skat_ Swiss Resource Centre and Consultancies for Development

Final Mission Report

Nexus Case Study Ethiopia

Hedi Feibel

Sorssa Natea Merga

Skat, St. Gallen, July 23, 2014

Skat Consulting Ltd. Vadianstrasse 42, CH-9000 St.Gallen, Switzerland
phone: +41 (0)71 228 54 54, fax: +41 (0)71 228 54 55
email: info@skat.ch, web: www.skat.ch
bank details: St.Galler Kantonalbank, CH-9001 St.Gallen, Switzerland
SWIFT / BIC code: KBSGCH22
CHF-IBAN: CH65 0078 1604 8831 0200 0 €-IBAN: CH38 0078 1604 8831 0200 1 $-IBAN: CH11 0078 1604 8831 0200 2

Table of contents

Exchange rate June 4, 2014: 1 Euro = 26.45 ETB

List of Figures

List of Photos

List of Abbreviations

ADA	Austrian Development Agency
ADC	Austrian Development Cooperation
ADLI	Agricultural Development Lead Industrialization
AEDC	Austrian Embassy Development Cooperation
AGP	Agricultural Growth Program (WB)
APPEAR	Austrian Partnership Programme in Higher Education and Research for Development
ARARI	Amhara Regional Agricultural Research Institute
ARDPLAC	Agricultural Rural Development Partners' Linkage Advisory Councils
BAU	Business as usual
Bo…	Bureau of… (regional level)
BoAD or BoA	Bureau of Agricultural Development
BoFED	Bureau of Finance and Economic Development
CAADP	Comprehensive Africa Agriculture Development Program
CGIAR	Consultative Group on International Agricultural Research (15 research centres)
CIDA	Canadian International Development Agency
CO_2e	Carbon dioxide equivalent
CRGE	Climate Resilient Green Economy
CWT	Community Watershed Team
DA	Development Agent
DAG	Development Assistance Group
DFID	Department for International Development
Do…	Department of… (zonal level)
DPs	Development Partners
DRM & FS	Disaster Risk Management and Food Security
EC	European Commission
EIAR	Ethiopia Institute of Agriculture Research, under MoA

EPA	Environmental Protection Agency
EPLAUA	Environmental Protection and Land Administration and Use Agency
ESFI	Ethiopia Strategic Investment Framework
EU	European Union
EWCA	Ethiopian Wildlife Conservation Authority
FTC	Farmers training centre
GoE	Government of Ethiopia
GARC	Gondar Agricultural Research Centre
GCCA	Global Climate Change Alliance
GTP	Growth and Transformation Plan
HAB	Household Asset Building (hh = household)
ICARDA	International Center for Agricultural Research in the Dry Areas
ICS	Improved cooking stoves
IFAD	International Fund for Agricultural Development (UN)
IWMI	International Water Management Institute (consortium member in CGIAR)
IWRM	Integrated Water Resources Management
LRRD	Linking Relief, Rehabilitation and Development
MDGs	Millennium Development Goals
MHP	Micro and mini hydropower
MoARD (MoA)	Ministry of Agriculture and Rural Development; irrigation < 200 ha (“small scale”)
MoEF	Ministry of Environment and Forestry
MoFED	Ministry of Finance and Economic Development
MoH	Ministry of Health
MoWIE	Ministry of Water, Irrigation and Energy (irrigation > 200 ha)
NARS	National Agricultural Research System
NEPAD	New Partnership for Africa’s Development
NRM	Natural Resources Management
OWNP	One WASH National Program
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
PBS	Protection of Basic Services (WB Program)
PCU	Program Coordination Unit

PIF	Policy and Investment Framework
PPD	Planning and Programming Directorate
PSNP	Productive Safety Nets Program (WB Program)
PSCAP	Public Sector Capacity Building Program (WB Program)
PW	Public Work
RDPS	Rural Development Policies and Strategies
REDD	Reducing emissions from deforestation and forest degradation
RED&FS	Rural Economic Development and Food Security
SC	Steering Committee
SDG	Sustainable Development Goal
SDPRP	Sustainable Development and Poverty Reduction
SLM	Sustainable Land Management
SLMP	Sustainable Land Management Program
SPIF	Strategic Program and Investment Framework
SWC	Soil and Water Conservation
SWG	Sector Working Group
LI SRMP-NG	Livelihood Improvement through Sustainable Resource Management Program - North Gondar
WASH	Water, Sanitation, Hygiene
WOA (WADO)	Woreda Office of Agriculture (Woreda Agricultural Development Office)
WOFED	Woreda Office of Finance and Economic Development
WSWG	Water Sector Working Group
WWRDO	Woreda Water Resources Development Office

Ethiopia's administrative structure:

- 9 administrative Regions (Addis Ababa, Afar, Amhara, Benishangul-Gumuz, Gambela, Oromia, Somali, SNNP, Tigray)
- Zone = cluster of woredas (e.g. North Gondar is a zone in Amhara Region, Amhara Region has about 10 zones)
- Woreda (district); governed by woreda council (members directly elected to represent each kebele in the district); 670 rural and 100 urban woredas
- Kebele (wards, sub-district); neighbourhood associations; smallest unit of local government

1 Background information on Nexus approach

Increasing water, energy and food demand worldwide and related conflicts are more and more understood as interlinked problems which can only be solved based on integrated approaches to ensure water, energy, and food security for a more social equitable and ecological sustainable global development. Besides the strategic and technical level, the political level is more and more coming to the fore as a crucial element for success (Bonn Conference 2011).

So far, development cooperation was mostly oriented towards sectors without considering possibilities for synergies through integrated holistic approaches. Even the MDGs only partially took into account the importance of inter-linkages. Thus, the outcome document of Rio+20 underlines the importance of **water, energy, land and biodiversity as priority areas for Sustainable Development Goals (SDGs)**. In the Secretary-General's initial input on SDGs, based on a survey of Member States' views on SDGs, food and agriculture (land), water and energy rank on the top three positions.[1]

The following figure summarises the crucial characteristics of the Nexus approach.

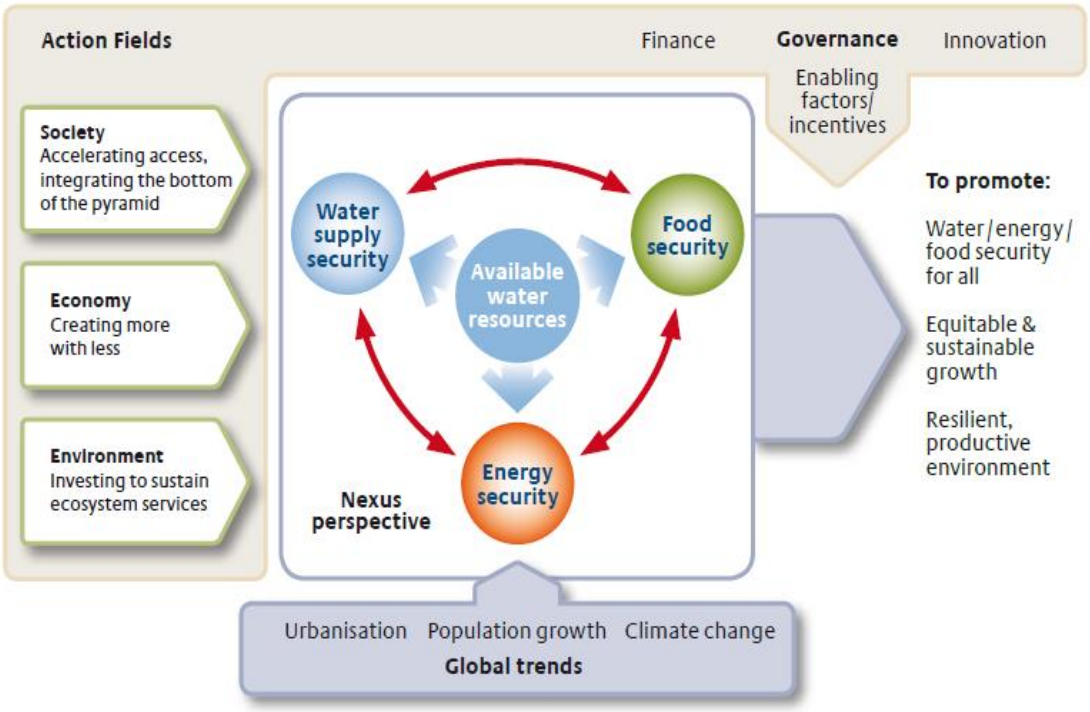


Figure 1: The water, energy and food security nexus (SEI 2011)

Water plays a central role as non-substitutable resource and is therefore placed centrally in the figure. A more extended version of Hoff SEI and the version as accepted by ADA are presented in Figure 2. The main difference is that the ecosystem (Hoff) and available natural

[1] German Development Institute DIE; Briefing Paper 3/2013; Post 2015: Why is the Water-Energy-Land Nexus Important for the Future Development Agenda?

resources (SERI) are in the centre instead of the water resources only. This modification leads to an equal consideration of different natural resources.

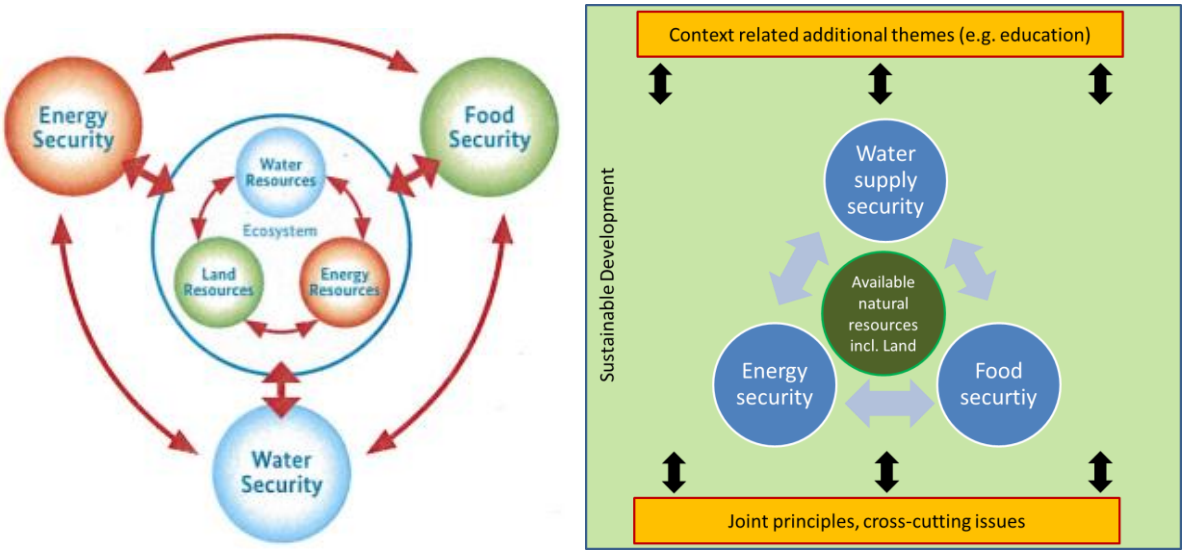


Figure 2: Extended Nexus approach according to Hoff (left) and as proposed in the SERI Guidance Document (right)

Apart from the definition and weighing of the different topics it is crucial to understand the essentials of the approach. The **main objectives of the Nexus approach** are presented in the following text box.

1. Increasing **resource efficiency** (productivity of resources; "creating more with less") for improved human well-being; decoupling of economic development from resource use through technological innovations and recycling
2. **Reducing trade-offs** (conflict of goals/reconcilement of interests)
3. Building **synergies**: "system efficiency" instead of "isolated sector productivity"
4. Improving governance across sectors: **dialogue** between sectors to support **equitable allocation and efficient use** of natural resources
5. Accelerating equal access, **integrating the poorest and vulnerable**
6. Investing to sustain **ecosystem services**

Figure 3: Main objectives of the Nexus approach[2]

Ideally, the Nexus approach provides additional benefits like carbon sequestration and resilience to climate risks.

[2] **Ecosystem services** = benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on Earth

On the other hand, **climate adaptation measures**, such as intensified irrigation are often energy intensive. Consequently, climate adaptation action can in return be maladaptive if not well aligned in a nexus approach.

Two good **examples** of Nexus approaches are[3]

- **Productive sanitation systems** safely recycle excreta, other organic waste products and water to crop and other biomass production, in order to increase overall resource use efficiency
- **'greening of agriculture'** aims at simultaneously increasing farm productivity and profitability, reducing negative externalities, and rebuilding ecological resources through practices from conservation agriculture, such as minimum tillage, biological pest control and soil fertility enhancement, crop rotation and livestock-crop integration, agro-forestry, reduced unproductive evaporation from the soil (e.g. by mulching and early vegetation coverage)

Existing more holistic approaches like "Integrated Water Resources Management" need to be **rethought and further developed** taking into consideration water-using sectors whose policies & strategies are governed by many factors outside the water sector.[4]

In order to apply the Nexus approach a **broader knowledge-base** is required covering the relevant spatial and temporal scales, like life-cycle analyses, water and energy efficiency of different cultivation methods etc.

Stronger institutions that are **better interlinked** are key to a nexus approach, and may be more important than additional institutions.

Most of the **stakeholders met in Ethiopia**, on federal as well as on zonal, woreda and even watershed level are very familiar with integrated approaches as such, since countrywide planning processes are based since years on an **Integrated Water Resources Management (IWRM) approach** (as presented in the "Community-based Participatory Watershed Development Guideline" applied by all Development Agents (DAs)). In addition, experts in the water sector know the **WASH approach** very well. So, all in all, integrated approaches are not new to Ethiopian professionals at all levels including even farmers' level. However the expression "Nexus approach" was new to all of them, except a few representatives of Development Partners (DP) (e.g. GIZ, EU, WB). Even though, some explanation on Nexus was given during the discussions, most of the stakeholders expressed their interest to get more detailed information on **"what is new compared to other integrated approaches"** and to learn more about case studies of successful application of the Nexus approach.

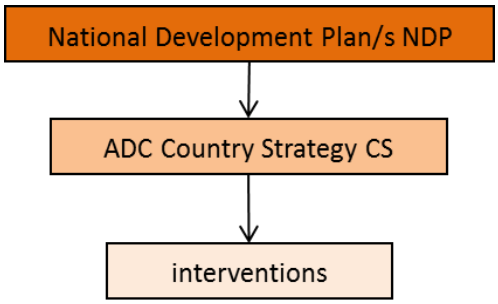
[3] Stockholm Environment Institute, Background Paper for the Bonn 2011 Nexus Conference; Understanding the Nexus
[4] Understanding the Nexus, SEI 2011, page 12

2 Nexus within the bilateral cooperation programme

The current **ADC Programme (2013-2015)** emphasises the importance to address water supply, energy, climate protection, forestry, agriculture and food security in an even more closely interlinked way. The objective is to[5]

- Feed the Nexus approach strongly into the **design for new interventions** ("basic programming principle"); **joint programming across sectors and cross cutting issues** to transform available information on interdependencies into intervention measures
- Change the **policy dialogue**: open dialogue and joint learning with partners leading to **"nexus-driven" national development plans**

The final form of intervention strongly depends on the specific Country Strategy and priorities which as such depend on the National Development Plans as shown in the figure below.



Trying to change or at least influence the **focus of future NDPs** has the advantage of a **leverage effect**, because it will impact on all donor programmes which are aligned to such NDPs[6]. The disadvantage is that the impact of a changed NDP does not necessarily have direct impact on the **concrete interventions** because there can be quite some room for interpretation of a policy.

OEZA Country Strategy Ethiopia 2014-2016

The country strategy is aligned with the Ethiopian Growth and Transformation Plan (GTP) and the common approach with the EU. One of the general overall objectives of the cooperation is the **sustainable management of natural resources**. The country strategy mentions two main fields of intervention namely the LI-SRMP and the support of the big PBS Program. For both, the nexus approach is to be taken into consideration as formulated in the country strategy.

As also analysed in chapter 4, the **LI-SRMP** already applies an integrated approach although improvement with regard to Nexus aspects is still recommended. By promoting an improved management of natural resources, income generating activities, soil and water conservation measures, diversification of cultivation and livestock activities, promotion of improved cooking stoves, development of water points etc. the program definitely contributes

[5] NEXUS Aufriss
[6] SERI document

to the nexus topics food security-water-energy in an integrated way. However, given the fact that more focus is put on food security it would be helpful to better coordinate the program with other activities related to water (especially WASH) and energy. In other words, it is not necessary that all 3 nexus "sectors" are (equally) taken into account in one program/project, but rather synergies with other programmes and improved coordination should be addressed.

Considering Nexus in the **PBS support** seems to be much more difficult. The Program is financed by several DPs and it mainly helps to pay salaries to people who provide basic services (health, schools, agriculture, WASH etc.) and also to improve accountability in the system. Although, theoretically a more holistic approach would certainly contribute to improve the PBS, in practise, it seems not very realistic to change the organisation and management of the whole Ethiopian public service sector, which evolved over years and is based on the legal and administrative framework of the country. The Nexus approach could become part of awareness raising campaigns (in trainings, workshops etc.) within the PBS in order to trigger a long term change in mind-sets, but not more than this.

The approach of **„Linking Relief, Rehabilitation and Development - LRRD"** as mentioned in the country strategy is certainly leading to a more nexus-oriented working because it ensures that efforts in the three different fields are associated to each other and activities are linked in a way to achieve synergies and optimise efficiency.

If the application of a nexus approach is taken serious, it would have to be reflected also in the **monitoring and quality assurance** procedures. The current country strategy lists the monitoring of results of **national development strategies and sector and local development plans**. These plans are partly based on integrated approaches like e.g. the IWRM. However, most results as formulated in the development strategies and plans are not considering the limitation of natural resources (e.g. available water resources as opposed to the different needs for human consumption, cattle, irrigation etc.) and their optimised utilisation. As understood from expert interviews, every ministry, independently, has to prepare its own plan to fulfil the GTP objectives. A nexus approach would be based on a cross-sectoral cooperation which obviously does not take place yet. While considering the national and sector development plans, OEZA formulates **program-related objectives and results** as presented in the country strategy. In order to follow a nexus approach, pertinent objective, results and indicators would have to be defined which guarantee optimised resource use and synergies. E.g. looking at the negative impact of the already existing number of cattle and of free grazing, the idea suggests itself to discuss the carrying capacity of a specific area before deciding on the number of credits for cattle breeding to be disbursed. Hereby, a balancing between preservation of the environment and sustaining the livelihoods has always to be obtained. It is common practice in most projects financed by NGOs to assess carefully the number of livestock/shoats introduced to a given area and the carrying capacity of a given agro-ecologic zone. A stronger focus on diversified cultivation and especially on processing of agricultural products might also help to create additional income while minimising input of natural resources and thus preserving the environment (reduce erosion etc.). Results like "the number of raised and marketed cattle is increased", "increased importance of animal husbandry and cattle breeding" etc. would have to be re-thought under a nexus approach.

3 Nexus in government policies, strategies and programmes

The Government of Ethiopia has established a macroeconomic policy and strategy framework. Besides, sectoral development policies and strategies have been formulated.

Figure 4 gives an overview on the various policies, strategies and programs.

As presented, **ADLI** is the overall **country development strategy** in place since 2003. The **Growth and Transformation Plan GTP** is the five years development plan (2010/11-2014/15) which will "expire" soon. The GTP was prepared based on ADLI's strategic directions. In terms of scope they are both covering all sectors.

In the following paragraphs, the **relevance of Nexus** in the GTP (paragraph 3.1) and in the CRGE (paragraph 3.2) is analysed. Furthermore, policies, strategies and programs of those three ministries (Ministry of Agriculture, Ministry of Water, Irrigation and Energy; and Ministry of Environment and Forestry) are analysed which are directly related to the Nexus topics water, food and energy (see paragraph 3.3., 3.4 and 3.5). However, there are more than 15 ministries / commissions in the Ethiopian government system whose work contributes to the GTP. All development policies, strategies and programs in Ethiopia are geared towards the fulfilment of the GTP. Plans and indicators in the various sector programs are aligned and synchronized with the GTP.

The sectors have clear policy directions and strategies to implement their mandates. As explained above, in the current study, specific focus is put on

1. the Water Sector Policy (1991),
2. the Environmental Policy (1995) and
3. the Agriculture and Rural Development Policy and Strategy (RDPS) (2003)

The listed policies have been reviewed to understand the extent to which the nexus-like holistic/integrated approach is considered in the formulations.

3.1 Nexus in the Growth and Transformation Plan GTP

The GTP[7] has very high priority in Ethiopia's development strategy and activities and is followed by all ministries. The objectives as formulated in this Plan are broadly accepted and not seriously scrutinised. The planning horizon of the GTP being 2014/15, it is almost "expired" and a new GTP 2 is already under preparation. Among the strategic pillars of the first GTP are:

1. **agriculture** as major source of economic growth: intensified production for domestic and export markets by small farm holders and private agricultural investors; focus on high value crops and potential high productivity areas; intensified commercialisation

[7] The GTP is the follow-up and is based on achievements of PASDEP

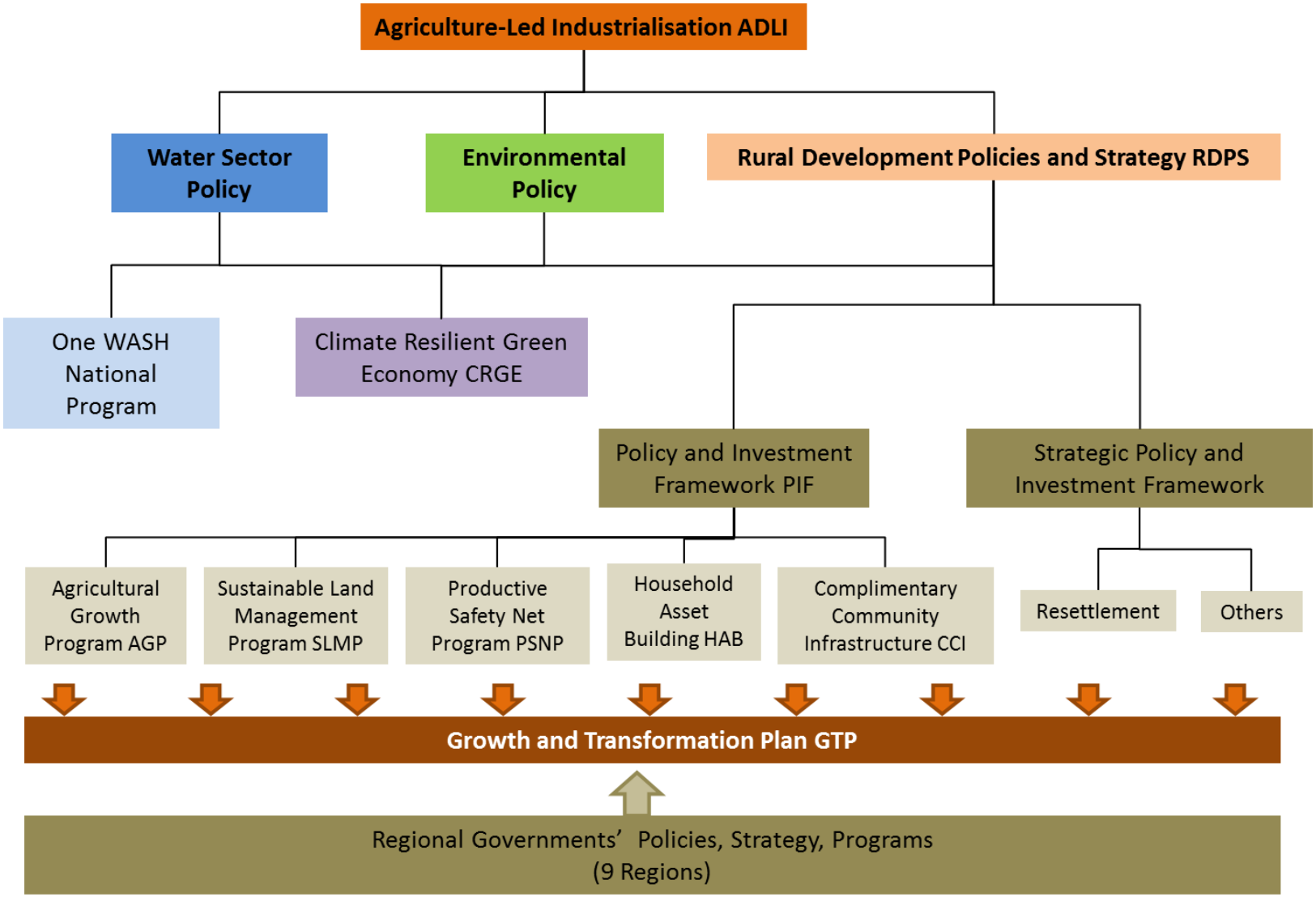


Figure 4: Policies, strategies and programs

support for development of large-scale commercial agriculture; commercialisation of smallholder farming will continue to be a major source of agricultural growth…; scaling up of best-practices of model farmers; strengthen government services for better support, development of new technologies; promotion of multiple cropping, adaptation to climate variability and ensure food security through intensified use of water and natural resources; small, medium and large scale irrigation schemes; watershed management; water and moisture retaining; conservation and management of natural resources; commercial horticulture; "agriculture as spring board for structural transformation" … by supplying inputs necessary for industrial growth.

2. expansion and quality of **infrastructure development** (roads, power, water supply, telecommunication, urban sanitation…): increasing domestic savings, promoting import substitution of materials etc.
3. expansion and quality of **social development**: health, water and sanitation, education, training etc.
4. **good governance and capacity building**: strengthen institutional and organisational capacity; improvement of transparency and accountability
5. promote **gender and youth** empowerment

The **overall logic** of the GTP is: sustainable rapid and equitable growth → creation of employment, raising of income → eradicating poverty[8].

Although watershed management, water and moisture retaining and conservation and management of natural resources are mentioned, such "euphonic targets" can only be achieved through an integrated planning process. However, on the other hand "intensified use of natural resources", small, medium and large scale irrigation and development of large-scale commercial agriculture are listed as targets which might also lead to significant negative environmental impact and high and probably conflicting water and energy requirements while **resources efficiency is not mentioned** as such.

Among the **specific targets** as listed in the GTP are, in a nutshell:

- crop productivity, land covered with multipurpose/versatile trees, extension services, reduced number of households participating in the Productive Safety Net Program PNSP, Water harvesting ponds, water harvesting systems, irrigation development
- electricity service coverage[9] (although power generation capacity shall grow from 2,000 to 8,000 MW, "electricity service coverage" is expected to grow from 41 to 75%, which does not even mean that 75% of the population will access to electricity); in general, energy targets are related to hydropower, rural/urban electrification, energy saving

[8] page 31/32 of GTP explains on poverty eradication

[9] "coverage" does not mean that all or most of the households in this area are connected; the target for "consumers with access to electricity" is an increase from 2 to 4 million while the total population is about 90 million and about 7 persons per household.

stoves (3 million distributed during PASDEP), SHS[10] (10,000 units), supply of health centres and schools (240)

- drinking water supply (from 68 to 98 %; for rural population within 1.5 km distance); land developed for medium and large scale irrigation (from 2.5 to 15.6 %; no target for small scale irrigation!)
- environment: woreda environment management planning manual to be prepared

Among the challenges, capacity constraints in administrations, domestic financial resources, inflation are mentioned.

The GTP was formulated with the main objective to **achieve MDGs by 2015** and to become a **middle-income country by 2020-2023**. Based on these targets, the different sectors were requested to establish their sector planning. The limitation of natural resources and thus the need for most efficient use of these resources which is the specific characteristic of the Nexus approach was not considered as main guiding principle. If the Nexus approach had been the planning basis, a much more cross-sectoral planning would have been required, striving for synergies wherever possible, e.g. using waste water for irrigation, using organic matter from waste and waste water for biogas production and fertiliser etc. The GTP however is mainly based on **more or less conventional sectoral planning** with separate targets for each sector.

One example was given by an interviewed expert: it would have made sense to discuss the **development of transport axes** like railways with MoA in order to consider the main production centres and required transport infrastructure for agricultural products. However, obviously such an exchange did not take place.

Another example is **livestock development** which plays an important role in Ethiopia. Among others, the following figures are listed as targets in the GTP:

GTP targets	baseline 2009/2010	plan target 2014/2015
cattle feed production (tons)	5'000	14'500
meat export (tons)	10'000	111'000

In addition, the export of live animals is projected to grow from USD 0.1 billion to USD 1 billion, which is a multiplication by the factor 10.

So, the general objective seems to be a significant increase of meat (and animal) production, however while considering neither the required resource input, nor any possible negative environmental impacts. In that respect the CRGE is much more considering the Nexus approach because it mentions “an increase in productivity of farmland and livestock rather than increasing the land area cultivated or cattle headcount” as an overall target. The question is whether increased productivity allows to keep the number of cattle stable or to even reduce it while at the same time achieving the cattle feed production and meat export figures as specified in the GTP. In addition, the “threatening increase” of the number of

[10] SHS = solar home systems

livestock (cattle population is expected to increase from about 50 million today to > 90 million in 2030 = “BAU scenario”) mainly happens at smallholders and pastoralists who feel to depend on high number of livestock, have strong traditions related to large flocks and often have few alternatives (“having cattle is like having a saving account”).

A really integrated approach would compare different options for income increase with regard to the required resource input (water, energy, land etc.), which means taking into account the resource efficiency. Besides increased productivity and diversification, this would also include added value through small- and medium-scale processing of agricultural products, possible marketing etc.

The GTP lists as one of the activities to facilitate private investment in the agricultural sector to “transfer nearly 3.3 million hectare land to **commercial farming investors** in transparent and accountable manner”. The Government argues that the country has ‘three million hectares of [land] … not used by anybody [which]…should be developed’. However, informal and customary land rights and downstream water uses are often neglected when claiming that land is unused (see also Photo 23). Favouring high-input agriculture – including large-scale irrigation infrastructure – in the most productive areas, often even for biofuel production (e.g. 200,000 ha for biofuel plantations in Tana-Beles Corridor) might lead to significant imbalances. This sensitive aspect would have to be addressed by **integrated water and land resources planning**. Pro-poor and sustainable development needs specific models like out-grower schemes and contract farming, equity sharing or producer-consumer partnerships as found in the fairtrade sector.

In various chapters of the GTP, **“integrated approaches” are mentioned**. E.g. under the strategic directions in the water sector the priorities are to “improve utilisation of water resources by interconnecting different sectors and users, ensure fair and equitable utilisation of water resources taking into consideration existing demand and future generations’ needs” This is theoretically a very good approach and very much in line with Nexus. However, from the information received from different interview partners the **reality is quite different** and this interconnection often does not take place.

Interestingly, at the very end of the GTP document **“Environment and Climate Change”** is treated as a **separate chapter** and separate targets like biodiesel production, forest cover, compost application, designated park area etc. are listed. Half of the targets remain extremely general (without concrete target figures) like “measures will be taken to mitigate climate change impacts to conserve biological resources”. If a Nexus approach had been applied while establishing the GTP such **climate and resource efficiency aspects** would have been **integral part** of most of the specific chapters in the document.

Summing up, the GTP although comprising some aspects of integrated planning (re-afforestation, soil and water conservation, etc.) is not based on a real nexus approach as illustrated in the preceding paragraphs. The general strategic directions describe kind of integrated approaches but according to the oral information received the actual planning which led to the figures and targets as listed in the GTP did not emanate from a cross-sectoral integrated planning.

A first step on the way to a more integrated planning e.g. for the GTP2 would be

1. to **gather the comprehensive information available at the various ministries** (sectoral plans, River Basin Master Plans etc.) and
2. to **analyse the concrete possibilities to increase resource efficiency** (closing water and nutrient loops etc.)
3. to analyse **the potential for synergies between different sectors**.

3.2 Nexus in the Climate Resilient Green Economy Strategy CRGE

The CRGE initiative although being developed under the guidance of an "inter-ministerial steering group"…"**follows a sectoral approach** and has identified and prioritised more than 60 initiatives…", which could help to achieve the development goals while limiting CO_2 emissions[11]. This sentence clearly indicates that the general approach of the strategy is a rather sectoral than inter-sectoral one. It is mentioned in the CRGE that sectoral plans and an integrated federal plan have been developed. For the implementation of the CRGE, it is mentioned that "green economy programmes for all relevant sectors will be developed to ensure that the programme is comprehensive", meaning that cross-sectoral work is unfortunately not actively promoted.

However, many aspects mentioned in the document lead into a very "Nexus-like" direction. In contrast to the GTP, the CRGE - even on the first page - mentions the **carrying capacity of cattle as one of the resource constraints[12]** which have to be taken into account. In order to keep CO_2 emissions at the current 150 Mt (CO_2e)[13] instead of reaching 400 Mt - which would be the "business as usual scenario" - the CRGE mentions four main pillars as a base for planning:

1. Improving **crop and livestock production** practices for higher food security and farmer income while reducing emissions (**agricultural and land use efficiencies**)
2. Protecting and **re-establishing forests** for their economic and ecosystem services, including as carbon stocks (GHG sequestration in forestry)
3. Expanding electricity generation from **renewable sources of energy** for domestic and regional markets
4. Leapfrogging to modern and energy-efficient **technologies in transport, industrial sectors, and buildings**.

These pillars mainly touch the food and energy topics whereby the water aspect is only partly included e.g. in the crop and livestock production practices. **Energy** is broadly covered through electricity production from renewables, energy efficiency and "re-establishing of

[11] In Ethiopia >40 % of total emissions are generated by livestock, 18% from deforestation for agricultural land, 23% from forest degradation (due to fuelwood consumption) and 7% from fertiliser use in crop production. 90% of total power generation comes from hydropower. Highest increase is expected of >15% yearly is expected from the industrial sector.
[12] Ethiopia is the 10th largest producer of livestock in the world! Cattle population is expected to increase from about 50 million today to > 90 million in 2030 ("BAU scenario")
[13] Per capita emissions of < 2 t CO_2e are modest compared with > 10 t per capita on average in the EU and > 20 t per capita in the US and Australia.

forests for their economic services" (among others as fuelwood). As further elaborated in the text, also promotion of alternative energy for cooking (e.g. biogas) and fuel-efficient stoves are addressed. Large scale promotion of advanced rural cooking technologies is even one of the "fast track initiatives". One option which is often overlooked in the energy discussion is the use of mechanical energy from hydropower to drive different agro-processing machines for hulling, husking, milling etc.. In rural areas of Ethiopia water mills have a long tradition, however, so far no initiative for improvement of efficiencies and further promotion is taken.

All in all, since the CRGE is focusing on emission reductions, **water** is obviously not seen as a crucial element, although several aspects are closely linked to water. E.g. crop and livestock production, re-establishing of forests (irrigation of tree seedlings) and finally also hydropower require an integrated (water) resources management strategy to avoid resource conflicts.

In the selection process of 150 potential green growth initiatives, their **contribution to reaching the targets as outlined in GTP** was ranked higher than their emission avoidance potential (see CRGE p.22, figure 7). Other criteria are general feasibility, cost effectiveness (to reduce CO_2e) and potential to attract climate finance.

Among the prioritised measures regarding soil-based emissions from agricultures are:

- Intensify agriculture through usage of improved inputs and better **residue management** (decreasing requirement for additional agricultural land)
- Create new agricultural land in degraded areas through small-, medium-, and large-scale **irrigation** (reduce the pressure on forests)
- Introduce lower-emission agricultural techniques (**carbon- and nitrogen-efficient crop cultivars**, promotion of **organic fertilizers** etc.)

To increase the productivity and resource efficiency of the livestock sector, the following initiatives have been prioritised:

- Increase **animal value chain** efficiency to improve productivity
- Support consumption of **lower-emitting sources of protein**, e.g., poultry
- Mechanise draft power, i.e., introduce mechanical equipment for ploughing/tillage (substitute animal draft power)
- **Manage rangeland** to increase its carbon content and improve the productivity of the land.

Measures prioritised for sustainable forestry and reduced fuelwood demand are:

- dissemination and usage of **fuel-efficient** stoves and/or **alternative-fuel** cooking and baking techniques (such as electric, LPG, or biogas stoves)
- Increase afforestation, reforestation, and **forest management**
- Promotion of area closure via rehabilitation of degraded pastureland and farmland, leading to enhanced soil fertility and thereby ensuring additional **carbon sequestration** (above and below ground).

In addition, the multiple-use of forests for various purposes is highlighted: honey, forest coffee, timber, discharge control, preservation of biodiversity, carbon sink, cleaning air, health benefits, soil fertility etc.

With respect to efficient use of energy and electricity - seen as fundamental precondition for modern economic development - the following aspects are highlighted:

- Generation of clean and **renewable electric power** (partly *exported* to get revenues also for other purposes)
- Leapfrogging to modern, energy efficient technologies despite higher investment cost
- **Fuel efficiency** standards for passenger and cargo transportation
- Electric rail network powered by RE, urban electric rail and efficient bus transit
- Domestic biofuel production (to substitute imported fossil fuel)
- Higher efficiency of appliances (bulbs etc.)
- **Landfill (solid waste) gas** management technologies
- Cement production: Improved energy efficiency; increased pumice content; increased share of biomass energy

From all the listed initiatives, four have been selected for **fast-track implementation**:

1. exploit hydropower potential
2. advanced rural cooking technologies on a large scale
3. improving the efficiency of the livestock value chain (monetising reduced emissions from livestock)
4. Reducing Emissions from Deforestation and Forest Degradation (REDD+).

Since the CRGE is very much oriented towards reducing CO_2 emissions, it has in general a stronger focus on **resource efficiency** (especially energy and land efficiency) than the GTP. The text clearly mentions the problem of growing demand for agricultural products and the inefficient agricultural practices which result in an over-exploitation of natural resources. On an average, a cropland increase of 1 ha results in 0.7 ha deforestation, not even considering the increasing pressure on the remaining forest for expansion of grazing land. The obvious conclusion is "to achieve economic development targets in a **resource-efficient way**" and by seizing opportunities for innovation ("leapfrogging")[14].

Although, as mentioned above, from the point of view of resource efficiency the CRGE is more in line with Nexus than the GTP, it has to be stated that with regard to **social inclusion and equal access to resources less Nexus-conformity** is achieved although this is of equal importance according to the main Nexus principles (see Figure 3). E.g. domestic biofuel production is likely to be at the cost of food security. Although e.g. the Jatropha productivity even on marginal soils is often invoked as an argument, competition for land is certainly an issue. Another threat for "social inclusion" is the implementation of big hydropower schemes which might lead to large-scale resettlements with enormous negative impacts for the respective population.

Unfortunately, the general impression from the stakeholder discussions is that much **more official attention is paid to the GTP** compared to CRGE. The technical note in the CRGE

[14] "leapfrogging" to the newest and best technology rather than reproducing each evolutionary stage undergone by already-developed economies.

stresses that “the individual initiatives should **not be understood as immediately mandatory government policies**” which sounds like a limited commitment to follow this document. The second limiting factor is the required finance of about 150 billion USD over the next 20 years to build a green economy. Furthermore, as mentioned above the CRGE does not sufficiently take into account “improved human well-being, accelerating equal access, and integration of the poorest and vulnerable” as targets of overriding importance.

The document is putting the cost into perspective by stressing economic and other benefits which will result from the initiatives. Furthermore, a very important point regarding capital cost is raised: often developing countries invest in **low-CAPEX alternatives** thereby **locking themselves into solutions that are inefficient and ultimately less sustainable and often related to higher operational cost (!)**, although more climate-compatible alternatives exist with higher social and economic benefits on the long run (e.g. to establish a railway system in a country with huge hydropower potential and consequently cheap domestic electricity is much more sustainable than car and truck transport on roads).

The CRGE document illustrates the profitability of the proposed initiatives and/or relatively low investment, per ton CO_2e avoided. In addition, related business opportunities and the overall benefit of a green economy for the population are described in detail (e.g. savings from energy-efficient cooking / baking, transport, reduced dependencies from imports etc.) and possibilities of international environmental funding sources and climate finance are elaborated.

In contrast to other policies and strategies the CRGE is very much focused on clear “efficiency increase”. In addition, the document analyses synergies, direct and indirect benefits and even proposes concrete financing mechanisms for implementation. Summarising, it includes a **number of good entry points to increase resource efficiency** but would **need a stronger focus on “equal access” and improved human well-being.** It definitely illustrates a number of concrete possible actions which guide in the right direction of resource efficiency. The respective benefits being quantified in terms of avoided CO_2e allows in many cases a transfer into saved energy.

3.3 Nexus in the Water Sector Policy

The Ethiopian Water Resources Management Policy is comprehensive and coherent. It addresses the various aspects of water uses including water supply and sanitation, water for agriculture, water for energy, water for mining/industry, aquatic resources, etc. For the purpose of this report three thematic areas related to the nexus pillars are reviewed and assessed to understand to which extent these key thematic areas are addressed and inter-linked.

Food Security:

Policy Issues	Policy Statements
Food security at household level	Develop and enhance small scale irrigated agriculture and grazing lands for food self-sufficiency at household level
Food security at national level and export earnings	Development and enhancement of small-, medium- and large-scale irrigated agriculture for food security and food self-sufficiency at national level including export earnings and to satisfy local agro-industrial demands

Water Security:

Policy Issues	Policy Statements
Water allocation	Enhance and encourage water allocation that is based on efficient use of water resources that harmonizes greater economic and social benefits
Water allocation based on socioeconomic development plans	Adopt the principle that water allocation shall not be made on permanent basis, but rather on an agreed time horizon that fits best with the socioeconomic development plans, especially pertinent to water resources, subjected to appraisals and revisions in light of new developments
Basic minimum requirement	Recognize that the basic minimum requirement, as the reserve (basic human and livestock needs, as well as environment reserve) has the highest priority in any water allocation plan.
Priority of water supply and sanitation	Ensure that water allocation gives highest priority to water supply and sanitation while apportioning the rest for uses and users that result in highest socio-economic benefits.
Sustainable and sufficient water supply	Provide as much as conditions permit, sustainable and sufficient water supply services to all the peoples of Ethiopia
Water supply for livestock and industries	Satisfying water supply requirements for livestock, industries and other users as much as conditions permit
Sanitation services	Enhance the well-being and productivity of the people by creating conducive environment for the promotion of appropriate sanitation services

Energy Security:

Policy Issues	Policy Statements
Hydropower development	Ensure that hydropower development is an integral part of the multipurpose uses of water
Affordability of hydropower	Ensure that hydropower development is affordable and development is in phases

Hydropower and environment	Subject hydropower development schemes to strict environmental and stakeholder considerations as well as meeting economic criteria
Domestic investors in hydropower	Encourage the involvement of domestic investors in the development of hydropower resources

Compared with the agriculture and environmental sector policies (see following paragraphs) the **nexus approach is well addressed in the water sector policy**. The water policy is very comprehensive and addresses all sectors where water is an important commodity/input. Top priority is given for water for domestic consumption. The environmental policy is more generic when compared with water policy.

The water policy gives high priority for water security. Based on the available water resource, also other aspects, as food security and energy security needs are addressed.

3.4 Nexus in the Environmental Policy

The environmental policy goal is to improve and enhance the health and quality of life of all Ethiopians and to promote sustainable social and economic development. The environmental policy is focusing on ten key thematic areas/sectors. The specific policy issues and statements regarding the three nexus thematic area are described in the following table.

Food Security:

Policy Issues	Policy Statements
Agricultural production	Base increased agricultural production on sustainably improving and intensifying existing farming systems by developing and disseminating technologies which are biologically stable, appropriate under the prevailing environmental and socio-cultural conditions for farmers, economically viable and environmentally beneficial
Water Conservation	Promote in drought-prone and low rainfall areas water conservation for more secure and increased biomass production, including crop production
Potential costs of soil degradation as well as soil and water pollution	Ensure planning for agricultural development incorporates in its economic cost-benefit analysis the potential costs of soil degradation through erosion and salinization as well as soil and water pollution
Social and economic impact assessment for irrigation schemes	Undertake full environmental, social and economic impact assessments of all existing irrigation schemes in the rangelands and wherever needed establish programs of correcting their negative environmental, social and economic impacts
	Consider the opportunity costs of irrigating important dry season grazing areas of the pastoralists for crop production in any cost

	benefit analysis of such irrigation projects

Water Security:

Policy Issues	Policy Statements
Regulation of water quality and quantity through natural ecosystems	Natural ecosystems, particularly wetlands and upstream forests, are fundamental in regulating water quality and quantity and to integrate their rehabilitation and protection into the conservation, development and management of water resources
Interface between water bodies and land	Promote the protection of the interface between water bodies and land (e.g. lake shores, river banks and wetlands)
Role of water resource users	Involve water resource users, particularly women and animal herders, in the planning, design, implementation and follow up in their localities of water policies, programs and projects so as to carry them out without affecting the ecological balance
Economic analysis of water projects	Consider protection of watershed forests, wetlands and other relevant key ecosystems
Effective water management techniques at the farm level	Promote, through on-site training, effective water management techniques at the farm level for improved performance of medium to large-scale irrigation schemes
Surface and ground water recharge	Promote viable measures to artificially recharge ground and surface water resources
Recycle waste water	Recycle waste water when it has been found to be safe for health and the environment or when it has been made safe without entailing high cost.

Energy Security:

Policy Issues	Policy Statements
Sustainable utilization of renewable resources	Adopt an inter-sectoral process of planning and development which integrates energy development with energy conservation, environmental protection and sustainable utilization of renewable resources
Development of renewable energy sources	Promote the development of renewable energy sources and reduce the use of fossil energy resources both for ensuring sustainability and for protecting the environment
Role of water resources in energy planning	Recognize that water resources play an important role to meet Ethiopia's energy demand and that, by generating power avoid pollution on the environment

The statements in the Environmental Policy are **very close to a Nexus-like approach** E.g. they consider the necessity for resource efficiency, the equal consideration of renewables and energy efficiency and recommend even an inter-sectoral planning process.

3.5 Nexus in the Rural Development Policies and Strategy (RDPS)

Basic principles governing the agriculture development policy in Ethiopia, as stated in RDPS (2003) are:

- Labour intensive production
- Proper utilization of agricultural land
- One foot on the ground[15]
- Taking different agro-ecological zones into account
- Integrated development path

As articulated in the RDPS, the policies that inspire the development efforts in the agriculture sector are comprehensive in terms of improving agricultural production and productivity. In general, RDPS although it mentions an "integrated development path", puts more emphasis on *food security* with less consideration of *energy* and *water security*.

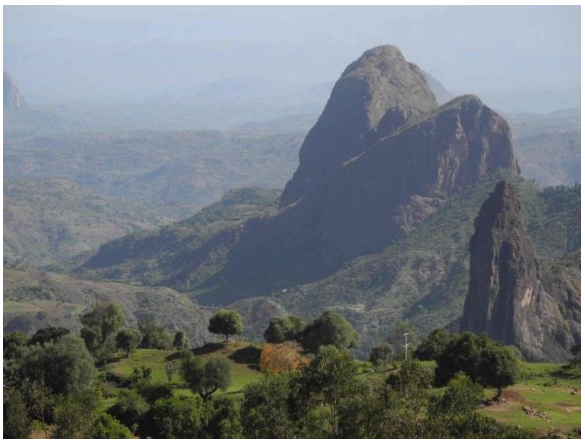


Photo 1: Fruit trees offer good opportunities for income generation in the highland areas

The key policies organized in the three thematic areas of nexus are as follows:

Food Security:

Policy Issues	Policy Statements
Watershed Development	Promote participatory watershed development to enhance watershed based agricultural production.
Irrigation Development	Ensure the development of multipurpose different size irrigation schemes where appropriate.
Fishery development	Expand fishery development and production in water bodies where the potential is not fully exploited
Wise use of natural resources	Enhance agricultural research programs for sustainable land management, wise use and maximum utilization of water and forest resources

[15] This is a principle which advocates that one has to maintain the existing knowledge base before taking on board different improved technologies from abroad. One cannot run by having both feet up in the air. One foot should be on the ground before moving the second foot. It is dangerous trying to rely on imported technologies rapidly.

Water Security:

Policy Issues	Policy Statements
Livestock Water	Promote the availability of water nearer to pastoralists as much as possible by providing livestock water supply to all the regions particularly to Pastoral Areas Pilot (PAP)

Energy Security:

Policy Issues	Policy Statements
Power and energy	Expand electrification to the rural kebele level
Forest development and management	Foster private forest development and conservation; expand forest development technology; expand market development for forests; administer and manage state forests; protect forest resources from threats

Most of the existing policies reflect strategies which are also part of existing legal and official documents. As mentioned above, ADLI is the lead national economic development strategy. It is the basis for the formulation of successive policy, strategy, and plan documents such as RDPS and the successive plans including Sustainable Development and Poverty Reduction (SDPRP), Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) and Growth and Transformation Plan (GTP). The RDPS is the "agriculture-centred rural development" strategy that has been adopted as a major strategy. Thus, much **attention is given to food security** compared to other nexus thematic areas.

Even though the RDPS deals with all sectors its focus is to address food security. It should be noted that the government policies and strategies have not consciously planned in a nexus-like approach.

3.6 Nexus in the Agricultural Sector Policy and Investment Framework (PIF)

Following an official request to the Development Assistance Group (DAG) by Ethiopia's Minister of Finance and Economic Development (MoFED), and in alignment with the Paris Declaration on Aid Effectiveness principles of local ownership, improved donor coordination, results-based approach, and mutual accountability various **Sector Working Groups (SWG)** were formed. Some groups such as the Rural Economic Development and Food Security (RED&FS) SWG, Health SWG and Education SWG were established between 2008 and 2010. In other sectors (Energy, Governance, Private Sector, etc.) the working groups have not (yet) been established as formal SWGs and thus continue to function as Technical Working Groups. The SWGs are platforms where Government sector offices and donors meet and communicate to come up with more holistic development interventions within the respective sector. On the other hand, the **Technical Working Groups** are still platforms mostly for donors to share information on the development interventions, harmonize their approaches and design ways to engage with the government to contribute to comprehensive harmonized and aligned development plans in the specific sector.

In general, the **mandate of the SWGs** is to:

- share information on Government policies, strategies, and programs based on the Government plan such as GTP objectives and targets;
- review sector level implementation status and other ongoing efforts of the Government and requirements of the sector;
- coordinate and harmonize efforts of various Development Partners (DPs) supporting the sector;
- Interact with and mobilize partners to provide additional support so as to achieve GTP and the MDGs at country level.

Photo 2: Informal meeting of the energy group

The **RED&FS Working Group** was established in 2008 by the Government of Ethiopia and DPs to support the development objectives of the government in the fields of agriculture, sustainable land management, disaster risk management and food security and since quite recently also livestock.

As could be gathered from Figure 5, the RED&FS SWG structure has four implementing arms: Secretariat, Broad RED&FS Platform, "cross"-sector Working Group and the M&E Task Force. In addition the various Technical Committees are responsible for the coordination and harmonisation of activities in the specific sub-sector. The "cross"-Sector Working Group is actually not facilitating the link between different sectors but rather between the sub-sectors (represented by the four Technical Committees).

The establishment of this structure took significant time and resources before it was well established and functioning, whereby it has to be stressed that it "only" coordinates activities in more or less one sector, namely the agricultural sector. All the Programs (blue boxes in Figure 5) are under the responsibility of MoA.

The **Agricultural Sector Policy and Investment Framework (PIF)** was developed by the Government of Ethiopia and its DPs under the framework of the Comprehensive Africa Agriculture Development Programme (CAADP) to provide a strategic 10-year framework for the prioritization and planning of investments that will drive Ethiopia's agricultural growth and development. This framework encompasses the different programmes and projects supported by the various stakeholders.

Increasing **productivity in smallholder agriculture** is a top priority of the GoE. Productivity enhancement has to be complemented by efforts to help farmers graduate from purely subsistence farming and adopt more **sustainable natural resource management practices** in order to arrest and reverse environmental degradation. At the same time, the poorest must be protected from food insecurity and supported by ongoing social safety nets.

This approach of "sustainable natural resource management" goes very much into the direction of Nexus, at least as far as the phrasing in the PIF is concerned.

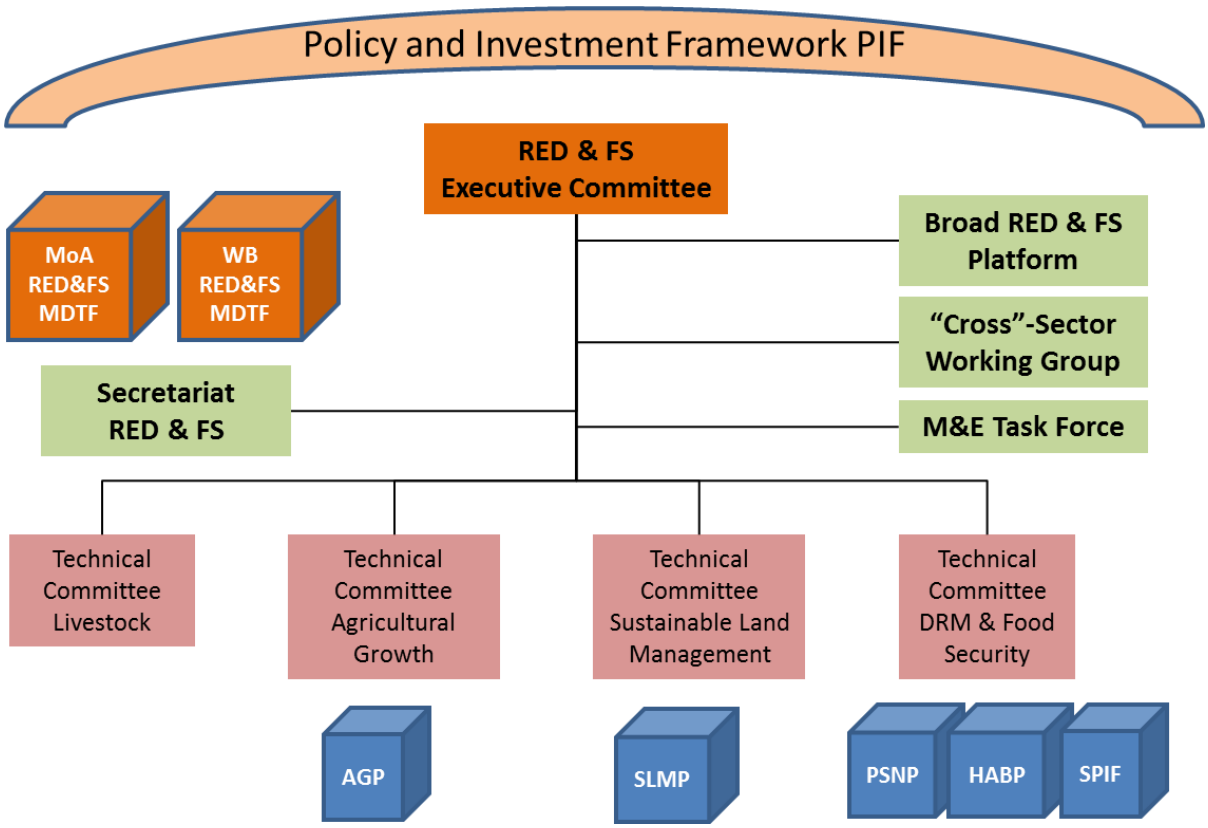


Figure 5: The Sector Working Group RED & FS

In recent years, a significant portion of Ministry of Agriculture (MoA) support for the sector has been allocated for disaster risk management[16] and food security, while investments for production support, rural commercialization and natural resource management have been comparatively lower. In the coming years the key challenge is to re-balance policy and investments to pursue sustainable productivity and profitability objectives, whilst executing a carefully controlled participants' graduation[17] and phasing down strategy of social safety-net activities under the DRMFS programme.

3.7 Nexus in the Flagship Programs

Main agriculture sector flagship programmes[18] are Productive Safety Nets Program PSNP, Sustainable Land Management Program SLMP and Agricultural Growth Program AGP. The flagship programs have a multi-donor financing mechanism. They were designed following

[16] Here generally disaster risk management refers to drought, flood, disease outbreak, earthquake, fire, etc. risks
[17] A house hold is considered to graduate from a program when it is able to fulfil its food needs for 12 months without external assistance
[18] Government Programmes that are supported by a group of donors through harmonized, aligned approach and cost sharing

the aid effectiveness principles, using the national system for the implementation and consolidating mechanisms with an improved capacity to achieve development objectives national wide. The PSNP, SLMP and AGP and other similar programmes (including those on the way to be created) are the most visible and practical result of the efforts done within the RED&FS SWG through continuous dialogue and engagement of the government and donors. However, there are several small programmes/projects implemented at the regions by relevant Regional Bureaux. In addition to the agricultural flagship programs under MoA, a relatively new flagship program was established in the water sector, the so-called One WASH (see paragraph d)).

a) Productive Safety Net Program PSNP

The PSNP is a component of the Ethiopian Government's Food Security Programme (FSP), and is an essential feature of the food security investment strategy for chronically food insecure Woredas of the country. The development objective of the programme is to contribute to reducing household vulnerability and improving resilience to shock.
The PSNP provides resources to chronically food insecure households through: (i) direct grants to labour-poor, elderly or incapacitated individuals, and (ii) payments to able-bodied members for participation in labour-intensive Public Works (PW) activities[19]. Since the launch of the programme in 2005, more than seven million households that were repeatedly affected by food shortage have received transfers on a regular basis and are able to meet their food needs. The PSNP has been financed by eight donors with a current budget of 2.5 Billion dollars in the current PSNP phase (2010-2014).
The PW component includes six major categories: (i) soil and water conservation (SWC), (ii) rural feeder roads, bridges and fords construction, (iii) water supply for human and animal use, (iv) social infrastructure (schools, health and animal posts), (v) small-scale irrigation/dams and, (iv) agricultural activities (composting and Farmer Training).
PSNP is one of the major undertakings of the Woredas where the programme is operational. It has attempted to bring together various Government, donors and non-Government stakeholders to work in an integrated manner. The woredas councils and sector offices are required to integrate the PSNP with other projects/programs.
The PSNP is a major flagship programme where **comprehensive and systemic designs of all livelihood components** are address. The nexus thematic areas particularly food security and water security are well considered in the design process. Thus it could theoretically be an **interesting entry point for the promotion a more Nexus-like approach**, stressing the resource efficiency and looking at potentials for synergies. Energy security as a topic is mainly addressed in cases where afforestation is part of the natural resource management. However, energy is not considered in its relation to water and food security so far.

b) Sustainable Land Management Program SLMP

The GoE recognizes land degradation as major challenge to economic growth and as an essential problem for the livelihood of the majority of the population. With its DPs the

[19] accounts for approximately 80% of the PSNP budget; financing labour intensive public works under cash-for-work and food-for-work payment approaches

Government developed a nationwide program known as Ethiopian Strategic Investment Framework (ESIF) to guide a systematic approach to combat land resource pressure. Although the first phase of the programme was successfully implemented and a second phase is launched[20], land degradation challenge remains alarming.

The Project's Development Objective is to reduce land degradation and improve land productivity in selected watersheds in targeted regions through provision of capital investments, technical assistance and capacity building for small holder farmers in the watersheds and government institutions at national and sub-national levels. The Project components are (i) Integrated Watershed and Landscape Management; (ii) Institutional Strengthening, Capacity Development and Knowledge Generation and Management; and (iii) Rural Land Administration, Certification and Land Use; and (iv) Project Management.

The Integrated Watershed and Landscape Management component has two sub-components, namely: (i) Sustainable Natural Resource Management in Public and Communal Lands, and (ii) Homestead and Farmland Development, Livelihood Improvements and Climate Smart Agriculture.

The objective is to support scaling up and adoption of **appropriate sustainable land and water management technologies** and practices by smallholder farmers and communities in the selected watersheds/woredas. This objective would be achieved through financing of demand-driven subprojects aimed at the introduction of tested watershed management practices such as land and water conservation, afforestation/reforestation, rehabilitation of degraded areas, protection of ecologically critical ecosystems, conservation agriculture such as no-/low tillage, agro-forestry, climate-smart agriculture and pasture management. Another relevant goal of this sub-component is to reduce Green House Gas (GHG) emissions at the watershed level and to enhance productivity through the promotion and adoption of low-carbon, climate-smart technologies and practices.

Many of these components and activities **reflect integrated approaches** and are very much oriented towards **sustainable resource management**, especially land and water, although even here, energy does not play a similarly important role compared to land and water. However, the question has to be raised whether all the implemented measures are promoted as individual and somehow separated activities or if they are considered with their inter-linkages and thus with their potential for synergies (e.g. combine improved cattle breeding with production of cow dung and re-use of faecal sludge as organic fertiliser).

c) Agricultural Growth Program AGP

With due commitment of the government, considerable achievement in the growth of the agricultural and rural sector has been recorded. However, the problems of poverty and food insecurity still remain a challenge to the overall development process of Ethiopia. Growth of the agricultural sector could neither match with the faster growth in domestic demand for food, nor with the expected surpluses to meet the demand for local industries and export needs thus limiting forward and backward inter-sectoral linkages. Main limiting factors of farm productivity are: slow technological progress, inadequate irrigation infrastructure, weak

[20] 5-year Sustainable Land Management Program-I (SLMP-1) 2008/09-2012/13; followed by Sustainable Land Management Program-II (SLMP-2)

market functioning and recurrent droughts. Inadequate participation of stakeholders in value chain development further restricts the process of agricultural commercialization.
AGP is a five-year program and operates in selected areas. The program targets Amhara, Oromia, SNNP and Tigray. Based on criteria such as suitability for agriculture, potentials for irrigation, access to infrastructure and institutional capacity, 80 woredas are selected.
Major components of the program are

(i) Agricultural production and commercialization with the sub-components institutional strengthening and development, scaling up of best practices, market and agribusiness development
(ii) Rural infrastructure development and management with the sub-components small scale agricultural water management and market infrastructures development.

Similar to the two other flagship programs, AGP has certainly a **potential for more resource efficiency** which could improve not only production systems but also agricultural commercialisation.

Since all flagship programs as mentioned above are based on policies and strategies which already follow more or less “integrated approaches”, the basics of the Nexus approach are at least partly considered (soil and water conservation measures, integrated water resources management etc.). The establishment of the SWG RED&FS can be seen as an **opportunity to create a stronger link between the programs**, to analyse **possible synergies and increase overall resource efficiency**. Consequently, the current environment is judged to be relatively favourable for the promotion of the Nexus approach. To make it more complete and efficient, certainly the **cooperation with other ministries** apart from MoA, namely also with MoWIE, MoEF, etc. is a crucial precondition.

d) One WASH Program

In September 2013, Ethiopia launched the largest sector wide approach to Water, Sanitation, and Hygiene (WASH) development, called “One WASH National Programme” (OWNP). It brings together four ministries (Water Resources, Health, Education, and Finance & Economic Development) to modernize the way water and sanitation services are delivered. It strives to improve the health situation, decreasing the drop-out rates of children in schools, and making financing for WASH more effective.

OWNP contributes to increasing water supply and sanitation coverage and the adoption of good hygiene practices. It consolidates planning, budgeting and reporting activities of WASH in a broad sector wide approach. It is unique in approach because it is **comprehensive, inclusive, cost effective, and progress oriented**. It is expected that OWNP will significantly contribute to meet GTP and MDG targets.

The four major components of OWNP are (i) rural and pastoral WASH; (ii) urban WASH; (iii) institutional WASH and (iv) program management and capacity building. Although OWNP focuses merely on water supply security (without taking into account inter-linkages with energy and food), the program has the **potential to build up competences for inter-sectoral cooperation** between the four ministries involved. The agricultural flagship programs are all implemented purely under MoA without clear involvement of other sectors.

In that respect the One WASH approach while integrating four different ministries is exemplary.

3.8 Nexus in Disaster Risk Management Strategic Program and Investment Framework (DRM SPIF)

The SPIF is a strategic framework for the prioritization and planning of investments that will drive Ethiopia's Disaster Risk Management system. It outlines major areas of investment and is designed to operationalise the DRM policy by identifying priority investment areas with estimates of the financing needs to be provided by Government and its DPs. The SPIF focuses on the creation of a comprehensive system for managing disaster risk that builds on past lessons and works to increase **cross-sectoral multi-agency integration**. The goal of the SPIF is to contribute to Ethiopia's achievement of middle income status by 2020.

The design of SPIF is very comprehensive and addresses all aspects of livelihood particularly in areas with disaster risks. Its design, implementation and assessment of progress is warranted through multi-agency dialogue at national level. From the approach, as written in the program document **SPIF in general is a framework which fully embraces the nexus approach**.

3.9 Nexus in the Regional Government Strategies

Ethiopia has nine regions, which are: Oromia, Amhara, Southern Nations Nationalities and Peoples (SNNP), Tigray, Somalia, Afar, Benishangul-Gumuz, Gambella, and Harari, plus the two municipal cities (urban administrations) of Addis Ababa and Dire Diwa. The regional governments have a mandate to prepare their own region specific strategies to guide and undertake their own development.

The practices of regional development can be divided into interregional and intra-regional ones. Inter-regional practices have been undertaken at the federal or central level while intra-regional practices are undertaken at the regional level. The inter-regional practices are fiscal decentralisation or inter-regional allocation of grants; investment policy; river basin planning; special area planning; and regional capacity planning. Intra-regional practices include the decentralised planning system and its attendant institutional structure, resource mobilisation and the preparation of regional five years and annual development programs.

The regional government development plans and strategies **tend to be based on more Nexus-like approaches.** At the regional level more cross sectoral planning, more dialogue on the plans between the different sectors take place and generally better efforts are made to prioritize resource (water, land) use.

The regional plan and strategy preparation passes through several steps and processes. It is developed through the involvement of sector Bureaus at the region and respective offices at the zone and Woredas.

3.10 Nexus at different levels of the Ethiopian administrative structure

The GoE administrative structure from the federal down to the grassroots level consists of five levels: Federal Government, Regional Administration, Zone Administration, Woreda Administration and Kebele Administration.

Nexus at Different Government Administrative Levels

Administrative Level	The extent to which Nexus like approach is applied in programme design and implementation
Federal Government	• At the federal level the sector ministries issue their sector related policies and strategies. The sector policies and strategies go along with the respective ministry's mandate. The policies are generally comprehensive for the respective sector but only partially apply a nexus approach. Among the three policies reviewed the **water policy** applied the nexus approach very well. The water policy addresses all sectors and advocates very much for the integrated and holistic approach. Compared with the environmental policy the water policy much better adopts the nexus approach. • Different SWGs are formed and functional at federal level. The SWGs are fora where dialogue between different actors takes place and optimized resource use efficiency is discussed. • The **SWGs** fora are **potential entry points** to take on board the nexus approach in programming
Regional Administration	• The regional governments have no mandate to prepare their policies. However, they have the mandate to prepare their region specific strategy to implement national policies.
Zone Administration	• A zone is a cluster of woredas. In terms of planning a zone does not perform major tasks. Its role is to facilitate the works of certain cluster of woredas including the dialogue between the government sector offices and NGOs.
Woreda Administration	• The woreda council is the main representative body at the local level, and its decisions directly affect the welfare of the local communities • Woreda councils through their sector offices are responsible to implement different programs/projects. Different activities in general relate to the same (limited) natural resources. Thus, woreda administrations plan in a more integrated way based on the availability of these limited resources (kind of nexus approach).
Kebele Administration	• Kebele is the lowest administrative structure. Kebeles are staffed by DAs and HEAs assigned by the woreda offices. The DAs and HEAs are in charge of organizing and coordinating all development activities in the kebeles supported by subject matter specialists from the woredas.
Community Watershed Team (CWT)	CWTs are formed as community groups at village level to plan and implement a **watershed based comprehensive development plan**. The CWT addresses all aspects of the community livelihood.


Photo 3: Discussions with Community Watershed Committees during the field visit

To a certain extent, an integrated planning which follows the Nexus ideas of optimised resource efficiency would **need national policies and strategies which follow this Nexus approach**. Lower administrative levels, namely regions, zones, woredas and kebeles are very much depending on decisions made at national level and on resource (funds and staff) allocation. Lower administrative levels can definitely not implement activities which completely deviate from national policies.

On the other hand, the **watershed based** community development plans which are established by CWTs often automatically follow a more integrated approach because water, energy and food security are all related to basic needs of the population (e.g. water for drinking, sanitation and irrigation, fuelwood for cooking etc.). Any competition for resource use at the implementation level, **forces to optimise the use of such resources**. Whether finally a Nexus-like approach is applied certainly depends on how such development plans from CWTs are “harmonised” with national policies / strategies in the specific cases.

4 Application of Nexus in the two visited projects

4.1 Livelihood Improvement through Sustainable Resource Management Program in N-Gondar (LI-SRMP)

4.1.1 The project topics

The LI-SRMP in general is based on an **integrated approach**. The specific activities are the result of a participatory planning process on watershed level based on an integrated water resources management approach[21]. The program is focusing on the improvement of agricultural activities (crop production, livestock and marketing) while taking into consideration environmental sustainability.

[21] IWRM is applied all over Ethiopia.

It includes soil and water conservation measures, increase of biomass production (area closure, cut and carry system for fodder, nurseries with improved varieties like crop, grass and tree seedlings etc.), income generation and diversification of income sources, credit schemes, promotion of socially and environmentally friendly tourism, land administration and allocation of land titles[22], etc.

Photo 4: soil and water conservation measures; planted elephant grass

Photo 5: (communal) "closed area" with beehives

The program also addresses re-afforestation (free distribution of tree seedlings) and simultaneous dissemination of improved cooking stoves (ICS) and to a very limited extent also provides credit for PV systems (solar home systems).

In addition, several water points including springs and hand dug wells have been developed. Compared to the program activities related to agriculture, those **activities related to water supply and energy are rather limited**. In one of the evaluation reports, this "deficit" is explicitly expressed: "*In some remote areas, support to the women groups through grinding mills was raised quite frequently. Apart from empowering women and hugely saving their time of travelling long distance to reach grinding mill (usually over 3 hours), experience shows that such schemes are cost effective and with good return for the owners…"*. In addition, during the conversation with CWT, problems like lack of light at home, lack of electric power to charge mobile phones and even the lack of clean water for midwifes in several places were raised as problems.

[22] Landholders with secured access and user rights are investing in a more sustainable and resource efficient way. In addition, conflicts concerning land/resource utilisation have been reduced.

Photo 6: Tourist huts operated by the community

Photo 7: nursery with different varieties of seedlings

Following the discussion with the Program Coordination Unit (PCU) members, the program has a **clear focus on food security and partly also water resource** development, although “more should be done also on energy” and “energy activities are not considered sufficiently”. Improved Cooking Stoves (ICS) and a few solar home systems are promoted by the program, however much more activities would be required to achieve an area-wide usage of ICS. In addition, **organic residues** which are used as fuel for stoves would be more useful to increase the content of organic matter of soils.

Photo 8: Improved cooking stove

Photo 9: Hand pump

Furthermore, energy/electricity access would allow for processing activities, e.g. milk processing, woodworks, agro-processing. Although activities in the energy field might often be related to high investment cost, such investments are often extremely profitable if the added value over the whole lifetime of an energy generation scheme, a transformer or other

infrastructure is considered[23]. In fact, energy is one of the sectors where the Government allocated high investment (e.g. the Grand dam and other new hydroelectric power infrastructure under construction). However, again the aspect of "social inclusion and equal access" is not (yet) well considered, because electricity export plays a more dominant role compared to rural electrification.

So far, no clear link with activities of other stakeholders and sectors in the zone was made. The example as presented in Figure 6 illustrates that **Nexus happens rather by chance** than in a planned and systematic way. In the case described in the figure all relevant topics, namely food security – water – energy, are ideally linked and resource efficiency is optimised. However, the different interventions of SRMP and of the Department of Water which led to the synergies were completely independent from each other and SRMP staff were not even aware of the fact that a biogas plant was installed in the specific case. In order "to make nexus happen" more often and more systematically, **closer cooperation** e.g. between SRMP and Department of Water but also between woreda and zonal level offices would be required.

Discussions with the zonal Department of Water and Energy have shown that energy activities in the zone are so far mainly focusing on biogas and improved stoves. For the implementation of **biogas plants**, the main preconditions are: at least 3 livestock, adequate water supply, contribution of 12 bags of cement and labour for the pit. Obviously **no common planning or link** is made so far between (zonal) Department of Water and the activities under the ADC program. Apart from activities on biogas plants, the Water Department is involved in promotion of improved cooking stoves. According to the interviewed expert "duplication with activities implemented by the Agricultural Department can happen…".

Inter-linkages with energy activities would not only require some kind of exchange or cooperation but also professional energy experts at **implementation level**. E.g. in one of the visited watersheds close to the National Park, the community has been connected to the national grid including even a grinding mill (connected to a separate transformer). Unfortunately, due to the lack of competence of the technician who did the installations, the transformer burned out so that the village now depends on a diesel mill with significantly higher operational cost. Even though an electric mill would save enormous cost for the community, no initiative exists to replace the broken transformer. The 10 % of the villagers who are connected to the grid mainly use electricity for lights and mobile charging. Not making optimum use of the available electricity is certainly a consequence of the **limited technical know how of the energy (or EEPCO) expert/s**. Cheaper agricultural processing can significantly contribute to improved livelihoods. It may be even more profitable for a farmer to sell a (cost-efficiently) processed product at a higher price (e.g. flour) than increasing the production of the raw product (in that case wheat).

[23] E.g. instead of using a diesel mill (low investment but very high operational cost due to the fuel consumption) a hydropower mill is definitely the more viable solution (high investment but almost no operational cost).

Access to 1 day old chicken on credit base (SRMP) → credit repayment and profit

Access to dairy cattle on credit base (SRMP) → credit repayment and profit

Support for installation of biogas plant from Bureau of Water (NO link to SRMP!)

Installation of private hand pump based on savings (water for biogas plant)

Use of biogas for cooking stove and light

Use of sludge from biogas plant as fertiliser for gardening

Figure 6: Nexus happening "by chance"

In another case, a similar problem came up when the community got access to the national grid: about 10 % of the households connected to the grid; although a borehole was equipped with a pump, the diesel generator which was expected to provide power for pumping was never operational because obviously no funds for buying fuel are available. **Supplying this pump with electric power from the grid** would by far be much more affordable. As a consequence of the lacking competence, **access to sufficient drinking water** is still a problem, although even a storage tank and a piped system had already been installed.

In the same village, improved cooking stoves had been promoted by SRMP. But so far only about 150 of 500 households use ICS ("because only limited number of stoves were provided", according to the information received). Looking for **synergies between ICS promotion activities** implemented by SRMP and those implemented by the zonal Water and Energy Office could contribute to increasing the coverage with ICS for the advantage of the majority of women in the area. The various advantages of ICS have been listed by women repeatedly: saving fuel wood, less smoke (enormous health benefit), less heat and time saving (several cooking plates can be used at a time). The disadvantage which was mentioned is the limited lifetime of about 3 years on an average.

Another example where Nexus could allow for a broader view is related to the activities in and around the Simien Mountain National Park. During the discussions with DAs working in a watershed in the buffer zone of the Park, the problem was raised that a youth group who intended to manage a "closed area" and to install beehives in this area were chased off by park scouts ("community is not allowed to give land from buffer zone to the youth for such activities"). Even though the woreda level administration (together with the park administration) in the meantime promised to clarify this issue and to "summon the scouts back" this event illustrates the **conflicting interests of park administration and farmers**, despite the fact that a "perfectly well integrated" approach would certainly allow for common benefits.

Photo 10: Lodges for the guards at the border of the Simien Mountain Park

Photo 11: Impressing landscape in the Park

So far, the program invested a lot to integrate people from the area into the activities and for possible income generation related to the park (training of cooks, scouts, guides; construction of community huts, park office etc.). In addition, rules have been defined on admissible activities in the core and buffer zone, e.g. the program refrains from credit

disbursement for cattle around the park. However, a more in-depth analysis seems to be required to define **activities which benefit both sides and to create awareness on both sides for the respective benefits** (e.g. area closure, bee hives, planting of specific tree species, collection of herbs, medical plants etc.). It is expected that farmers rather tend to protect a forest where they are allowed to install their beehives compared to a forest where they are not even allowed to enter. Farmers who live in the buffer zone are far from the camp sites where tourists show up and thus have no benefit at all from the park; on the contrary the Park is limiting their agricultural activities.

The LI-SRMP suggested developing so-called "**community protected areas**" as a new level of protection which is recognised also on regional level. Such areas of about 500 ha each, have been developed at two sites and are already attracting a certain number of tourists. These areas have been developed in close cooperation with the Department of Culture & Tourism, who identified and assessed potential tourist areas. After an exchange visit with a similar area in the South of Ethiopia, ideas were discussed in a workshop, the area was demarcated, free grazing was forbidden and now plans to construct community lodges, to train guides, cooks etc. are made. As a general approach, it seems very important to combine other SRMP activities with protection activities in order to ensure integration of all interests.

The **reduction of free grazing** was one of the crucial issues in the discussion with the Steering Committee (SC) at zonal level.

Photo 12: Massive soil degradation through deforestation and overgrazing

The SRMP through various activities contributes to this reduction like e.g. use of more productive animals (improved breeding), land certification (private land for "cut and carry"; grazing only on communal land…), area closure and advice to reduce the number of livestock. However, the **carrying capacity** as such has not been assessed so far. Meaning, although various activities are targeting a limitation of livestock, so far the different stakeholders have no idea on a crucial limit. Thus, no limit is set for the number of credits to be disbursed for buying improved cattle (only in the National Park area no credit for cattle). High number of livestock is (still) reflecting wealth, is considered as a "saving deposit" etc.

Given the fact that overgrazing is one of the crucial problems, a stronger focus might be required to identify solutions. Even ARARI in their research work did not consider assessing a carrying capacity. Amazingly, during the discussions, the general opinion was obviously that the area is still far from reaching this crucial limit.

Problems raised in Dabat woreda (the third visited woreda) are: budget shortage (aggravated by price escalation), the difficulty to get a critical mass of cooperative members from only 2 watersheds (various cooperatives: for dairy, for sheep breeding, for small scale irrigation, for afforestation, for bee-keeping etc.), lack of information to the watershed on the duration of support, high staff turnover and finally the problem of **rodents in terraces**. The latter is described as a serious but unsolved problem for which ARARI also has no solution. Provided ARARI would apply a real **action research approach** this problem would have to be addressed seriously, entailing a planning of follow-up. Also other communications gave the impression that the **link between SRMP and the ICARDA project is not very close**. The research does not directly address the needs of the SRMP (e.g. research focus solely on crop varieties instead of also developing improved varieties of fruit trees).

4.1.2 Project Coordination Unit PCU, steering committees and structural aspects

The **PCU team** consists of experts from different fields including crop development, NRM, livestock development, gender, land and protected area management, forestry, knowledge management and communication, capacity building and marketing & entrepreneurship. This interdisciplinary team guarantees the application of an integrated project approach. However, **specific water and energy experts are not represented in the team**. The water point development is under the responsibility of the NRM expert and the expert for land & protected area management. An agreement is made with the Zonal Department of Water Resources (including energy and irrigation) for the assessment of irrigation and water points. For this service, per diems (200 ETB/d/pers.) and transport cost are covered by the SRMP-LI. Any implementation work for water points is done under the supervision of SRMP, meaning the Program announces a bid, hires a contractor and supervises the contractor. The Zonal Water Department is only “assisting on-demand”, mainly on assessment and supervision of water works. The advantage of cooperating with **water experts** at zonal level - as expressed by PCU - is their experience in establishing water user groups, training them, supporting the drafting of by-laws and clear rules for **operation and maintenance** of the infrastructure. The latter is crucial with regard to water and energy related activities.

The official mandate of the **Department of Water at zonal level**[24] includes: drinking water supply (springs, hand-dug wells, shallow wells, and deep-hole wells), irrigation and drainage, mines resources development, energy expansion and water resources management. According to information received from this Department, mainly engineering services are provided to the ADC program. For the “regular” government supported WASH activities, water, health, education and finance Bureau work closely together for implementation “on

[24] Official name is „water resources development department“, although it also includes energy experts.

the ground". Normally, the WASH approach is implemented by the Woreda WASH Team (WWT) which consists of three Community Facilitators teams (CFT). According to the information received, the cooperation between water and health sector works very well, whereas the education aspect is mainly considered for water supply schemes in schools. One of the HEAs explained that **hygiene and sanitation** are the most difficult problems to be tackled, number and quality of latrines are by far not sufficient. Often latrines are not properly constructed and degraded by rainfall. According to his information slightly more than 50 % of the population in the area have access to improved water points, und the usage of latrines is also still limited (estimated figure 50-70 %). A **more systematic cooperation** with the zonal Department for Water and Energy (instead of paying them here and there on a "per diem basis"), may lead to more efficient work. This does not automatically entail additional fund requirements but rather increased efficiency by making use of available know-how and by useful combination with other activities in the WASH sector.

Still, the **allocation of funds** is certainly an important issue if not a barrier with regard to integration of other sectors. The LI-SRMP coordinator stressed that the program has limited financial resources available. Despite this, it very much **diversified its activities** to include the various sectors. Several other departments (water, gender etc.) wanted to become member of the steering committee. Apart from the fact that the limited resources did not allow to support those interested departments, the program coordinator considers a bigger steering committee to be **difficult to manage** (difficulty to meet with all etc.). In his perception, the program should continue to focus on specific crucial problems instead of being too broad. However, cooperation with the Health Department he considers very important and more funds should be assigned to related activities in the future. With regard to the energy sector, his fear is that the development of biogas plants might address mainly wealthier people who can afford cattle[25]. If a broadening of activities, especially with regard to energy is planned, affordable technologies should be offered which clearly address poorer people (e.g. stoves made of local material / clay). He stressed the following two aspects:

1. Define priorities subject to the beneficiaries (**address the poor**!)
2. Coordinate activities and allocate funds where others are not yet active to **avoid duplication** of work (e.g. many NGOs work on HIV, so better focus on family planning)

The **Steering Committee (SC) at zonal level** consists of representatives of DoA, PCU (secretariat), DoEnvironmental Protection & Land Administration, Agricultural Research Centre Gondar ("ARARI branch"), DoCooperatives, DoFED, Department of Culture and Tourism. The composition of the Zonal Steering Committee also reflects the integrated approach linking **agricultural activities** with **soil and water conservation** (environmental)

[25] Biogas can certainly be an appropriate solution depending on the specific conditions of a site. They can even be a precious contribution to a "energy-solution-mix" which leads to an overall reduced pressure on local firewood, leading to a broader indirect benefit.

but also to **income generating activities**[26]. However, in this committee, similar to the PCU, water and energy experts are not represented either.

According to the ARARI representative in the Zonal SC of the SRMP, the research institute strives for a close **cooperation** between the LI-SRMP and the ICARDA project e.g. by developing high yielding, frost and drought resistant crops and in general by doing action research. In his opinion the so far neglected areas are: community ponds (surface water harvesting), community forest promotion and strategies for scaling-up. In general, he feels a **need for improved cooperation in the triangle research-extension-agriculture**. Sometimes, efforts are duplicated or even destroyed due to lack of cooperation. His proposal for improvement is to **strengthen and institutionalise the zonal steering platform** ("every actor must be responsible and accountable for his activities! Cooperation should not only be on paper, an enforcement mechanism is required").

The **Regional SC** of the LI-SRMP consists of BoFED, BoA, BoEnvironmental Protection and Land Administration, BoCulture, Tourism and Park Development, ARARI (ICARDA not represented), Ethiopian Wildlife Conservation Authority (EWCA) and ADC. The Regional Steering Committee decides on the composition of the PCU.

In the third visited woreda (Dabat), the situation seems to be quite different and in a way exemplary. The representatives stressed that **their cooperation between Department of Agriculture and water and energy experts is very good**, that they coordinate all activities and in general "funds are disbursed according to the activities, strictly following the project document", meaning if a water point has to be developed the water expert is in charge and funds are assigned accordingly. Comparably, production and promotion of ICS is under the responsibility of the woreda. Although the water and energy experts are not member of the woreda steering committee the reason for closer cooperation might be the repartition of funds[27]. In general, the Dabat woreda staff seem to be very committed and active. They reported of a number of exchange visits undertaken by farmers, experts etc. within and out of Gondar zone. This example of Dabat woreda illustrates that much depends on the local team and individuals who are responsible at woreda and kebele level and their way of organising the **work in a more cross-sectoral way or rather in an isolated way**.

4.1.3 Planning and budgeting process

It is understood that for program planning, a general summary of the program was provided to the woredas who then gave explanations to the watershed committees so that the latter could develop proposals based on their needs and the support possibilities under the current prodoc. The project document as such was based on a needs assessment made by a consultant. The proposals as elaborated by the watershed committees were submitted to the woreda level and were then selected according to specific criteria. In large part, this approach is considered to be participatory, with the reservation that the watershed

[26] Main income generating activities in the Program are: access to credits, breed improvement, queen raising technologies / beekeeping, poultry, Jack Ass (mule), diversification of cultivated vegetable, crop and fruits…

[27] In another woreda as described in a preceding paragraph, only per diem and transport was paid to the water expert in case a specific work had to be done by him in the field.

committees will not propose activities which are not part of the project document even though these might be their most urgent needs. Mostly, a certain prioritisation of interventions from the development partner/s is unavoidable but on the other hand, opening up the decision making process and providing more freedom of choice may give room for more synergies at implementation level.

The funds from ADC are directly channelled to the WOFED at woreda level for direct support of the communities whereas another part of the funds is used to finance the various steering committees at regional, zonal and woreda level and the PCU.

4.1.4 Capacity building at implementation level

Looking at the complexity of the tasks for a professional, sustainable land management the question is justified, who finally at the implementation level works together with the communities and how did this work run. The most important **"implementing agents"** in the field are the development agents (DA) and Health Extension Agents (HEA). The program coordinator considers the number of HEAs (2 in each kebele) and of DAs to be sufficient in number. However, the quality of their work depends on their individual efficiency and know-how. In his opinion it also has to be acknowledged that behavioural changes take time. The general approach of "campaigning" of individual problems is considered less sustainable compared to a permanent integration of important topics into a program.

Photo 13: DAs at one of the visited kebeles

Photo 14: soil and water conservation in the front, erosion at the opposite slope

The **system of employment of DAs and HEAs** is very particular. The required qualification is a university degree although the payment is not very attractive. After having some professional experience e.g. a DA can be promoted to a "higher position" which means a position which is closer to a city and not too remote. This leads to the situation that remote villages which are often anyway disadvantaged because of limited access to various infrastructures get rather "greenhorn DAs" although they might be in (urgent) need of a more experienced person. The general proposal to provide capacity building to DAs and HEAs has to be considered against this background.

When discussing the **"Nexus competence" of the implementing agents**, it is important to get an idea about the current capacity building system.

As explained by a woreda representative, in general, the different stakeholders at grass-root level (kebele administrator, DAs, HEAs, education expert etc.) are meeting once a year for training (at woreda level). In the specific case, the woreda consists of 30 kebeles, meaning that at least 180 (= 6 x 30) persons come together to receive **training on watershed management**. Some training sessions are separate for DAs, HEAs etc. and some are held with the whole crowd. Taking into account that the whole training session takes 3 to 5 days, the effectiveness of such a capacity building measure may be challenged and most probably not all participants will benefit to a great extent. In addition to these activities at woreda level, the PCU trains those trainers who are teaching then on woreda level. Reviewing the **content of the different training sessions** and harmonise it with the **Nexus approach** would be a possibility to integrate ideas of resource efficiency etc.

On the other hand, so far, no water or energy experts are working at kebele level. Only at woreda level, normally, one energy and one water expert are available. E.g. with regard to ICS, the DA is only responsible for the promotion activities on ICS. The HEA is responsible to give a training on how to produce the stoves, how to use it and finally also to do promotion. Depending on the subject it would certainly be useful to have a closer cooperation between the DAs and HEAs on the one hand and the water and energy experts (at woreda level) on the other hand.

4.2 Reducing Land Degradation and Farmers' Vulnerability to Climate Change (ICARDA project)

4.2.1 The project topic

The food security, livelihood and survival of rainfed farmers in the Amhara region is threatened by land degradation and climate change impacts. 10% of the Amhara region has annual soil losses of > 200 t/ha and almost 30 % has losses of 50-200 t/ha. Rainfed farmers of the Amhara region are tied up with in the strong cycle of "land resources degradation, poverty, poor productivity, and food insecurity". The rainfed crop-livestock production system is characterized by traditional low-input production practices, inefficient rainwater management, use of low yielding crop varieties and livestock breeds, increasing disease and pest prevalence and poor marketing and processing infrastructures. Strengthening resilience to impacts of climate variability and change related shocks and halting land degradation is priority in the project area. To this effect the ICARDA project (2013-2016) is trying to "***develop, adapt, evaluate, and demonstrate innovative, integrated, and sustainable improved land, water, crop, and livestock management technologies that would improve farmers' resilience capacity to the impacts of climate change/variability and land degradation".*** It is the second project of this type. The first one, called "Unlocking the Potential of Rainfed Agriculture in Ethiopia for Improved Livelihoods UNPRA" (2009-2012) applied a similar approach. For the research and project activities, gauging stations, automatic weather station, automatic rain gauges, water harvesting ponds etc. have already

been installed during this first phase. In the project area a “treated” (with SWC) and an “untreated” (without SWC) catchment area are surveyed.

Photo 15: Hydrological station to measure runoff and sediment transport

Photo 16: Rainfall station

The specific objectives of the current project are:

1. To reduce vulnerability and increase the **resilience capacity** of rainfed farmers to climate change and land degradation;
2. To understand the strategies adopted by farmers in their efforts to manage climate change impacts and **disseminate best practices**;
3. To ensure rainfed farmers **food security, livelihood and economic well-being** in the face of climate change;
4. To **capacitate farmers** to sustainably manage their farming system resources (land, soil, water, crop and livestock);
5. To identify and recommend **policies and strategies** to facilitate more climate change resilient production systems.

Looking at the objectives, outcomes and activities as described in the project document, they are understood as a mixture of research, dissemination of results and development, thus suggesting very ambitious and complex targets, not even taking into account that many activities are bound at agricultural seasons. Among the main activities are:

research	• study the possibilities and impact of water harvesting and supplementary irrigation, soil drainage, use of fertiliser etc. on productivity • assess farmers perception on climate change and their adaptation strategies • study different options of livestock improvement (e.g. “integrated goat improvement”) • do watershed modeling (runoff soil and nutrients) and bio-economic system modeling (system dynamics, productivity and constraints);

	purpose is to model system dynamics and to calibrate the model so that it can be transferred from 20-30 ha to >= 6,000 ha • measure and understand the effectiveness of different agronomic practices (conservation tillage, stone bunds, intercropping, etc.) on surface runoff, erosion, soil humidity etc.; analyse integrated farm level SLM technologies (technologies that enhance the organic matter content of the soil, reduce erosion, enhance soil water holding capacity, restore land productivity) with regard to their compatibility and affordability to poor farmers
dissemination of results	• disseminate and exchange research results and do capacity building during field days, workshops, on-the-job training (for at least 2000 farmers); at least 50 extension staff & 15 scientists will be trained etc. • give technical and policy recommendations for best climate change adaptation strategies and SLM practices • develop the selected watershed into a research, learning, demonstration and development benchmark site
development	• productivity of the rainfed systems in the target areas is increased by at least 100% through using adapted crop and livestock management practices • Economic performance of the farmers that apply water harvesting and supplemental irrigation (off season vegetable production) is doubled • increase farmers' adaptation capacity (to increased drought etc.) through application of different techniques related to crop and livestock • Implement participatory evaluation, demonstration, and dissemination of drought and high temperature tolerant crop varieties and management practices • introducing energy efficient stoves and alternative energy sources[28] • Introduce multipurpose tree species and biofuel plants which can rehabilitate degraded steep hill-sides, serve as feed and food sources, serve as biofuel energy sources and combat soil erosion

The enormous **variety and complexity of objectives and activities** may also be the result of a multi-donor financing. The project as such has to live up to a number of expectations and be in coherence with the priorities of different financing organisations.

[28] Only mentioned in text but not in logframe

4.2.2 Nexus in the ICARDA project

The ICARDA project design is a conventional research oriented project to come up with appropriate technology solutions and policy recommendations, mainly related to food security. The project design is comprehensive to tackle problems related to drought and capacity issues. It puts more emphasis on issues related to **environmental rehabilitation** which has direct impact on improving **food security and water security**. In the project document there are 14 activities organized under seven outputs and none of these activities have direct relation with water security and energy security. Water related project activities (activity 4.1) give more emphasis to irrigation (related to food security) but not as water for WASH, water for livestock etc.. Due to the limited natural resources potential in the project area, tackling drinking water related issues is more challenging and requires considerable resource and technical inputs (see also Photo 19). In that respect, an integrated approach which looks at **different water uses** may help to identify more cost-efficient and sustainable solutions (combination with rainwater harvesting, groundwater recharge etc.). Energy is only mentioned under activity 3.3 (introduction of biofuel plants to rehabilitate degraded steep hills; energy as side use?). A few activities consider **natural resource efficiency**, like e.g. re-use of manure and crop residues as fertilizer; integrated plant nutrient technology, multipurpose trees species for simultaneous use for biofuel, feed and against soil erosion. However, resource efficiency is not applied in a systematic way.

According to the project document, the activities focus among others on **bio-economic analysis and modelling**, etc. Unfortunately, no detailed information was available on this type of “modelling” and in how far the modelling takes into account **natural resource efficiency (water, energy etc.) of different cultivation methods, husbandry etc.** From a Nexus point of view, this would be an extremely interesting aspect. Looking at the main research subjects which include soil and water conservation, integrated nutrient and moisture management (quantitative assessment; losses of water and soil), combination of compost and chemical fertilizer, improvement of soil properties, water harvesting and trickle irrigation etc. the expected results will certainly be extremely valuable for a more in-depth understanding of an appropriate Nexus approach. Such type of research could provide **evidence on which (combination of) farm management methods really optimise resource efficiency**. The fact that the project tries to link agricultural productivity with environmental protection makes it even more interesting with regard to the Nexus approach. However, **resource efficiency** so far seems to be **not in the focus of the research**.

Although, the project proposal mentions the interdisciplinary team, the group of researchers and collaborating institutions **mainly consists of agriculture-related specialists** (no social science, no gender specialist, no engineering, only one economist). E.g. to fully analyse farmers’ perception on climate change and their adaptation strategies and to understand the complexity of risk management social science experts would be important to avoid a purely technocratic analysis.

Furthermore, the project design document **does not give adequate authority/involvement to key agricultural sector offices** (region, zone and Woreda offices of agriculture). Collaborative responsibility is accorded for these institutions. Although these are very crucial offices which are responsible for **promotion and application** of the project’s findings, the

design document did not pay much attention to them. By neglecting them, the research project misses the opportunity to contribute to an ongoing information exchange and dialogue during implementation. A fruitful dialogue between research and the relevant sector offices is an important precondition to ensure practical relevance of the results. In that sense, the nexus approach has not been well embraced in the project design phase. **Synergies between research and practical application** would need this dialogue. Currently soil and water conservation measures in the project area are implemented through the "national SLMP" flagship program[29] and the ICARDA project in reality focuses mainly on research. However, according to the information received, the research project intends to "generate methods", and at a certain point to do a "pre-scaling up" of the most promising methods and then finally "to deliver them to other projects". To do this successfully would even more require a close cooperation with implementing bodies at woreda and kebele level and a **more serious action research approach**. According to the project team, "the DAs are too busy to do action research because they have their own activities; therefore pre-scaling up has to be done by research staff (in cooperation with DAs). However a real participatory approach is not possible in the current setting". So, the envisaged strategy is to prepare "technology packages" and then convince all levels on their usefulness. Only demonstrations and the "scaling out" will then allow to judge if the respective technology fits to all types of farmers.

Photo 17: Test field with Beles cactus

Photo 18: Discussions with the researchers in the field

From the discussions, the conclusion is drawn that the **link between the ICARDA project and LI-SRMP is obviously not very good**. As mentioned above, complaints were expressed by PCU members of SRMP about the fact that the research project (also in the past) did not pay adequate attention to the most pressing needs of the farmers. Most research works were done on cereals, none on fruit trees and none on multipurpose trees for re-afforestation ("we had to get such seedlings from far"). The same seems to be valid for the problem of rodents in terraces which was not addressed by the researchers. **Dialogue for synergies** is also crucial for the application of a Nexus approach, meaning that a stronger action research based on farmers' needs would be required. Otherwise,

[29] SLMP applies the concept "stove for work", meaning that people are paid by SLMP to build soil and water conservation structures on communal land; whereas for structures built on private land, people receive ICS as compensation.

inappropriate methods may be developed which neither solve farmers' problems nor contribute to resource efficiency (because of limited application).

The **problem of linking research and extension work and disseminate useful technologies** was discussed also with several other interview partners. An example was given illustrating that for a new teff variety – despite aggressive promotion work – it took about 8 years to be disseminated. Theoretically, an organisation called ARDPLAC (Agricultural Rural Development Partners' Linkage Advisory Councils) exists whose mandate is to relate research and extension work at all administrative levels. It is intended to link GOs, NGOs, research and private sector, but due to lack of finance it is not really functional.

Photo 19: Abandoned water point in the treated[30] catchment area

Photo 20: surface water harvesting for irrigation

Livestock management technologies (improved feed, nutrition, animal health, and value addition) as mentioned in the project document are considered as a means to improve farmers' resilience to climate change by generating income and even through provision of a safety net, meaning livestock as "live stock". The discussion with the researchers showed that the implication of this socio-economic importance of livestock for overgrazing, soil degradation, erosion etc. is not seriously analysed. In a more holistic approach, this link between free grazing livestock and soil loss has to be seriously analysed to better understand the importance of livestock (traditional value, means of saving etc.) and to identify alternatives (e.g. other saving methods, "quality instead of quantity": significantly reduced number of livestock based on cut and carry system etc.).

4.2.3 Recent adaptations in the project approach

During the field work the mission has contacted ICARDA project stakeholders including the project coordinator, Gondar Research Institute staff, Woreda Office of Agriculture, Woreda Office of Water Resource, DAs and farmers. From its field observation and discussion with these stakeholders, the mission noted positive steps are being taken to make the project

[30] The research project analysis an untreated and a treated catchment area in parallel, meaning one without and one with soil and water conservation activities

more comprehensive which will ensure to address the nexus thematic issues. Some of the encouraging steps being taken by the ICARDA project are:

1. The project is in the process to establish a **steering committee** where the progress of the project will be discussed, outstanding implementation issues can be resolved and where inter-departmental support for the project can be secured.
2. The project has established **close working relation with Woreda Water Resource Development Office** (WWRDO) which is also mandated for the implementation / promotion of energy related activities. The project in collaboration with the WWRDO is promoting energy efficient stoves through training of selected women for stove production at community level.
3. The project has also **close working relation with the Woreda Office of Agriculture (WOA)** to select appropriate SLM technologies and raise tree seedlings to be planted in protected project watershed areas.

It is recommended that ICARDA in consultation with ADC formalizes these positive arrangements with the relevant stakeholders.

4.3 Summary of observations

It has to be stressed that **none** of the programs / projects was **planned on the basis of a Nexus approach** as this was **not a requirement** and/or a policy principle of ADC at that time. Consequently, for most of the interview partners even the word and the concept behind were more or less new. Therefore, the points as listed in the following should not be understood as a kind of evaluation or even criticism but rather as an encouragement to think about possible advantages and added-values of realigning the projects in a more Nexus-like direction. Where can the project make a difference? What would be the added value? What would be needed?

Figure 7 shows a number of topics in the three resource-fields. Black topics are covered by the program/project and white ones not. These clusters of topics are certainly not yet complete, but could be used as a start to identify potential synergies.

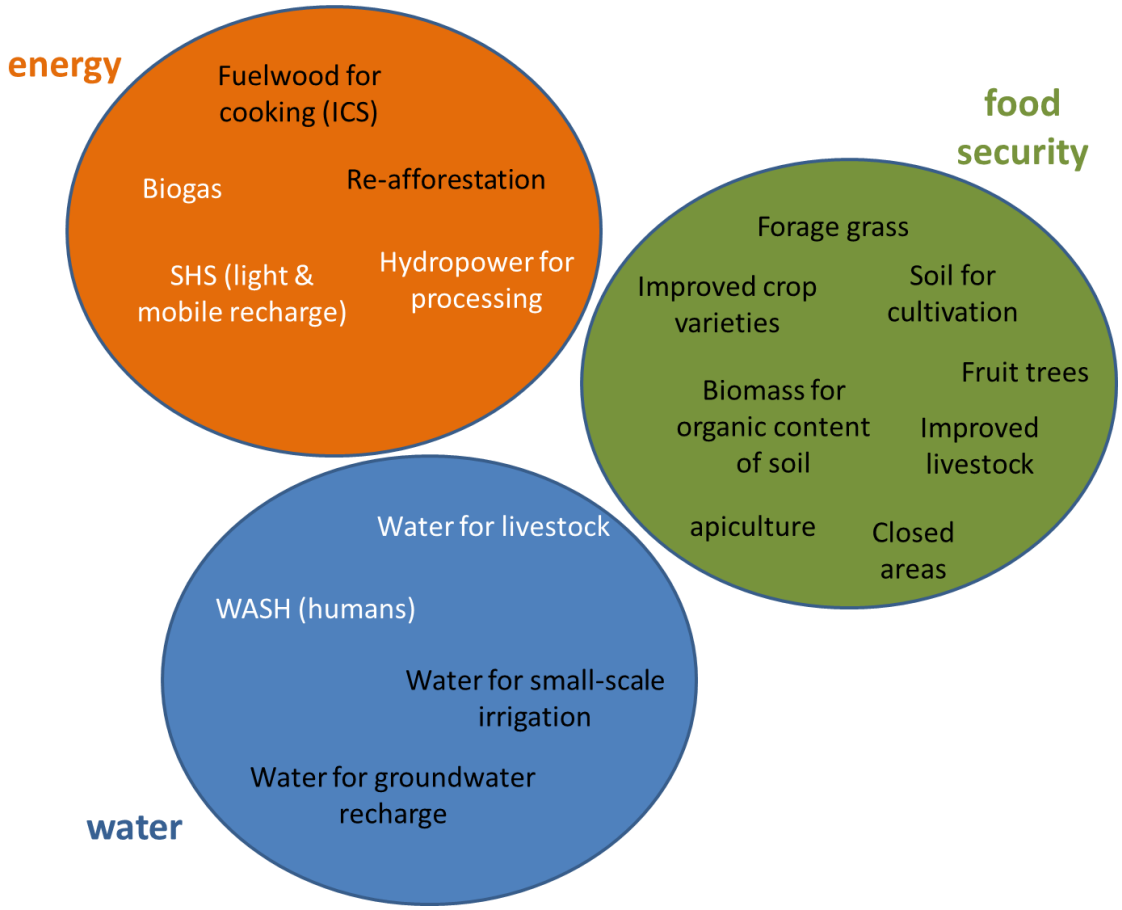


Figure 7: Relevant Nexus topics in the visited projects

The findings from SRMP and the ICARDA project can be summarised as follows:

Integrated approach and relevant topics

- Both programs adopt nexus-like **integrated approaches** (based on the application of the "community-based participatory watershed development guideline")
- strong **focus is put on food security and only partly on water and energy** aspects (e.g. development of water points, promotion of improved cooking stoves, promotion of reforestation for fuelwood use). Synergies could be achieved by intensifying the cooperation with the water and energy experts at zonal and woreda level (exemplary case: combination of improved cattle and use of biogas)
- **Nexus rather happens by chance** than in an intended way (see example in Figure 6)
- Relatively weak implementation of **water supply infrastructure**: technical implementation; protection zone too small, no sustainable O&M system, very low or even no (financial) contribution for water supply; hygiene and sanitation campaigns not always accompanying water infrastructure
- In practise, the protection area around a water point is in the range of 5 m x 5 m, although according to the guideline a **protection zone** of 30 m in all directions should

be kept. In addition, one of the standard “packages” implemented by the HEA is related to **chlorination of water points**. Obviously, no link is made on the health impact of chlorinated water and on how to avoid such a treatment. Looking at the SRMP activities, the establishment of a “closed area” around the spring could be a useful approach to create awareness for the protection of a catchment area of a spring or well. In general, a close **link between soil and water conservation measures and the availability of drinking water and water quality** should be made (awareness raising → benefit on drinking water supply).

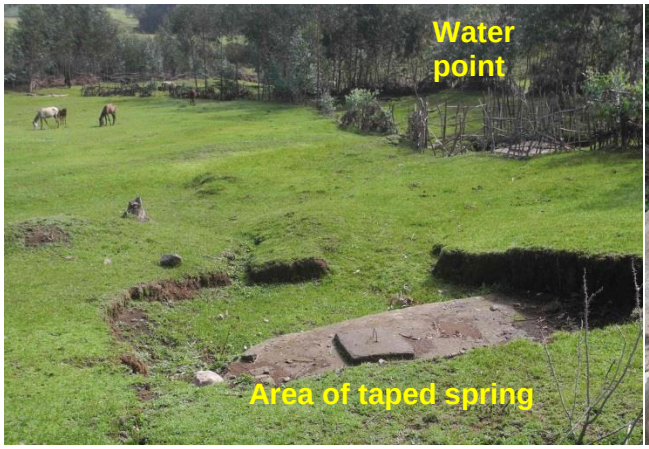


Photo 21: Very small protection zone around the water point (background), no protection around the taped spring (foreground); whole area used for grazing with problem of contamination

Photo 22: Poorly implemented water point

- Strong inter-linkages also exist between **education, health, family planning and poverty**. Many prejudices against family planning exist and have to be better understood, analysed more in detail and in their inter-relation with other aspects in order to make the overall approach more efficient.
- Another example for the importance of inter-linkages is the **selection of tree species** for reforestation (link to beekeeping, water balance and groundwater recharge etc.). The fact that eucalyptus is still widely promoted shows that its enormous water consumption and negative effect on the soil are not taken serious. The explanation given is the fast growing, but still a good balance has to be promoted between short term economic benefit (e.g. of fast growing eucalyptus) and ecological added value resulting in mid or long term ecological benefit (e.g. “graduated subsidies”, e.g. for slow growing trees); combine short term profit and long term sustainability
- Obviously, a good **profit margin** can easily be achieved based on any type of **animal husbandry** (poultry, dairy cattle, improved goats etc.). However, so far the **carrying capacity** of a specific area was not yet taken into account. Even though improved cows, goat and sheep may allow reducing the overall number, this is not made an explicit goal of the project. On the other hand, beneficiaries in the discussions referred much less to farming activities (fruit trees, improved crops varieties etc.). One reason might be that these are less attractive and profitable. **Adding value to crops** (including vegetable, fruits etc.) by means of any type of processing requires energy

which is mostly not available. Low-cost hydropower use for agro-processing (direct drive of mills, hullers etc.) may be an interesting option. In that respect, **energy might be a key aspect for "non-animal income generation"**. Looking at this wider perspective is definitely an advantage of the nexus approach and could be an interesting entry point for the current research work done by ICARDA / ARARI. Many nexus publications start from the **energy and water efficiency** of animal and crop production which is even more relevant in Ethiopia with its massive problems of over-grazing.

- The activities in the Simien Mountain National Park might need stronger linkage with the integrated water resource management around the park. Instead of keeping the population as far as possible out of the park (including resettlement of a village in the centre of the park), **cultivation methods should be developed and promoted which allow for win-win-situations**. Even the ICARDA project could provide input in this regard: which cultivation methods are possible? How can people benefit from the forest without any environmental impact, beekeeping, herbage collection etc. even in the park?
- The **ICARDA project** seems to focus on **separate analysis of specific subjects** rather than research on inter-linkages and inter-sectoral resource efficiency. E.g. cross breeding of goats to improve their quality could be linked to a total reduction in number, meaning the research project could provide evidence on how many improved goats are required (compared to "normal" goats) to create a specific income. The additional problem of "goats for status, social insurance and prestige" could be addressed by an interdisciplinary approach in research work which strongly integrates also social sciences or other relevant fields.

Project planning and management

- **Indicators in the logframe** are not targeting at resource efficiencies; consequently the project work is focusing on different, more "sectoral results".
- **steering committees** of projects do not (yet) fully reflect required nexus-expertise (water / energy experts on zonal and woreda level are only partly involved)
- Wide **geographic area** of intervention and **limited funds** do not always allow to achieve synergies (some get access to energy saving stoves others to tree-seedlings…); closer cooperation with **other projects** might lead to more synergies (e.g. cattle - biogas), provided the specific conditions are convenient.[31]
- According to an evaluation report, soil and water conservation activities of SRMP were overachieved due to **special attention of the Government** to this subject, showing that Government support is crucial especially if scaling-up is intended. On the other hand, **"food security" did only slightly improve** (less than 10 % increase) despite the successes in many fields. To analyse the reasons, probably a more integrated

[31] There is a strong need for joint planning among different actors to address the economic and social problems of the community in an efficient manner with limited funds. In the case of biogas the cooperation between agriculture bureau and water/energy bureau is very instrumental to deal with the issue of carrying capacity and promoting biogas in an environmentally sound way.

approach taking into account inter-linkages would be helpful. A **better understanding of "food security" is crucial** for project success; meaning the fact that this figure only slightly increased should be much more alarming.

- One option for achieving a more integrated approach (as brought forward by PCU staff) is the **strengthening of the GO / NGO Forum at zonal level** which is organised by and under the responsibility of DoFED. Currently, the forum is relatively weak (only meeting once in 3 months) and not all government organisations are participating. However, it could become a useful forum for exchange of experience and promotion of the nexus approach.
- In general, some attention is paid to improvements in **processing, distribution and retailing** of (agricultural) products; however, remoteness of the area, rather limited production surplus etc. are still limiting factors. Improved access to energy and to transport logistics, through synergies with other projects and activities may ease such limitations.

4.4 Short and mid-term recommendations for the two programs / projects

The recommendations given below are limited to the time remaining for the ADC supported ongoing projects.

a) Organize **short workshop** for ADC supported project staff and key stakeholders on **Nexus approach** (what exactly does it mean, concrete examples etc.)

b) Revise **Steering Committee** members to include all relevant sectors in order to create more inclusive working environment where different actors can make positive dialogue to improve synergies of different interventions

c) Encourage **joint planning and collaboration** at grass root level (DAs, HEAs)

d) Design and include in the projects clear **phase out plans** to ensure the sustainability of assets, knowledge and experiences gained from the ongoing projects

In addition, the following aspects could be considered on the mid or long term perspective for future program / project planning:

e) Consider the option to really **combine the SRMP and the ICARDA** project in a way that they operate in the same area, SRMP is responsible for development objectives, ICARDA for research, whereas dissemination of results is done under shared responsibility. This would allow for much more **engagement with each other and mutual learning**. The combination would allow the ICARDA project to really focus on its strengths in research and SRMP to bring in relevant research topics.

f) "Applying Nexus" should start with a **check for cross-sectoral synergies** at the beginning, in order to decide which concerned sector specialists with their specific in-depth know-how have to be **brought together to develop appropriate solutions**. Cooperation of the concerned sector specialists is a crucial precondition because their specialised knowledge is the basis for fruitful cross-sectoral cooperation.

g) Since ADA is often supporting programs/projects as a co-financier, it is of crucial importance not to overload projects with expectations from different financing organisations. If understood as a roundly accepted approach, the **Nexus principles** could help to **harmonise the respective program/project logframe** and to bring it to a realistic and feasible dimension. As a consequence the project implementing agencies would follow a common harmonised logframe (ideally in line with Nexus ideas) instead of "running after the hobby-horse" of the various funding agencies.

The Project Steering Committee/s are established among others to take also a more long term perspective as reflected in points e) to f). Strengthening the SCs by including all relevant actors can help to address these challenges.

5 Drivers, barriers and entry points for a stronger Nexus-orientation in Ethiopia

5.1 General Key Findings

- Government policies, strategies, flagship programs promote **integrated approaches** for planning and implementation of development efforts.
- **Implementation arrangements** of ADC supported programs/projects need to be revisited in terms of **including all key actors** in the planning and implementation of the projects. Nexus does not necessarily mean that ALL water-food-energy related problems have to be solved by one program/project. The intrinsic idea of Nexus is to identify synergies in resource use, be it **in or between projects**.
- ADC projects have multi-sector components (agriculture, water, energy, etc.). For effective projects planning, implementation and management **cross sector coordination** is necessary. However, the projects resources are limited. As a result, some major key stakeholders (water, energy and health) are excluded from the steering committee (SRMP-NG). This has negatively affected the required dialogue between the relevant stakeholders for effective planning, implementing and management of the projects. Competition for funds is obviously a driving force behind the lack of coordination. Consequently, it is important that at the planning stage the project holder and the donor ensure the right composition of the project SC and that the required budget is allocated.

5.2 Drivers and barriers on policy level

5.2.1 Main drivers

- Most of the interview partners at the various ministries and other institutions visited in Addis are not familiar with the Nexus approach as such but know other different integrated approaches. Once the Nexus-approach was explained more in detail including the necessity of inter-sectoral cooperation and common planning as one of its specific

characteristics, a **broad interest was expressed by most of the interview partner**. The cooperation between different ministries is so far considered to be very limited which has significant impact on project implementation. One interview partner described the cooperation between ministries by calling it “a nightmare”, others were more optimistic and e.g. the representative of the One WASH explained in detailed how currently a cooperation between MoWIE, Ministry of Health, Ministry of Education. MoFED and CSOs is being established through a MoU and a “Common Wash Implementation Framework”.

- As elaborated in the preceding paragraphs, most of the **government policies and strategies clearly favour integrated approaches**, like e.g. it is reflected in the River Basin Master Plans which are in fact based on a multi-stakeholder and multi-sectoral approach and the principles of IWRM.

Photo 23: Limited land forces farmers to continue deforestation and to use very steep slopes, prone to erosion

Photo 24: Irrigation allows to significantly increase productivity

- The establishment of various formal and informal **Sector Working Groups** based on the Paris declaration on aid effectiveness laid a strong foundation where different sectors and the Development Partners can meet and make dialogue to promote joint development efforts which favours integrated, harmonized and aligned programmes. Figure 8 gives a rough overview on the different SWGs and the participating parties. ADC’s strong engagement with the SWGs helps to push the nexus approach forward. The existence of SWGs is a clear indication that integrated approaches are applied, although often limited to one or only few sectors e.g. RED&FS (agricultural sector), “one WASH” (water, health and education sector), the (informal) “Energy Support Partner Group Meeting” and the (informal) Climate Change Working Group. The main purposes for establishing SWC are: alignment and harmonisation with government policies, accountability and government ownership. In this context, it is considered as an advantage that water and energy are already under one ministry.

- The joint planning and implementation of the government flagship programmes (PSNP, SLMP, AGP and OWNP) provide strong practical experience for the implementation of Nexus approach.
- An important driver to be considered is the fact that cooperation between ministries holds **high potential for synergies**. Improved exchange of data and information alone may already facilitate planning processes. E.g. the data bases available at MoWIE in the River Basin Master Plans which provide information on available water resources (rainfall, runoff, groundwater levels, water balance simulations etc.) would be of high avail for SLM planning done under the MoA.

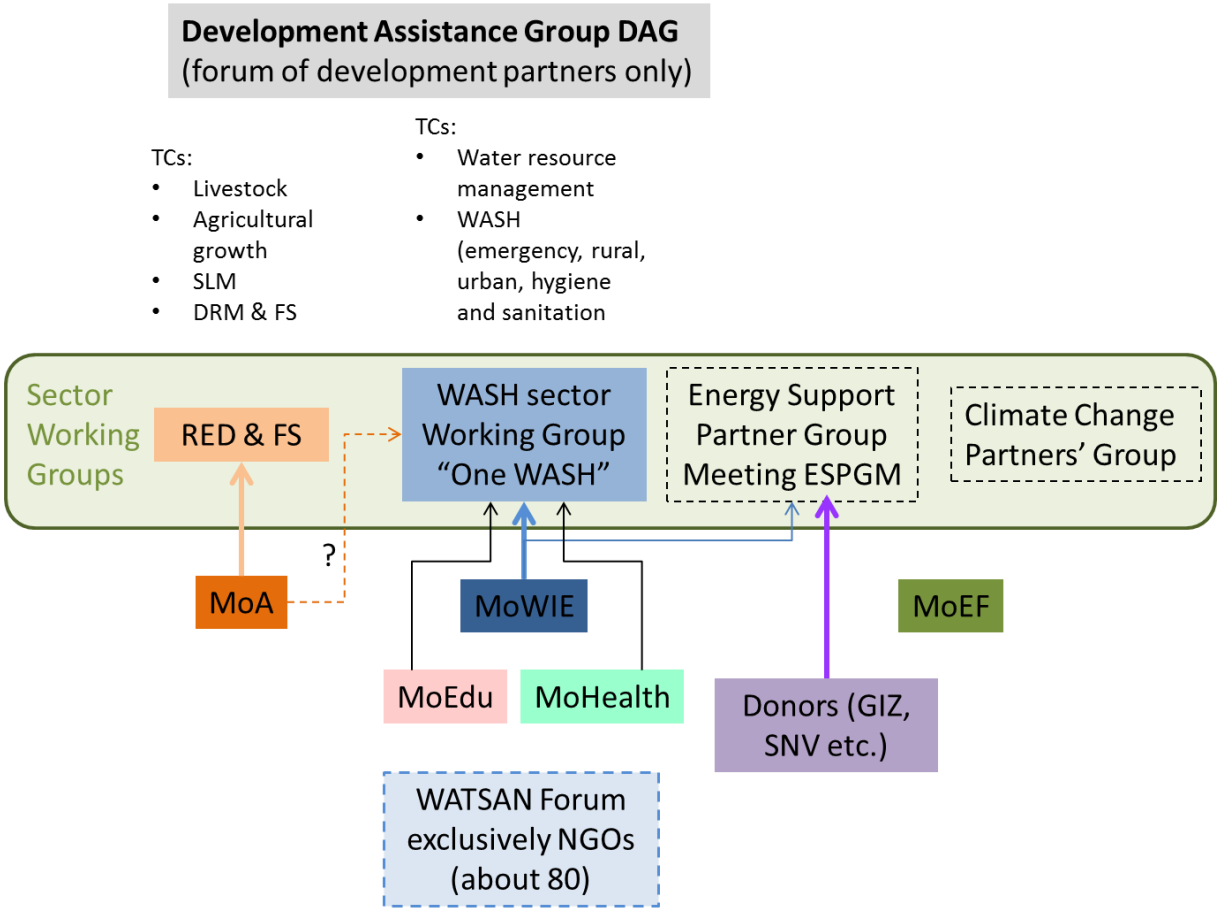


Figure 8: DAG, SWGs and participation of ministries (incomplete)

5.2.2 Main barriers

- One important barrier which hinders cooperation is obviously the **fear that by involving other ministries the available funds will be divided by more institutions** and thus less would remain for the own institution. This fear was expressed also with regard to integrating more partners in steering committees. In addition, integration and coordination is sometimes complicated by the **presence of too many actors**, slowing the process and losing focus. Lack of trust between agencies may have a history of poor relations leading

them to see each other as threats, competitors and/or untrustworthy. **Competition for (financial) resources** is also a critical element that can potentially hinder coordination between different sectors and integration of works to be delivered with better synergy.

- Another important aspect to be considered in Ethiopia are **frequent changes in the repartition of responsibilities between ministries** which even created significant tensions e.g. between MoWIE and MoA. Today, irrigation schemes supplying surfaces up to 200 ha are under the responsibility of MoA whereas bigger ones are under MoWIE. Improved Cooking stoves which had been under MoA are now under MoWIE, whereas all forestry and re-afforestation issues (although closely related to improved cooking stoves) are under MoEF. This current repartition of responsibility is not "automatically" reflected on administrative levels of regions, zones and woredas. In addition, often the responsibilities are not clearly formulated or simply not considered, leading to overlapping roles and responsibilities of Government institutions (e.g. improved cooking stoves).

Photo 25: In the small round during the final feedback session in Addis not a single representative of any ministry participated

Photo 26: How can Nexus make a difference for the farmers?

- The establishment of the various **SWGs** shows that this, although considered very useful by many stakeholders, was a lengthy and difficult process. It requires **committed individuals**, interested to establish such groups and **significant funds** for staff to promote the activities and bring stakeholders together. E.g. the RED&FS secretariat is equipped with two full-time employees who are definitely required to initiate and maintain the activities. The establishment of the whole RED&FS structure was only possible because funds from the multi donor trust fund (MDTF) were available. A conclusion drawn from this experience is that most probably the establishment of an **inter-sectoral working group** comprising more different interests might be even more difficult and will certainly require investment of significant time and resources. Thus, section 5.4.2 and Figure 9 give the recommendation of a "double-tracked approach": provide Nexus information individually to the various existing SWGs but also promote cross-sectoral exchange in a group of experts from different sectors ("inter-sectoral working group").
- Another barrier might be a certain **lack of ownership for the subject at the ADC coordination office**. The office has very limited staff but a number of diverse responsibilities. For them to pro-actively push the Nexus subject would be an additional

work which most probably has not highest priority. For this problem a solution has to be found.

- Since not a single government representative joined the final workshop in Addis it was speculated about the reasons: Maybe Nexus is seen as an **"additional headache"** instead of an approach which can save time and resources. Maybe integrated approaches are considered as a problem of capacity and availability of time for coordination.
- The **awareness and knowledge among key stakeholders** on nexus approach is still limited. Despite the experience with integrated project/program design and implementation bringing together different actors at the national and regional level, it is not very clear to most stakeholders in how far Nexus offers an added-value and what is the difference between the former "integrated approaches" like IWRM and the Nexus approach.
- Although many development partners support Ethiopia with funding and technical assistance, the **geographical coverage of programs** is still relatively limited. E.g. SLMP although being implemented in many regions, the actual surface of watersheds where physical measures have been implemented is quite small compared to the overall surface where such measures would be needed. **To achieve synergies between different projects and activities they have to concern the same area**. Integration cannot happen if the measures are scattered with limited effectiveness.

5.3 Drivers and barriers on implementation level

5.3.1 Main Drivers

- Obviously, more **inter-sectoral cooperation** already exists at **zonal and woreda** level
- Broad experience through **integrated watershed approach**
- The limited availability of natural resources "compels" to apply a nexus approach to **avoid wastage of natural resources**
- Nexus gives **more flexibility** for selection of activities (provided indicators in logframe are formulated accordingly)

Photo 27: Stove working with biogas

Photo 28: Light working with biogas

Photo 29: Peasant women with her well fattened cows (she also owns a biogas plant)

Photo 30: Only reduction of free grazing can help to avoid such degradation

5.3.2 Main Barriers

- **High need/demands and limited financial resources** for services in a wide geographical area; synergies are often difficult to be achieved.
- **Lack of information and evidence on Nexus benefits;** (e.g. on saving capacity of ICS, different quality of stoves etc.) although such information may exist at various levels it is NOT made available at grassroot level
- **Lack of know how (on Nexus)** in government structures on different levels; sensitization and change of mind-set required (problem of **brain drain** esp. at implementation level and in remote areas)
- In general, limited **human resources and know-how** at implementation level; DAs are more experienced in agriculture compared to water & energy and Offices of Water & Energy at woreda level do not have sufficient (competent) staff
- In general, **less attention is given to energy** although it is key for processing, marketing etc., lifting water, fuelwood for stoves (biomass)

5.4 Possible entry points for a nexus oriented approach

5.4.1 In the ongoing projects

1. A possible entry point for an improved integrated approach (also including energy aspects) would be the drafting of an **addendum to the respective planning elements** in the **"Community Based Participatory Watershed Development Guideline**" (2005), even though this might require significant effort to bring the government at federal and regional level on board. A real revision or adaptation of the guideline may be unrealistic and very time consuming because many stakeholders would have to be involved. The guideline is applied countrywide by DAs to help the community watershed committee to develop their **integrated watershed management plan**. These plans are then the basis for the planning process on kebele, woreda, zonal and regional level and are therefore crucial for the final prioritisation of activities. The guideline is a real kind of "instruction book" including among others explanations on the planning procedure, the so-called "infotechs" (descriptions of SWC, water harvesting, agro forestry gully control, feeder roads etc.), survey methods, national work norms, useful plant species etc.. Since it is broadly applied, any kind of "add-on" which is officially accredited would have a **significant leverage**, because it would become part of the official IWRM approach. It is very much appreciated that the watershed is the basic unit for planning (instead of administrative structures) and the type of planning is considered to be integrated and in any case very participatory ("community knows their problem best"), however a kind of amendment should nevertheless be considered. This type of planning process will even become more binding due to the "watershed proclamation" as suggested by GIZ. In case the elaboration of such an "official addendum" is considered too ambitious another option would be to apply a "modified watershed management guideline" in the ADC programme area with a stronger focus on a Nexus-like approach. If successful and valuable, lessons learned could be scaled up.
2. *Example for **useful addendum aspects***: 1) The establishment of a "closed area" around the spring or well would be a very useful approach to create awareness for the protection of the catchment area of the spring / well. 2) In general, a close link between soil and water conservation measures and the availability of drinking water and water quality should be made (awareness raising → benefit on drinking water supply). 3) Basic explanations on energy-related topics: improved stoves, biogas, hydropower etc.
3. Project planning and monitoring: **objectives and indicators in the logframe should be looked at in their relationship**. Instead of achieving individual (sectoral) results, more focus should be put on interlinkages, e.g. soil and water conservation methods leading to increased crop production, increased groundwater level, better availability of spring water etc. By focusing on the linkages, "multi-benefits" may come to the fore and create awareness on the added value of a nexus approach.
4. Most programs (as e.g. SRMP-NG) have a wide geographic and sector coverage despite rather limited allocated resources. Undoubtedly, trying to address all activities in such wider areas will greatly affect the quality of the outputs. Therefore, the **Nexus benefit is often not identified <u>within</u> a program / project but rather in the cooperation and**

searching for synergies <u>between</u> the programs. As an example, the EU implemented biogas plants through SNV in the past and is currently planning to support another 20,000 systems in the near future in six regions. In this specific case, MoWIE, MoHealth and MoEF are involved. Such a project could be combined with a project like SRMP or the national SLMP which promote improved cattle varieties, cut & carry systems etc.

5.4.2 Possible strategic options at a higher level

In the following the higher level, strategic entry points are developed which would besides initial investment certainly also require patience and tenacity but would finally also allow for added value through manifold synergies. It has to be mentioned that the current allocation of staff at ADC office in Ethiopia is not adequate to deal with these issues which require strong engagement with different stakeholders.

The two proposed strategic intervention lines are summarised in *Figure* 9.

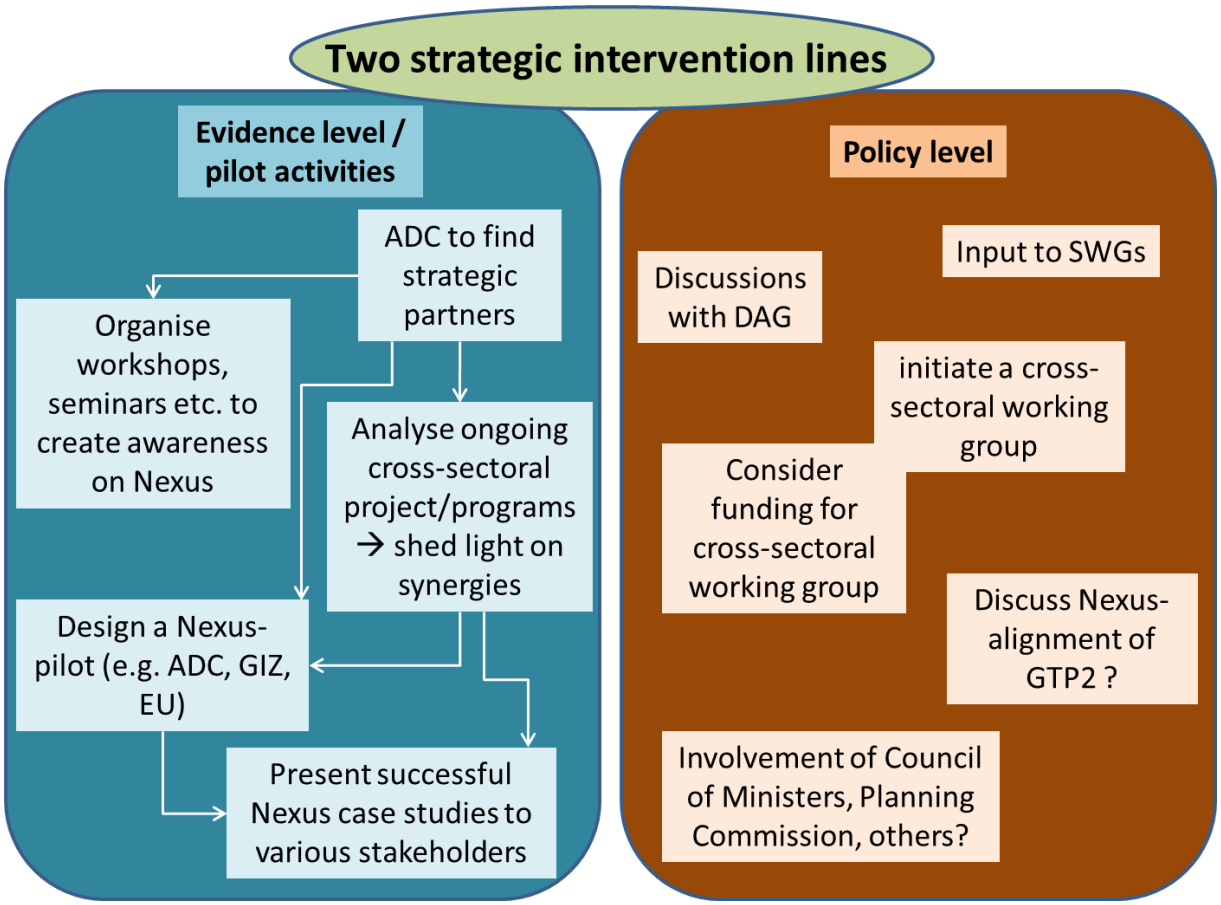


Figure 9: The two strategic intervention lines: "evidence creation" and policy level

- **Identify "Champions"** (MoWIE, MoA, MoFED, ADC, EU, GIZ, WB[32], …). European Union together with at least two of its member countries (ADC, GIZ) would be strong constellation to **promote the Nexus approach**

[32] Importnat because financing big governemt projects

- These strategic partners should identify options for inter-sectoral cooperation and **develop a proposal** - showing synergies by bringing together their planned activities - and submit it to the DAG; e.g. combination of GIZ SLMP[33] and ADC SRMP[34] together with EU energy activities[35] showing options for synergies in the water-energy-food security field (see also example described under 5.4.1 point 4). This could probably be combined with GGGI for emission reductions (REDD+). Such **"Nexus programs"**, especially if funded by several donors need a **harmonised logframe and a harmonised M&E system.** It is crucial to also consider joint planning at grassroot level (DAs, HEAs, water and energy experts) in order to **create a difference for the farmers.**

- **Sensitize** senior government officials, technical staff etc. on the nexus approach and **provide information on nexus benefits, case studies, synergies** etc. in workshops, seminars etc. at different levels: in common meetings of SWGs (RED&FS, water, energy…), Technical Working Groups, steering committees (national, region, zone, woreda), GO-NGO-Forum (national, regional, zone and woreda level); ARDPLAC (Agricultural Rural Development Partners' Linkage Advisory Councils) etc. More **evidence** and simple examples[36] are needed to show that the Nexus approach is **"demand-oriented"**, helps to save time and resources through synergies. Awareness creation, capacity building, joint learning and consideration of individual "driving forces" of stakeholders are indispensable for ownership for the approach.
- Share **outcome of the current study** and further nexus information with Ethiopian stakeholders
- Start on a more **"technical level"** (rather than policy level) with a focus which is of relevance for most stakeholders (e.g. Climate Change, …)
- **Involvement of DAG** which has a strong influence on the SWGs; in addition DAG plans to establish a "technical level DAG" in the future
- Promote and support the design of **more projects** which **allocate funding to different ministries** in order to force them to cooperate. In case of "CRGE funding" strong additional focus has to be put on equal access (!). Cooperation between ministries can probably be pushed by the Planning Commission. Such development programs should be based on identification of mutual objectives and interest of different institutions which can bind them together in true sense of partnership. **MoFED** (managing the CRGE fund) is probably too much focused on fund disbursement whereas **Planning Commission** which also establishes GTP is directly under the Prime Minister, more powerful and important → take both into consideration

[33] SLMP 2 is currently developed and could get a new focus (scaling-up strategy based on Nexus approach including energy and water, capacity building and staff increase strategy)
[34] Probably also include ADC activities on and biodiversity
[35] Currently financing biogas systems implemented by SNV; significant additional funds are earmarked under EDF (European Development Framework) for further activities in the energy sector
[36] E.g. without safe drinking water, farmers are less healthy and thus often not able to cultivate.

The following figure shows the **link between evidence / implementation level and policy level** as suggested during the final feedback round in Addis. The relation is like a **moka pot**: The evidence based examples must create sufficient heat and bubbles to pressurize the hot water and make it pass through the ground coffee (the policy makers). Both, water and ground coffee, meaning good examples and policy changes are required to produce a good espresso.

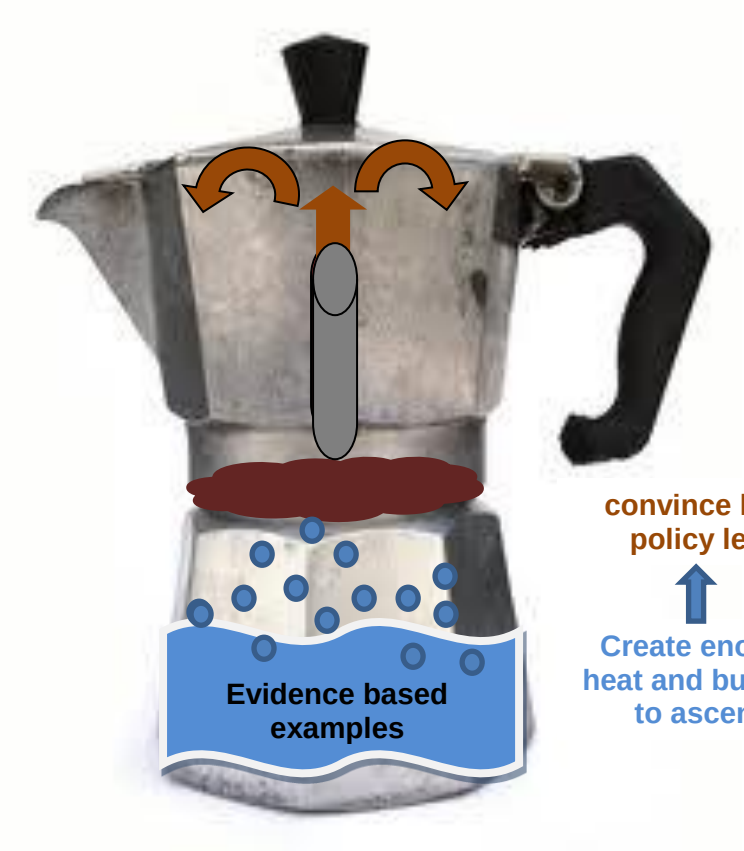


Figure 10: The Nexus Moka Pot

6 ANNEXE 1: Programme during mission in Ethiopia, persons met

	Name	Position / Institution
12.5.	Mr Gary Wallace	Donor Coordinator Rural Economic Development and Food Security Sector Working Group (RED&FS SWG)
	Dr. Teklu Tesfaye	senior agricultural specialist WB
	Mr Heinz Habertheuer / Ato Dereje Kebede	ADC coordination office
	Ato Sertse Sibu	Climate Resilience Green Economy CRGE Coordinator
13.5.	Dr Girma Gebremehidin	SLM advisor to MoA; on behalf of GIZ/KfW Programme at the Ministry of Agriculture
	Dr. Dawit Alemu	Ethiopian Institute of Agricultural Research EIAR (Director of socio-economic Directorat)
	Ato Dejene Abesha	Coordinator RED&FS SWG
14.5.	Mr Heinz Habertheuer / Ato Dereje Kebede	ADC coordination office
	Ato Adane Kassa	Water Action (NGO), Executive Director
	Ato Asmamaw Kumie	MoWIE, Basins Master Plan Directorate
	Ato Abiy Girma	MoWIE, National WASH Coordinator
15.5.	Mr Riccardo Claudi	EU, energy in “rural development section”
	Mr Jean-Baptiste Fauvel	EU, energy in “infrastructure section”
	Mr Boris Buechler	GIZ SLMP Senior Advisor Capacity Development
	Ato Zerihun	MoFED CRGE coordinator
16.5.	Ato Tsegaye Tadesse	Global Green Growth Institute, Forestry and Natural Resources Advisor, Ethiopia Country Program
	Mr Rainer Hakala	Programme Manager Energy Coordination Office ECO / GIZ
	Ms Elina Weber	Program Advisor, GIZ
	Ato Mesfin Mulugeta	Secretariat of WASH Sector Working Group, MoWIE
	Ato BerhaneMeskel Eniyaw	regional affairs – communication officer, MoWIE

17.5.	**Flight to Gondar**	
	Ato Teshome Mullu	PCU: LISRMP-NG, program coordinator
	Ato Bekele Zerihun	team leader NRM
18.5.	**Visit of woreda Ley Armacho**	
	Ato Berhanu Tereda	Woreda SRMP Focal Person
	Community Watershed Committee:	Yeshisew (DA, livestock), Belayneh Moges (DA, crop), Meret (DA, veterinary)
19.5.	Meeting with PCU LISRMP:	Ato Teshome Mulu - Coordinator Ato Bekele Zerhihun – NRM Team Leader Ato Zelalem – Livestock Expert Ato Markos – Gender Expert Ato Abebe – Capacity Building Expert Ato Yeshiwas – Land and protected management expert Ato Wenzie – Knowledge management & communication Ato Daniel – Planning M&E team leader Ato Yikalo – Marketing and Entrepreneurship team leader
	Meeting with Zone SC LISRMP	Dr. Abraham - Gondar Research Institute Ato Teshoma Mulu -secretariat of SC Ato Dissie - Zone Finance and Economic Development Ato Aderajew -Zone office of Culture & Tourism Ato Mulu – Zone Environmental Protection and Land use
20.5.	**Visit of woredas Debark and Dabat**	
	Debark Woreda	
	Ato Alemu Brehane – SRMP Focal Person Watershed Committee members Ato Yeshisew, Belayneh, Meret (Kebele DAs)	
21.5	Steering Committee on woreda level / Debark	Ato Alemu - focal person / woreda, secretariat SC Ato Getinet - Head of Office of Agriculture, vice chairman of woreda

		Ato Tadesse - representative of Park Office
	Ato Asfaw Derebe	Head of Woreda Health Office
	Ato Megistu Hailu	Head of Woreda Water Office
	Dabat Woreda	
	Project SC members	Ato Destaw - focal person Ato Esmeraw - WoFED Ato Eshetu - Woreda Office of Cooperatives Ato Atikilt - Environmental Protection and Land Administration Ato Bayilegn Admesa - Woread Office of Agriculture
22.5.	**Visit to Gondar Zuria Woreda**	
	Dr. Wondemu	Project Coordinator of ICARDA project
	Ato Nigus Demelash	Gondar Agricultural Research Centre / ARARI
	Ato Melaku	Gondar Agriculture centre
	W/ro Tikunesh	Livestock Researcher
	Ato Masresha Melkie	Woreda Water Office –Energy Expert
	Ato Abyi,, Etalem, Sisay, & Yeshiembet	DAs at the watershed
23.5.	Gondar Agricultural Research Centre / ARARI	Dr. Abraham, Ato Nigus Demelsh Dr. Wondemu
	Feedback round with members of SC LISRMP PCU and ICARDA	
	Dr. Wondimu (ICARDA) Ato Nigus (ICARDA) Ato Teshome (SRMP) Ato Mersha (SRMP) Ato Bekele (SRMP) Ato Enquayenesh (SRMP)	
24.5.	Flight back to Addis and analysis of information	
25.5.	Preparation Feedback Workshop	
26.5.	**Feedback Workshop, ADC Coordination Office**	
	Discussion with Sorssa on follow-up and report preparation	

7 ANNEXE 2: Results of stakeholder interviews (Addis)

Gary Wallace, (fulltime staff for) "Secretariat RED&FS": Donor Coordinator Rural Economic Development and Food Security RED&FS SWG 0913-857-888

In general very interested in Nexus approach; already had similar discussions with some other stakeholders

Would also be important to meet DAG secretariat (Emily Bosch / Emily.bosch@undp.org)

Objective of RED&FS SWG: align and harmonise donor activities with government priorities (quotation Sorssa) or to align the different donor activities (quotation Gary).

structure was created after Paris Declaration, started about 2007 and was continuously built up; Consisting of Technical Committees and under each TC one or more task forces. Each task force chaired by a ministry representative and 2 donors

TCs and TFs evolved, e.g. TC livestock was built up recently; each task force prepares annual work plan (under PIF) and feeds in this work plan into the work plan of the Technical Committee; platform of government institutions (mainly MoA) and 22 bilateral donors, of which about 10 are really active.

Under each TC "flagship programmes" in which donors can participate (blue boxes), e.g. in AGP 5 or 6 donors. PSNP 8-9 donors spend about 2 bio USD through "basket funding" OR like USAID (exception!) implementation through own project implemented mainly through NGOs, because USAID decided NOT to channel money through government organisations. However, USAID is closely relating their programme to PSNP. Although USAID works through NGOs it is well aligned with other activities! Due to **lack of capacity in government structures**, the involvement of NGOs is even very useful!

E.g. in the first year AGP only absorbed / spent 17 % of the available funds! → capacity building is extremely important, problem of brain drain (those who get good education, even scholarship, end of on national level in the ministries or at donor agencies etc.); institutional skills important to retain people in the system; innovative incentives required!!! E.g. Safety Net Support Facility SNSF did such capacity building with limited success??? Ask Dereje?!

Advantages: administrational cost reduced!

(TCs work in one sector, already difficult enough to communicate. Most probably this communication is even more difficult across sectors!)

"Cross-Sector Working Group CSWG" in the RED&FS is responsible for coordination between the different TCs (all in agricultural sector but different "sub-sectors")! CSWG chaired by **Director PPD** (Planning and Programming Directorate) under MoA. PPD is the central coordination body in MoA, problem: not sufficient capacity, otherwise it could play an important role!!! PPD is not yet really built up.

CSWG is the "technical arm" of the executive committee (executive committee has no time to care for all this…)

SLM is more easy as far as “cross-sectoral” work between TCs is concerned; AGP is the most difficult one.

In the last meeting cross-sectoral activities were discussed and the following priorities were selected from a long list (there is strong awareness that more coordination between the 4 TCs would be required; not all can be done at once):

1. Harmonising of financial / accounting systems; e.g. same wage and per diem levels etc.
2. Harmonisation of M&E; common data collection even though different indicators
3. More activities e.g. trainings in common: since in the future most programmes will geographically expand there will be more overlap; if one programme does training on accounting others should participate etc. → avoid doubling of activities; PSNP was mainly in vulnerable areas but for AGP and SLM there will be more overlap in the future!

Secretariat has very important role; is pushing activities; consists of a donor coordinator (Gary) and a MoA coordinator; these two bring MOA and 22 donors together

DAG consists of about 14 different working groups. RED&FS before was also under DAG, changed now! The RED&FS SWG has 4 TCs under it

Gender donor group?

ATA is NOT under MoA, is a bit apart?! ATA is under the MoA. It was established by Government proclamation as part of the MoA to tackle the Ministry’s systemic problems

PPD: should collect all relevant information required for concrete interventions; who is already intervening how with how much funding, where are gaps etc. (kind of data base)

Important for Nexus:

Champion is needed: e.g. ADC together with EU, also USAID and WB (more in water and energy); Gary very interested! CIDA also interested!

Water sector working group (Gary advised them based on his experience from RED&FS): Netherlands, Canadians, (multidonor trust fund/s?), Spanish; Irish&EU&UNDP started at the beginning; in water sector NO basket funding!!! WB, Japanese, Unicef have different big WASH projects. Water group mainly consists of donors, but government very important to get authority. For RED&FS there was a strong government will to establish the structure!

Important cooperation with water, gender, vocational training!

Other example: nutrition is under Ministry of Health (before MoA?) and food security under MoA → cooperation indispensable!!!

Takes time until ideas are evolving and until they are being accepted (sometimes ministries refuse but secretly they change policies accordingly, not to lose face…).

Consider that work in TC costs time! Who has capacity to dedicate its time for TCs, today mainly the bigger donors (WB, USAID…) became more dominant! The structure of an integrated approach has to be institutionalised! So that it finally does not consume extra time but helps to save time through synergies!

Important to start cross-sectoral approach on a more "**technical level**" (not too much on policy level)!

One possibility would be to look for subjects where many sectors are very relevant, e.g. climate change (all sectors have components; CRGE as an entry point; Ministry of Environment & Forestry - relatively newly established – outsources strategies (?); e.g. agro-forestry clearly between MoA and MoEnvironment and Forestry)

"National Nutrition Policy" would be another entry point

Dr. Teklu Tesfaye senior agricultural specialist WB:

No cooperation between ministries at all! Nexus is very relevant! And is definitely basic pre-condition e.g. to move from rainfed agriculture to irrigation an integrated approach is needed!

Lack of clear regulations, e.g. on irrigation schemes

Example: for developing value chains in agriculture energy and transport infrastructure is needed, but no coordination between ministries. No agroprocessing without energy!

Irrigation should help to produce higher value crops; e.g. tomatoes need processing not to be rotten…

AGP is common interest, business activities, develop women groups, youth groups etc. but what to do without energy; e.g. simple flour mills; milk needs cooling etc. rural infrastructure, farm access roads etc. etc. Not only roads to transport goods, but also trucks; about 270% import tax on trucks…

He mainly cooperates with Ministry of Trade, of Water/Irrigation/Energy and of Agriculture.

NGOs have less difficulties to implement integrated approaches because they are free to choose their project planning; in government structure it is more difficult

Important for Nexus:

1. Capacity is a problem
2. Council of Ministers has to agree on it, define a clear roadmap with indicators and accountability for objectives; and not only policy papers ("paper pact")

AGP Group met 1-2 times per month; Ministry of Trade was never present; TC is aware of problems and of need for inter-sectoral approaches; some ministries simply not interested.

MoFED: has important role because it assigns funds to different sectors! MoFED is chairing DAG!!! So **DAG** could express the urgent need for a more integrated approach; about 8 sector working groups report to DAG.

WB is relatively weak because they also provide credit; however bilateral donors who provide grants could put more pressure on government…But: "the donors are not united"; e.g. WB was not ready to implement a specific project then DFID came in and did it

No incentive for donors to bring in all relevant ministries.

Possible entry point for Nexus: Agricultural Transformation Agency Council (ATA Council)

He tried sometimes internally in the WB, because WB also has transport projects, but unfortunately mainly bigger roads which are not so relevant for AGP; but with ministries it is extremely difficult.

A certain inter-ministerial discussion exists; e.g. 9 ministries signed document on nutrition!

In general, lower levels are easier for integrated approaches, but woredas have no power.

(EU and USAID do much on nutrition)

Today importance of development projects (compared to emergency projects) is understood. If development projects are neglected, those who came out of poverty will soon fall back again. Thus, today less funds are used for emergency and more for development projects and thus also more integrated approaches are applied. Close cooperation between AGP and PSNP.

Heinz Habertheuer / Dereje Kebede, ADC coordination office

- N-Gondar project was NOT designed as Nexus project! About 15 a ago several activities were ongoing and local government itself asked for a more integrated approach, bringing together several activities! → SLM and livelihood development as need expressed by local government; today steered by PCU; regular meetings of Bureaus of agriculture, finance, tourism, academics etc.; plus zonal level steering committee; coordination in region
- DAG exists in Addis but is not reflected in regions where activities take place; many policy documents do not have a significant impact on reality in the field → what is the difference for the farmer??
- 2 solutions: joint implementation and basket funding
- Not only policy documents but really jointly plan projects / programs!!! Several Development Partners (and NGOs) could go together
- Take into consideration that not all stakeholders might be familiar with Nexus approach
- What does Nexus mean?
- We cannot stand alone; limited staff (cannot shoulder more work load!), limited funds, limited capacities; consider additional work load…
- EU recently held "resilience workshop" → think about what is the difference for the farmers? how to translate it to people who work in project…

Dereje:

- EU started already even with a concrete road map; “joint program exercise”, led by GIZ, biodiversity program (biodiversity too big?! → certain fear); for nutrition this worked already (on track, roadmap existing; financing secured)
- ADC “only” spends 6 million Euro in 3 a in 12 woredas; several components → not such a big impact

Sertse Sibu, Climate Resilience Green Economy CRGE Coordinator

CRGE is clearly “inter-sectoral”; all sectors developed their strategies

All sectors have working groups according to PIF pillars

Important to do something on household level!

Geared towards woreda level → lowest decision making level

Problem when cascading “new” approaches to lower level; how to implement it (who and how)

Example: before MoA was responsible for hh energy (charcoal, biomass etc.), today this subject is under Ministry of Environment and Forestry; energy saving stoves before under MoA, today under MoWIE… more and more tasks go to other ministries, but:

MoA has “more visible structures on the ground” (traditionally more projects, more resources, more staff, e.g. 3 DA (agricultural experts) per each kebele (if > 600 people) etc. but these are mainly trained on agriculture); other ministries have no or less staff!

MoA has experience on selection of hh, DAs etc.

If nexus should work out, the lowest level has to understand; either train DAs or have more staff (e.g. water experts, energy experts etc.); today DA already get too many tasks!!!

In general: MoA works close with MoFED, with Environment & Forest, less close with MoWIE and not so much with transport and urban development…

Gender is “constitutional issue” (also Minister?)

MoA has specific Department for Gender; MoA developed “gender manual”, but still problems in implementation!

Important for Nexus:

Who will coordinate new platform, how to establish it?

Eventually national steering committee of MoA, MoWIE, Ministry of Environment&Forestry

On project level: capacity building / development and additional manpower

Develop “work profiles” of development agents!

Question on compilation of “best practises”: on the way to be established (data base); good approach; not yet ready!

Also harmonised approach on M&E; synchronised in SLM

Girma Gebremehidin SLM advisor to MoA; on behalf of GIZ/KfW Programme at the Ministry of Agriculture; paid by GIZ

SLM applies multisectoral and multistakeholder approach; the big challenge is to "scale up"; scaling up was always the vision of the SLM Programme of the WB; general idea was that after removal of barriers (knowledge, financial, policies…) since technologies are available, SLM can be scaled up; did NOT work!

Energy plays important role in SLM → biomass increase

GIZ/KfW technical and financial assistance in about 45 watersheds

Participatory planning at grassroot level

SLM has to be implemented "one by one" (different from original concept of scaling up)

Show successes to farmers to convince them

Private sector must be involved! E.g. planting material (if project is over who will supply it → therefore better involve private providers from the beginning

Debre Tabor project of GIZ was success story, but finally the additionally produced biomass was not used…

General approach is to also do projects in "potential/surplus" areas (today in all regions); vulnerable areas already get PSNP (equity issue!)

SLM is somehow the intersection of AGP, SLMP and PSNP

Important: "harmonisation" required so that all follow the same SLM!!! (same methodology, indicators, M&E etc.); land degradation and water degradation have to be addressed

Each programme has other "driving forces" (e.g. productivity targets in AGP)

SLM has steering committee for final decisions (MoA, MoWIE, MoEF, Biodiversity Institute etc.)

Since establishment of RED&FS structure, steering committee lost importance and Technical Committee became more important!

No action (!) for inter-ministerial aspects; does not exist!

Ethiopia Strategic Investment Framework ESIF (March 2010) under PIF

Big difference between different "small" SLM projects (WB, GIZ etc. and the SLM Programme which is a national programme.

NO basket funding for SLM!!!

Main barriers:

1. Donors are different!
2. E.g. KfW does not trust Ethiopian system; ask to make the Ethiopian system more efficient and transparent!; but lack of capacity

3. Although capacity building was considered as an important issue by many donors and was financially supported, brain drain makes it still difficult to have good implementation staff (high turnover, no incentive system in place for staff to stay)

Incentives could be career development, financial incentives etc.; government is reluctant to increase salaries (what to do when project is over…); BUT: salaries can be maintained by generated value; better off farmers would pay for good extension services etc.

If PSNP would be closed → disaster!!!

Growth has no impact on food security (in his opinion); his example for growing disparities: Middle class is disappearing (staff at MoA get about 3,000 ETB / month whereas apartment cost about 40,000 ETB/month; how could they afford?)

At woreda level integrated approaches can be easily implemented, no problem; but better know-how at national level (there cooperation difficult)

But on national level: relation SLM to MoWIE is not good; no formalised cooperation, agreement or similar

On the one hand, water resources assessment done by MoWIE but on the other hand SLM does planning based on guesswork because no data available!!!

Dr. Dawit Alemu, Ethiopian Institute of Agricultural Research EIAR (Director of socio-economic Directorate)

Difficult to keep researches, now slightly getting better (e.g. housing allowances and other incentives); but no really "output based" incentive system.

Responsible for socio-economic technology transfer; link results to end-users, demonstrations, trainings, support extension system, field days with media, survey for adoption, pre-scaling up of technologies

"agricultural Development Partners linkage advisory councils" (ADPLAC) at different levels, 2 forums per year, stakeholders are present; model zones known for advisory councils (platform)

e.g. request to them from a specific zone to supply them with advisory council (seed supply, adaptation trial etc.) → doubled harvest in zone

new approach "integrated activity approach": each hh has different activities; natural resource, livestock, water, crop… marketing → Enhancing national agricultural technology transfer = ENATT (= mother, translated)

action research is important activity for them!

Today national research system promoted; technologies are available but adoption required e.g. drought resistance

Before: central "seed distribution system" many planning went wrong, now establishment of public seed enterprises in different regions (more flexible)

"technology use" is still very low (about 20% for maize, for others even less), e.g. improved seeds

Agricultural experts make big difference (if someone is capable or not…); extension services very important; many people illiterate, "what we have now/today is the best" is common thinking.

Required action: policy level and knowledge! Nexus must be acknowledged in policy framework; watershed approach, natural resources, genetic resources; good watershed management…energy is key (rural energy depends on government policy!);

Energy: 1) export whatever possible, 2) geopolitics ("let them benefit to avoid trouble"; Sudan, Egypt…)

"Cooperation between ministries is a nightmare"

To be considered:

1. 4 deputy prime ministers have to agree (one of them economic affairs)
2. Consider development corridors
3. Basin authorities (establishment is ongoing); 3 already existing (Nile, Rift Valley, Baro Akobo); these are accountable to MoWIE or even to Prime Minister?; watersheds under MoA and water basins under MoWIE![37]

Nexus approach must be integrated in papers; inter-institutional linkages are still a challenge

Research: cross-cutting projects but still challenging

Organisation of forums can help

Good "integrated" project example: ENGINE USAID: enhancing production, nutrition, capacity building, livestock, vegetable… → even considered by government as a "model" want to replicate it

Three options to finance projects:

1. Funds directly to government
2. Projects under government but with own staff, e.g. in ministries
3. USAID, Japanese → work through NGOs but are aligned with the various programmes AGP, PSNP etc.

[37] Remark: Basin Directorate/authority is under MoWIE. The MoA plan and implement Natural Resources rehabilitation, development and management based on community based Participatory watershed Development. In the context of Ethiopia "basin" is bigger in size (may include part of 2-4 regions. However, "watershed" is small area with optimum size of 200-500 ha.

Dejene Abesha , (fulltime staff for) "Secretariat RED&FS": Rural Economic Development and Food Security RED&FS SWG coordinator (from Government side, Gary from Donor side)

Nexus approach of paramount importance

Especially energy often neglected; irrigation (lifting of water) often requires energy; fuelwood saving stoves etc.

Water and energy already in one ministry!

RED&FS, activity integration and integrated planning

Problem of mind-set

MoARD is central, link MoWIE to it and (almost forgotten) MoEF

Energy is needed in manifold ways (irrigation, processing etc.); Approach is "new" with regard to energy.

Pilot project/s required to demonstrate benefit → evidence based; farmers must be convinced; and to show methodology on how to link the 3 subjects; pilot project at "junction";

SLM also promoted energy saving stoves

"Natural resource based irrigation"

Operational aspects are more important, how to implement it; more important than policy papers etc.

At woreda level all ministries are represented but MoARD has more capacities, staff, development agents etc.

"everybody has a stake but you have to be selective"

Does an energy policy exist (who was involved to establish it…)

Compared to RED&FS it is a DREAM to have such a similar structure while integrating three different ministries; better let MoARD take the lead (key ministry) and other two ministries work under MoUs and depending on concrete activities on the ground. Impossible to give one project/programme to 3 different ministries… Other ministries can be represented in steering committee, joint action plan etc.

PIF review showed that in the RED&FS a cross-sector working group is required

Barriers:

1) energy not sufficiently integrated; not clear how to achieve synergies
2) bring in different institutions

Opportunities:

1) at watershed level all activities are already integrated; bring in "packages" on how to implement such a project; mechanisms are not enough known
2) do piloting before scaling up

financing in a basket and then repartition for various activities.

Dereje Kebede / Heinz Habertheuer (ADC)

- bilateral help: health / Somali, PBS (ADC + MoFED), CRGE (MoFED)
- NGO projects: Caritas, Red Cross
- New project in SW "biosphere forest coffee reserve" (started June 2013); conservation of nature and high value of coffee as a cashcrop, different from "improved livelihoods and SLM"… but eventually exchange possible through "participatory forest management" and conservation strategies as a linkage; but one in N-Gondar and other in SW in Yayu Forest Reserve
- Donor coordination mainly takes place on national level but not on regional level! Bureau of Finance and Economic Development should coordinate all projects and facilitate exchange

In general not much exchange between these projects; but ADC tries to make link between APPEAR (PhD theses on project relevant subjects…) and projects/programs; ADC tries to make NGO projects fit to each other but not always possible.

PBS: pays half of salaries of government staff, rest paid by government. Probably relevant for Nexus on regional level → extension workers' knowledge about nexus and other integrated approaches? Is it useful for their work? (Although PBS is close to "budget aid" it allows at least some control of the donors… through M&E)

N-Gondar: 12 woredas, regular exchange meetings, planning workshops and bi-annual woreda stakeholder meetings, first planning was done by consultant together with woredas. In current phase marketing gained importance compared to pure production; high value products (honey, fruits…).

Landless youth and poorest of the poor organised in cooperatives; installation of beehives, partly through revolving fund. Normal micro-finance institutions ask for 17-18 % interest but revolving fund in project has 5% interest only!

Selection of beneficiaries: meetings with elders and also baseline studies on wealth ranking as additional basis for selection of beneficiaries (poorest of the poor, landless etc.)

Irrigation schemes: water user associations (obligatory for users to be member): O&M of schemes; link irrigation to surplus production and marketing through cooperatives (interested persons can become member).

ICARDA – Arari project: Arari is in steering committee of LI-SLMP project, already a close link between projects, e.g. Arari tries to improve breeds to provide it to the project.

Close link between 2 projects!

Nexus in LI&SLM: food security; water: spring development, shallow wells; energy: TA for energy saving stoves, producers support (equipment through grant & credit) and marketing. 120-150 ETB/stove; wood for free!

Difficult to create linkages because activities are "thinly spread"; limited funds for large area; affects level of change. But: regional government wanted 12 woredas to be included!

In same region: Finish Cooperation in WASH, GIZ in SLM+improved stoves

➔ Consortium of donors for integration / synergies

Adane Kassa, Water Action (NGO), Executive Director

Since 1995, local NGO; objective is poverty alleviation through 3 pillars: WASH, natural resources protection & development NRPD, community capacity building

92 projects and programmes implemented in Oromia, Amhara and SNNP

In WASH mainly gravity schemes

Always try to integrate all 3 pillars; NRPD also contributes to food security; also including small ponds & small scale irrigation, gully protection, re-afforestation

Improved seed development and promotion (cooperation with research institutes) diversification for food security; irrigation for cash crops

Important to combine short and long term benefitting activities; plan in parallel!; good successes with gully protection, re-afforestation, closed areas…

Participatory planning with community → multidimensional

Their main donors: CRS, water aid, Christian Aid, Plan International, Water first International…

Multiple of water addressed by many WASH organisations; food security more and more discussed in WASH sector, also change in donor agencies policies

➔ Nexus gives finally more "freedom" for activities in the field, allows to be more demand oriented because donors are less sector-focused

Energy: fuel-saving stoves, PV SHS

The funding sources are still dominating the focus…→ they try to combine different donors for different pillars (combine activities and getting donors together sometimes not easy); clearer government policy would help in some cases (already small improvements in policies).

They work with government structures; steering committees at woreda level (government partners, beneficiaries, Water Action staff); government is chairing steering committee (overseeing budget, activities etc.); quarterly and annual plans approved by steering committee. Water Action uses its own staff and government staff seconded to it, paying them top-up to their government salaries. Government participates in surveys, planning, machineries, etc. Projects finally handed over to community and to be backed up by government.

In some areas, government even ask for their support (they bring in NGO funding and staff). Government should make use of NGO staff, because they often do not have sufficient own staff / capacity. Sometimes because of this reason they cannot absorb the available budgets.

BUT: in Oromia regional government pays 25 % (in cash) of any of Water Action's projects, if water Action brings remaining 75 %!

Local government staff learned integrated approaches from working with them and now establish their policies accordingly meaning following integrated approaches.

If woreda has more hydrogeologists, they are drilling more wells → focus often depends on peoples' capacities.

Barriers:

- ➔ Sector-financing
- ➔ Human capacities (juniors tend to leave and go to towns; elder professionals too expensive)
- ➔ Human resources (not enough people)

Natural resources have to be used more efficiently; scaling-up happens!; closed areas have changes a lot; good practices are "universities" + training

Ato Asmamaw Kumie River Basin Planning Director MoWIE

Ethiopia has 12 basins

8 basin master plans have been established in different years (not all up-to-date!); most recent are Rift Valley (Halcrow; needed 4 y for completion), Genele Dawa (financed by AfDB, about 2.5 million Euro; consultant: Lahmeyer); others older, 90ies etc.; but up-dating required for issuing of water permits (based on master plan); planning horizon for Master Plans about 25-40 years. For the Master Plans the conservation aspect is MORE important than the development aspect!

Integrating ALL resources: water, agriculture, human, cattle, apiculture etc.; all stakeholders (down to kebele) are heard and also get access to the outcome of the analysis (Master Plan); all development planning should be based on these plans. → different sectors should all benefit from Master Plans (water supply, hydropower, irrigation etc.); almost all hydropower plants have been derived from Master Plans.

Integrated Water Resources Management (IWRM)!

MoA is member of Technical Review Committee for Master Plans; Master Plans include always a number of project proposals (in brief; e.g. > 100 in Rift Valley Master Plan); these are forwarded to MoA and regional sector agencies.

Master Plans also include institutional analysis.

River Basin Authorities: have important role for implementation of master plans; they coordinate between regions if projects are of relevance for more than one region. Most rivers are crossing different regions which is often difficult for doing Master Plans. But River Basin Authorities are established to coordinate between regions and between sectors

Basin Council: for regulatory, legal and policy issues, should resolve possible conflicts

Master plan includes water balance model, energy balance model, scenarios, livestock population, human population etc.

Mechanisms are required to bring sectors together.

On regional level Master Plan is probably more used than on national level

Better water resource planning required: e.g. problem with increasing number of small scale irrigation schemes → limited water resource should be used more efficiently; in small-scale irrigation often big water losses.

Abiy Girma, MoWIE, National WASH Coordinator

Their main cooperation partner: Ministries of Health, Ministry of Education, MoFED (important for financing) and MoWIE itself → all together signed MoU where roles and responsibilities of each based on their mandates are fixed: signed 2012; first MoU signed 2006 but only between health, education and water (at that time). Now considered important to include MoFED. Eventually also MoA (under discussion!) and Ministry for Urban Development (urban sanitation is a big problem!). MoA important for watershed management (water conservation)

The same four ministries cooperate on national and on regional level; on woreda level wider cooperation (with more sector offices, i.e. also agriculture and women offices).

The four cooperating ministries together established:

1. MoU
2. Implementation framework
3. National Programme

In order to finally achieve the government targets.

In each ministry, a focal person is assigned and a project management unit PMU is established (PMU so far only in Ministries of Health and MoWIE.

Together they select projects and do joint technical reviews (bi-annually) with Ministries, donors, NGOs.

Example: health posts without water, because often constructed on hills (how can wmen give birth without water…); similar for schools → common planning required!

Generally good coordination at national level; especially MoFED concerned to warrant smooth coordination; donors also interested to work together

Main donors in WASH sector: AfDB, DFID, WB, UNICEF (chairs donor water group); pay into WASH account at MoFED (basket funding; about 477 million for programme); JICA supporting “outside basket”.

2.5 billion USD (2013-2015) would be required to achieve GTP target of 98 % supply. 52% from government, 32% gap.

Funds go directly to woreda level; woredas develop their project proposals. In addition, “national inventory for WASH” used for selection and to develop programme (priority for areas with low coverage, difficult access etc.); regions select then the woredas which need

support. River Basin Master Plans are not (yet) considered for the planning! But necessary in the future to take limitation of resources into account.

Normally “hh water self supply” for drinking water and irrigation, low technology, hand dug wells…one hand dug well for about 20 persons (circle of 1.5 km); normally pumping test and quality check to know availability of water and its quality.

Programme implementation: either woredas implement through contracting or by kebele or support from staff at regional or zonal level. Planning at woreda level often through private consultants (hired to support), tendering.

Development Agents have secured job but earn less, private consultants can earn more but higher risk and often in different regions

Energy: diesel generators for water points shall be replaced by PV and wind; Energy directorate in same ministry!

(Food security also linked to sanitation and irrigation)

For irrigation: cooperation on woreda and regional level staff of agricultural bureau / office; good relation !!! MoA also participates in their multi-stakeholder forum.

Riccardo Claudi (EU, energy in “rural development section”)

Responsible for energy projects under “rural development” (energy, participatory forest management etc.).

EU energy facility is programme with several components of which 2 are managed under rural development section; both implemented by NGOs.

1. COOPI (Italian NGO): (production and) promotion of fuel saving stoves; equipment of basic services, PV for private entreprises (3 cooperatives and 25 individuals) with commercial activities; capacity building of administrative services.

2. “Horn of Africa Regional Environment Centre & Network”: rural hh energy needs; together with local governments

Individual projects already complex, with Nexus even worse…both NGO projects are as such “integrated”; integration should take place at higher level; government defines synergies in GTP

Jean-Baptiste Fauvel (EU, energy in “infrastructure section”)

Current activities :

- technical assistance to East African Power Pool ; to establish regional market, capacity building, licencing etc.
- under current 11th European Development Fund EDF: 1) sustainable agriculture and food security, 2) health, 3) phasing out roads and phasing in energy! About 90-100 million Euro planned for energy (over 7 years); focus on:

a) access!!,

b) renewable production: geothermal (risky, high initial investment required?), wind, PV… mini and micro hydro; no big hydropower, no support for renaissance dam; probably mini and micro hydropower with GIZ

c) energy efficiency

(under former?) Infrastructure Trust Fund ITF; EU contributed (exploration of geothermal energy in Rift Valley)

Ethiopia gets 7-8 US cent/kWh for exported electricity → good business, because in Ethiopia electricity price very low…

Difference made between "access" and geographical coverage" (current strategy: first cover, then intensify access…); coverage about 15-20% but only 5 % electrified (varying figures)

SE4ALL Initiative: EU financed TA for MoWIE to draft national strategy and gap analysis on energy

In the EU Delegation structure the economic and health section will soon be merged with governance.

Participates in informal "Energy Support Partner Group Meeting" ESPG; one meeting per month; all donors represented; government people invited, join from time to time; discuss key issues: e.g. FiT (GIZ), renaissance dam etc.

EU: Antoine Saintraint for Nexus

Boris Buechler, GIZ SLMP Senior Advisor Capacity Development; before DED

Nexus already important subject in headquarter but has not yet impact on SLMP activities.

GIZ is only technical cooperation partner in SLMP. SLMP is NOT a GIZ programme but: "GIZ support programme for the national SLMP.

SLMP will expand massively through new WB support (in SLMP2): so far 80 woredas and in future 176 woredas.

"Scaling-up" what does it mean?, no clear strategy available, talking about "best practices" but how to "scale-up"? Partly done by means of mass mobilisation campaigns.

Global Climate Change Alliance GCCA (EU delegated cooperation on climate change; worldwide programme until 2016) contributes to GIZ activities with additional budget of 8.5 million Euro (combine adaptation, resilience and income generation); BMZ does not want "more of the same"? EU wants to see s.th. different. The additional fund should add value to the programme…

Combine and measure impact, options for carbon sequestration (by enriching organic matter in soils)

SLMP donors: WB, KfW, Canadian, GIZ, IFAT. Finish, EU, GCCA → SLMP becoming bigger; GIZ focus is on capacity building to government structures (Amhara, Oromia, Tigray SNNP), woreda offices need management capacities to handle the additional activities; scaling up has enormous impact on woreda offices… capacities on woreda level are most difficult and critical; GIZ should play a role here! More development workers required

PSNP (in food-insecure areas), SLMP (in "productive" areas; only in highlands), AGP (in "high potential" areas), if all 3 expand there will be overlap not in watersheds but in woredas; however, staff at woreda level not increased → how to handle workload?

All 3 programmes do trainings; trainings will be at lower qualities, shorter and more in number, to fulfil requirements → no good trend!

But: high potential for synergies between 3 programmes, e.g. do trainings together; but still huge management task.

SLMP2 will broaden thematically, e.g. more income generating activities (less on food security)!

How can processing be facilitated → energy! (solar cookers, efficient stoves, electricity?)

MoWIE participated in preparation for SLMP2, want piece of cake, as well as MoEF

Nexus at federal level more difficult, but the further one goes down in administration level the easier!!

GIZ programmatically wants to enter in Nexus, looking for opportunities, e.g. integrate hydropower in SLMP2? Due to combination of GIZ/KfW probably possible; government negotiations will be in Sept 2014

SLM (in different flagship programmes) always based on "community based watershed guideline, 2005", needs to be revised but still very practical and useful guideline (in many local languages available), useful for the "what" and "how" (technologies and methodologies)

Interventions on so-called "critical watersheds" (typically about 10,000 ha); 177 had been identified (level of degradation, food-insecurity…); meaning only about 2-5 % of woreda are part of activities.

Ato Zerihun, MoFED CRGE

Nexus terminology is new to him; no sector stands alone; depending on major focus; co-benefits; mostly several outcomes (not limited to one sector); projects often already integrated.

CRGE facility (Austria also contributing) is managed by CRGE management committee with members from all line ministries; receive proposals from different partners/institutions. Facility now at appraisal stage.

If MoFED considers that certain activities in a proposal concern another ministry, the applicant is instructed to consult the concerned ministry.

MoFED CRGE facility brings ministries together; promotes cross-sectoral cooperation. Encouraging integrated approaches, avoid duplication. Interference in case of conflict → MoFED has power to take final decision; often capacity is a problem; capacities at national level might differ from local level; institutional structures in Regions sometimes different (Regions have power to structure offices slightly different)

Theoretically it is possible that 2-3 sectors propose a common programme.

Steering committees are important, because people talk to each other / exchange, leads to improvement of cross-sectoral cooperation.

Recommendations:

- Good to further look into such (multi-sectoral) projects from the past; such projects exist(ed), learn from experience
- Identify new (pilot) project based on nexus approach
- Programmes rather than projects; encourage sector/s to come up with "programme approach" (to avoid multitude of individual projects…)
- Facilitate collaboration workshop to further develop ideas
- Engage MoFED and National Planning Committee (the latter shall invite ministries)

Minimum standard recommendations of MoFED:

Value for money; significant part must go to community, "results to resources"; efficient utilisation of funds, integration within the sector also very important!

Next generation GTP started, guideline prepared; climate change given high priority, green growth vision, encouraging integration!

Tsegaye Tadesse, Global Green Growth Institute, Forestry and Natural Resources Advisor, Ethiopia Country Program

Institute is based in Seoul (working in 16 countries), branch in Addis Ababa; he advises MoEF on forestry issues.

Main objective here is to implement CRGE; driving forces are identified based on this analysis define how to reduce emissions

Agricultural growth is still based on enlargement of area used for agriculture and not on intensification.

Main reasons for deforestation (basis of strategy):

1. Agriculture
2. 90% of energy comes from biomass

REDD+ mechanism could be used (although price per ton CO2 still too low); addresses the driving forces for deforestation. REDD+ strategy is under development; for this purpose MoEF established the REDD+ Secretariat.

Consider required changes in policies! This needs cooperation with MoA, MoWIE and Ministry of Trade (forest product certification!)

Example: **Bale Mountain Project**: 0.5 million ha under REDD+; communities and government are sharing benefits; participatory forest management (in Ethiopia totally 1 million ha under participatory forest management); non-timber products; honey, herbs, coffee (forest coffee for community benefit; contract with Italian coffee company; get 10 USD/kg); carbon credits only in 3-4 years, sharing between community and government not yet clear…4% deforestation per year in Bale (20,000 ha/year), objective is to reduce it to 2 %

Long term objective is to bring all forest areas under REDD+; started in Oromia as sub-national programme

CRGE facility under MoFED (basket funding)

Forestry as topic was first under MoA then separated, back again etc. → tensions! Conflicts on usage of resources; now looking for ways to smoothen conflict. Agro-forestry also under SLMP → no coordination! Would be important, but how to achieve it?

MoEF is still new, has no development agents on kebele level, on woreda level only partly represented (different structure in regional structure); in regions "different story" (even if agreements at national level exist!)

Guideline required for DAs; they have already checklists (which helped a lot); agriculture, irrigation, health, etc. already integrated

Forest can be commercialised: eucalyptus plantations, individual farmers who planted sell wood to Sudan…

"climate smart agriculture" now discussed but actually already implemented since years…→ expand and strengthen existing activities

Opportunities:

- Implementation of CRGE high on agenda of various ministries → how to do it?; different initiatives; → align them; MoEF has mandate to coordinate activities for CRGE implementation; MoFED has financial coordination
- How to bring CRGE ideas / targets in new GTP 5 year plan?
- National Planning Commission (under Prime Minister) has the broader task of coordinating ALL activities (not only CRGE-related ones which address only 7 sectors); National Planning Commission should support their coordination task

(Climate change tasks were originally given to EPA which caused displeasure at MoA)

Barriers/problems:

- DAs also have to levy taxes from farmers and to do "election assistance"… (advantage that now "checklists" limit their tasks to a certain extent)

- Lack of information is a big issue; produce data and information and spread it! (e.g. he has no access to River Basin Master Plans; woody biomass study established about 2000 not available anymore, although helpful information, should be with MoA)
- Lack of appreciation of knowledge of others

It is planned to have one person in MoA to advise flagship programs on forestry!!!

My question: why not establish a good cooperation between MoA and MoEF instead of only delegating 1 person there?!

Rainer Hakala, Programme Manager Energy Coordination Office ECO / GIZ

Elina Weber, (policy, strategy and Communication Development), Program Advisor

Sector initiative of BMZ under Franz Marré strongly supported Nexus approach!

In GIZ headquarter 2 nexus initiatives, one under water and one under energy sector initiative Klas Heising (head of sector initiative, RE) → **interview ?**

4 mini hydropower systems have been implemented by GIZ in the South (Jimma etc.)

Improved cooking stoves (ICS) under SUN Programme and then under SLMP; under CRGE the ICS are a "fast track action", 9 million ICS to be distributed…

Now under Energising Development EnDev: bioenergy, PV, MHP

Although strong link to SLMP, no "official nexus strategy"

Energy not considered as end as such but as a means to achieve other things; "develop sustainable markets" new approach of EnDev!

MHPs quite successful, productive use of energy (mill; cheaper service, cooling (?), processing etc.)

EU will start their energy activities in 2015; GIZ also wants to focus on "access"; probably cooperation? Wind farms, PV schemes in cities (as back-up; big market)

Although electricity generation capacity increased, less transmission and distribution implemented (mainly by AfDB and AFD); rural electrification fund etc.

Government negotiations Germany – Ethiopia towards end of the year; technical and financial cooperation could be combined especially with regard to energy (e.g. hydropower)

Education and vocational training programme

MoWIE is key partner → Ato Gossaye (Alternative Energy Technology Promotion and Development)

MoA especially on regional level and health and education ministries

GIZ is part of informal energy group; last 6 months energy was pushed more than before

Main donors: DFID (more climate), AfDB, USAID, … Jica

In addition informal "Climate Change Partners Group", meeting every 2-3 months; MoEF joining from time to time

RED&FS was formalised because GIZ and Netherlands took initiative!

Energy was already with several ministries, "pushed around"

"which Nexus are we looking at"; connect with SLM is ambitious, sectorial nexus leads to restrictions…; would be good to have EU behind and to have at least 2 EU partners!

GIZ in energy: strategy, policies etc. are no longer on the agenda, more EnDev oriented (output of hh with access to modern energy); WB and AfDB have more say in energy!

Mesfin Mulugeta secretariat of WASH Sector Working Group, MoWIE

Berhane Meskel, regional affairs – communication officer

After exchange of experience with RED&FS… Water Sector Working Group WSWG was established in April 2014; before they were working as a "secretariat"; MoWIE initiated working group, should be led by ministry itself.

2 Technical Committees (will be established in June 2014)

1. Water resource management
2. WASH with 4 working groups / task forces: emergency, rural, urban WASH and hygiene & sanitation

WSWG can learn a lot from RED&FS, interested to cooperate with them (WSWG is still looking for funding, similar like RED&FS secretariat which was financed through multidonor trust fund, mainly from Spanish+WB; 2 persons for secr. + probably 2 more persons)

Donors expect higher efficiency

If donors approach government together, they are more powerful

In Development Assistance Group DAG, only DPs are represented, ministries not involved.

WSWG intends to bring ALL partners together (NGOs not very clearly expressed…) in RED & FS NGOs are NOT included!

WSWG secretariat shall help in networking, administration, coordination etc.

80 NGOs are in the "Watsan Forum"

Cooperation between ministries considered very important: MoA, MoEF, Ministry of Health are also part of working group.

WSWG does biannual joint technical review together and annual review meeting; agree on thematic issues to be analysed I field → field visit together → findings → multistakeholder meeting

e.g. hand dug well for irrigation → MoWIE also support beneficiaries to improve hand dug wells so that they are also appropriate for drinking water; "self supply task force" ??????

most hand-dug wells under PSNP; in this program water supply is also a component but poor implementation

Basin Authorities should coordinate the planning on regional levels

In general, cooperation with MoA is most difficult

MoWIE together with ministries of education and health are implementing "one WASH"; MoA not part of it! "one WASH" means, several projects are somehow bundled through common planning, implementation, accounting, reporting. Not yet signed for funding. WB, DFID, UNICEF, AfDB, agreed to contribute, to go through common WASH account; JICA will be separate

River Master Plans not used, would be useful

Working Group was established to look also at management side (water ressources management!!!) and not only at the development

Normally at woreda level there are 1-2 persons related to MoWIE (in some regions still mines&energy; can be decided by region)

At regional level "Bureau of Water"

Funds are channelled through MoFED; **each of 3 ministries gets a share** (!); fund flow from Bureau of Water" to zonal and then to Woreda level.

2 channels for fund flow:

Channel 1: from MoFED directly to woredas (WOFED), e.g. PSNP

Channel 2: through ALL levels (e.g. ADC); gives more power to regions; regions get funds from MoFED and assign them

Not yet clear which channel will be applied for the "one WASH".

Problem: at woreda level often lack of competent staff → improve training, increase salaries

In many cases WASH Consultants are hired, NGOs cannot be hired; some people work as "contracted staff" for ministries (coordinator gets about 12,000 ETB)

Problem for NGOs: 30:70 relation, meaning their overhead may not exceed 30% and 70% has to reach community

Energy: replace diesel pumps by RE → vision of one WASH; using human faeces for biogas not possible → taboo!; but he knows case where 1-2 communal latrines are used to generate electricity; animal faeces for biogas and fertiliser! Latrines for Biogas + fertiliser in Bahir Dar

Barriers: so many… coordination especially with MoA; budget problems (for WSWG; need funds for secretariat, important for coordination); structural problems (frequent restructuring of ministries leading to staff fluctuations, loss of competences etc.)

Considered positive: WSWG gets positive signs from individual Development Partners, political will exists

Cooperation between ministries very important! High policy level must understand and feel the need for intervention.

Teshome Mullu Zenebe, PCU: LISRMP-NG, program coordinator

Bekele, team leader NRM

Program today in 12 woredas (before in 19; urban and those in the North taken out and 2 new ones); although overlap with other programs (e.g. national SLMP / GIZ) no overlap in watersheds; well coordinated so that all benefit…

3 project components

Under **NRM**: 1) Integrated watershed management: afforestation, homestead plantation, natural forest protection, soil conservation, plants for different purposes 2) Parks (at distance of 160 km Simien; at distance 320 km at Sudan border): afforestation around park, water supply, park management, tracking routes 3) land administration: primary and secondary book of holding, communal land registration

Under **livelihood improvement**: livestock: improved breeds, improved forage, veterinary clinics; bee keeping related with area closure; feed processing plant managed by cooperative, high nutrition fodder based on by-products from oil processing and others, grass etc.; bought mainly by small dairy farmers around Gondar. Milk processing plant already since about 10 years. Crop varieties, fruits, horticulture, vegetable; first some seedlings were given for free for trials then scaling-up on credit basis (payback 2-3 years), marketing: training of farmers in masonry, carpentry, weaving etc. construction of market infrastructure.

Poor credit repayment because people are poor?!

Credits mainly given to poor people at low interest so that they can start improvements; credit repayment on woreda level (at cooperative office; already existing since long time), probably too far, no social pressure/control…

Program management + M&E: capacity building training for woreda experts in agricultural sectors, watershed management, new varieties of crops, fruits etc.; provide computers

Most of woreda towns have electricity

About 15-20 kebele in 1 woreda; woreda size about 30-100 km wide; 1 watershed about 500-5000 ha.

FTC in each kebele, only some have electricity.

All DAs work on the basis of the "guideline"; good document, integrated approach; all watershed aspects well addressed (including fuel saving, hand dug wells, irrigation, conservation of soil and water etc.

In case of revision of this guideline: focus not only on agriculture but also health, clinics, schools, energy aspect (also hydropower); generation of income; but actually more important to correctly apply it than to revise it

"Water desk" at woreda level: technical issues; "we work with water resource experts"; max staff 5-6 persons

Department of Water (at zonal level): do technical assessment, supervise, construction of irrigations etc.

Community based annual planning; watershed committee plans → integrated in woreda plan → integrated in regional plan etc.

Watershed committees only supported by agricultural experts; NO water bureau staff participate!!!

Only when plans are consolidated then other (water etc.) experts are involved!

"real problems have to be formulated by the communities"

Farmer is specialist in many fields; their knowledge is nowadays very much recognised; strategy is to improve the indigenous knowledge

Question: better have one generalist or several specialist?

Energy: woodlots in homestead; ICS, reforestation

Useful would be: electrification for "user groups" and their activities; e.g. milk

8 ANNEXE 3: Outcome Feedback Rounds in Gondar and Addis

Outcome of final feedback round with stakeholders in Gondar

- number of woredas already reduced from 19 to 12, not all needs can be fulfilled with limited resources → compromise
- ICARDA: "to a certain extent nexus is unconsciously applied"; if nexus was known before, approach could have been more complete
- It was discussed whether similar to DAs (focus on agriculture) and HEA also water and energy experts would be required at kebele level. Both project representatives hold the opinion that more and better qualified water and energy experts are required rather on woreda level (for several kebeles). Water experts at watershed level are not required since they would not be needed all year round. E.g. the general agreement for O&M of water points is that the water committee (5 persons) is responsible for minor maintenance and the woreda experts come in for bigger maintenance work
- One important problem is that relevant information (e.g. on saving capacity of ICS, different qualities etc.) although it exist at various levels is NOT made available at grassroot level

Outcome of final feedback round with stakeholders in Addis

- Since no (!) representatives of ministries took up the invitation to the feedback round the critical question was raised whether the nexus subject is of interest for them…However, in general, the policy level is considered to be of importance and even the involvement of the Council of Ministers was discussed (different opinions).

- MoWIE most difficult but important; at least water and energy are already under one ministry
- Application of integrated approaches is often problem of capacity and availability of time for coordination
- Important to consider funding mechanisms → through several ministries to force the sharing of funds
- MoFED probably too much focused on fund disbursement whereas Planning Commission who also establishes GTP is directly under the Prime Minister, more powerful and important → take them into consideration
- CRGE which is coordinated by MoFED is considered as a possible entry point
- Important to share outcome of the current study and further nexus information with Ethiopian stakeholders
- EU, and at least 2 member countries (→ ADC + GIZ) would be strong to promote the approach; ADC should together with these strategic partners, send a proposal – showing synergies by bringing together planned activities - to DAG; e.g. combination of ADC activities and biodiversity approach; GIZ SLMP and ADC SRMP together with EU energy activities (SNV biogas)
- More evidence is needed → elaborate case studies of nexus approach
- If multi-donor approach, then harmonised logframe and harmonised M&E system are indispensable
- EU so far did not invest much in energy sector, is changing now → energy is the focal area of European Development Framework EDF → significant funds earmarked for renewable energy production, access and energy efficiency

9 ANNEXE 4: References

- German Development Institute DIE; Briefing Paper 3/2013; Post 2015: Why is the Water-Energy-Land Nexus Important for the Future Development Agenda?
- Understanding the Nexus, SEI 2011

Ethiopian policy documents, strategies etc. :

- **Ethiopia's Climate-Resilient Green Economy**, Green economy strategy, Federal Democratic Republic of Ethiopia, August 2011
- **Growth and Transformation Plan GTP** 2010/11 – 2014/15 ; Volume I : Main Text, Ministry of Finance and Economic Development, Nov 2010, Addis Ababa
- **Ethiopia's Agricultural Sector Policy and Investment Framework (PIF) 2010 – 2020**, Draft Final Report, 15 September 2010, Ministry of Agriculture and Rural Development = "CAADP Comprehensive Africa Agricultural Development Program – Ethiopia Investment Plan"
- FDRE/MoARD, **Agricultural Growth Programme (AGP)** Project Appraisal Document. 2010, Addis Ababa
- FDRE/MoARD, **Community-based Participatory Watershed Development**; A Guideline. 2005, Addis Ababa
- FDRE/MoA, **Disaster Risk Management and Food Security Strategic Investment Framework** (DRMFS SPIF). 2013, Addis Ababa
- FRDE/MoARD, Revised Project Implementation Manual for Sustainable Land Management Project (SLMP). 2011, Addis Ababa.
- FDRE, **One WASH** National Program, Program Document. 2013, Addis Ababa
- FDRE, **Rural Development Policy and Strategies** (RDPS). MoFED, Addis Ababa, 2003.
- FDRE, **Ethiopian Water Sector Policy**. 2001, Addis Ababa
- **Environmental Policy of Ethiopia**, 1995, Addis Ababa
- MoADR, **Food Security Programme,** 2010-2014. Household Building Asset Component. Addis Ababa, 2009
- MoARD, **Productive Safety Net Programme** (PSNP) Component Document. 2010-2014. Addis Ababa, 2010

ADA documents:

- The Nexus between Water, Energy and Food Security – A New Approach for an Old Issue?, ADA
- Three-Year Programme on Austrian Development Policy 2013-2015, Federal Ministry for European and International Affairs, Directorate- General for Development Cooperation

- OEZA Landesstrategie Äthiopien 2014-2016
- SERI Nexus Guidance Document (draft version)
- Various project documents and evaluation reports of LI-SRMP and ICARDA project

Internet Links:

- http://www.water-energy-food.org/
- http://www.erd-report.eu/erd/report_2011/report.html