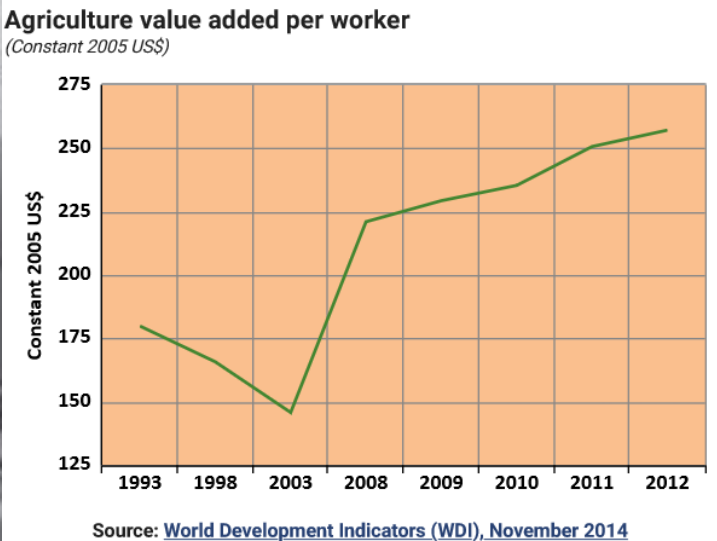
Well being method surveys use three stepn human interest - reflection – thematic discussion. This method aims to look at people's life more broadly such as family composition, father, mother, brother, sister etc. After that we focus in the self-perception, own motivation, availability, personal circumstance and how they see they life and possible opportunities, then we get into the current reality, the challenges they have, and what they personally and their own family can do to change it, and identify what the government responsibility is, and what they believe has to be done to create a real opportunities.

- Girls often marry young and then quickly divorce; they then try to go the Middle East where they know there is much risk of abuse, but at least it is less shameful

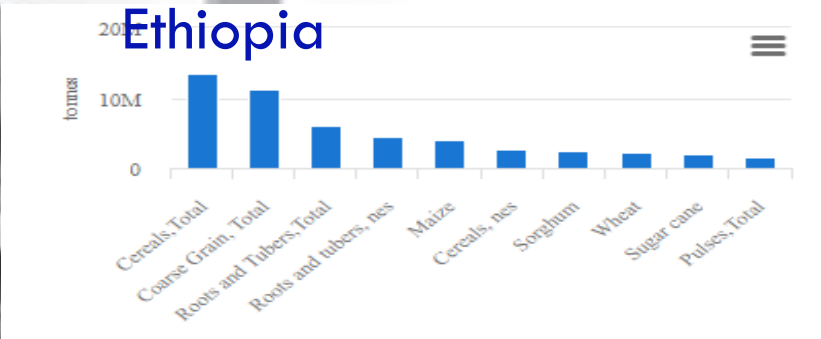
What could be done

- Create diverse business around the agriculture which are attractive for young people, poultry, cow fattening, green house, transport, processing of agriculture, and preparing dairy products etc.
- Develop farmer interest and skill to work more efficiently, by leaning different possibilities in crop production and use of better seeds and diverse fertilizers and other inputs.
- Give land to youth that really are interested in agriculture, and not just unemployed.
- Identify talented, and motivated young people, coach them and put them in the right place.

Agricultural value added per worker has increased but is still low



Major crops produced in Ethiopia

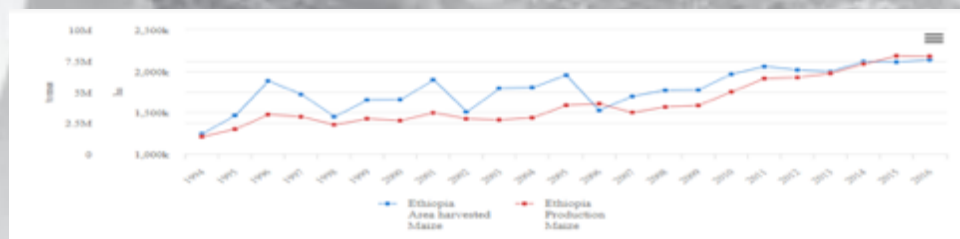


“The share of agriculture and allied activities in overall GDP which stood at about 42% at the beginning of the plan (2009/10) declined to nearly 39% by the end of 2014/15. The decline in the share of agriculture is an indication of structural shift from agriculture to industry and service sectors “
GTP I

Production/yield quantities of wheat in Ethiopia 1994-2016



Production/yield quantities of maize in Ethiopia 1994-2016



Yet resource base is under pressure:
The direct costs of loss of soil and essential nutrients due to unsustainable land management is estimated to be about three percent of agricultural GDP

Is there a future for
small holder
agriculture?

Is there a future with
small holder
agriculture?

Do these constraints
also include the
answers to the
solutions?



Three pictures



What else do we see?



Is this special?

Coastal Bangladesh: the basket case in climate change and rising sea levels?





Spectacular agricultural growth: coastal zone is region of potential
Move to multiple cropping with new Ti-Aman (requires water control)
Increase in crop intensity 18% (DAE, validated)
Other surveys up to 34%



Messages/ observations

- Much scope exists for improving small holder productivity
 - Unused better practices
 - The power of water management (we do not do enough)
 - Move from linear to circular, high water productivity agriculture
 - Move to local value chains and more diversity
 - Agriculture seen as a agri-business
 - Agriculture improves family well-being



Polder water management and agricultural development go together:
WMGs free of water problems 55%, up from 8%

Circular High Water Productive Agriculture

- Large scope to move from linear to circular agriculture
This can lead to production increase and can create more livelihood opportunities in agriculture and in agricultural services as shown in the diagram (developed jointly with NRM Process Owner BoA Amhara)

There are several threats to regenerative agriculture, such as:

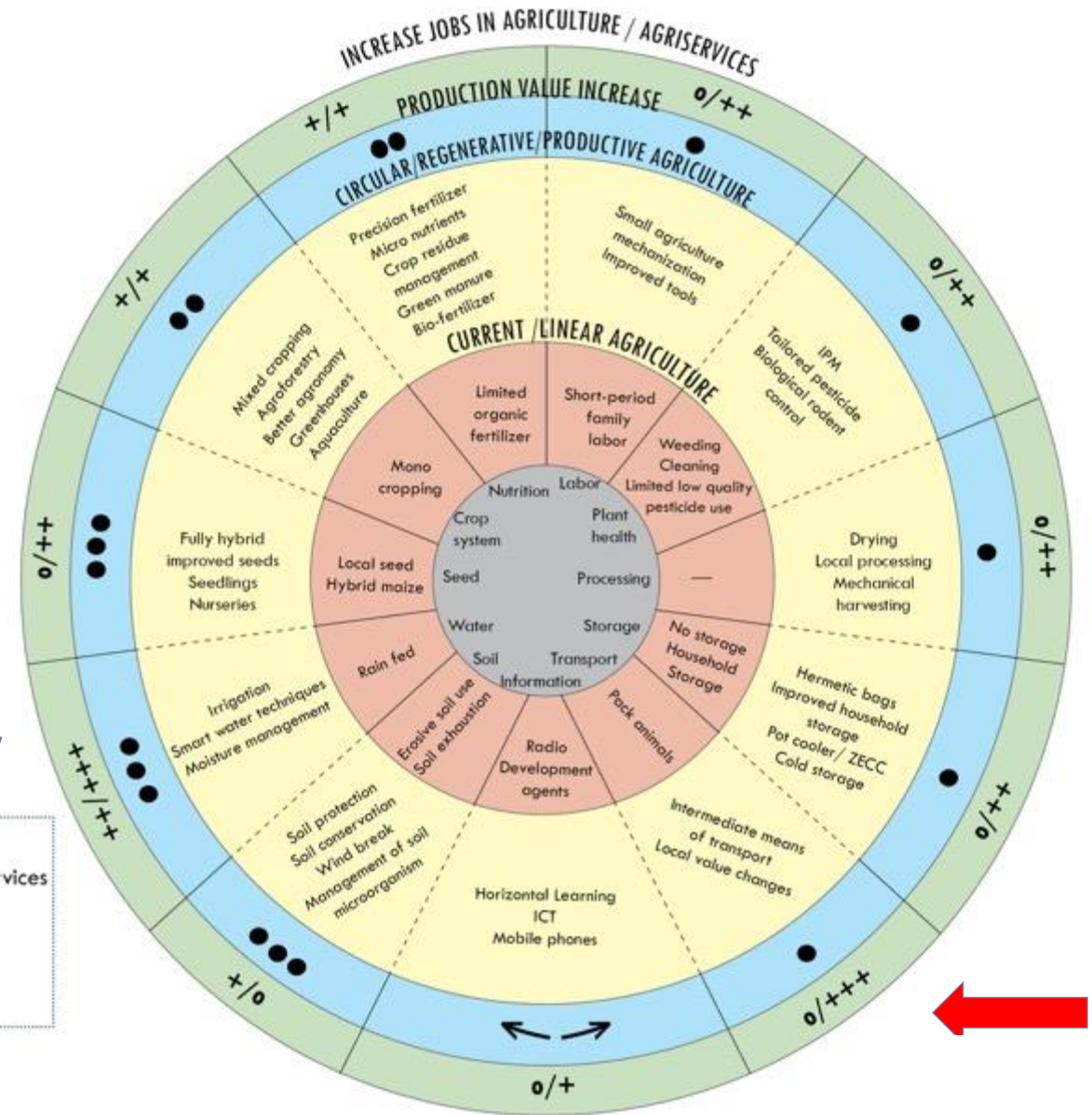
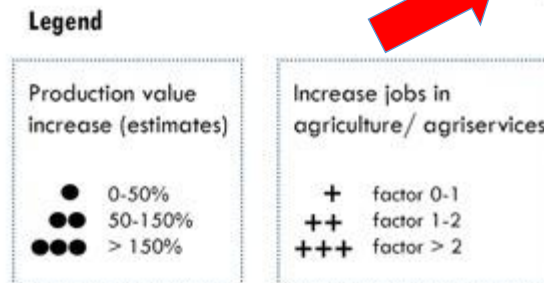
- Soil degradation due to inadequate land management (partly addressed)_
- Uncontrolled local forest clearance especially in high land potential areas (triggered by exodus from densely populated highlands)
- Soil nutrient depletion in maize cultivation and horticulture
- Substantial crop losses due to rodent infestation, inadequate harvesting, and post harvest loss

Disabling environment?

- There are a number regulatory constraints to circular agriculture and these need to be addressed at policy level from blanket fertilizer recommendations, to single public contracts for one day chicken, to pesticide licensing, plans to introduce GM Cotton to blockage in promoting intermediate means of transport
- Telecommunication has to open up still =pending revolution

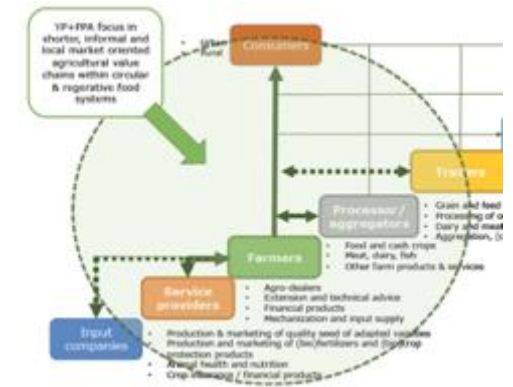
FROM LINEAR TO PRODUCTIVE CIRCULAR AGRICULTURE

- ➔ HIGHER PRODUCTIVITY, BETTER QUALITY
- ➔ MORE SUSTAINABLE LIVELIHOODS IN AGRICULTURE AND AGRIBUSINESS





Short agricultural value chains and local/national market orientation create opportunities for young farmers, agri-entrepreneurs and refugees”



Circular value chains

- Local transaction oriented
- Extend the chain of local service providers, including transport and general services
- Stimulate diversity and density of local services
- Optimize multiplier
- Money circulating among local parties
- Create money by local credit
- Boosting local economy
- Focus on local commodities and import substitution. Integrating also side products, minor crops and reuse into the economy.
- Policies
 - local procurement*
 - cash injection*
 - local entrepreneurship and business skills*
- Risk: no ignition or seepage - large external spending

Linear value chains

- Commodity oriented
- Optimize links between commodity chain parties – adding value to one another
- Ensure efficiency and quality
- Reduce uncertainty
- Money moving up and down the value chain
- Create money by trade credit
- Competitive share in global/ national economy
- Focus on export and on import substitution
- Policies
 - rationalize regulation*
 - address missing links*
 - better deals*
- Risk: exploitation or failure by weakest link

Circular value chains present large opportunities

- There is little diversity in business in rural Ethiopia
- Rural transport is non-present with 0.3-2 vehicles/feeder km/day
- Processing, value addition and intermediate services are underdeveloped
- 27% of young people are looking for additional employment
- Artificial barriers (regulation) holding back opportunities in agri-business
- Cash transaction under Safety Net programs can help the wheel turning

Agricultural

Innovations –

- many sources but often no scaling up
- from Asia to Africa-



Finally

– agriculture as an instrument for well being





A photograph showing a man and a woman working together in a field, likely rice cultivation. The woman is wearing a colorful, patterned headscarf and a matching top. The man is shirtless and wearing a patterned cloth around his waist. They are both looking down at something they are working on. The background is filled with tall, green rice stalks.

Agriculture improves family well-being

- More spending on housing, education, food, agricultural assets
- More money into the local economy

Agriculture stabilizes family relations:

- More respect for women (less domestic violence)
- More stabilized families in family based rice cultivation