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Centre for Rural Development (SLE) Berlin

**RURAL TRANSFORMATION IN AFRICA**

# Scenario Building Workshop in Ethiopia

Addis Abeba, 15. - 18. February 2016, Documentation


2016

# Workshop Proceedings

Scenarios of rural transformation in arid and semi-arid lowland regions of Ethiopia

Addis Ababa, 15.-18.02.2016

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# 1 Introduction

## Context and objectives of the workshop

Rural areas in Ethiopia are currently facing massive environmental and socio-economic challenges which put the livelihoods of smallholders and pastoralists at risk. The diverse livelihoods systems, social and agro-ecologic conditions within rural areas lead to heterogeneous processes of change and require contextualized strategies to foster the inclusiveness and sustainability of the transformation processes. One of the most vulnerable regions are the arid and semi-arid lowlands, where large parts of the population are currently recipients of food aid (PSNP) due to widespread poverty and food insecurity. Mobile pastoralists and sedentary agro-pastoralists share and/or compete for diminishing resources. Under these conditions balancing out the competing land use systems or finding benefit-sharing-regimes and protecting natural resources remain major challenges for a transformation agenda which focuses on increased agricultural productivity.

This scenario building workshop on Rural Transformation in arid and semi-arid lowlands (ASAL) of Ethiopia is part of a research project dealing with Scenarios of Rural Transformation in Subsahara Africa until 2030s funded by the special initiative "One World – No Hunger" of the German Federal Ministry for Economic Cooperation and Development (BMZ). The workshop in Addis Abeba was the final in a row of three workshops, while previous scenario workshops had taken place in Zambia and Benin.

Participants in the workshop included representatives from governmental organizations, research and civil society, who approached the topic of structural transformation in ASAL regions from different perspectives and professional backgrounds.

The **overall objectives** of the workshop were a) to build scenarios of alternative "futures" until 2030 and b) and to develop recommendations towards a socially inclusive and ecologically sustainable rural transformation to be later on provided to the BMZ.

More specifically, the workshop aimed at:

- Identification of trends of past and current processes of change in arid and semi-arid regions
- Discussion of the main influencing factors of these trends and their future impact specifically on lowlands
- Building of linear and systemic scenarios of rural transformation until 2030
- Development of strategic recommendations for arid and semi-arid lowlands
- Giving participants the opportunity to gain methodological experience with the 'scenario technique'

## Key concepts

After presentation of the objectives the guiding concepts of the workshop were shortly presented.

**Scenarios** describe alternative possible pictures of the future and the conditions under which these futures developed. Unlike forecasts which are based on trend extrapolation, they do not predict what will happen, but they tell us what could happen within a certain probability over time (Fig.1).

Scenarios can raise awareness among stakeholders concerning possible future outcomes of their actions and non-actions. Scenario building involves thinking about a wide range of possible futures considering well-known trends as well as uncertainties. As such it tries to consider possible developments and turning points which are not necessarily connected to the past. The appropriate time horizon for scenarios depends on the pace of development of the issue under discussion and the driving forces behind it. For the question of rural transformation a time horizon of 15 years (2030) was considered.

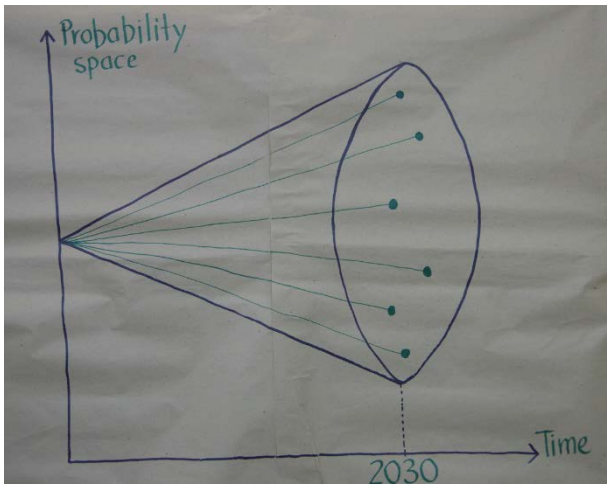


**Figure 1**: Probability space in scenarios

**Rural Transformation** was defined as *a long-term, multi-dimensional process of change affecting the basic characteristics of livelihoods of people in rural regions, taking into account their interaction with societal and global dynamics.* Change processes in complex and interacting systems include inter alia demographic dynamics, migration, privatization, decentralization, ecological changes. They can be divided in economic, institutional, ecological and socio-cultural dimensions. As the workshop aimed at building scenarios for sustainable and socially inclusive rural transformation these normative concepts were also introduced.

**Sustainability** is a bridging concept between social and natural spheres as it relates to socio-ecological processes, to the way how natural resources are used. A sustainable use of resources manages to meet basic human needs of current generations without destroying or degrading the natural environment so that resource needs of future generations can be met. It was stressed that sustainable development is not only a technical but also a political question.

**Social inclusion** refers to the capabilities and structural conditions of a person or a social group to participate in political, economic, social and legal terms in a given society. It focuses on social relations which are regulated through institutions. Key aspects of social relations which determine inclusion in or exclusion from certain social and economic spheres are participation, access and entitlements to various resources.

**Comments**

Participants welcomed the focus on ASAL regions as these areas have received little attention so far even though these areas are at more risk than highland areas. Within the last 10 years there has been a slow shift in governmental attention towards pastoral areas. This might be a good sign that there is potential to make use of the outcomes of this workshop.

# 2 Identification of major macro-trends

Working groups discussed recent trends of rural transformation in Ethiopia, indicating the direction of change and social and ecological implications within the last 35 years (since 1980). Basic areas for the discussion were suggested by the moderator and included: forms of migration, income sources, land use and characteristics of families/households. No additional topics were added by the participants who were free to develop sub-aspects in the working groups. It was agreed to discuss changes for all types of livelihoods including pastoralism and agriculture. Participants also agreed that the early 1990s marked a decisive political turning point in Ethiopia; a time when the socialist DERG regime collapsed and when the currently governing party EPRDF came to power. Therefore, trends and their directions of change were assessed for two periods: 1980s-1990s and 1990s-today. The following table outlines the major trends and their directions of change as discussed by the participants.

| **Aspect** | **Directions of change** | |
|---|---|---|
| | **1980-1991 (DERG regime)** | **Since 1991 (EPRDF)** |
| Customary institutions | Institutions for NRM and conflict management are strong, strong internal governance system | Weakening, especially of NRM due to land use changes and expansion of governmental institutions<br>Institutions for conflict management relatively strong still |
| household structure and internal power relations | Families and households gain importance due to development interventions | Increasing access to education |
| | Prevailing exclusion | Women and minorities get more rights in decision-making and are increasingly recognized |
| Forms of migration | Planned rural-rural: predominantly forced inter-regional state resettlement programs: villagization | More intra-regional and voluntary resettlement schemes: villagization |
| | Autonomous rural-rural: People from rural highlands move to commercial state farms in lowlands | Continuing highland-lowland in-migration towards large-scale sugarcane and cotton plantations |
| | Rural-urban migration not very significant, mostly highlanders starting businesses in small towns of lowlands | Increased urbanization: educated and uneducated youth, destitute pastoralists, highlanders (intra-regional, inter-regional and international)<br>Growth of small/ medium settlements |
| | Urban-rural migration: employment opportunities by expansion of state owned farms in rural areas | Continuing |
| international out-migration | Mostly induced by political reasons (violent conflict in Ethiopia) | Increasingly search for economic opportunities (e.g. women to Arabian peninsula, young Somali to Europe, Afar to Djibouti) |

| | | |
|---|---|---|
| international in-migration | War refugees from neighboring countries (e.g. Somalia, Eritrea) | continuing |
| Cash income sources | Livestock as major source of income<br><br>Income from other sources insignificant and often temporary coping strategy only | Livestock still major source of income for most people<br>Increasing need for income generation<br>Increasing diversification into non-pastoral activities (e.g. charcoal, farming, leasing of land, renting of houses)<br>Commodification of land |
| Traditional safety nets | Strong | Have kept their importance but decreasing capacity to share because of general asset deterioration |
| Food aid and transfers | Started in 1984 | Increased significantly, from acute to structural support for the poorest (PSNP) |
| Agricultural policies | Push for farming and transformation of mobile pastoralism towards agro-pastoralism | Continuing, e.g. current policy of Basin Development |
| Forms of land use | Expansion of irrigation agriculture (mostly governmental state farms)<br>some small scale opportunistic farming started | Continuing expansion of agriculture (governmental and pastoralists)<br>shift from pastoralism towards agro-pastoralism (diversification)<br>increase of small/medium commercial farming<br>increasing mining activities (oil, gold, potash)<br>increasing encroachment by invasive plants |
| Land tenure | Communal land taken over by government | increasing privatization of communal land: increasing enclosures, process of land certification |
| Pastoral mobility | Increasingly restricted because of economic, ecological and political reasons (see land use changes above) | Continuing decrease and Increasing sedentarization driven by destitution, livelihood diversification, ethnic Federalism |

**Figure 2**: Major macro-trends in ASAL regions since 1980

The discussion stressed the transformative impact of changing land use patterns in the context of increasing governmental interventions within the lowlands which focused on the introduction of irrigation agriculture and the sedentarization of pastoralists. Pastoral key resources like strong customary institutions for the management of common natural resources and mobility were undermined in the process. In this context, participants identified a general trend towards livelihood diversification and the uptake of non-pastoral economic activities to generate increasingly needed cash income as average livestock holdings and productivity decreases. The increasing number and size of urban settlements are indicators of this development.

# 3 Identification and definition of factors determining rural transformation

In the next step participants were asked to

a) identify the most important factors determining the macro-trends identified in the previous step which will also be relevant for the future rural transformation and to

b) define the factors.

The first brainstorming resulted in a mixture of ecological, institutional, demographic and economic aspects which were partly overlapping, redundant and/or not clear in their meaning. In the following discussion redundancies were eliminated and unclear factors were clarified. Finally, 27 factors remained (Figure 3).

| | | | | |
|---|---|---|---|---|
| Population Growth | Sustainable use of natural resources | Security of communal land entitlements | Employment opportunities outside agriculture/pastoralism | Access to extension services tailored to pastoral conditions |
| Urbanization | Use of appropriate technologies | Effectiveness of Civil Society Organizations | Livestock and crop productivity | Access to financial services |
| Level of conflict | Water management for production | Stakeholder networks and coordination | Value adding of produce | Access to quality education |
| Governance | Resilience against shocks and stresses | Openness towards innovations | Level of income | Access to ICT |
| Weather variability | | Social capital | Level of knowledge and education | Access to transport infrastructure |
| | | Gender equity | | Access to health services |
| | | | | Access to potable water |

Figure 3 - Summary of factors determining rural transformation

In the discussion participants agreed on the relevance of demographic changes as population growth puts significant pressure on the sustainable use of natural resources. Nevertheless, the relevance of this factor was discussed controversially as some argued that other factors are much more important. Urbanization and migration were additional aspects discussed in relation to demographic shifts.

The participants also agreed on the importance of ecological changes, especially the increasing variability of weather phenomena like rainfall challenging the resilience of local groups to deal with shocks and stresses (climatic and others). Another uncontested main determining factor was the role of hidden and violent conflicts on different levels involving various stakeholders which might challenge an inclusive and sustainable transformation in ASAL regions.

Institutional and attitudinal aspects were repeatedly mentioned as being highly influential for rural transformation. The discussion stressed the problem of the currently insecure communal land rights. Pastoralists lack formal entitlements to their pastures and water points which are at risk of being appropriated by other user groups. Currently communal land is increasingly privatized as the commercialization of agriculture is expanding. Customary land rights (on clan base) also have been ignored by previous regimes in order to establish irrigation agriculture. In this context the issue of governance emerged in the discussion but it was decided that this factor should remain separately as it contains a multitude of important aspects beyond land tenure. It also relates to the direction of policies and to the effectiveness of their implementation. Additional institutional aspects discussed contain the relevance of customary institutions with their inherent social capital, the socio-cultural setting including values and gender relations and the openness towards innovations. Some participants mentioned that pastoralists tend to be reluctant as they lack confidence in external interventions. Currently external innovations as well as governmental extension and education services are often not adapted to needs and conditions of mobile pastoralism.

The way how different stakeholders coordinate their activities was problematized by participants. There seems to be lack of coordination, duplication and competition between different actors, including service system providers. Other crucial factors for future transformation processes which were subsumed under the factor of stakeholder networks and coordination refer to the way how customary and external institutions interact and to the ability of local actors to build grass root organizations.

The discussion concerning the future determining role of economic factors focused on issues of productivity (land, crops, livestock), the production system, the level of income and valued addition to produce. Participants stressed the crucial future role of transport infrastructure to increase market access. In this context the relevance of additional employment opportunities outside the farming/pastoral sector was stressed.

After having identified the major determining 27 factors of rural transformation participants were asked to develop a definition for each factor. These definitions were visualized on the pinboards in order to serve as orientation during the discussion.

# 4 Weighting and filtering of factors

The following step aimed at the selection of those factors that are particularly relevant for building scenarios. This was done through an exercise of weigthing and filtering in which participants were asked to rate factors according to their importance (blue points) and uncertainty (orange points).

Guiding questions were:

- How important is the factor for rural transformation now and in future?
- How uncertain/unpredictable is the factor?


Figure 4 – Rating the factors

These ratings were transferred into a matrix in which the vertical axis relates to the degree of importance and the horizontal axis to the degree of uncertainty. Most out of the 27 factors were located in the lower left area of the matrix indicating that they have a relatively low rating in both criteria: They were considered to be rather certain and not very important by the participants. Factors like governance mark the other end (upper right) with a high uncertainty and high importance.

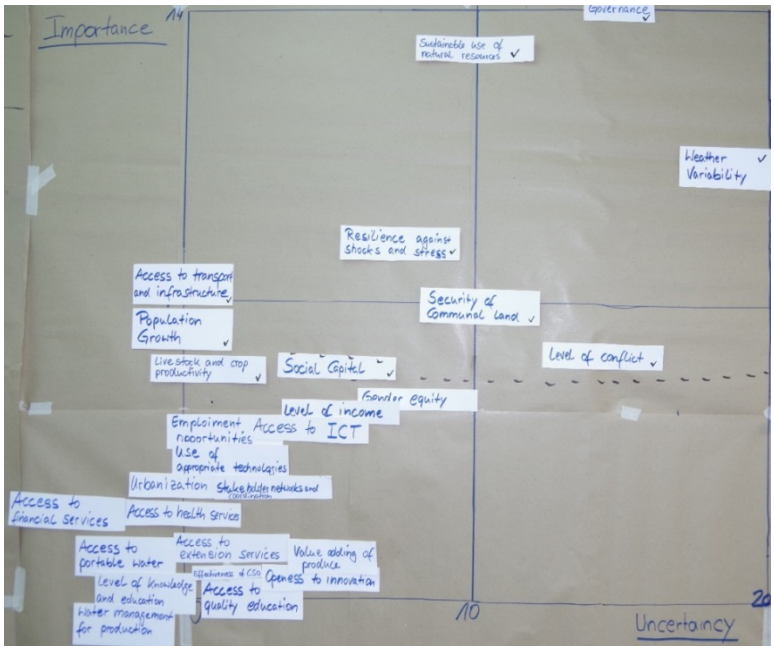


Figure 5: Weighting of factors in terms of importance and uncertainty

In the following discussion of the matrix some participants were surprised that the uncertainty of governance is higher than weather variability but it was argued that weather could be somehow predictable by weather forecasts. Also the location of the factor relating to value addition of produce was questioned. While some said that this factor could be left out anyway as it is the result of all other factors some argued that it should come to the top (importance) given the current impoverishment and as this area has been neglected so far. But apart from these contested points the location of the factors within the matrix was generally found plausible by the participants.

Those 10 factors above the dotted line in the matrix were selected for the next methodological steps of scenario building as they represented those with the highest importance for rural transformation. The figure below (Fig. 6) displays the selected factors in conjunction with their respective definition (done in previous step). As can be seen the factor previously called 'Population Growth' was renamed into 'Population in-migration' as participants shared the opinion that this more specific term would be more relevant for ongoing on future processes of structural transformation.

| Factor | Definition |
|---|---|
| Weather variability | Uncertainty of weather patterns (rain, temperature) |
| Resilience against shocks and stress | Coping capabilities to resist external shocks (climatic, economic and conflicts) |
| Social capital | Ability to act collectively; cooperation based on reciprocity, social safety net and trust |
| Governance | Peoples' participation in decisions that affect their interests.<br>Important aspects: inclusiveness, participation, legitimacy, responsiveness, accountability, transparency, rule of law |
| Security of communal land entitlement | Formal recognition and protection of traditional land management systems |
| Sustainable use of natural resources | Use of natural resources in a way that does not compromise future generations |
| Livestock and crop productivity | Output per unit land or animal |
| Access to transport and infrastructure | Availability, affordability and reliability of transport and infrastructure |
| Population in-migration | Number of immigrants to pastoral areas |
| Conflict | Scale and intensity of conflict |

Figure 6: Definition of major factors

# 5 Development of linear scenarios

In order to develop narrative linear scenarios working groups described possible variations of the ten factors within the probability space of the time horizon (until 2030). The following figure presents the results of the working group discussions.

**Variations of the factors (drivers of rural transformation in Zambia) and scenarios:**

Most probable scenario: more or less continuing the current

Best case scenario

Worst case

| Factor | Variation A - Most Probable | Variation B | Variation C |
|---|---|---|---|
| **Weather variability** | **Pessimistic and most probable view**:<br>Severe droughts alternate with torrential rains. Together with periods of extremely high temperatures, life has become almost unbearable. Dryland areas cover large parts of the regions. | | **Optimistic view:**<br>Negative trends in weather variability could be stopped. Rainfalls are more predictable, average temperatures have almost stabilized, though at a high level. |
| **Resilience against shocks and stresses** | **Most probable:**<br>After 15 years of coherent measures of national and international actors, the coping capabilities of pastoral communities have improved, due to (1) Modest diversification of livelihoods; (2) Capacity building, training, education and therefor improved skills; (3) Communities count with appropriate technologies to improve resiliency through improved productivity, transportation (=mobility and communication) | **Improved** (beyond/better than expected):<br>There is full global commitment to climate change, e.g. adaptation funds.<br>Full and optimized sustainable use of natural and human potentials because of broadly diversified sources of income/livelihood.<br>People and communities can easily cope with shocks and stress. | **Worsened**:<br>The frequent calamities happen, but (1) international support is weak; (2) National actions to implement/improve resilience have failed; (3) Anti-resilience-land policy; (4) Land alienation/ displacement lead to more conflict on land tenure and weaken social ties.<br>Final outcome → Crack of resilience power. |
| **Social capital** | **Worsening:**<br>Further erosion of common values of pastoralist population. | | **Improvement:**<br>Pastoralists have strong own institutions of which some are traditional and some are new. They develop common |

| Factor | Variation A - Most Probable | Variation B | Variation C |
|---|---|---|---|
| | Increase of internal conflicts. Selfish use (unsustainable) of natural resources.<br><br>Dual loyalties have torn apart traditional institutions. Bargaining power and viability of pastoralism is diminishing.<br><br>A few better-off makes profit but the majority abandons the region. Natural resources diminish | | solutions/decisions for their problems. They foster their interactions. They have strong bargaining power and create ability to influence national policy. They develop a strong identity. |
| **Governance** | **Current and worsening:**<br><br>Forces of resistance to change will prevail (corrupt gov. officials).<br><br>Rising conflicts, poor or no social services, unemployment.<br><br>Local officials selling community land, bribery, nepotism, fraud and officials living beyond their means.<br><br>Rising marginalization. | | **Improving**:<br><br>All people (women, vulnerable, groups) will have voice in decision-making that affects their lives directly/indirectly (e.g. use of water points, grazing lands, vet service). All decisions made are based on people's interest, aspirations and preferences. Officials and leaders are accountable, governmental officials are taken to court.<br><br>We find civil servants in offices, there are females and minorities represented in local councils. |
| **Security of communal land entitlement** | **Entitlement is not secured:**<br><br>Investors and governments can take more land while pastoral systems are endangered. This causes resource-based conflicts and hinders development. | | **Entitlement is secured:**<br><br>Traditional land management system is recognized and protected because of the confidence that communities developed. Degraded land will be rehabilitated and the system will be more resilient. Prospect of conflicts may decrease. |

| Factor | Variation A - Most Probable | Variation B | Variation C |
|---|---|---|---|
| **Sustainable use of natural resources** | **Most probable and also negative development: desertification and disaster:**<br>Dry season grazing areas taken over by expansion of large-scale commercial farms and unwanted plant species.<br>Grazing areas are severely degraded.<br>There will be wide spread poverty and destitution.<br>We will find highly reduced forest cover.<br>There is increasing migration, higher number of drop-outs and increasing levels of conflict. | | **Positive development**:<br>High level of awareness in communities, government and strong policies on natural resource management will translate in to practices. This will translate into improved pastures, increased forest coverage and enhanced soil fertility. Finally, this will lead to enhanced productivity and well-being.<br>Good practices are up-scaled.<br>There will be green pastoral areas. |
| **Livestock and crop productivity** | **Pessimistic/ collapse of pastoralism – most probable:**<br>Barren lands and livestock numbers don't suffice for survival.<br>High food insecurity amongst the majority of pastoralists | | **Optimistic/ prosperous pastoralism:**<br>Booming livestock market and high prices. Strong institutions and governance/policies in place which are implemented.<br>Increased adaptation of improved technologies and increase productivity. Most pastoralists are food and feed secure and resilience is increased. |
| **Access to transport and infrastructure** | **Most probable:**<br>Poor transport infrastructure (more people, same roads, same facilities poor maintenance).<br>Women carry heavy loads on their backs. Pastoralist travel long distance by foot. More demand – same supply. Increased costs of transport services. | **Improving:**<br>Expansion of road networks (all Woreda and Kebeles are interconnected). We see regularly maintained roads (less potholes), more service providing, business (restaurants and hotels, bars, discos). There is more petty trade. Affordability of transportations. We see | **Worsening:**<br>Deterioration of road and road services.<br>More pressure on less roads than today.<br>Pastoralist areas are more isolated from outside world. Poor health, education and other social services. |

| Factor | Variation A - Most Probable | Variation B | Variation C |
|---|---|---|---|
| | There is less access to markets and social service. | buses, mini buses, lories etc. frequently passing.<br>Re-opening and expansion of airstrips. | Businesses close and migrate. Out-migration to better areas. Ultimately increased poverty. People have to live on milk because they cannot buy food in town. |
| **Conflict** | **Pessimistic / most probable**<br>Regional/local stability will decrease.<br>The resilience of the system will weaken and more people will be displaced.<br>Poverty will increase due to loss of resources. | | **Optimistic**<br>In pastoral areas conflicts will be managed (interregional and intra-regionally)<br>Casualty will decrease<br>There is low migration and less internally displaced people.<br>Resilience of the system increases and the economic situation (improves?); there will be more livestock and a better use of natural resources. People coming closer together (and) there is more social cohesion. |
| **Population growth**[1] | **Probable**<br>ASAL Region has turned from Total Fertility Rate (TFR) increase region to a No TFR change region. Population growth rate is still higher than the Ethiopian average. Contraceptive use has increased to 20 %. | **Pessimistic**<br>The region is still a TFR region. The difference of the population growth rate to the national average is higher than ever before. Contraceptive use is still as low as 5 %. | **Optimistic**<br>The region has become a TFR decrease region. Population growth rate stand at 1,9% and contraceptive use is close to the national average of 50%. |

Figure 7 – Variation of factors

In a second step the factor variations, which represent different realistic visions of the factors in 2030, were connected to two scenarios of rural transformation: an optimistic scenario (with special emphasis on sustainability and inclusion) and a most probable scenario. A third pessimistic scenario was not differentiated as for most factors (7 out of 10) the most probable factor variation was identical with the pessimistic vision. The narrative scenarios (see below) were prepared by the moderator due to time constraints and discussed with the participants.

[1] The variations of this factor were not developed in group work but by the main facilitator. It was presented and discussed in plenary.

## Most probable/pessimistic scenario

*Severe droughts alternate with torrential rains. Together with periods of extremely high temperatures, life has become almost unbearable, barren lands cover large parts of the region. Calamities happen frequently, and international support is weak. National actions to improve resilience have failed, the resilience of people and communities has cracked.*

*Common values of the pastoralist population have further eroded. Internal conflicts are frequent and people make selfish and unsustainable use of natural resources. A few better-off make profit, but the majority abandons the region. Dual loyalties have torn apart traditional institutions. Bargaining power and viability of pastoralism have diminished. Investors and government can take more land, endangering the pastoral system and causing resource-based conflicts.*

*Dry season grazing areas have been taken over by expansion of large-scale commercial farms and unwanted plant species. Grazing areas are severely degraded and we can see widespread poverty and destitution.*

*In government, forces of resistance to change prevail. The provision of basic services is poor, local officials are selling community land, officials are living beyond their means, and there is widespread bribery, nepotism and fraud.*

*Barren lands and livestock numbers and productivity do not suffice for survival. We can see high food insecurity in the region.*

*Most roads and road services are deteriorated; there is more pressure on fewer roads and pastoralist areas are more isolated from outside world than ever before. Businesses have closed and left the region, we can generally see a lot of people out-migrating to better areas. Pastoralists have to live on milk as they cannot buy food in town.*

*The whole regional and local stability is weak. Competition for diminishing resources turns into violent conflicts. We can see large numbers of displaced people.*

## Optimistic scenario

Full global commitment to climate change is reflected in access to adaptation funds, among others. Negative trends in weather variability could be stopped. Rainfalls are more predictable, average temperatures have almost stabilised, though at a high level. People and communities cope easily with climate-induced shocks and stresses, making full and optimised use of natural and human potentials.

Pastoralists have strong own institutions of which some are traditional and some are new. They develop common solutions/decisions for their problems and have a strong identity. They foster their interactions. They have strong bargaining power and ability to influence national policy. Traditional land management systems are legally recognised and protected. Degraded land is rehabilitated and the whole land management system is highly resilient towards external shocks and stresses.

High level of awareness in communities, strong government policies on natural resource management, and the scaling-up of good experiences have translated into practice. We see improved pastures, increased forest coverage, and enhanced soil fertility.

All people including women and vulnerable groups have voice in decision-making that affects their lives directly or indirectly. All decisions made are based on people's interests, aspirations and preferences. Officials and leaders are accountable and held accountable, the Government

is committed, and everyone is equal in front of the law. Women and minorities serve as civil servants in offices and are represented in local councils.

There are booming livestock markets in the region and livestock products realise high prices. Government and NGOs give much attention to livestock and pastoralists. Farmers, agro-pastoralists and pastoralists are using adapted improved technologies and have increased productivity (per unit land or animal).

All Woreda and Kebeles are interconnected by roads. We see few potholes and frequently passing buses, mini buses, lorries etc., a lot of service provision, businesses like restaurants and hotels and petty trade, and a network of re-opened or new airstrips.

Conflicts in pastoral areas are managed inter-regionally and intra-regionally. There is low and controlled in-migration and we can see few casualties and internally displaced people. People are coming closer together, and social cohesion is strong.

## Discussion

The discussion of these scenarios mentioned certain factors which were not included in the scenarios like gender, in-migration, agro-processing, electric and communication infrastructure. Most of these factors had been eliminated or subsumed under other factors during previous steps, now they came back on the agenda.

A second point of discussion revolved about the value of mobile pastoralism as an economic system and a viable way of life which is far from being 'backward' as stated by the government, but actually the most sustainable way to manage natural resources under extremely harsh conditions. Therefore some participants called for a stronger recognition of these issues in the optimistic scenario.

Others commented on the current trends in governance which gives some hope that the pessimistic scenario won't become true. They mentioned improvements in terms of governance, institutions, budget and education. The level of education among the Afar has significantly increased in recent years but this might also become a problem in the future. One participant stated that half of the problem is the government and the other half is the young educated people.

# 6 Mutual influences of the factors defining rural transformation (Influence Matrix)

Having finalized the linear scenarios a systemic cross-impact/influence analysis, applying an influence matrix was done. Mutual influences between the different key factors identified in previous steps were analyzed. Each factor was discussed regarding its direct influence on other factors (ranking 0-2). The active sum reflects the cumulative influence of the one factor under discussion upon all other factors within the system (see Table below). Participants in the workshop identified as most influential factors for rural transformation in ASAL regions: governance, conflict (each 15 points) as well as social capital/customary institutions (14). The passive sum of each factor indicates its sensitivity to be influenced by other factors in the system. Most sensitive factors identified during the workshop, in the sense that they are strongly influenced by other factors, related to sustainable use of natural resources (18), resilience against shocks and stresses (17) and livestock and crop productivity (16). Resilience, for example, has a low influence on other factors (active sum 6) but it is strongly influenced by most of the other factors.

| | | A | B | C | D | E | F | G | H | I | J | Active Sum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Weather variability | | 2 | 1 | 1 | 0 | 2 | 2 | 1 | 1 | 2 | 12 |
| B | Resilience against shocks and stress | 0 | | 1 | 0 | 0 | 2 | 1 | 1 | 0 | 1 | 6 |
| C | Social Capital | 0 | 2 | | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 14 |
| D | Governance | 0 | 2 | 2 | | 2 | 2 | 2 | 2 | 1 | 2 | 15 |
| E | Security of communal land entitlement | 0 | 2 | 2 | 1 | | 2 | 2 | 1 | 1 | 2 | 13 |
| F | Sustainable use of natural resources | 1 | 2 | 2 | 1 | 1 | | 2 | 1 | 1 | 1 | 12 |
| G | Livestock and crop productivity | 0 | 2 | 1 | 1 | 1 | 2 | | 1 | 0 | 1 | 9 |
| H | Access to transport and infrastructure | 0 | 2 | 1 | 1 | 1 | 2 | 2 | | 1 | 1 | 11 |
| I | Population in-migration | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | | 1 | 8 |
| J | Conflict | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | | 15 |
| Passive Sum | | 1 | 17 | 13 | 9 | 10 | 18 | 16 | 11 | 7 | 13 | |
| Product (PS X AS) | | 12 | 102 | 182 | 135 | 130 | 216 | 144 | 121 | 56 | 195 | |

Figure 8: Influence matrix 0 = no influence; 1 = moderate influence; 2 = strong influence

The product that results from the multiplication of the active and passive sum indicates the overall relevance of factors within the system. The three factors with the highest product are sustainable use of natural resources (216), conflict (195) and social capital/institutions (182). These factors are characterized by a relatively high influence on other factors as well as sensitivity to other factors. The identification of these factors gives a first hint towards main fields of future intervention for a sustainable and inclusive rural transformation.

# 7 Analyzing the functional character of the factors (Axis diagram)

In this step a visualized diagram of all key factors determining rural transformation was discussed which illustrated the relative power of influence (active sum) and the degree of influenceability of the factors (passive sum). The horizontal axis in the diagram indicates the active sum of the factor, while the vertical axis indicated the passive sum. The location of factors within this diagram allows a differentiation of factors in four different categories: active, passive, inert and critical factors.

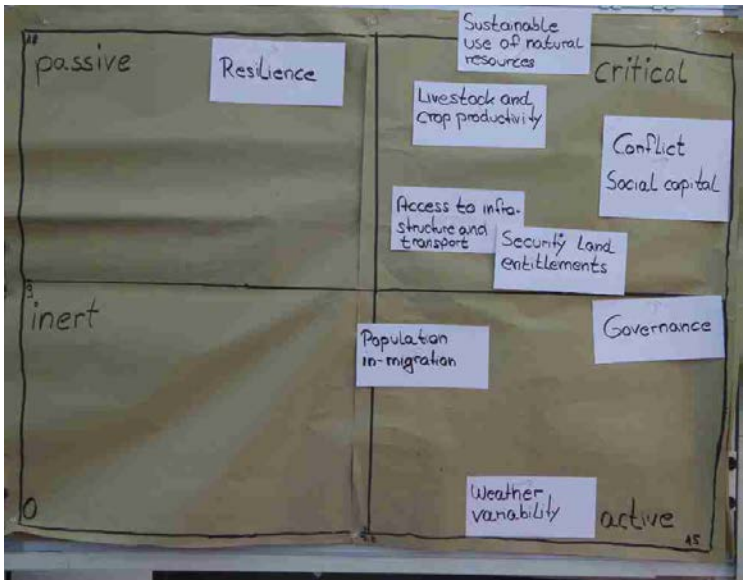


Figure 9: Axis diagram

**Active factors** have much influence but are hardly influenced by other factors. If they can be changed they will exert a lot of effects on rural transformation without having to consider many feedback loops. However, if they can't be changed and their influence is negative, adaptation strategies have to be developed. Weather variability is a case in point. It is very difficult to be changed so that strategies are needed which reduce the influence it has on other factors. The factor of governance is also very active but it can be better influenced than weather variability. If governance could be moved into a different direction it would have a strong influence on rural transformation in ASAL regions.

**Passive factors** are very sensitive to changes of other factors without having much influence itself. Resilience, which was mainly understood as the social capacity of communities to resist to or recover from shocks, is such a factor as it is strongly influenced by most key factors in the system. It could stabilize the system in some way if the influences of other factors on resilience can be contained.

**Inert factors** like population in-migration are neither influenceable nor do they have much influence. Population in-migration can be ignored for the time-being in the development of sustainable and inclusive long-term strategies but it needs to be monitored as it might tip-over at some point.

Most factors in the axis diagram are **critical factors**. These are factors which have much influence and are at the same time highly influenceable. They are the most dynamic factors as any change will exert a lot of effects on other key factors for rural transformation. Feed-back loops need to be assessed carefully. Some of the most critical factors were sustainable use of natural resources, social capital and conflict.

## Discussion

The visualization of the key factors in the axis diagram was welcomed by the participants as it clarified the objective of the workshop in developing strategic recommendations for a more inclusive and sustainable rural transformation. These recommendations have to consider the different systemic quality of factors (activity, passivity) and mutual interdependencies.

It was stressed that the results are subjective and would look probably somehow different with a different group of participants. It was also questioned if the limitation on 10 key factors led to an exclusion of certain factors which would have changed the systemic relations significantly. Nevertheless the results were considered to be valid from the perspective of the participants. It was agreed that the composition of participants was appropriate for the research topic, without any main bias towards social or natural sciences or between professional backgrounds (science, policy, development practice). The identification of key factors and their relations was therefore based on partly contested and intense discussions which give the results more credibility. One participant, the representative of OPA (Oromo Pastoral Association), stressed that even from a pastoralist perspective the identification of critical factors was very realistic.

# 8 Analyzing pathways and strengths of interdependencies: Interdependency diagram

The results of the influence matrix were transferred into an interdependency diagram where only strong influences (value=2) between key factors were considered. Arrows indicate the direction of influence. This diagram was useful in checking the plausibility of the system in terms of pathways and strengths of influences.

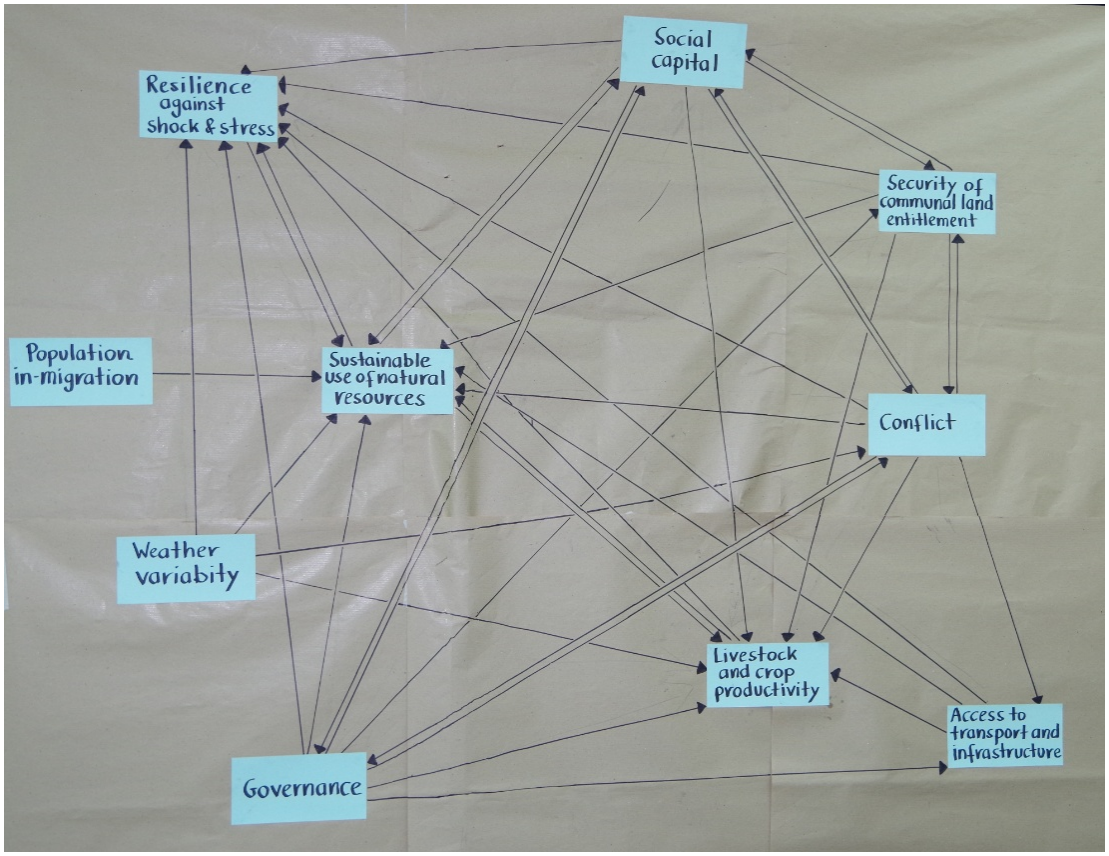


Figure 10: Interdependency diagram

This kind of visualization rose confusion at first and it was questioned regarding its value to convince policy makers on strategic issues as it seemed too complicated with its accumulation of arrows and without focus on certain factors. It was proposed to put governance more in the middle in order to raise attention to the relative importance of this factor. In spite of these first irritations concerning the form of visualization people agreed on the plausibility of the diagram.

One subsystem which could be identified by the participants related to the close linkages between social capital, security of communal land entitlements and conflict. Strong mutual influences connect all three factors. Participants were invited to pick one of these factors as starting point and take a walk through the system, in the sense that they develop a narrative of systemic interdependencies.

Example for a walk through the system: "*The strengthening of customary institutions with a high capacity to act collectively (social capital) contribute to a better security of communal land entitlements as people are in a better position to defend and secure their rights from contesting*

*claims. Increasing security of communal land entitlements leads to a decreasing intensity of existing land conflicts on local level. Fewer and less intense conflicts create space for collective action of previously hostile groups: social capital and customary institutions which are based on solidarity and reciprocity are strengthened. Stronger institutions are also a prerequisite for effective conflict resolution on local level. In this context of peaceful coexistence the sustainable management of natural resources based on customary institutions becomes a major concern for the inhabitants of the land who feel a strong sense of ownership based on traditionally acknowledged but also on formally recognized land rights…" (*to be continued*……)*

## Things to consider

1. These narrations should either start from one of the most critical factors as entry point to sensitize decision makers or from factors which are high on the agenda of decision-makers. There needs to be a selection of factors when presenting to others (sub-systems) so that the most critical interdependencies are highlighted. The discussion revealed that conflict is an issue with many interdependencies which needs urgent action. The occurrence of conflict is inevitable but there need to be stronger mechanisms for conflict resolution. It could be a good entry point, just like social capital.
2. If the objective is to strengthen a certain factor (e.g. livestock productivity), this could also give an orientation where to start the analysis. It has to be asked where main influences come from, how and by whom these factors can be influenced to move in a certain direction and how unwanted effects can be avoided.
3. When analyzing systemic linkages it is important to assess the positive as well as potentially negative impacts which may occur in a certain context. It is highly important to consider these unwanted possible negative effects when designing strategic measures. E.g. communal land certification might increase the security of communal land rights but this might lead to increasing soil degradation as mobility of livestock might be confined by the new land demarcations.

# 9 Developing scenarios through changes of factors

In the final step, participants were invited to develop scenarios through a change of factors that describe

1) the desired change (with a view towards a socially inclusive and ecologically sustainable rural transformation),
2) important effects in the system on other factors,
3) medium to long-term positive social and ecological impact of the factor change (in terms of social inclusion and ecological sustainability),
4) the key forces (actors, institutions, policies) behind the factor that foster or hamper it, and
5) suitable strategic measures to influence these key forces and hence the dynamics and direction of change.

In two working groups scenarios were developed for the four following factors: conflict, security of communal land entitlements, social capital and governance. Results were visualized in a matrix (one per factor) starting out from the question in which direction the factor has to change to contribute to a socially inclusive and ecologically sustainable rural transformation. The tables on the following pages display the results of this step which also marked the end of the workshop after three and a half intense days of discussion.

## Factor 1: Security of communal land entitlement

| Positive social and ecological impacts | Important effects in the system | Factor and desired change | Key forces behind the factor | Suitable strategic measures |
|---|---|---|---|---|
| ▪ Better well being of pastoralists<br>▪ Ensured peace and trust among pastoral institutions, groups and external actors<br>▪ No fear but prosperity and sense of ownership<br>▪ Improved trust among different land use groups, between clans and between pastoral clans and external actors<br>▪ Possible negative impacts: Too much local participation might be a risk for the government as the government will be held accountable for everything that is happening | ▪ A more sustainable use of natural resources due to a appropriate planning and and strengthened ownership which will create long-term incentive to take care of resources<br>▪ increased productivity of livestock, crops and wildlife due to proper land use planning<br>▪ Reduction of conflicts between pastoral groups and between pastoralists and other users (irrigation, mining, etc.): land use and holdings are demarcated and secured, resources shared<br>▪ Improved resilience through improved collective action: participation enhanced, customary institutions strengthened | **More formal recognition of communal land entitlements through certification and a more appropriate land use system recognizing mobile corridors (people, livestock and wildlife)**<br><br>**land use system reappropriated by local communities who decide on land use**<br><br>**land use system established in consultation with elders and communities** | ▪ Governments at different levels, also regional bureaus: designing institutions, policies<br>▪ NGOs like USAID, GIZ lobbying for land security issues<br>▪ Customary institutions<br>▪ Policies and guidelines: proclamation on national level but this needs to be translated to the regional level | ▪ Government provides necessary personal /experts to facilitate certification process with the community,<br>▪ Implementation of legally recognized land use system and rights Formulating policies and strategies<br>▪ NGOs piloting projects in pastoral areas<br>▪ Create an administrative base<br>▪ Consultation and dialogue<br>▪ Translate policy proceedings into local level<br>▪ Experience sharing and best practices: learning from others areas where land use management already works |

## Factor 2: Conflict

| Positive social and ecological impacts | Important effects in the system | Factor and desired change | Key forces behind the factor | Suitable strategic measures |
|---|---|---|---|---|
| ▪ Improves natural resource conservation/ utilization<br>▪ Strengthens harmony between different parties<br>▪ Creates peace and security and stability<br>▪ Enhances respecting once values<br>▪ Less financial resources are spent on permanent conflict resolution<br>▪ Opens the way to use resources (before used for conflicts) for other important development issues | ▪ Improves resilience against shocks and stresses as conflicting parties can better deal with it due to joined action and sharing of resources<br>▪ This improves the social capital of customary institutions<br>▪ Use of Natural Resources more sustainable through sharing of resources, less competition | **Reduced conflicts and tensions through non-violent mechanism and strengthened customary conflict resolution**<br>**(conflict at inter- and intraregional level)**<br>**Tolerance of differences, peaceful co-existence**<br>**Customary institutions for non-violent conflict management are strengthened so that conflicts can be reduced**<br>**Example: Oromo Pastoral Association in Borana** | ▪ Actors in conflicts:<br>▪ Government bodies such as Ministry of Federal and Pastoral development Affairs, House of Federation<br>▪ Local level: security and administrative bureau<br>▪ Security forces: military, police, special force<br>▪ NGOs and donors as implementation agencies<br>▪ Customary institutions including religious leaders, elders and women<br>▪ Brokers/investors and human traffickers (Proliferation of arms, contraband) | ▪ Institution building for conflict resolution: CEWARN, CEWERU<br>▪ Upgrade existing peace committees and build new ones where necessary<br>▪ Bring relevant and different stakeholder together to solve conflicts<br>▪ Increase the number of women in peace committees (not only victims anymore)<br>▪ Create a unit that bridges conflict parties / interface body – specialized organization with a broader scope to manage conflicts<br>▪ Creation of peace committees: joint structure of government and customary institutions (example in Borana),<br>▪ Work through broker organizations like OPA (chair is elder of Borana)<br>▪ Regional and federal level has to give recognition to customary institutions |

## Factor 3: Social capital

| Positive social and ecological impacts | Important effects in the system | Factor and desired change | Key forces behind the factor | Suitable strategic measures |
|---|---|---|---|---|
| ▪ Improved household/ community/clan food security<br>▪ Higher adaptation to climate change | ▪ Women have equal access and property rights to land and livestock<br>▪ Scale of conflict: women can contribute with new ideas, innovation, arbitration<br>➢ Women may stick to their hidden powers in order to maintain conflicts and instigate<br>➢ Women might reduce conflicts<br>▪ Sustainable use of natural resources, productivity and resilience will increase because women feel more responsible for family and resources | ▪ **Empowerment: The social, cultural and economic status of women is enhanced.**<br>▪ **Women have more "voice" on family and clan level.**<br>▪ **Women have equal ownership and control over economic assets** | ▪ Low education of women (literacy)<br>▪ Existing values, attitudes and norms, practices (FGM) → local culture<br>▪ Urban culture → communication, media, employment opportunities<br>▪ NGO + CBO<br>▪ Government Development Programme (PCDP) 2015-2020:<br>▪ Cooperatives (dairy, trade, microfinance) supported by the Government<br>▪ Women development package implemented by the Ministry of Women and children and others<br>▪ GTPII | ▪ Capacity building of actors on grassroots level to strengthen implementation of policies<br>▪ Strengthening of traditional knowledge<br>▪ Partnership and coordination of development actors<br>▪ Policy filtering and contextualization → tailored programmes for ASAL region<br>▪ Improvement of access of women to basic social and economic services |

This factor (as well as the following factor of 'governance') was mainly discussed in regard to the gender dimension as the group came to the conclusion that this perspective had not been discussed sufficiently in previous steps. Empowerment of women was conceived as a cornerstone for an enhanced capacity to act collectively and share resources. Nevertheless the group was aware that a strengthening of social capital actually would actually involve a broader perspective.

## Factor 4: Governance

| Positive social and ecological impacts | Important effects in the system | Factor and desired change | Key forces behind the factor | Suitable strategic measures |
|---|---|---|---|---|
| ▪ For the moment pastoralists enjoy the land but with new roads, new investments will come in and there will be competition for land → will weakened traditional institutions | ▪ Social capital: trust , belongingness, ownership will be strengthened; people will ask government for implementation Livestock + crop productivity increased →tailored extension package<br>▪ Access to transport is increased → demand is there because people want access to market<br>▪ Sustainable use of natural resources -_> policies, strategies, programmes and projects contribute to suitable land use and appropriate land use planning<br>▪ Conflict is reduced because people are part of consensus and share ideas<br>▪ Communal land entitlements improved because they will be accepted by government and community and legal/formal communal land rights | ▪ All groups (women, minorities) have participation in planning, monitoring and decision-making in topics that affect their lives<br>▪ Pastoralist participation in planning, monitoring and decision-making at regional and national level | ▪ Ethiopian Pastoralist Day<br>▪ PCDP: have resources and development programme in place (community based development approach)<br>▪ Pastoralist Standing Committee at parliament level<br>▪ Ministry of Federal and Pastoral affairs<br>▪ Inter-ministerial Board<br>▪ Educated young pastoralists now in office but might over-run traditional institutions<br>▪ Pastoral CSO/NGO<br>▪ Droughts<br>▪ Capacity gap in ASAL Region<br>▪ Accessibility and remoteness of the area is an issue + hostile environment<br>▪ Dual loyalty (maybe sometimes conflicting systems) | ▪ Respect traditional government in the government system (traditional leaders are consulted and asked for their ideas)<br>▪ Trainings<br>▪ Legal system should respect reciprocity<br>▪ Legal system should respect pastoralist voice, find modes to conciliate, governmental needs to recognize<br>▪ (Remember: constitution above traditional system) |

# 10 Annex

## Annex I: List of workshop participants

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|---|---|---|
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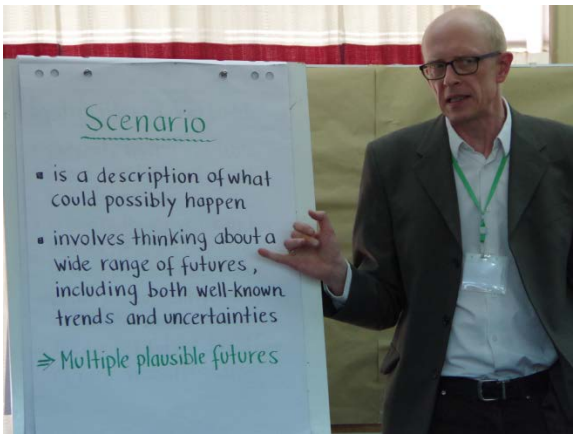
## Annex II: Visual impressions of the Workshop





Livestock and
crop productivity
Factor: