Rurbanisation, urban expansion, and thickening rural-urban links in rural Ethiopia 2010-13

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Introduction

Urbanisation is a process during which rural places are more or less gradually transformed physically and socially through the dense construction of buildings and infrastructure. In Ethiopia the urbanisation process has been accelerating in the last ten years: the estimated urban population grew from 11,958,476 in 2005 to 20,202,815 (19.8% of the total population) in 2016[2], and the estimated annual rate of change between 2010 and 2015 was 4.89%[3]. The official Ethiopian definition of 'urban' is 'localities of 2,000 or more inhabitants'[4] but many 'mini-urban 'localities with fewer inhabitants have urban infrastructure and buildings, and the urbanisation of rural areas is proceeding apace. Looking at Ethiopia's landscape at any point in time there is a continuum of 'urbanity' from the tiny 'towns' emerging around kebele public buildings to the rapidly expanding city of Addis Ababa.

Government interventions have been key in supporting this urbanisation. Rural communities have benefitted from the national road-building programme which has encouraged the establishment and rapid growth of towns along road routes, providing new markets and services for rural hinterlands and new demand for their products. The move to give greater responsibility to weredas, starting in the early 2000s, led to a burgeoning of new administrative wereda towns, many of which had flourishing urban economies by the start of the WIDE research in 2010. The Ethiopian Government Portal reported 800 weredas containing 5,000 urban and 10,000 rural kebeles[5]. Already established small and medium-sized towns and larger cities also grew rapidly, partly as a result of the increasing rural to urban migration (see the chapter on migration).

On a day-to-day basis urbanisation is socially constructed by the actions and interactions of many people. Government, rural residents and private entrepreneurs are all involved in the development of new urban spaces and the expansion of existing ones on rural land. Top-down urbanisation is initiated at higher government levels, while urbanisation from below involves interactions among local government officials, landholders and other community members. Top-down and bottom-up urbanisation processes often interact.

The WIDE data for 2010-13 shows that all twenty communities were engaged in two urbanisation-related processes: *rurbanisation* involving the construction of 'urban' infrastructure and buildings within the kebele boundaries; and *thickening rural-urban linkages* to a variety of towns. In addition in eight of the twenty communities rural land had recently been lost as a result of *urban expansion* or 'creep[6]' of bordering towns, and in six others losses were likely in the not-too-distant future. These developing rural-urban dynamics were contributing to local agricultural modernisation, industrialisation, servicisation[7], and 'consumerisation'[8], bringing changes to community beliefs and practices and people's lifestyles, aspirations, relations and well-being.

[2] http://www.worldometers.info/world-population/ethiopia-population/
[3] https://www.cia.gov/library/publications/the-world-factbook/fields/2212.html. This urbanisation rate of 4.89% compares with a population growth rate of 2.71% in 2010 and 2.48% in 2016.
[4] http://unstats.un.org/unsd/demographic/sconcerns/densurb/Defintion_of%20Urban.pdf
[5] http://www.ethiopia.gov.et/en_GB/regional-states; accessed 20 June 2016
[6] This useful concept acknowledges a process which is likely to continue.
[7] Servicisation involves increases in agriculture & business services, human development services and personal day-to-day services
[8] 'Consumerisation' describes the process of shifting from household self-sufficiency to participation in markets for food, consumer goods, and services.

Rurbanisation is the construction and maintenance of 'urban' infrastructure and buildings within rural kebele boundaries, a process which accelerated everywhere in rural Ethiopia following the 2005 election. The buildings include government buildings providing health, education, extension and community management services, commercial buildings used by private entrepreneurs and co-operatives, and urban-style residences usually clustered around the government buildings. Internal roads and paths enable people to get about, separate infrastructures provide the utilities of electricity, mobile phones and drinking water, while further water structures provide irrigation.

Somodo kebele centre

Thickening rural-urban linkages affect rural economic modernisation and people's well-being in five main areas: trade, work, investment, access to modern human development and well-being services, and access to modern information:

Rural-urban linkages in Oda Dawata

- *Rural-urban trade* benefits both rural and urban residents. Urban demand for natural resources and agricultural and industrial products stimulates rural investment in modern technologies and inputs, and provides opportunities for rural traders to network with urban traders. Rural exports provide natural resources, staples, vegetables and fruit for urban consumers, hospitality service providers, and are inputs for value-added production in urban and industrial areas. Rural demand for urban products and services boosts urban economic growth.
- *Commuting and migrating to towns*: incomes earned in town may be used to invest in agricultural or non-farm activities at home. Workers may also learn new non-farm skills. On the negative side poor rural migrants may not improve their livelihoods much and face risks to well-being (see chapter on migration).
- *Investment:* richer rural households invest in urban housing and sometimes businesses while urban residents may invest in rural agriculture and non-farm businesses. Families with both rural and urban dwellers may benefit both ways.
- *The use by rural residents of modern human development services in towns* leads to improved well-being and higher quality human resources and also provides clients for government and private service providers.
- Rural people who travel to towns to work, shop or use services are exposed to *new ways of thinking and acting* while those who stay at home learn from migrant relatives and friends.

Urban expansion into rural areas refigures landscapes and may lead to regular kebele boundary changes as the expansion continuously eats into the rural land. Expanding towns raise demand for food and natural resources from the their rural hinterlands and bring remote areas closer to urban economic opportunities and services. They also affect land prices. The process is often disruptive and can generate local conflicts.

Urban expansion in Sirba

In rural Ethiopia these three urbanisation processes have been affecting different kinds of communities in different ways, depending on their location, terrain, ecology, climate, livelihood system and history. In each community the combination of levels and types of rurbanisation, expansion of local towns, and rural-urban linkages, enabled and/or constrained the export of agricultural and natural resources, opportunities for non-farm business and employment, and access to education, health services and modern information.

Different kinds of people make different contributions to urbanisation processes and enjoy and/or suffer different consequences. Combinations of gender, age, wealth, education, household location, and personal aspirations influence an individual's use of urban-style infrastructures, utilities and services within rural communities, and their use of, and connections with, external towns. For example, the urban experiences of rich male traders living adjacent to main roads are likely to be quite different from those of poor young women leaving rural communities to try to make a living in distant cities.

The two most influential community and household factors determining how urbanisation processes affect people are poverty and remoteness. They have somewhat different consequences for people of different genderages[9] whose daily activities depend to a large degree on whether they are male or female *and* how old they are. There is no room in this chapter to consider poverty and urbanisation thoroughly though there is some discussion in the conclusion. There is more on poverty and genderage differences in the chapter on inequality.

The rather woolly concept of 'remoteness' used in the chapter combines information about distance along the routes to urbanised settlements with the quality of the routes and the modes of transport along them. In relation to internal rurbanisation household remoteness is important, while rural-urban links are affected by community remoteness. As Box 1 illustrates people living in households which are remote from kebele infrastructures have poor access to services and markets.

Box 1: Differential access to markets and services within communities

Extracts from WIDE3 community reports

Adele Keke: The remoter areas that are further away from the *kebele* centre (Adele Tabia village) and the main road are noticeably worse off in terms of access to safe drinking water and water for irrigation, and are at risk of acute water shortages; far from health services (especially in an emergency), schools and other *kebele* administrative services; without (legal) electricity connections; and most are inaccessible by road. However residents of remote villages are still able to make their livelihoods by growing chat, maize and sorghum, just like other less remote villages. Some remote villages are closer to services in neighbouring *kebele*s, e.g. the health centre in Haramaya, and schools in Kersa and Adele 01. Villages and farmlands on sloping areas e.g. on Mount Keke are vulnerable to soil erosion and in some years landslides and floods (Carter 2013a: 31).

In *Harresaw* people living in Ekunta *got* and in Harresaw *kushet* face several disadvantages compared to other places in the *tabia*: distance to the road and transport and to the *tabia* centre and various services, no access to mobile phone and electricity, and above all, acute shortage of any kind of water. Land is also said not to be fertile (Dom 2013b: 22).

Shumsheha: Tisho *got* is in a quite remote part of the *kebele* and residents have to travel far to get to the central Shumsheha *got*, for *kebele* administrative and health services, the market, the main road with transport out of Shumsheha. Tisho was the worst affected by hail and floods last year and many households lost crops and livestock. However, they are advantaged by having better land access with a bigger grazing area on the hillside below their *got*. Residents of Ketef *got* are also far from Shumsheha *got* but closer to Lalibela town centre; however their land is the most mountainous and infertile in the *kebele*. People who used to have the most fertile land on the plain area are now some of the poorest in

[9] The combination of gender and age describes personal identity in a more meaningful way than the use of gender and age separately.

the community: their land was taken for the airport development and some have already spent all the compensation money received (Carter 2013b: 34)

Aze Debo'a: Households living on the hillsides are not necessarily poorer. They tend to have larger landholdings, though less fertile and prone to erosion. But they have less access to services and development activities. DAs and HEWs visit them less often. Schools and water points are more distant. There is no hope for them to get access to electricity (Dom, 2013a: 23).

Kormargefia: Infrastructure and access to markets and transport vary considerably within the community, contributing to spatial inequality. Close to the main Addis Ababa to Debre Berhan road, there is good market access for those seeking to buy agricultural inputs or selling produce. In contrast access to other parts of the community is very problematic, especially in the rainy season when the level of the rivers rises. While a temporary wooden bridge was constructed by the community in Milki sub-kebele, there is no bridge in the east of the kebele. As a result, market access is very problematic and people have to walk a long way to find a way to reach the rest of the kebele (Lavers, 2014: 40).

Oda Dawata: The poor woman head of household explained that

> Communities in Chebote and Akiyya have seriously less access to government services. They have to travel too long to get water and only get health services after a long journey on foot or using pack animals. They have to carry cereals to grind to Makiro on their backs. They cannot easily get to Asela and back; they have to leave early in the morning and get back before sunset due to the long walk. Those living in the remote and slopy area suffer from these problems while those living on the roadside suffer from none of them.

(Gordon, 2014b: 39).

Oda Haro: There are also large differences in accessibility between the different zones, and this makes a difference in terms of ability to transport crops and livestock out to markets and to access services in the nearby towns. In relation to markets, farmers whose farms are accessible to local traders have no transportation costs as their harvest is collected from them (Gordon, 2014a: 45).

Somodo: People living along the road are privileged whereas people in areas like Gerdi are less well served. In Gerdi, where most of the Yem live, people have to use kerosene for lighting, and walk an hour to fetch water (Dom, 2013c: 47).

There are different kinds of rural community remoteness. First, how near the community is to a what kind of town is important. Although the WIDE3 communities were not chosen with urbanisation processes in mind, and were all more remote in the mid-1990s, it emerged that they could be sorted into four different kinds depending on their proximity to different kinds of town: 1) communities some distance from any town; 2) communities bordering municipalities; 3) communities bordering larger towns [populations of 20,000-50,000]; and 4) communities adjacent/near to cities (populations of > 100,000). A second aspect of community remoteness relates to the density of urban settlements in the vicinity of the community. For example, a community not adjacent to an urban settlement but near the urban-industrial corridor from Addis Ababa to Bishoftu is practically less remote than a community adjacent to a town which is far from any other town. A third aspect is the distance of the community from the capital in the centre of the country.

Map 1 shows the locations of the twenty WIDE3 communities with information about their proximity to the nearest town, while Table 1 lists the distances to towns which are used by the communities and their distance from Addis Ababa distinguishing between those without a border with a town, those bordering municipalities, those bordering larger towns, and those bordering cities.

Map 1: The locations of the WIDE3 communities in wider Ethiopia

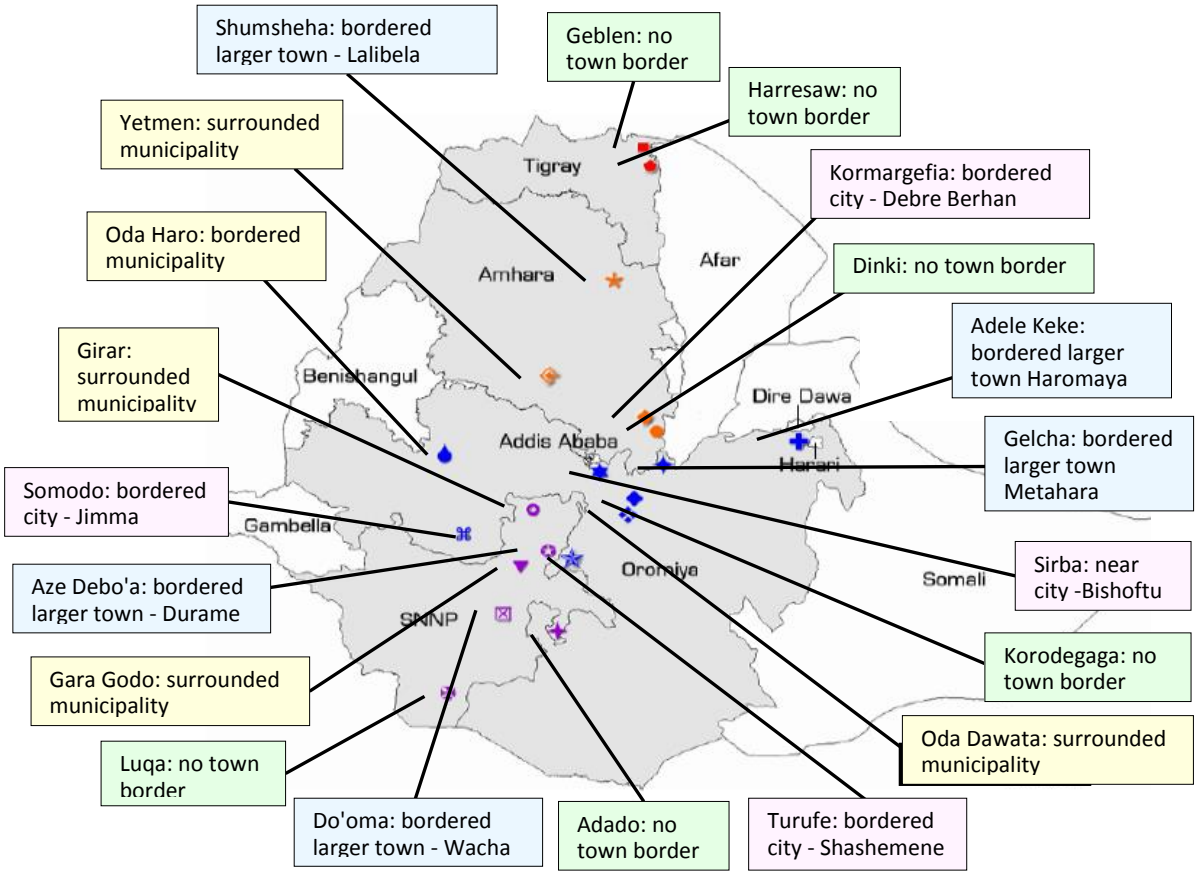


Table 1: The locations of the WIDE3 communities in relation to their nearby towns

Remote	Surrounding or adjacent to municipality	Adjacent to larger town (population 20-50,000)	Adjacent or near to city
Korodegaga; Sodere crossing raft on foot; Awash Melkasa 8 km from Sodere; wereda town Dera 19 kms crossing raft; 25 km using dryweather road; Adama 24 km from Sodere – estimated population 2015 324,000*, Addis Ababa 120 kms	**Gara Godo**; Gara Godo municipality recently established at centre, Areka on Route 51 11 kms, Wolayita Sodo 41 kms one way, Addis Ababa 293 kms the other	**Do'oma**; border with Wacha- estimated population 2015 20,100* 12 kms on allweather road to road between Sawla 88 kms one way and Wolayita Sodo 144 kms the other; 220 kms to zone capital Arba Minch; Addis Ababa 380 kms	**Somodo**; border with Jimma – estimated population 2015 177,900*, on gravel road 4 kms to Belida one way and 17 kms to Jimma the other, Addis Ababa 369 kms
Dinki; wereda town Aliyu Amba 8 kms on path, from there Ankober 15 kms, Debre Berhan 42 kms, Addis Ababa 173 kms	**Yetmen**; Yetmen municipality established at centre many years ago; on Route 31 Bichena 17 kms, Debre Markos 64 kms, Addis Ababa 250 kms	**Shumsheha**; border with Lalibela – estimated population 2015 27,200*, allweather roads to Bahir Dar 312 kms and Addis Ababa 674 kms	**Turufe**; border with Shashemene – estimated population 2015 147,800*. 3 kms from Route 7 leading to Addis Ababa (229 kms)
Geblen; nearest small town Adi-kelembes 45 minutes' walk; Edaga Hamus 20kms; wereda town Freweyni 39 kms; zone town Adigrat 40 kms -estimated population 2015 86,100*, 847 kms to Addis Ababa	**Oda Dawata**; Gonde municipality established at the centre of the kebele; on Route 9, Assela 16 kms one way, Adama 61 kms and Addis Ababa 150 kms the other	**Gelcha**; border with Metahara – estimated population 2005 21,348** including workers at the sugar factory, on Route 1 to Adama 134 kms and Addis Ababa 217 kms	**Kormargefia**; border with Debre Berhan – estimated population 2015 102,100*, on Route 2 Debre Berhan 10 kms one way and Addis Ababa 126 kms the other

Remote	Surrounding or adjacent to municipality	Adjacent to larger town (population 20-50,000)	Adjacent or near to city
Harresaw; wereda town Atsbi 17 kms, from Atsbi Wukro 26kms, Mekelle, 58 kms, Addis Ababa 819 kms	**Girar**; bordering Imdibir municipality established many years ago; on gravel road from Hosaena 94 kms one way to Wolkite 32 kms and Addis Ababa 182 kms	**Aze Debo'a**; bordering Durame – estimated population 2015 46,800* 12 kms on gravel road to Route 7 to Wolayita Sodo 61 kms, allweather road north to Route 51 to Addis Ababa 269 kms	**Sirba**; On Route 1 20 kms from Mojo one way and 20 kms from centre of expanding Bishoftu – estimated population in 2015 147,100* the other, Addis Ababa 80 kms
Luqa; Brayle/Woito 15 kms; wereda town Key Afer 21 kms; zone town Jinka 63 kms – estimated population 2015 38,700*, Addis Ababa 641 kms	**Oda Haro**; bordering relatively new Tibe municipality on Route 4. Bako 17kms and Nekemte 94 kms one way, Ambo 110 kms and Addis Ababa 224 kms the other	**Adele Keke**; bordering Haramaya – estimated population 2015 45,200*, on Route 10 23 kms from Harar, Dire Dawa 23 kms, Addis Ababa 470 kms	
Adado; wereda town Bule 10 kms; zone town Dila25 kms – estimated population 2015 112,900*, Addis Ababa 381 kms			

* Estimated population sizes from http://www.citypopulation.de/Ethiopia.html accessed 27/08/16
** Estimated population from https://en.wikipedia.org/wiki/Metehara

In the remainder of the chapter I describe and compare the ways in which the main features of the three urbanisation processes had worked in the twenty WIDE3 communities up to the time when fieldwork was done in each of them[10]. Sections 2-4 summarise and discuss the WIDE3 evidence on rurbanisation, urban expansion into rural spaces, and thickening rural-urban linkages, while Section 5 briefly describes the combined effect of the urbanisation processes on each of the communities. The evidence in these sections is organised according to the first definition of remoteness: type of nearest town. Section 6 concludes and points to some emerging policy issues.

Rurbanisation - the WIDE3 evidence

Rurbanisation, community modernisation and well-being

Rurbanisation contributes to wider community modernisations in a range of ways as Table 2 shows.

Table 2: Some contributions of rurbanisation to economic modernisation in rural areas

Rurbanisation	Agricultural modernisation	Industrialisation	Servicisation	Well-being*
Urban settlements	Demand for crops, vegetables, milk, meat from non-farmers	Buildings for manufacturing enterprises	Marketplaces, shops, other service business premises; private clinics and kindergartens; religious buildings	Widening choice of food and other household goods to buy, socialising and entertainment
Government buildings housing services	Fewer days lost to illness; Better educated farmers Storage; Farmers' Training Centres; Agricultural extension and vet offices;	Educated people open to new things	Health Posts, Health Centres hosting services and health education; Schools providing education	Improved health & nutrition, skills & knowledge, raised aspirations, wider vision of life

[10] Early 2010 in Geblen, Yetmen, Dinki, Korodegaga, Turufe and Girar; late 2011 in Harresaw, Shumsheha, Gelcha, Adele Keke, Aze Debo'a, Gara Godo, Do'oma, and Luqa; 2013 in Kormargefia, Sirba, Oda Dawata, Oda Haro, Somodo and Adado.

Rurbanisation	Agricultural modernisation	Industrialisation	Servicisation	Well-being*
Internal roads and paths	Ease of exporting crop and livestock outputs (grain, potatoes and other vegetables, fruit coffee, chat, milk, eucalyptus trees and importing modern inputs and machinery	Ease of exporting stone, gravel, sand	Transport services Affects ease with which residents can travel for services within & beyond kebele	Getting about easier generally; better access to health services in emergencies
Electricity infrastructure	Electricity for irrigation pumps	Use of tools, e.g. carpenters, grainmills. People can work at night	Electricity service generally providing light, charging phones, powering domestic appliances. Used for services such as barbering, TVs in bars, fridges in restaurants	Students can study at night; domestic work made easier; TVs and radios, lit public walkways are safer
Mobile phones	To get technical information (e.g. from the agricultural extension hotline 8028[11]) and price information from urban-based traders and informants	Contacting clients	Mobile phone service, repairs, phone charging	Keeping in touch with relatives and friends elsewhere; health emergencies where there are ambulances
Water infrastructure: reservoirs, irrigation, drinking water	Irrigation for high-value crops for export out of the community: vegetables, fruit, sesame;	Water for coffee-washing plants	Safe water points Water important for health and hospitality services	Irrigated vegetables and fruit improve diets and bring in income. Safe water prevents disease

*Ways in which rurbanising infrastructures can contribute to ill-being are not considered here.

Urban settlements inside communities generate demand for agricultural products and host infrastructure for manufacturing and service businesses whose products can be bought by those living in the rural surroundings. Government buildings potentially house services providing community management, agricultural extension, veterinary care, preventive and curative health care and education.

The quantity and quality of internal roads and paths affects the ease of exporting crop and livestock outputs, stone, gravel, sand, and trees, and importing modern inputs and machinery for agricultural or industrial purposes. They also determine the kinds of transport services which can be provided and the ease with which residents can get about generally and travel to markets and for health and education services within and beyond the kebele.

Electricity can be used to power larger irrigation pumps, for non-farm business activities, by for example, carpenters, metal workers, barbers, and hospitality service providers, for night work and study, to power mobile phones and household electrical goods, and it enables people to walk more safely along lit public walkways. Mobile phones allow people to communicate with relatives and friends within and beyond the community. Farmers can get information about prices of inputs and outputs, call the vet and get information from Development Agents and the agricultural extension service hotline (8028[12]). Kebele officials, Development Agents and health extension workers can communicate with wereda officials and sub-kebele officials and development team leaders. Where there are ambulances they can be called for sick people and women in labour needing skilled help. Potentially they could be widely used to download 'apps' containing useful information related to different development sectors.

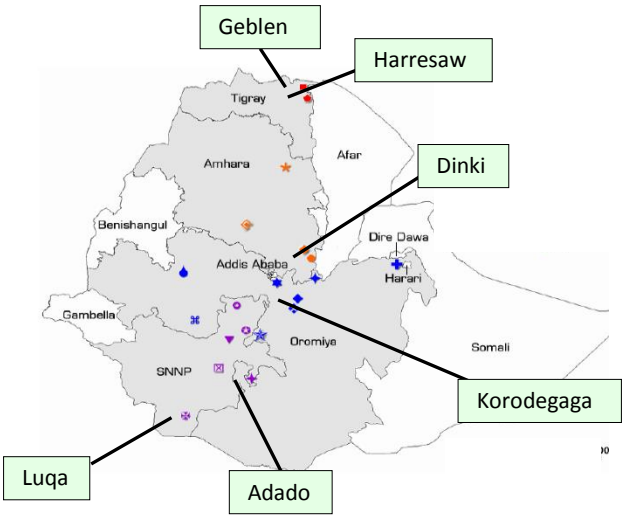
Water infrastructures can provide accessible safe drinking water improving health and well-being and water for irrigation which can be used to produce high-value cash crops. Coffee-washing plants require reliable water supplies.

[11] http://www.ata.gov.et/highlighted-deliverables/8028-agricultural-hotline/
[12] http://www.ata.gov.et/highlighted-deliverables/8028-agricultural-hotline/

In each community the difficulty of the terrain, the climate, the settlement pattern, and the physical locations of buildings and other infrastructures contributes to differential access to safe water, irrigation, electricity, mobile phone use, modern health and education services, and urban personal services. The WIDE evidence on the six elements of rurbanisation is summarised in the Appendix in Tables A1-A24. These tables provide summary descriptions of rurbanisation in each of the twenty communities which are worth reading in their own right. They also provide the basis for the summaries, conclusions and discussions in this section which has sub-sections on the four categories of community: 1) communities some distance from any town; 2) communities bordering municipalities; 3) communities bordering larger towns; and 4) communities bordering cities.

Rurbanisation in communities some distance from any town

Map 2: Rurbanisation in communities with no town border



Six of the WIDE communities were some distance from any town. They included the three drought-prone and aid-dependent communities researched in early 2010 (*Geblen*, *Dinki* and *Korodegaga*), two drought-prone and aid-dependent communities researched in late 2011 (*Luqa* and *Harresaw*), and a coffee-exporting and self-sufficient community researched in 2013 (*Adado*). In the Appendix Tables A1-A6 there are descriptions for each community of settlement patterns, health facilities and schools inside the kebele, internal roads, paths, bridges and transport, electricity and mobile phones, drinking water structures, and irrigation structures. These have been used to provide the summaries in this section.

Settlement patterns in the communities some distance from any town

Geblen, *Harresaw*, *Dinki*, and *Adado* were in the mountains while the land in *Korodegaga* and *Luqa*, which were in the lowlands, was mostly flat. In all the communities there were settlements distant from the kebele centre some organised in hamlets and some with scattered homesteads. The self-sufficient coffee-exporting community, *Adado*, had a relatively long-standing and larger small town at its centre, which had developed around kebele buildings constructed during the Derg. A similar urban development process had recently started in the two drought-prone communities in East Tigray, *Geblen* and *Harresaw*. In agro-pastoralist *Luqa* in South Omo a roadside town was starting to develop around the kebele building, Health Post and school. There was no urbanisation in *Dinki*, which, since WIDE 1 in 1994, had become one of five *gots* in a larger kebele whose centre, Chibite, had just started to urbanise. Nor was there any urban development in *Korodegaga*, near Sodere, where the kebele centre was on one edge of a community with nine scattered villages and cut off from the main road to Sodere by the river Awash. (See Table A1 for more details)

Health and education services inside the communities some distance from any town

Health and education services within the remote kebeles had improved since 2003. Five of the communities had acquired Health Posts; *Adado* had a Health Centre which was said to replace the Health Post. *Harresaw* had a Health Centre on its border. Three communities had Grade 1-8 schools in the kebele centres and *Harresaw* had one on its border. *Luqa* had a G1-4 school and *Korodegaga* a G1-5 school and in both the communities were working to extend to Grade 8 eventually. Four communities had satellite schools for younger children. However, despite these improved facilities,

residents living in scattered settlements faced problems getting to them, one factor being distance and another the existence and/or quality of paths and roads. (See Table A2 for more details).

Internal roads and paths in the communities some distance from any town

Access to main roads and the availability and cost of transport affect the movement of people and goods in and out of rural communities. Main roads with passing cars, minibuses, and Isuzu trucks bisected *Luqa* and touched on *Harresaw*'s border, although the connection with the kebele centre in *Harresaw* was a dryweather road frequently impassable in the rainy season. The feeder road in *Geblen* was all-weather, though in poor condition, and there were regular, if infrequent, private minibuses. Connections to main roads in the other three communities were long, dryweather and not in very good condition at the time of research. The absence of bridges was a problem in three communities.

There had been recent improvements to other internal roads and paths in all communities except *Korodegaga* through Food-for-Work or community Public Works making travelling inside the communities somewhat easier. In the dry season vehicles could access some parts of *Harresaw*, *Korodegaga* and *Luqa* and motorbikes could travel the narrow paths in *Adado*. Walking was the main form of transport in all communities. There were a few bicycles in two, donkeys for transporting goods everywhere, mules in three communities, horses in one, and camels in another.

Poor internal roads in *Korodegaga* led to the failure of a sand youth co-operative since the transport was too expensive, though traders came with lorries to buy irrigated tomatoes and onions at the farmgate. Poor roads in *Harresaw* hindered the loading of trees for sale and the passage of the modern machines needed to extract honey from the modern beehives in the forest. Poor roads in *Adado* were a major constraint to trade and the coffee business. In *Dinki* irrigated vegetables were carried on paths to Aliyu Amba (8kms) by donkeys, camels, and people. In *Luqa* the few growing the new cash crop sesame sold it to traders on the main road.

One reason that feeder and internal roads were not in better condition was that work to improve and maintain them was done through community work with little technological or resource input from the wereda. For example the wereda provided some gabions for *Adado* but they were not used as no-one had been trained in what to do with them. (See Table A3 for more details).

Electricity and mobile phones in the communities some distance from any town

Before 2005 people in these communities some distance from any town had neither electricity connections nor mobile phones. Table A4 shows that in the subsequent years considerable progress was made in both these areas. Two communities had both grid electricity and mobile phone connections at the time of fieldwork. One community had electricity but no mobile phone signal and the three without electricity all had some mobile phone signal.

In the three communities with electricity it was mostly use to provide light and to charge mobile phones, although it could also contribute to economic production. It was very important for the coffee washing plant in *Adado* and was necessary to power the unused large government irrigation pump in *Korodegaga* which had no grid connection. A number of small businesses in *Adado* town benefitted and a few bars in the centres of *Geblen* and *Harresaw* used it to power TVs. In two of the three communities with electricity only a small minority of households had access to it.

Only in flat *Korodegaga* was the mobile phone service ubiquitous and reliable. In the other four communities with connections there were problems of patchy, poor and/or erratic access. Those without electricity had to travel to charge their phones. (See Table A4 for more details).

Drinking water in the communities some distance from any town

There was no safe drinking water in *Dinki* or *Korodegaga*; in the other four communities some people had access. In *Luqa* three of the seven sub-kebeles did not have clean water points. In *Harresaw* only five of the nine wells were functional. In extremely drought-prone *Geblen* water

shortages in the dry season were severe and many people had to go a long way to fetch water. A new waterpipe connecting *Adado* town to a spring in the mountains had been destroyed by a landslide after a few months. In two communities people complained of lack of response from the wereda. (See Table A5 for more details).

Irrigation infrastructures in the communities some distance from any town

Expanding irrigation in drought-prone and aid-dependent *Korodegaga* and *Dinki* had been used by substantial numbers of farmers to grow high-value vegetables and fruit for sale in towns. In flat *Korodegaga* water was pumped from the Awash, although there was talk of rehabilitating the large Government pump and also of introducing spate irrigation. In hilly *Dinki* canals fed water from higher springs and some pumped water from the river. 16% of households in *Harresaw* had small irrigated plots, using a reservoir, ponds, wells, pumps, and drip irrigation, on which they grew barley for home consumption and vegetables, some of which were sold locally. Some farmers in *Geblen* had very small irrigated plots using small-scale spring development and a few rock catchments; there was no groundwater. About 9% of pastoralists in *Luqa* used traditional water diverting channels to grow crops mostly for home consumption, though recently a few had produced sesame and sold it for good prices. In coffee-exporting *Adado* there was no irrigation infrastructure or technology apart from a few near rivers carrying water for vegetables. (See Table A6 for more details).

Rurbanisation in the communities some distance from any town

Table 3 summarises the findings on urban infrastructures described above. In all six communities there were settlements distant from the kebele centre, some organised in hamlets and some with scattered homesteads. In terms of urban settlement there were three kinds of community: those with no urban settlement – Korodegaga and Dinki (2), those with some urban settlement around the kebele buildings but not on a main road – Adado, Harresaw, and Geblen (3), and one where ribbon settlement along a main road had just started - Luqa.

Table 3: Rurbanisation in the communities some distance from any town

	Settlement patterns	Internal roads and transport*	Grid electricity	Mobile phones	Drinking water	Irrigation	Health bldgs	Schools
Internal urban settlement around the kebele buildings								
Adado, remote, mountainous, international niche coffee exporter, self-sufficient, long rainy season SNNPR, 2013	Established small town with outside houses scattered fairly densely	Narrow internal dryweather roads; motorbikes, mules, horses, donkeys, walking	In town and surrounds	Patchy, poor, erratic access	Some safe water	None	HC	G1-8
Harresaw, remote, plateau & escarpment, export of trees and honey, Tigray; end 2011	Small growing urban settlement, five hamlets, two very remote *kushets*	Vehicles pass on edge on main road; dry-weather internal roads bicycles, donkeys, walking	In tabia centre	Patchy with some interruptions	Some safe water	Small plots and sales	HP	G 1-8 + satellite
Geblen, very remote, mountainous, Tigray; beginning 2010	Small growing urban settlement, two very remote *kushets*	Poor all-weather road to centre - minibuses; 1 gravel path, rest dry-weather; donkeys, walking	In tabia centre	None	Very scarce safe water	Very small plots and sales	HP	G1-8 + 2 satellites
Early ribbon development along the main road								
Luqa, very remote, mostly flat, livestock exports, SNNPR; end 2011	7 sub-kebeles, incipient urban settlement along main road	Small dry-weather roads; cars can access some parts; donkeys, mules, bicycles, walking	None; 2 solar panels; wind vane for water pump	Mobile tower broken	Some safe water	9% using customary irrigation	HP	G1-4
No urban settlement								

	Settlement patterns	Internal roads and transport*	Grid electricity	Mobile phones	Drinking water	Irrigation	Health bldgs	Schools
Dinki got, very remote, mountainous, vegetable & fruit exports, Amhara; beginning 2010	Scattered hamlets perched on hillsides	Dry-weather paths, camels, donkeys, mules, walking	None	Very recent patchy access	No safe water	Cash crops and daily labour	HP	G1-8 + satellite
Korodegaga, remote, flat, drought-prone, aid-dependent, irrigated vegetable exports, Oromia, beginning 2010	Nine villages scattered over large area	Dryweather road to kebele centre, lorries come for vegetables; donkeys, walking	None	Full service	No safe water	Cash crops and daily labour	HP	G1-5

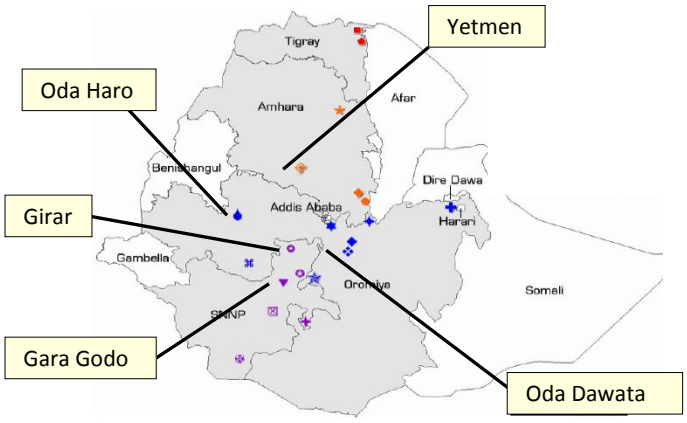
* Internal roads and paths nearly all dryweather; problematic during rains and needing repair afterwards.

Rurbanisation had progressed further in the four communities with small or potential urban settlements. All had some safe water, Health Posts, some vehicular access in the dry season, and some electricity, although Luqa's consisted only of two solar panels and a wind-powered water pump. All but Luqa had G1-8 schools, all but Adado had minor irrigation structures, and all but Geblen had mobile phone reception.

Korodegaga and Dinki, with no urbanising centres, also had no electricity and no safe water. Though they both had important irrigation infrastructures. Otherwise there were differences partly related to the fact that Dinki was small and recently demoted to being a *got* in a large kebele. Unlike Korodegaga, Dinki's school and Health Post were in the new kebele centre. Korodegaga had excellent mobile phone reception while Dinki's new signal was not widespread. Irrigated products were collected by lorries using the dryweather road in Korodegaga, but transported on a path 8 kms to market from Dinki.

Rurbanisation in communities bordering municipalities

Map 3: Rurbanisation in communities bordering municipalities



Five of the WIDE communities were adjacent to expanding municipalities; four surrounded small towns while Oda Haro shared some border. *Oda Dawata*, *Yetmen*, *Girar* and *Oda Haro* were economically self-sufficient. *Gara Godo* was prone to drought and received occasional Emergency Food Aid, while 9% of households benefitted from the Productive Safety Net Programme in 2011. In Appendix Tables A7-A12 there are descriptions for each community of settlement patterns, health facilities and schools inside the kebele, internal roads, paths, bridges and transport, electricity and mobile phones, drinking water structures, and irrigation structures. These have been used to provide the summaries in this section.

Settlement patterns in the communities bordering municipalities

In *Yetmen*, *Girar*, *Oda Dawata* and *Garo Godo* the rural kebeles surrounded the municipalities, which had started off as small urban settlements around the kebele buildings. *Oda Haro* part-bordered Tibe town which had started as a ribbon development in the neighbouring kebele. In *Yetmen* and

Gara Godo the terrain was mainly flat or gently sloping; in *Girar* and *Gara Godo* some land was undulating. The urbanised centre of Garo Goda had recently become a municipality. *Girar* surrounded the town of Imdibir which had become a municipality between 2003 and 2009 and the few villages adjacent to the town were urbanised. There were a dozen or so villages in the rural part. *Yetmen* had been villagised during the Derg and houses still clustered around the town encircled by farmland and grazing land. In *Oda Haro* and *Oda Dawata* some of the land was flat or gently sloping but both had mountainous zones with scattered hamlets and homesteads. There were signs of incipient ribbon development in *Oda Haro* along the recently upgraded main road between Ambo and Nekemte, and in *Oda Dawata* some of the villages near the town were semi-urban. (See Table A7 for more details).

Health and education services inside the communities bordering municipalities

Four of the five communities had Health Posts. *Oda Dawata*'s was in a mountainous sub-kebele and there was a Health Centre near the main road. *Gara Godo* had lost its Health Post in the re-organisation of rural kebeles which followed the municipalisation of the kebele centre and was waiting for a new one to be built. Three communities had G1-8 schools and one of these also had G9-10. *Oda Haro* had two G1-8 schools and *Oda Dawata* had four plus a G1-4 school making access to education easier for those in the mountainous zones. (See Table A8 for more details).

Internal roads and paths in the communities bordering municipalities

Oda Dawata and *Oda Haro* had flatter zones where internal roads and paths were good and mountainous zones where road construction was difficult and costly. Two gravel roads and one tarred road passed through the lower part of *Oda Dawata*, though it was difficult to access the public transport on the roads as there were no bus stops. Internal roads in *Oda Haro* and in the mountainous zones of *Oda Dawata* had recently been improved with MDG funds related to the Universal Rural Roads Access Programme; the wereda provided some funding and technical support while the community provided funding and labour. However, one of the *Oda Dawata* roads had not been completed before the rains and the other was badly damaged by them. Improvements to *Oda Haro* internal roads had led to the introduction of mule carts.

In the flatter communities villagised *Yetmen* had one internal road to the kebele centre in an adjacent sub-kebele and a bridge had recently been constructed on it. Internal roads and paths in *Gara Godo* were much better than five years previously, but the undulating land in *Girar* constrained vehicular access to the inside villages which was a constraint on marketing, especially of eucalyptus trees.

There was vehicular access to parts of all five communities during dryweather but there were problems during the rains. Donkeys and walking were common everywhere and there were carts in *Oda Haro*, *Oda Dawata* and *Girar*; *Gara Godo* also had some motorbikes. Mud was a problem for all types of transport and walkers while wooden bridges constructed by the community were often damaged or not safe to cross. (See Table A9 for more details).

Electricity and mobile phones in the communities bordering municipalities

More than half of households in *Oda Dawata* had access to electricity: 90% in the lower zones and 20% in the mountainous parts. In *Gara Godo* and *Yetmen* metered access was limited to the municipality, although a few rural households adjacent to *Yetmen* had lines for light. A few in the urbanised villages bordering Imdibir had access. There was no access in *Oda Haro* in 2013 though they had been promised electricity if they voted for the EPRDF in 2010, which they had done. Between 2010 and 2013 people had also contributed 30 *birr* each for solar power but nothing had happened by the time of fieldwork at the end of 2013. There was good mobile phone coverage everywhere, though sometimes signal problems in *Oda Dawata*. Respondents in two communities said the signal only worked if the electricity in the town was working. (See Table A10 for more details).

Drinking water in the communities bordering municipalities

In *Yetmen*, which had copious groundwater, all households could access safe water. In densely-populated *Gara Godo* most people used safe water, although there was scarcity in the dry season, and people in peripheral areas used streams all the time. In the mountainous zones of *Oda Haro* and *Oda Dawata* not everyone had safe water access: 30% used rivers and ponds in *Oda Haro* and in one *Oda Dawata* zone only 25% used clean water. Scarcities of spare parts and skilled plumbers in two communities meant that a number of waterpoints were not functioning.

No access to safe water was a major issue for most households in *Girar*; there was only one developed spring with long queues and most households used rivers. Some years previously households had contributed 20 *birr* for a water project but nothing had transpired, and a recent spring development in the kebele only piped water to Imdibir and Wolkite towns. Wereda officials said that the undulating topography made it difficult to pipe water to rural villages like *Girar* but that a World Bank project with technology allowing piping through hilly places was 50% complete. People from another kebele had tried to take some materials provided for the project resulting in a serious conflict. (See Table A11 for more details).

Irrigation in the communities bordering municipalities

Irrigated agriculture was non-existent or insignificant in *Gara Godo* and *Girar* and was limited to 32 hectares in *Oda Dawata* fed by two rivers. There was competition for the water with a neighbouring wereda. Use of pumps to extract water from the rivers and home-dug wells was increasing rapidly in *Yetmen* in 2010 and had reached 25, some of which were rented out; the wereda had assisted people to get pumps. In *Oda Haro* 5% of the cultivated land was irrigated with 20% of households using it. Kebele leaders planned to use development funds promised by the wereda to install a big modern pump, though the groundwater had declined due to more intensive use and longer dry seasons, and there had been no sign of the promised funds by the end of the fieldwork. (See Table A12 for more details).

Rurbanisation in the communities bordering municipalities

As Table 4 shows in terms of internal urban settlement one kind of rural kebele surrounded a municipality, while another part-bordered it. *Oda Dawata*, *Gara Godo*, *Girar* and *Yetmen* were in the first category and, although there were government buildings away from the towns, and some urban-style housing patterns near to them, there was no urban commercial centre. *Oda Haro* bordered the recently established Tibe town, but did not surround it. As in the other communities, apart from newly-municipalised Gara Godo, the government buildings were off the main road some distance from the town, but a different feature was the incipient ribbon development of businesses along the main road some way from the Tibe town border and the kebele centre.

These five communities had four things in common: they all had good mobile phone signals, G1-8 schools, and vehicular access in at least some parts during dry weather, while the lack of a Health Post in *Gara Godo* was only temporary.

Proximity to municipalities and the absence of an internal urban centre was linked with relatively poor access to electricity in four communities; *Oda Haro* had none at all and in *Yetmen*, *Gara Godo* and *Girar* access was only possible to households near the town borders taking lines for light. By contrast access in *Oda Dawata* was very good for those in the lower zones (90% households), but less so for those in the mountains (20%).

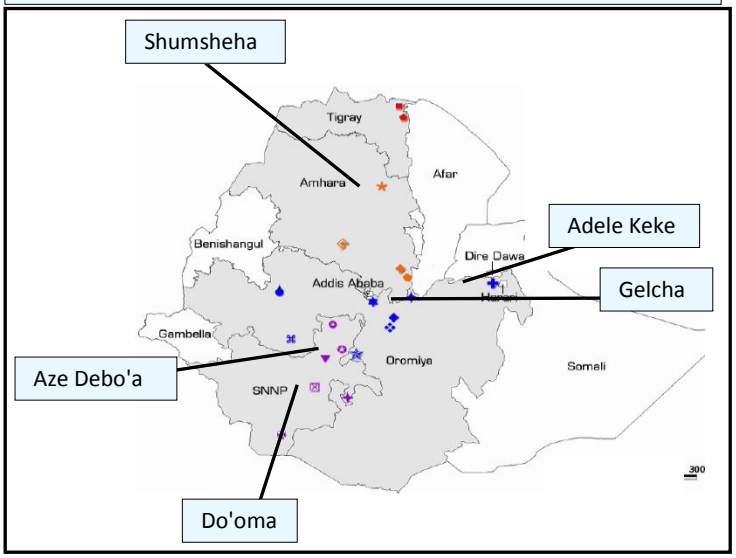
Girar and *Gara Godo* had no irrigation infrastructure. From *Oda Haro* 20% of farmers were exporting some of their produce to Addis Ababa and other cities, while smaller minorities in *Yetmen* and *Oda Dawata* were producing for sale in local markets.

Table 4: Rurbanisation in the communities bordering municipalities

Community	Settlement patterns	Internal roads and transport*	Grid electricity	Mobile phones	Drinking water	Irrigation	Health build-ings	Schools
No urban commercial centre								
Oda Dawata, self-sufficient, 61% of land flat and 39% steeply sloping with gullies, exports of potatoes and wheat. Arssi, Oromia, 2013	Surrounding municipality; some villages semi-urban; mountainous area hamlets and scattered homesteads	Two gravel roads and one tarred pass through lower part of kebele; roads to mountainous parts damaged or incomplete	90% in lower zones; none and 20% in 2 upper zones	Many phones, sometimes signal problems	In one zone all had safe water; in two 50% and in one 25% (55%ish)	32 hectares	HP In remote sub-kebele; HC in central sub-kebele	Four Grade 1-8 schools and one G1-4
Gara Godo, drought-prone and sometimes aid-dependent, nearly 75% gently sloping plain, rest undulating, recent increase in coffee exports. Wolayita, SNNP, end 2011	Dense population; houses in gardens plus fields; some remote households	Improved internal roads and paths; problems in rainy season	In town which recently became muni-cipality	Many phones; internet use; required electricity to be working	Most used safe water; peripheral areas streams; scarcity in hot season	None	No HP – lost after kebele split	G1-8 and G9-10 in the kebele
Girar, self-sufficient, flat, *chat* and eucalyptus exports. Gurage, SNNP, early 2010	16 villages, those near town urbanised	Inside villages hard to reach by car/truck and maybe impossible in rainy season.	Minority in urbanised villages	Reached all parts	Most used rivers	In-significant	HP in kebele centre	G1-8 in kebele
Yetmen sub-kebele, self-sufficient, flat, grain exports to Addis Ababa. East Gojjam, Amhara, early 2010.	Villagised; surrounding municipality	Internal road from sub-kebele to kebele centre; animal transport of goods; walking	Very few with lines for light	Good reception	All accessed safe water	25 pumps in 2010	HP in kebele centre	G1-8 in kebele
Early ribbon development along the main road								
Oda Haro, self-sufficient, two flat sub-kebeles and one mountainous. West Shewa, Oromia, 2013	3 villages, 16 scattered hamlets, beginning of ribbon development along main road	Improved internal roads allowing mule carts; problems in rainy season	None	Many phones; signal good if town electricity was working	30% uses rivers or ponds	5% cultivated land; 20% house-holds	HP in kebele	Two G1-8 schools

Rurbanisation in communities bordering larger towns

Map 4: Rurbanisation in communities bordering larger towns



There were five WIDE communities with borders with larger towns. By chance all were affected by drought and/or other weather shocks and received Productive Safety Net Programme aid and occasional Emergency Food Aid. *Adele Keke* bordered Haramaya, *Shumsheha* Lalibela, *Aze Debo'a* Durame the Kambata zonal capital, *Do'oma* Wacha, the wereda town, and *Gelcha* (pastoralist community) Metahara and a sugar plantation and factory. In Appendix Tables A13-A18 there are

descriptions for each community of settlement patterns, health facilities and schools, internal roads, paths, bridges and transport, electricity and mobile phones, drinking water structures, and irrigation structures inside the kebele. These have been used to provide the summaries in this section.

Settlement patterns in the communities bordering larger towns

In two communities the terrain was mostly flat; the population was organised in two villages in *Do'oma* and in five in *Gelcha*, and neither had an urban centre. *Aze Debo'a* had some flat land and some hilly parts and was organised into 27 villages with no urban centre. In *Adele Keke* 25 villages were scattered across terrain which was hilly and contained escarpments and gorges; incipient development of urban businesses along the main road between Haramaya and Dire Dawa was underway. *Shumsheha*'s nine *gots* were spread out over land that was mostly flat; one *got* was on higher ground and another was urban (see table A13 for more details).

Health and education services inside the communities bordering larger towns

Two of the communities had had no Health Post for some while: in *Adele Keke* building had stopped due to a dispute and in *Do'oma* the building had been destroyed by wind. The Health Post in *Gelcha* was reportedly rarely used. *Aze Debo'a* and *Shumsheha* had Health Posts and there was also a Health centre in *Shumsheha got*. *Shumsheha*, *Aze Debo'a* and *Gelcha* had G1-8 schools; in *Do'oma* there was G1-5 and in hilly *Adele Keke* there was one G1-7 school, one G 1-3, and two providing G1-2. Children living near the rural borders sometimes went to school in neighbouring kebeles. (See Table A14 for more details).

Internal roads and paths in the communities bordering larger towns

Main roads between cities passed through *Gelcha* and *Adele Keke*, while *Aze Debo'a* lay either side of the not-very-well maintained road from Durame to Hosaena. The main road from Lalibela airport to Lalibela used to go through *Shumsheha got*, but the building of a new road had sidelined this road which was no longer properly maintained. Similarly the road from Wacha to Morka, on the main road between Sawla and Sodo, used to pass through *Do'oma*, but this had been sidelined by a much improved road which bypassed the community. (See Table A15 for more details).

There were no well-constructed internal roads inside *Do'oma* and though 4-wheel drive vehicles could pass on the old road to Morka in the dry season they rarely did so. People mostly walked though recently motorbikes had been introduced. In *Shumsheha* Government cars could drive on some of the community-maintained rocky roads to the *gots*. The quality of internal roads in *Gelcha* had recently improved as a result of infrastructure development by the Pastoral Community Development Project (PCDP); horse carts, bajaj and bicycles had new access. In *Adele Keke* there were dryweather internal roads to all the villages and in *Aze Debo'a* some new internal roads had been constructed.

All the roads and bridges were maintained or newly-built through PSNP Public Works. In *Shumsheha* wereda-hired graders infrequently contributed to maintenance of the steep road to Lalibela; otherwise no wereda inputs of funding or technical expertise were reported anywhere. (See Table A15 for more details).

Electricity and mobile phones in the communities bordering larger towns

In *Adele Keke* the community agreed on an initiative to arrange for electricity in all villages paid for out of contributions; at the time of fieldwork 12 villages were connected and thirteen had paid the community contribution and were waiting to be connected. There was electricity in urban *Shumsheha* following an initiative by a grinding mill investor to fix a link to the electricity at the airport, though not elsewhere. Electricity came to kebele buildings and nearby churches and houses in *Aze Debo'a* in 2009 which was seen as an election measure since the kebele voted for an opposition party in 2005. There was none in *Gelcha*, though people said there were plans for a large

scheme with support from the World Bank PCDP, while in *Do'oma* wires and poles, promised before the 2010 election as a vote-catching measure, were going up as the fieldwork ended in early 2012.

In all five communities many people had mobile phones, and signals were good everywhere except in *Do'oma* during the night when there was no signal. (See Table A16 for more details).

Drinking water in the communities bordering larger towns

In *Aze Debo'a*, *Do'oma* and *Adele Keke* nearly all could access safe water; in all three NGOs and/or church finance and technical support and community labour had been the drivers. All residents in *Shumsheha* had access to piped water, although it was rationed, which some attributed to the fact that the borehole also supplied water to Lalibela town. People in the other eight *gots* used four improved springs, 11 natural springs and a perennial river. Some waterpoints were not working. In *Gelcha* only those living near Harro Adi could get it, and they had to pay 50 cents per jerrycan. The community had contributed 80 *birr* per household to provide a water supply with PCDP assistance. (See Table A17 for more details).

Irrigation in the communities bordering larger towns

Irrigation boreholes allowing farmers to produce three *chat* harvests a year had spread rapidly in *Adele Keke* after people had observed how the Chinese roadbuilders had tapped into underground water in 2006 and had some government training and support. At the end of 2011 there were 146 pumps. Many households in *Do'oma* had access to irrigation from a large scheme constructed by UNICEF to support new settlers in the 1980s or via traditional irrigation from the river. A bit over a quarter of households in *Shumsheha* had some irrigated land and a small proportion of households in *Gelcha* used the river or the sugar plantation outflow. An irrigation project financed by the PCDP was expected shortly. In *Aze Debo'a* eleven farmers had started watering small plots of land using pumps. (See Table A18 for more details).

Rurbanisation in the communities bordering larger towns

Table 5 shows that there were three types of community in this category: 1) three had no urban centres; 2) one had an urban *got* at its centre which would probably become a municipality in due course; and 3) one had just started on a process of ribbon development around the kebele centre.

These five drought-prone communities shared two things in common; they all had good or very good access to mobile phones, and all could be accessed by vehicles on internal dryweather roads.

As with the communities bordering municipalities the lack of an urban centre was associated with no access to electricity (*Do'oma* and *Gelcha*) or very little (*Aze Debo'a*), although there were moves to connect *Do'oma* and *Gelcha*. In *Shumsheha* electricity access was restricted to the urban *got*. In *Adele Keke*, the wide connection was associated with a community initiative rather than urbanisation processes.

Adele Keke and *Do'oma* were communities where interest in government services seemed relatively low; neither had a G1-8 school and neither had had a functioning Health Post for a while, while the other three communities had both. They were the two communities where nearly all farmers used irrigation and many produced exports which travelled far beyond the larger town they bordered.

Over a quarter of households in *Shumsheha* grew irrigated vegetables and fruit, much of which was sold in neighbouring Lalibela. Irrigated production in *Gelcha* and *Aze Debo'a* was limited, maybe related to the state of the markets for irrigated vegetables and fruit in Durame and Metahara.

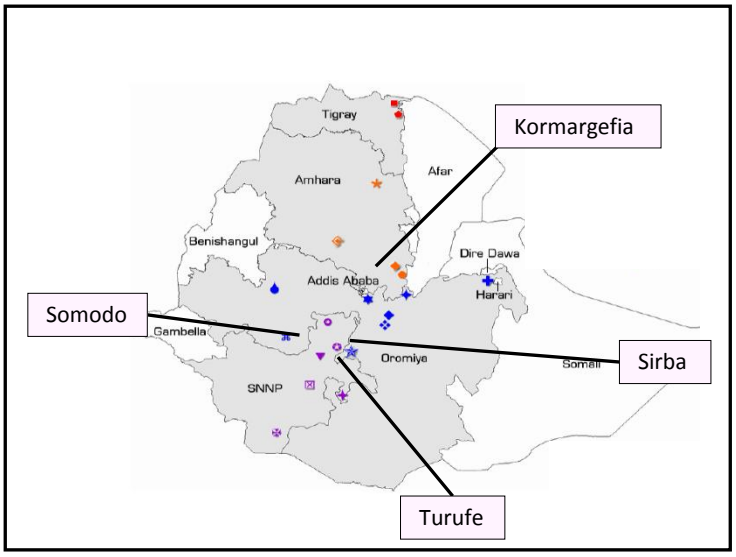
Table 5: Rurbanisation in the communities bordering larger towns

Community	Settlement patterns	Internal roads and transport*	Grid electricity	Mobile phones	Drinking water	Irri-gation	Health build-ings	Schools
Urban *got* inside the kebele								
Shumsheha, weather-prone, aid-dependent, some flat some hilly, bordering Lalibela, North Wollo, Amhara, late 2011	8 rural hamlets, one urban *got*	Unpaved rocky roads and inter-weaving paths; damaged by floods	In urban *got*	Good signal	Mixture of safe and unsafe water	27% house-holds	HP and HC in kebele	G1-8 and G1-4
New ribbon development along the main road								
Adele Keke, drought-prone, aid-dependent, hilly terrain, escarpments, 2 large hills, 5 gorges, bordering Haramaya, *chat* export to Gulf, East Harerghe, Oromia, late 2011	25 scattered villages, incipient ribbon develop-ment along main road	Internal roads to all villages; hard to travel in rainy seasons	12 villages connected 13 have paid	670 phones	16 manual pump points	146 pumps	No HP – half-built for some time	Four: G1-7, G1-3, G1-2, G1-2
No internal urban centre								
Aze Debo'a, drought-prone, aid-dependent, flat alongside road, hilly parts, recent exporting of niche coffee, bordering Durame, Kambata, SNNPR late 2011	27 villages	Some newer roads passable by vehicles; some uphill villages inaccessible to vehicles	In and around the kebele buildings	250 phones	All access safe water	11 farmers	HP in kebele	G0-8 and new school started 2010
Do'oma, drought-prone, aid-dependent, flat or gently sloping, export of onions, peppers, fruit, tomatoes, some to distant cities, bordering Wacha, Gamo Gofa, SNNPR, late 2011	2 villages	No well-constructed internal roads; old road to Morka passable by vehicles in dry season. Rainy season challenge for walkers	Wires and poles going up early 2012	Only worked during the day	All access safe water	Canals; most house-holds	No HP – destroy ed by wind	G1-5
Gelcha, pastoralist, drought-prone, aid-dependent, flat lowland, bordering Metahara, East Shewa, Oromia, late 2011	5 villages	Recently quality of internal roads improved poorly made bridges	None but plans	Many with phones	Little safe water	Small propor-tion of house-holds	HP in kebele but little used	G1-8

* Internal roads and paths mostly dryweather.

Rurbanisation in communities adjacent or near to cities

Map 5: Rurbanisation in communities bordering cities



Three of the WIDE communities bordered cities: *Turufe* sub-kebele (Shashemene), Kormargefia kebele (Debre Berhan) and *Somodo* kebele (Jimma). *Sirba* sub-kebele lay on both sides of the road between Bishoftu (20 kms to the centre) and Mojo which was fast becoming an urban-industrial corridor. All four communities were self-sufficient in terms of farming and exported products to towns. *Turufe* exported potatoes and maize, *Sirba* exported *tef* and chickpeas, *Kormargefia* was a livestock-rearing centre and exported livestock and

livestock products, and *Somodo* exported coffee. In Appendix Tables A19-A24 there are descriptions for each community of settlement patterns, health facilities and schools, internal roads, paths, bridges and transport, electricity and mobile phones, drinking water structures, and irrigation structures inside the kebele. These have been used to provide the summaries in this section.

Settlement patterns in the communities adjacent or near to cities

The terrain in all four communities was mostly flat. Most *Turufe* residents lived in the village established by the Derg, though a minority had returned to their farmsteads. *Sirba*, also mostly villagised, had become a sub-kebele of a larger kebele since 2003. People in *Somodo* lived in the 11 villages set up by the Derg, while in *Kormargefia* there were three Derg villages plus houses scattered on small hills. In *Sirba*, *Kormagefia* and *Somodo*, which had main roads passing through, ribbon development was under way. (See Table A19 for more details).

Health and education services inside the communities bordering cities

Somodo had a functioning Health Post but the post in *Kormargefia* was rarely open and the one in *Turufe* 'was not appreciated'. The Health Post in the sub-kebele neighbouring *Sirba* had burned down and another was under construction at the time of fieldwork. There was a G1-8 school in *Turufe* sub-kebele and G1-4 schools in the other two sub-kebeles. *Sirba* sub-kebele had a G1-4 school and there was a G1-8 school in a neighbouring sub-kebele. *Somodo* had G1-8. G1-7 and G1-4 schools. The school at the kebele centre in *Kormargefia* was G1-7 with plans to upgrade to Grade 8; there was a G1-4 school in another sub-kebele. (See Table A20 for more details).

Internal roads and paths in the communities adjacent or near to cities

Sirba had several dry-weather roads that were wide enough for Isuzu lorries to enter from the main road to collect crops but the other three communities faced problems with their internal roads. In *Turufe* the dirt road to Kuyera and Shashemene was no longer regularly repaired through Public Works and the area recently included in Kuyera Kebele 01 was not maintained as it was no longer part of the kebele. Transport included horse and donkey carts, a few bicycles and bajaj if the road was passable. In *Somodo* a new all-weather-road built to connect more remote kebeles to the Yebu-Jimma road had helped those living near it but otherwise there were no well-maintained feeder roads in the 11-village settlement. People usually travelled on foot though there were also pack animals, a few carts and bicycles, one motorbike and one pickup in the kebele. A minibus on the main road joined one area in the periphery to another at the extreme. In *Kormargefia* the Derg road from the main asphalt road to the kebele centre had disappeared and cars had to drive across farmland to reach the centre. This was the case in many parts of the kebele as only one of the internal dryweather roads was wide enough for cars.

In all four communities vehicles could not pass on all or most internal roads during the rains and walking was also difficult. The absence of an allweather road to the irrigation farms in *Kormargefia* prevented traders from bringing their trucks during the rains causing vegetables to rot on the farms. Unlike in *Turufe* in *Sirba* the roads were re-constructed through Public Works every year and recent work on flood prevention had meant that the dryweather roads had not been so badly affected by the rains. Not much work had been done through Public Works on internal roads in *Somodo* and *Kormargefia* apart from basic maintenance. In Kormargefia two years before the fieldwork Public Works had been used to construct a bridge to an area frequently cut off during the rainy season with technical advice from the wereda, but other parts of the community had no bridge and were still cut off. (See Table A21 for more details).

Electricity and mobile phones in the communities adjacent or near to cities

All but five households in *Sirba* were connected to electricity although the supply was not reliable everywhere during fieldwork. Part of *Turufe* village obtained electricity in 2008 with the help of an investor who installed a grinding mill. Funds from a previous attempt had been embezzled. 30% of

households near the main road in *Somodo* had electricity; some had meters and some connected illegally to get light, reducing its cost from 60 *birr* a month for kerosene to 5 *birr*. There were only three grid electricity connections near the main road in *Kormargefia*; 10 households had solar panels for lighting.

In *Kormargefia* about half the households had mobile phones and the signal was quite good but lack of electricity made charging a problem. Most households had at least one mobile phone in the other three communities though this was not the case for some poor households in *Somodo*. The *Sirba* signal was usually good though it sometimes failed completely. (See Table A22 for more details).

Drinking water in the communities adjacent or near to cities

All households had access to safe water in *Somodo* and *Sirba* as did those living in *Turufe* village (the majority). In Turufe there had been outbreaks of Acute Watery Diarrhoea during the rains in 2006 and 2009 attributed to leakage of river water into the pipes. Most *Kormargefia* households used safe water although there were queues and rationing in the dry season as springs dried up. (See Table A23 for more details).

Irrigation infrastructures in the communities adjacent or near to cities

In *Kormargefia* it was estimated that more than half the households had some irrigated land. An NGO project with a borehole in *Sirba* with 18 members had failed due to corruption by the manager. In the village a few households used borehole water and drip irrigation to grow vegetables in their gardens. As part of the wereda's large Ada'a Becho irrigation project three deep boreholes had been dug on *Sirba* land and pipes were being extended. On completion the water would be pumped out using electricity and the amount used by each farmer measured using a meter and charged for. In *Somodo* 85 households used irrigation to grow vegetables in small gardens or cultivated wetland. The wereda had recently supplied free pumps for private hand-dug wells for small groups; the household with the well paid for cement and sand. There were also some recent investors from outside who had leased land by the river and were growing tomatoes and onions for sale in Jimma using furrows and a pump. Three farmers had started to copy them. In *Turufe* the seedlings nursery and a few farmers had dug canals from the rivers and the wereda said there were plans to modernise and expand the scheme. (See Table A24 for more details).

Rurbanisation in the communities adjacent or near to cities

Table 6 shows that in terms of internal urban settlements there were three types: new ribbon development along a highway; new ribbon development along a gravel road; residential urban settlement. There were no urban centres as such but in the three communities through which main roads passed there were signs of accelerating ribbon development. *Sirba* and *Kormargefia* straddled highways which were developing as urban-industrial corridors with incoming investment, though this was happening much more quickly around *Sirba*. *Somodo* straddled a secondary main road and here the ribbon development was being led by people from the kebele who were setting up small businesses providing services such as grinding mills and cafés and bars. *Turufe* did not border the main highway between Addis Ababa and Shashemene and the urban part was mainly residential.

The four communities had five things in common. Vehicles could enter all of them when it was not raining, they all had good mobile phone coverage, good safe water and health post infrastructures. Also from different starting points officials and farmers were planning to build new irrigation infrastructures. Electricity connections varied from almost all in *Sirba* to only three buildings in *Kormargefia*. Only *Kormargefia* did not have a G1-8 school but Grade 7 had just been added and there were plans for Grade 8.

Table 6: Rurbanisation in the communities adjacent or near to cities

Communities	Settlement patterns	Internal roads and transport*	Grid electricity	Mobile phones	Drinking water	Irrigation	Health buildings	Schools
New ribbon development along a main highway								
Sirba sub-kebele, mostly flat, small hill, near to Bishoftu, export of *tef* +chickpeas, East Shewa, Oromia, 2013	One of three villages in a kebele which also had a few scattered hamlets, ribbon development starting	Several dryweather roads wide enough for lorries	All but 5 households	Most households	All used safe water	Garden irrigation; failed NGO project; Government project being built	No HP – burned down; HC in another sub-kebele	G1-4; G1-8 and 9-10 in adjacent sub-kebele
Kormargefia, flat with small hills part bordering Debre Berhan, livestock-rearing, export of eucalyptus + irrigated vegetables, North Shewa, Amhara, 2013	3 villages + houses scattered on small hills, ribbon development just started	Few internal roads, dryweather only, only one wide enough for cars	3 connections	About half households	Most used safe water; scarcity in dry season	More than 50% households	HP in kebele but rarely open	G1-7 at centre G1-4
New ribbon development along a gravel road								
Somodo, more or less flat with some slopes, border with Jimma, export of coffee and *chat*, Oromia 2013	11 villages, ribbon development	No well-maintained feeder roads; all internal roads difficult to walk in rainy season	30% of households	Most had them; not some poor	All had access; some poor could not afford	85 households; investors + 3 farmers using pumps	HP in kebele	G1-8, G1-7, G1-5
Residential urban settlement								
Turufe sub-kebele, flat, adjacent to Kuyera recently incorporated into Shashemene, exports of potatoes and maize, West Arssi, Oromia, early 2010	Villagised plus some farmsteads	Internal roads no longer repaired regularly through Public Works	Part of the village	Many had them	Those in village used safe water	Insignificant	HP in kebele but not appreciated	G1-8 and two G1-4s in kebele

* Internal roads and paths mostly dryweather.

Thickening rural-urban linkages – the WIDE3 evidence

Rural-urban linkages, community modernisation and well-being

Rural-urban linkages contribute to community modernisation in a range of ways, as Table 7 shows.

Table 7: Some contributions of rural-urban linkages to economic modernisation in rural areas

Rural-urban linkages	Agricultural modernisation	Industrialisation	Servicisation	Well-being*
External roads – extent and quality of road network	Determines the ease of transporting crops, livestock and livestock products (particularly important for short-lived products such as tomatoes and milk) and importing farming equipment and inputs	Determines the ease of exporting natural resources such as stones, sand, timber, and manufactured products and importing inputs for in-kebele manufacturing	Determines the ease of importing inputs for in-kebele services	Determines ease of access to health and education services, wereda services, and seeing friends and relatives in towns or in the community

Rural-urban linkages	Agricultural modernisation	Industrialisation	Servicisation	Well-being*
Going to towns to use health and education services	Health is important for agricultural work; education improves skills including literacy and numeracy and encourages a modern outlook	Health is important for industrial work; education improves skills and encourages a modern outlook	Health is important for service work; education improves skills and encourages a modern outlook	Health is an essential part of well-being; education improves skills and raises aspirations
Exporting rural products to towns	Urban demand raises prices of crops and livestock increasing the profitability of investment in modern inputs and practices	Urban demand encourages investment in quarrying, sand extraction and tree-planting and value-adding production such as *areke*, and weaving	Incomes from exports to towns can be invested in trade and other service businesses in the community	Improvements in economic well-being; incomes spent in the community can have a multiplier effect
Commuting and migrating for work in towns	Incomes earned in towns can be invested in modern equipment and inputs	Incomes earned in towns can be invested in natural resources for use in the community and export, and manufacturing	Incomes earned in towns can be invested in trade and other service businesses	People working in towns can learn new skills and discover new opportunities; poor people working in towns may be exploited

*Ways in which rural-urban linkages can contribute to ill-being are not fully considered here.

The extent and quality of road networks determine where and how easily agricultural and industrial products can be exported, and the ease of importing agricultural, industrial and service equipment and inputs . They determine ease of access to urban health, education and other services and how easy it is to visit relatives and friends in urban areas and for them to visit the community.

Use of urban health services should lead to improved health, which is an essential part of well-being, as well as enabling people to work harder. Education improves skills and raises aspirations, both necessary for successful agricultural modernisation, industrialisation and good service provision within rural communities.

Exports of rural products to towns and commuting and migrating for work in towns bring in income that can be invested in local agriculture, industry or services or used to improve the well-being of household members.

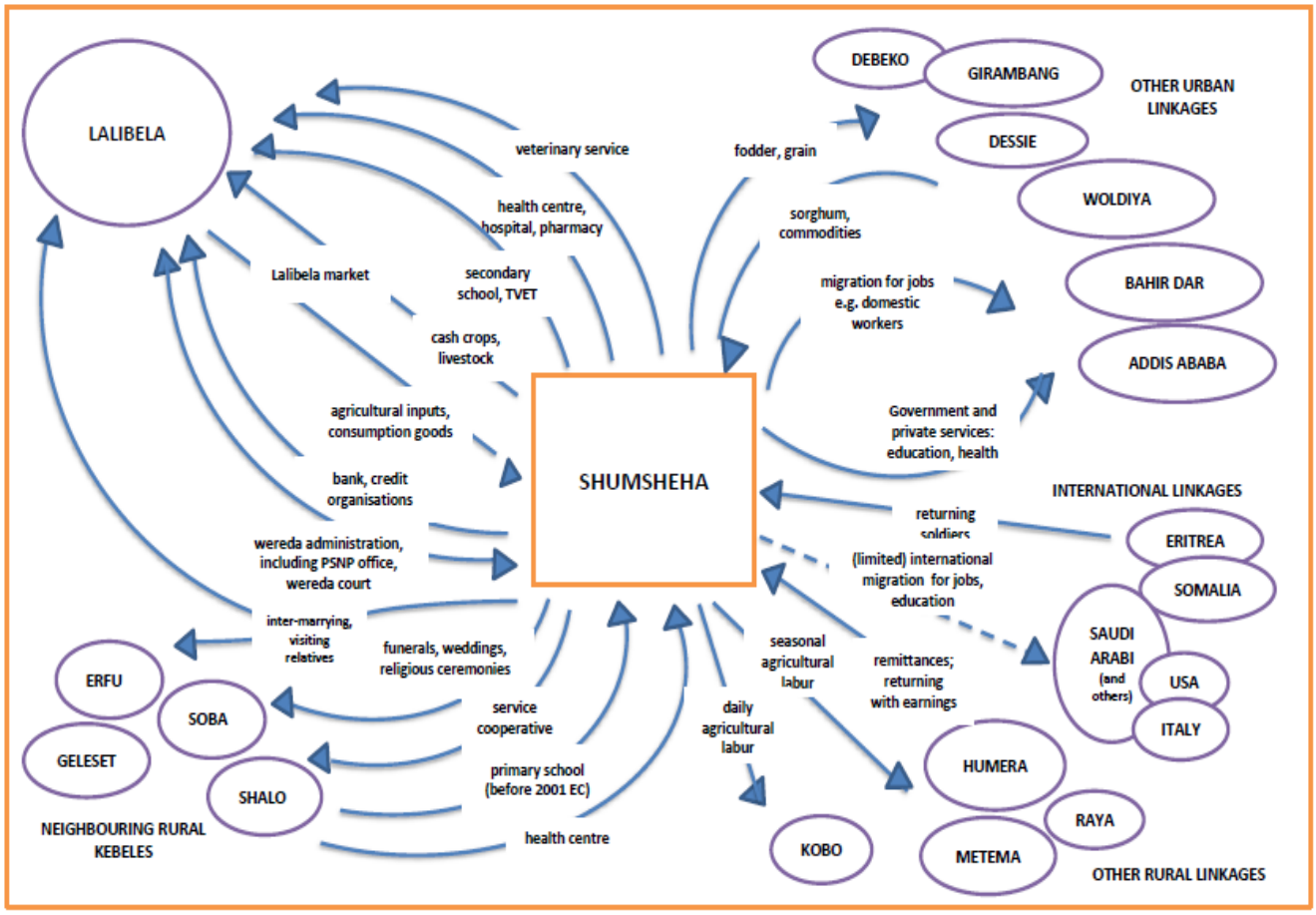
The density and reach of the urban links of Ethiopia's rural communities have been steadily improving in recent years. Box 2, taken from the Gara Godo Community report, describes how the community uses the wereda and zone towns and Addis Ababa while Map 6, taken from the Shumsheha Community Report (Carter, 2013: 9), provides an example of the diverse content of rural community links with towns. Box 3 provides an extract from the Adado Community Report which contains a description from a community member of how he thought increasing urban links had been changing the community.

Box 2: Community use of wereda and zone towns and Addis Ababa in Gara Godo

From the *Gara Godo* community report (Bevan, 2013: 8)

'The rural community frequently uses Areka and Sodo towns. The reasons include attending schools and colleges or broader weekly markets and visiting relatives. In Areka they also seek justice at the wereda court and higher medical service at the hospital. They use the town's bus station to travel to other places. People used to walk to Areka (2 hours) and Sodo (6 hours) but this is now unusual because both towns have transportation services. There is a bus from Gara Godo to Areka three times a week. People go to market places usually in the morning while those going for schooling travel once a week or month. The journey to Areka costs 6 *birr*, to Sodo 10 *birr*, and to Addis Ababa, where they go for job-seeking, butter trading and to migrate abroad, 90 *birr*. A few older people go to Addis Ababa while youth engaged in shopping or petty trade also go to Addis Ababa, though the linkage is not strong.'

Map 6: A map of Shumsheha's links to towns, neighbouring rural kebeles and overseas



Box 3: Some consequences of increased density of urban linkages

From the *Adado* Community Report (Dom, 2014: 18)

One knowledgeable person explained that the increased density of urban linkages is changing the local community culture. People in Adado want to live an urban lifestyle; they perceive it as always better than the rural lifestyle, be it the way of clothing, people's cleanliness and generally their being alert. People in rural communities like Adado adopt urban types of household utensils. The rural community started using electricity for home energy consumption, which is a feature of urban dwellers. Houses are now smokeless. Since they have an opportunity to see how urban dwellers use electricity as a source of energy, a few rural dwellers with access to resources started using it.

He added that the shift to an urbanised culture is particularly pronounced with the young generation, who gives loose attention to the local community customary beliefs and values which used to be very strictly respected (such as the Aba Gada system). The community's religious practice is also changing under urban influence. These days, the youth and adults affirm that the 'worldly' religions, which have been there for a considerable number of years now, are better than the traditional one. Youth are also more interested by the independent lifestyle of the urban areas, unlike in rural areas where family relations are strong.

Farming practices are somewhat influenced by urban linkages as well. The local farmers produce the farm products that are more demanded by urban areas. For instance, they produce high quality coffee which can satisfy the urban demand. Farmers think that the products will be better sold if quality is maintained.

Farmers perceive quality as a feature of the urban economy.

The non-farm activities such as shop trading, skill works, renting vehicles, renting films and running a show room (for football watching) in Adado town attract customers from the rural areas. The urban economy also relies on the rural economy as a source of goods daily consumed such as crops, livestock and other farm products. Farm and non-farm products are strongly linked. The skilled workers such as blacksmiths in urban areas are suppliers of the farm tools to the local economy.

Attitude to education is better in urban areas than in rural areas. People in urban areas know the returns of education better than the rural ones. There is no drop out of students in urban areas. The local people use the urban dwellers as a reference for all better achievements. Sanitation and use of latrine was not common in the rural areas but this is changing as rural people regularly visit urban areas during market days or in meeting occasions and take the opportunity to see urban ways of using sanitation and latrines. Diet is also influenced by urban cultures. People in the rural areas used to consume only farm products, but these days the rural community use commodities such as sugar, powder, tea, bread, *injera* and others.

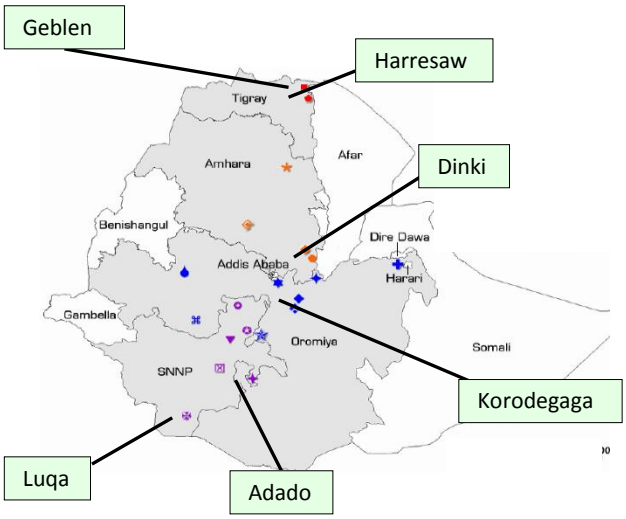
Aspiration for the betterment of one's future life is linked to the culture of the richer people either in rural or urban areas. However, people in Adado clearly see that the richer are always living in urban areas and have better infrastructure access. Many rural rich farmers are trying to buy urban land to shift to urban areas as cities are perceived as the place to be for those who overcame their life challenges and lifestyle is seen to be more modern in urban areas than in rural areas. Farmers also get used to spend time on leisure and move to urban areas for this, staying for some days and enjoying, eating and drinking urban-produced items.

Rural-urban linkage is now the two sides of a coin. The urban economy will not live without the rural linkages. The rural economy is the main supplier of farm products and also cash crops. The urban economy is also the main market source for rural households. Industrial products are consumed by the rural economy. There is an increasing dual linkage between urban and rural economies.

Summaries of the WIDE3 evidence on external roads, access to urban-based health and education services, rural exports to urban areas, and non-farm business and employment opportunities inside the communities and in linked urban areas are presented below in separate sections for the four categories: (1) communities some distance from any town, (2) communities bordering municipalities, (3) communities bordering larger towns and (4) communities adjacent or near to cities. Tables A25-40 in the Appendix provides more detail for each community.

Rural-urban linkages in the communities some distance from any town

Map 7: Rural-urban linkages in communities with no town



The drought-prone communities are *Dinki* (North Shewa), *Korodegaga* (Arssi), *Luqa* (South Omo), and *Geblen* and *Harresaw* (East Tigray). The coffee-exporting community *Adado* is in Gedeo zone.

External roads linking the remote communities to urban areas

The kebele centres of three communities were on allweather roads which led eventually to towns. A poor all-weather road from the centre of *Geblen* joined the main road from Mekele to Adwa after 20 kms. From there it was 19 kms to the wereda town in one direction and 20 kms to the zone town in the other direction on the Route 2 highway (847 kms to Addis Ababa). In *Harresaw* an allweather road to the wereda town Atsbi (17 kms) crossed the *tabia* at one end; Atsbi was 26 kms from Wukro, 58 kms from Mekelle, and 819 kms from Addis Ababa. *Luqa* straddled the allweather highway from Jinka to Arba Minch; the nearest town was 15 kms, the wereda town 21 kms and the zone town 63kms (641 kms to Addis Ababa).

In the other three communities there were problems getting to the nearest allweather roads where there was transport. From *Dinki* people walked 8 kms on paths to get to the wereda town Aliyu Amba where they could get transport to Ankober (15 kms) and the zone town, Debre Berhan (42 kms) and Addis Ababa 173 kms. The road from *Dinki* to Aliya Amba was dryweather for 7 kms and rocky for 3 kms and crossed two rivers without bridges. To get from the *Korodegaga* kebele centre to the wereda capital (25 kms) people could exit on the dirt road, usually on foot, or they could cross the river Awash on a hand-pulled raft and walk to an asphalt road where there was transport to the wereda capital (19 kms – 120 kms to Addis Ababa). The distance to the wereda town (Bule) from *Adado* was 10 kms and from the zone town (Dilla) 25 kms (381 kms to Addis Ababa). There was a dryweather branch road from the kebele centre to the road between Bule and Dilla. There was no public transport and motorbikes were expensive (50 *birr* to Bule and 150 to Dilla). (See Table A25 for more details).

Accessing urban health and education services from the remote communities

There was a Health Centre in *Adado* town. In the other five communities the journeys were quite long. In *Geblen* the Health Centre was 45 minutes' walk from the kebele centre and in *Harresaw* the walk took an hour. Vehicular transport was rare. In *Luqa* the distance was 21 kms on an asphalt road. For people in the remoter parts of these kebeles there might have been walks of two hours or more to reach the kebele centre. Vehicular transport would have had to be paid for. Distances to the health centre from *Korodegaga*'s nine scattered villages varied. From the kebele centre it was 24 kms on a dirt road with no local vehicles or 19kms on an asphalt road after crossing the river on a raft which would involve transport costs. From *Dinki* people would have had to walk for 8 kms on paths. Hospitals were even more difficult to get to involving distances of 18 kms (*Geblen*), 24 kms after crossing on the raft (*Korodegaga*), 25 kms (*Adado*), 42 kms (*Harresaw* and *Dinki*), and 63 kms (*Luqa*).

The nearest G9-10 schools were 45 minutes' walk (*Geblen*), 1 hour walk (*Harresaw*), 1½ hours walk (*Adado*), 8 kms walk (*Dinki*), 24 kms on the dirt road (*Korodegaga*), 21 kms on asphalt road (*Luqa*). No information on G11-12 schools was provided in *Dinki*, *Korodegaga*, and *Luqa*. For *Geblen* the distance was 18 kms, for *Harresaw* 17 kms, and for *Adado* 25 kms. Given the lack of transport most G9-10 students and all G11-12 students would have had to lodge in town to attend secondary education. (See Table A26 for more details).

Rural exports to urban areas from the remote communities

In all communities households sold small amounts of crops and livestock in local markets for cash for basic household expenditures or during emergencies; these sales are not considered as 'exports to urban areas' . There were no rainfed agriculture exports to urban areas from the five drought-prone communities. *Adado* exported niche coffee to Dilla and beyond. There was some sale of irrigated products in three communities. Traders bought sesame from a few farmers in *Luqa* who grew it using traditional irrigation or on irrigated plots outside the kebele, and onions and tomatoes from

farmers in *Korodegaga*. *Dinki* farmers took their irrigated vegetables and fruit to Aliyu Amba market but linkages to more distant markets were poor.

Livestock sales were insignificant in *Dinki*, *Geblen* and *Korodegaga*; sale of fattened livestock, dairy products and honey were increasing in *Harresaw* associated with expansion of the nearby Dera town market. Traders came to pastoralist *Luqa* to buy goats and to *Adado* to buy fattened cattle and hides and skins.

Households in *Harresaw* and *Adado* had started growing eucalyptus for sale, while in *Korodegaga* the sale of firewood in the wereda market, mostly by women, was a common livelihood strategy, especially during droughts. In this community a youth co-operative selling sand had failed as traders would not use the long poor internal road. (See Table A27 for more details).

Non-farm business and employment opportunities in urban areas for residents of the remote communities

In remote communities some distance from the nearest town the main chance young people had to pursue non-farm activities came from internal urbanisation. This was under way in *Harresaw* and to a lesser extent in *Geblen*. In *Harresaw* more than 50 people were engaged in non-farm businesses with about 60 living mainly on daily labour. In *Geblen* nine people were employed in grainmills and there was work in house construction, trade, shops and bars. In these two communities non-farm output demand and investment was funded by a mix of PSNP/EFA, and savings from migration income. In the more agriculturally productive community, *Harresaw*, which had a wider range of non-farm activities, income was also derived from the local sale of eggs, butter, fattened animals and small amounts of irrigated vegetables. Cuts in safety net and international migration income would have had a considerable impact on demand for non-farm products and services in these communities. There was small seasonal and longer-term urban migration in *Geblen* and longer-term urban migration from Harresaw, particularly by women.

The construction of an allweather road through pastoralist and drought-prone *Luqa* had eventually led to the establishment of a market, café and 3 shops, and opportunities for livestock and grain trade had increased. There was hardly any non-farm activity in the other two remoter drought-prone communities; in *Dinki* 7 kiosks were provided in the kebele town for young people but no credit so only the minority who could borrow from family were likely to open. There had been an urban centre in remote coffee-exporting *Adado* for more than ten years. While it had not expanded physically very much non-farm activities had become more diversified. They included coffee trading, carpentry, blacksmith work, handcrafts, bakery, barbering, shops, petty trade, motorbike driving (which may be owned by other people). Some households employed daily labour to process *enset* to make *kocho*. However demand for non-farm products and services was seasonal being high during the coffee harvest when people had incomes but much lower at other times. (See Table A28 for more details).

Thickening rural-urban linkages in the communities some distance from any town

Table 8 summarises the data on the rural-urban linkages of communities some distance from any town under two headings: communities with small or potential urban centres and communities without. In the former (Adado, Harresaw, Geblen and Luqa) there were internal non-farm business and employment opportunities; most in Adado, including coffee trading, and fewest in Luqa. Non-farm activity outside the communities was restricted to petty trade in the closest markets. Only Adado had significant exports to urban areas. There was some urban migration from all but Luqa. Allweather roads connected parts of Harresaw, Geblen and Luqa to the outside world but journeys to hospitals and preparatory schools were long. The road from Adado was poor.

In the two communities without urban centres there were no non-farm activities and the nearest towns were small with limited non-farm opportunities. Korodegaga had been a source of recruitment by the army for many years.

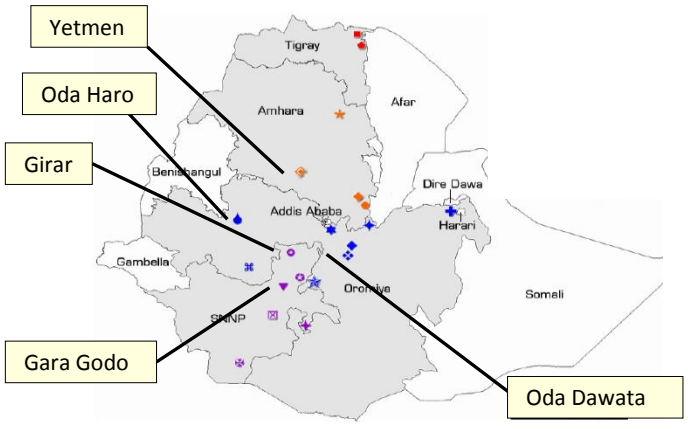
Table 8: Thickening rural-urban linkages in the communities some distance from any town

	Distance centre to centre	External roads & transport	Exports to urban areas	Non-farm urban opportunities*		Distance to urban services
				Internal	In linked towns	
Communities with small or potential urban centres						
Adado, remote, mountainous, international niche coffee exporter, self-sufficient, long rainy season SNNPR, 2013	Bule 10 kms, Dilla 25 kms	No all year road out of Adado; no public transport; expensive motorbikes	Niche coffee to Dilla and traders; fattened cattle and skins to traders	Many involved in coffee trade, skilled work, daily labour or business	Petty sales in Bule market; male urban migration; few young women - new	HC & G1-8 inside; G9-10 90 mins walk; hospital & G11-12 25 kms
Harresaw, remote, plateau & escarpment, export of trees and honey, Tigray; end 2011	Atsbi 17 kms, Wukro 43 kms	Allweather road Atsbi to Wukro (Route2 42 kms) crossed *tabia* at one end	Livestock, dairy products, honey local market; eucalyptus	Over 100 in employment, skilled work, daily labour or business	Petty trade in Dera; small seasonal and long-term urban migration in area	HC and G1-8 1hr walk; hospital 42 kms after walk; G11-12 18 kms
Geblen, remote, mountainous, Tigray; beginning 2010	Adikelembes 6 kms, Edagahamus 20 kms, Freyweini 19 kms, Adigrat 20 kms	Road out joined Route 2 Mekele to Adwa after 20 kms; minibuses on some days	Insignificant	Some involved in employment, skilled work, daily labour or business	Petty trade in new market in Adikelembes; long-term urban migration mostly women	G1-8 inside; HC & G9-10 45 mins walk; hospital & G11-12 18 kms
Luqa, very remote, mostly flat, livestock exports, SNNPR; end 2011	Weyto 15 kms, Key Afer 21 kms, Jinka 63 kms	On road from Jinka to Konso; minibuses both ways	Traders came to buy goats; few sold sesame to traders	A few emerging business opportunities, weekly market	Insignificant	HC and G1-10 21kms; hospital & G11-12 63 kms
Communities with no urban centres						
Dinki got, very remote, mountainous, vegetable & fruit exports, Amhara; beginning 2010	Aliyu Amba 10 kms by road, 8kms path, Ankober 25 kms, Debre Berhan 52 kms	8 kms walk on paths; pack transport	Irrigated products to Aliyu Amba	None in *got* and very few in kebele centre	Trade and little daily labour Aliyu Amba; distress urban migration	HC & G9-10;; 8 kms walking; G11-12 DK hospital 42 kms after walk
Korodegaga, remote, flat, drought-prone, aid-dependent, irrigated vegetable exports, Oromia, beginning 2010	By road Dera 25 kms, Adama 52 kms; on foot Awash Melkasa 8 kms, Dera 19 kms, Adama 24 kms	Wereda centre 25 kms dry-weather road; pedestrian raft to Route 91 & 8kms to Route 9	Irrigated vegetables bought at farmgate; firewood	A few women sold a few urban goods from home	1 guard at Sodere; trade & firewood sale in Dera; army	HC, G6-10, 25 kms on dirt road; 19 kms after raft; hospital 24 kms after raft

*Not including agricultural and international migration

Rural-urban linkages in the communities bordering municipalities

Map 8: Rural-urban linkages - communities bordering municipalities



The communities with borders with municipalities at their centres were *Girar* (Imdibir town, Gurage), *Yetmen* (Yetmen town, East Gojam), *Oda Dawata* (Gonde town, Arssi), and *Gara Godo* (Gara Godo town, Wolayita). *Oda Haro* bordered Tibe town on one side (West Shewa).

External roads from the communities bordering municipalities

Oda Haro and *Oda Dawata* straddled main highways between cities; *Oda Haro* was on the road between Addis Ababa (Route 4 – 224 kms) and Nekemte (94 kms – Bako 17 kms)) via Ambo (110 kms) and Oda Dawata on Route 9 from Assela (16 kms) one way to Adama (61 kms) and Addis Ababa (150 kms) the other. Both were in good condition at the time of fieldwork. There were minibuses and middle level public buses passing through *Oda Haro* and transport costs had officially reduced by a third following Chinese road improvements, although drivers were not sticking to the legal tariffs. In Oda Dawata there was a problem accessing any transport as there were no bus stops. There were good allweather roads to two other towns with limited transport.

Yetmen and *Girar* straddled main roads leading to highways; *Yetmen* was on Route 31 17 kms from Bichena and not far from Route 3 between Addis Ababa (250 kms) and Bahir Dar, and *Girar* on an allweather gravel road from Hosaena (94 kms) one way to Wolkite (32 kms) on Route 5 to Addis Ababa (182 kms). Buses from *Yetmen* costing 10 *birr* for a roundtrip and Isuzu pickups transported people and goods to the wereda capital Bichena and there was regular public transport passing through *Girar*.

The road from *Gara Godo* to the wereda capital Areka (11 kms), which was on Route 51 between Wolayita Sodo (41 kms) and Addis Ababa (293 kms) had recently been improved. There were no transport problems getting to Areka or Sodo. Roads to two small local towns had recently been improved. (See Table A29 for more details).

Accessing urban health and education services from the communities bordering municipalities

There was a Health Centre in *Oda Dawata* kebele. Health Centre services for people in the other four communities were in the adjacent municipalities. The nearest hospitals to *Girar* (12 kms) and *Gara Godo* (11 kms) were Catholic hospitals, both described as 'expensive'; the nearest to *Oda Dawata* was 12 kms. Journeys to hospital were longer from the other two communities: 64 kms from *Yetmen* to Debre Markos and 94 kms from *Oda Haro* to Nekemte, although there was a plan to build a wereda hospital in Bako (17 kms).

There were G1-8 schools in *Girar* and *Gara Godo*, two in *Oda Haro* and four in *Oda Dawata*. The *Yetmen* G1-8 school was in the municipality. There was a G9-10 school in *Gara Godo* kebele and Tibe municipality bordering *Oda Haro*. G11-12 for *Gara Godo* was 11 kms and for *Oda Haro* 17 kms. There was a G9-12 school a few kilometres from *Girar*'s kebele centre. The *Oda Dawata* G9-10 school was 12 kms and the preparatory school 16 kms. There was G9-12 in Bichena, 17 kms from *Yetmen* but there was a plan to build a G9-10 school in the municipality. (See Table A30 for more details).

Rural exports to urban areas from the communities bordering municipalities

Three communities exported rainfed agricultural products to big cities. *Yetmen* farmers sold *tef* and wheat to traders who sold in Addis Ababa. Farmers in *Oda Dawata* sold potatoes at the farmgate and beans and wheat to big traders in Gonde town. Maize was exported from *Oda Haro*, much of it going to Addis Ababa. Increasing 'Wolayita' coffee production in *Gara Godo* was sold to two coffee-washing plants and some richer farmers sold *tef* locally. *Chat* from *Girar* was sold in Imdibir. Farmers in *Yetmen* and *Oda Dawata* sold irrigated vegetables in the municipalities. Farmers in *Oda Haro* also sold vegetables and fruit locally, but in addition tomatoes were exported to Addis Ababa and incoming traders bought sugarcane.

Livestock fattening for local sale was reported from all communities except *Girar*, where wereda officials were trying to encourage it by providing credit. Some fattened cattle from *Oda Dawata* were sold on in Adama and Addis Ababa and some farmers sold milk to a co-operative and eggs to traders, some of whom sold them on in Adama. *Oda Haro* farmers sold butter and eggs to traders

who sold on in local markets. Women in *Gara Godo* had a history of butter trading in Addis Ababa. Some milk was sold in *Yetmen*.

Urban building booms had increased demand for building materials. Eucalyptus was grown as a cash crop by some farmers in *Gara Godo* and *Oda Haro* and it was a major export from *Girar* where traders came to load lorries. Stone was quarried by a co-operative in *Oda Dawata* and there was a stone-crushing business in the kebele. (See Table A31 for more details).

Non-farm business and employment opportunities for residents of the communities bordering municipalities

Some non-farm activities in communities bordering municipalities served only people within the communities; for example in *Oda Dawata* there were 100 living-in domestic workers. Others involved production activities inside the community with outputs sold in the municipality or beyond; for example the butter traded from Garo Godo. Some living in the rural kebeles commuted to the municipality for work; for example wholesale grain trading in *Yetmen* town and construction work in *Gara Godo*. Longer-term urban migration had been a long-standing practice in Gurage *Girar* and a considerable proportion of young people from *Oda Dawata* and Garo Godo migrated to towns for various durations. Urban migration from *Oda Haro* had increased while agricultural migration had fallen. Some young men left *Yetmen* for towns[13]. Table 9 shows that many people living in these communities bordering municipalities were involved in non-farm activities of various kinds.

Table 9: Non-farm opportunities for people living in the communities bordering municipalities

Community	Work inside the kebele	Commuting	Migration
Yetmen sub-kebele surrounding Yetmen town, East Gojjam, Amhara, early 2010.	Areke production, dungcakes; sold in urban Yetmen market	Grain trade: *tef,* wheat and chickpeas bought in remote rural markets and sold retail in market or wholesale in Yetmen town. Daily labour in Yetmen town including construction of health centre	Some youth longer-term urban; [small seasonal agricultural]
Girar, surrounding Imdibir town, Gurage, SNNP, early 2010	Maybe In urban villages adjacent to Imdibir; pottery made and sold in Imdibir	Trade and daily labour in Imdibir. Some richer farmers have businesses in town.	Longer-term urban migration a long-standing Gurage practice for males and females. [International - young women to Gulf and a few males and females to Europe and US]
Oda Dawata, surrounding Gonde town, Arssi, Oromia, 2013	Production of *areke* and trade in agricultural produce; grain mills; stone production co-operative; stone crushing investor employs 30 daily labourers; 100 domestic workers in homes.	Daily commuting for work out of the kebele including employment in Agricultural Research Centre, flour factory, malt factory and construction work.	Male and female seasonal and longer urban migration [4 men a year migrate seasonally to Bale to sharecrop land for red pepper for income to invest; international - many young women migrating to the Gulf]
Gara Godo, surrounding Gara Godo town, Wolayita, SNNP, end 2011	Larger and smaller crop trading; timber trading; butter trading; coffee processing in two plants September-December.	In municipality 20 carpenters, house construction; transport services, transport *delala*, retail trading, shops, kiosks, bicycle renting, DSTV renting, beauty salons, barbers, restaurants, private clinics, and pharmacies.	Butter trading in Addis Ababa.30% of young population migrate to towns for various durations (Algeta, Adama, Addis Ababa, Hawassa, Shashemene, Wolayta Sodo, Zway) [Migration for seasonal agricultural work; small number to Gulf and South Africa]

[13] See the chapter on migration for more

Community	Work inside the kebele	Commuting	Migration
Oda Haro, bordering Tibe town, West Shewa, Oromia, 2013	179 people in non-farm business; 29 in non-farm employment. moneylenders; big/ middle/ small and self-traders; maize thresher; a few irrigation pumps for rent; part-time carpenters; blacksmith; *gotera* makers; spinners; 10 weavers making clothes; *areke* production; wood and charcoal sale; shoe shiner; watch/ shoe/ umbrella mender	Trading and local daily labour in Tibe and other nearby small towns. Pure water sold by *iddir*.	Increase in urban migration; some female urban migration; [Decrease in male agricultural migration and international migration mostly female to the Gulf.]

Thickening rural-urban linkages in the communities bordering municipalities

Table 10 summarises the rural-urban linkage data for the communities bordering municipalities. Non-farm business and employment opportunities were good and increasing in these five communities, some taking place inside the communities, some in nearby towns, and some involving transport between the two. The main reason probably was that four of the communities were relatively prosperous surplus-producing agricultural exporters, and while the fifth, Gara Godo, was drought-prone, niche coffee production and associated incomes had been growing fast. Good incomes from these exports meant good demand for non-farm products and services. There was some urban migration from all communities; in the Gurage community Girar, it was large and long-standing with networks of links to Addis Ababa and other towns.

All the kebele centres had excellent access to the outside world via tarred or gravelled roads. All had public transport passing through though Oda Dawata had no bus stop which meant it rarely stopped. All the communities had Health Centres within 10 kms and three had hospitals within 20 kms, although in Oda Haro and Yetmen they were 94 kms and 64 kms from the kebele centres. A G9-12 school was within walking distance of Girar's kebele centre and G9-10 schools were accessible in Gara Godo and Oda Haro. G11-12 in these two communities and G9-12 in Oda Dawata and Yetmen were between 12 and 17 kms distant making walking impossible.

Table 10: Thickening rural-urban linkages in the communities bordering municipalities

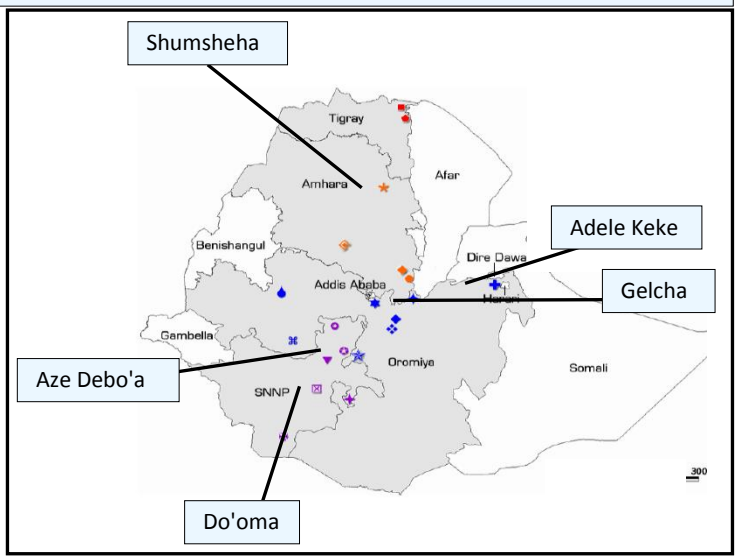
	Distance centre to centre	External roads & transport	Exports to urban areas	Non-farm opportunities*		Distance to urban services
				Internal	In linked towns	
Municipality surrounded by the community						
Oda Dawata, self-sufficient, 61% of land flat and 39% steeply sloping with gullies, exports of potatoes and wheat. Arssi, Oromia, 2013	Assela 16kms, Adama 61 kms	On Route 9 from Adama to Assela- no bus-stop; allweather roads to 2 other towns	Potatoes, beans, wheat, livestock milk, eggs, vegetables, stone, wood	Areke production, grain mills, stone quarrying and crushing, domestic work	Factory work, trade, employment, skilled work, daily labour in Gonde town, urban migration	HC + 4 G1-8 schools in kebele; G9-10 12 kms; hospital & G11-12 16 kms
Gara Godo, drought-prone, sometimes aid-dependent, gently sloping plain, some undulating, recent increase in coffee exports. Wolayita, SNNP, end 2011	Areka 11 kms, Wolayita Sodo 41 kms	Upgraded road to Areka on Route 51; no transport problems	Coffee, *tef*, livestock, butter, wood	Some carpenters, transport services, coffee processing	Businesses, trade, daily labour, transport services, private clinics, pharmacies, urban migration	G1-10 in kebele; HC in town; hospital & G11-12 11 kms
Girar, self-sufficient, flat but undulating, *chat* and eucalyptus exports. Gurage, SNNP, early 2010	Wolkite 32 kms, Hosaena 94 kms	Allweather gravel road to Wolkite on Route 5; regular public transport	Chat, wood	Pottery production, some urban activities in urbanised villages	Pottery sale, trade businesses & daily labour, long-standing large urban migration	G1-8 in kebele; HC G9-12 in town; hospital 12 kms

	Distance centre to centre	External roads & transport	Exports to urban areas	Non-farm opportunities*		Distance to urban services
				Internal	In linked towns	
Yetmen sub-kebele, self-sufficient, flat, grain exports to Addis Ababa. East Gojjam, Amhara, early 2010.	Bichena 17 kms, Debre Markos 64 kms	Allweather road to Bichena and Dejen with public transport	*Tef*, wheat, livestock, milk, vegetables	Areke production, dungcake making	Areke and dungcake sales, trade & daily labour in town, small urban migration	HC & G1-8 in town; G9-12 17 kms; hospital 64 kms
Municipality bordering one side of the community						
Oda Haro, self-sufficient, two flat sub-kebeles and one mountainous. West Shewa, Oromia, 2013	Bako 17 kms, Nekemte 94 kms	On Route 9; lower transport costs	Maize, red pepper, livestock, butter, eggs, vegetables, fruit, wood	Spinning, weaving, areke production, charcoal, moneylending, maize thresher and pumps renting, skilled workers; large traders stores	Non-farm products sold in Tibe, trade & daily labour in Tibe and other nearby towns, urban migration increasing	2 G1-8 schools in kebele; HC & G9-10 in town; G11-12 17 kms; hospital 64 kms

*Not including agricultural and international migration

Rural-urban linkages in the communities bordering larger towns

Map 9: Rural-urban links in communities bordering larger towns



The communities with part-borders with larger towns were *Do'oma* (Wacha, around 20,000 people, Gamo), *Gelcha* (Metahara, about 23,000 including sugar factory), *Shumsheha* (Lalibela, about 27,000), *Adele Keke* (Haramaya, about 45,000) and Aze Debo'a (Durame, about 47,000). All were drought-prone and part-reliant on social protection programmes.

External roads from the communities bordering larger towns

Shumsheha bordered Lalibela which was on an allweather road which led to Gashena (61 kms) on Route 22; from there Route 22 and Route 3 connected to Bahir Dar (312 kms) and Route 22 and Route 2 to Addis Ababa (674 kms). As described in the rurbanisation section getting from Shumsheha to Lalibela was problematic. There was no public transport and people had either to walk to Lalibela or for 30 minutes to the bridge on the main road where they could stop passing buses and trucks in the hope they had a space. Lack of transport was said to be harming the community.

Gelcha bordered Route 1, the highway from Assab to Addis Ababa (217 kms from Gelcha) via Adama (134 kms). Route 10 to Harar branched off Route 1 30 kms beyond Metahara. There was public transport from Metahara to Adama and Addis Ababa. Gelcha also bordered a small town, Harro Adi; people could walk to both towns in about half an hour and there were horsecarts between Metahara and Harro Adi.

Adele Keke was on Route 10, 23 kms before Harar and 470 kms from Addis Ababa. There was transport on the main road to Dire Dawa, Haramaya and Aweday where the large *chat* market was.

Aze Debo'a was 12 kms on a gravel road from Route 7 which gave access to Wolayta Sodo (61 kms from Aze Debo'a) in the south; to the north an un-numbered road led to Route 51 to Addis Ababa (269 kms). The gravel road was about to be asphalted at the time of fieldwork. There was public transport to Durame, motorbikes and carts. Traders could hire private trucks for collecting coffee or stone.

Do'oma was 12 kms from Morka on the road between Sawla 88 kms one way and Wolayita Sodo 144 kms the other. The distance from Morka to the zone capital Arba Minch was 220 kms and to Addis Ababa via Wolayita Sodo on Route 7 it was 380 kms. Until 2012 Do'oma was cut off from Morka during the rains by two rivers; during fieldwork a bridge over one river was completed and a bridge over the other was under construction and the road was being upgraded. There was a new unreliable bus service to Morka 3 times a week costing 10 *birr*. (See Table A33 for more details).

Accessing urban health and education services from the communities bordering larger towns

There was a Health Centre in *Shumsheha got* and there were health centres in Durame for *Aze Debo'a*, Wacha for *Do'oma*, and 2 kms from *Gelcha*, although it had no drugs. People from houses scattered across *Adele Keke* used different health centres depending on proximity. Gelcha residents could use the Metahara factory hospital which was 6 kms from kebele centre. Lalibela hospital was 9 kms from *Shumsheha* on the steep unpaved road and 24 kms on the allweather road on the edge of the kebele. Dire Dawa hospital was 23 kms from *Adele Keke* roadside kebele centre and Sawla hospital was 88 kms from *Do'oma*. *Aze Debo'a* was 53 kms from the nearest government hospital which was in Wolayita Sodo.

Aze Debo'a, *Gelcha* and *Shumsheha* had G1-8 schools inside the kebele. G9-12 for *Aze Debo'a* was in Durame (4 kms), for *Gelcha* at the sugar factory, and for *Shumsheha* in Lalibela (9kms). The nearest G1-8 school to *Adele Keke* was in a neighbouring kebele where there was also a G9-10 school; the preparatory school was in Kersa which was 30 minutes on a bus with a fare of 7 *birr*. *Do'oma* students had to go to Wacha for G5-8 in Wacha (5 kms). The nearest G9-10 school was in a neighbouring kebele 'quite near' while the preparatory school was in Morka (12 kms). (See Table A34 for more details).

Rural exports to urban areas from the communities bordering larger town

Four of these communities were drought-prone and often had few surplus rain-fed crops to sell. Bad weather also affected *Shumsheha's* agriculture but in good times fodder and grain were often transported to Lalibela and two other nearby market towns, with some going to Woldiya (110 kms), Dessie, and sometimes Addis Ababa. Irrigated vegetables and fruit were sold in Lalibela market. Coffee and avocado were cash crops in *Aze Deb'oa* while a few rich farmers sold *tef*. Both rainfed and irrigated *chat* were exported from *Adele Keke* with some going to Djibouti and Somaliland. Also some irrigated vegetables were sold in Haramaya and Dire Dawa. Rainfed agriculture in *Do'oma* frequently failed but irrigated vegetables and fruit were sold in Wacha, and some were transported for sale in Wolayita Sodo, Addis Ababa and Adama. A few households in *Aze Deb'oa* irrigated and sold mangoes and papayas.

Farmers in all five communities were involved in livestock fattening for sale in local livestock markets. Milk and milk products were sold in *Adele Keke* (there was a co-operative), *Aze Debo'a* and *Gelcha* during the rains where it was new. Honey from *Shumsheha* was sold in Lalibela market.

Construction wood was exported from *Shumsheha* to various towns, while *Do'oma* residents cut construction wood, firewood and charcoal from the forest and grass for sale in Wacha. Sale of eucalyptus had been growing in *Aze Debo'a* where there was also a stone quarry. In *Gelcha* stones collected within the kebele were taken to Metahara for sale. (See Table A35 for more details).

Non-farm business and employment opportunities for residents of the communities bordering larger towns

Patterns of non-farm activity in these communities were similar to those in the communities bordering municipalities. In *Adele Keke*, near Haramaya with a population of more than 45,000, a number of non-farm businesses were being developed involving transport, petty retail trade, and wholesale trade, facilitated by easy access to a main road and multiple nearby towns and markets. For example there were 13 milk traders. A landholder sold water from a waterpoint on his land. A few young men commuted for construction work in nearby urban centres and there was seasonal female urban migration including to Djibouti. In *Aze Debo'a*, bordering Durame with more than 47,000 residents, 15 people had their own businesses, and 53 were employed, including 17 men in skilled work. There was small-scale trade of coffee & fruit and more than 100 females were employed in coffee washing for 3 months. A stone-crushing site employed around 30 people and there was motorbike and cart transport. People commuted to Durame for employment and trade and there was established urban migration for trade and jobs. Females had only recently started migrating to towns on any scale.

There was less urban demand from the smaller relatively isolated towns bordering Shumsheha, Do'oma and Gelcha. *Shumsheha* was the only kebele with an internal urban centre; here there were grinding mills, petty and shop trading, manual daily labour, cotton spinning, sewing and local beverage production. People worked in Lalibela market selling crops and livestock. Female migration to Addis Ababa had increased and 30 men had recently been employed by the Federal police. (See Table A36 for more details). Working inside *Do'oma* there were six part-time carpenters, a few potters, and motorbike transport. Commuters to Wacha were involved in the sale of wood etc described above and petty and larger trading, and there was a *delala* who linked farmers, three traders and truck owners for the export of irrigated products. Three young men were employed as guards at the adjacent Maze National Park. There were daily labour opportunities in Wacha, for example painting houses. Males migrated seasonally and longer-term to Arba Minch, Sodo and Harar, while females mostly migrated to Arba Minch. In mainly pastoralist *Gelcha* a few people had horses and carts and there was potential income from sale of stone in Metahara. 80 people were employed at the sugar factory while some commuted to Metahara to sell wood, grass and sugarcane. There was a small amount of urban migration by men.

Thickening rural-urban linkages in the communities bordering larger towns

Table 11 summarises the data on rural-urban linkages in communities bordering larger towns. These communities were all weather-prone and dependent on social protection aid to different degrees. Nevertheless three of them exported agricultural products to distant places. Do'oma's irrigated vegetables were sold in Adama and Addis Ababa, some of Adele Keke's irrigated *chat* was exported to Saudi Arabia, and Aze Debo'a's increasing production of specialist Kambata coffee was traded in Addis Ababa. Farmers from the communities also sold different mixes of staple crops, vegetables, fruit, livestock, livestock products, wood and stones. Demand for these rural products was greater in the larger towns of Durame (Aze Debo'a) and Haramaya and its corridor of smaller towns (Adele Keke). There were also considerable business and employment opportunities for residents of Aze Debo'a and Adele Keke.

In the communities adjacent to the smaller and more isolated towns there were fewer non-farm opportunities. Urban Shumsheha had some but non-farm activities inside Do'oma and Gelcha were insignificant. External non-farm work opportunities in all three were limited although in Gelcha the Metahara sugar factory employed 80 people.

All the communities except Shumsheha had allweather connections to the outside world. All the communities had a Health Centre within 10 kms of the centre and four had hospitals within 20 kms. None had a single village centre meaning that everywhere some people had noticeable journeys to

the kebele centres on dryweather routes. In hilly Aze Debo'a and Adele Keke there were more than twenty villages.

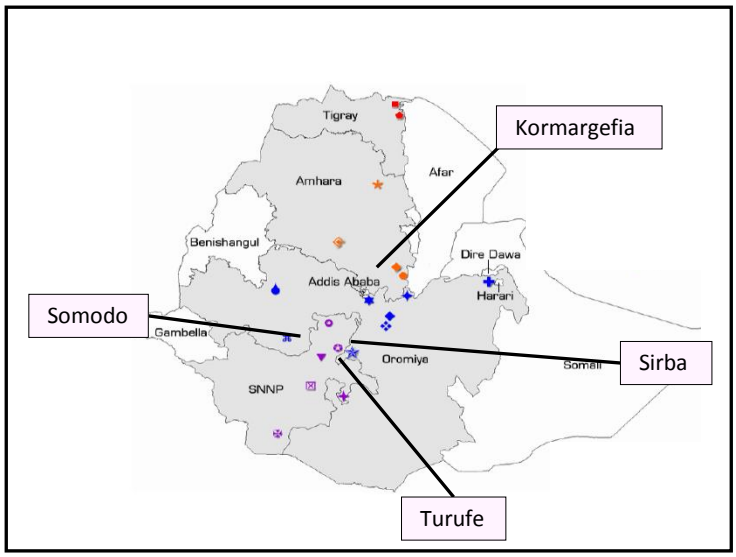
Table 11: Thickening rural-urban linkages in the communities bordering larger towns

	Distance centre to centre	External roads & transport	Exports to urban areas	Non-farm oppor-tunities*		Distance to urban services
				Internal	In linked towns	
Communities bordering towns with almost 50,000 inhabitants						
Adele Keke, drought-prone, aid-dependent, hilly terrain, escarpments, 2 large hills, 5 gorges, bordering **Haramaya**, *chat* export to Gulf, East Harerghe, Oromia, late 2011	Haramaya, 10 kms Dire Dawa 23 kms, Harar 23 kms	Highway with transport	*Chat*, vegetables, fattened livestock, milk and milk products	New businesses by road, milk co-operative, water selling	Trade & construction work in Haramaya and other nearby towns; female urban migration	HC 9 kms, G8-10 neighbour kebele; G11-12 30 mins on bus, hospital 23 kms
Aze Debo'a, drought-prone, aid-dependent, flat alongside road, hilly parts, recent exporting of niche coffee, bordering **Durame**, Kambata, SNNPR late 2011	Durame 4 kms, Wolayita Sodo 61 kms	Gravel road being asphalted; transport to Durame	Kambata coffee, avocado, *tef*, fattened livestock, milk, butter, cheese, fruit	Coffee-washing, coffee trade, carts motorbikes	(15 businesses, 53 employed, 17 skilled workers – not sure where) trade & work in Durame, urban migration	G1-8 in kebele, HC. Hospital G9-12 4 kms
Communities bordering towns of around 20,000						
Shumsheha, weather-prone, aid-dependent, some flat some hilly, bordering **Lalibela**, North Wollo, Amhara, late 2011	Lalibela 9 kms, Bahir Dar 312 kms	Road Lalibela poor, no transport	Fodder, grain, shoats, vegetables & fruit, wood	Urban Shumsheha trade, business, labour	Trade Lalibela, urban migration	HC & G1-8 in kebele; hospital & G9-12 9 kms Lalibela
Do'oma, drought-prone, aid-dependent, flat or gently sloping, export of onions, peppers, fruit, tomatoes, some to distant cities, bordering **Wacha**, Gamo Gofa, SNNPR, late 2011	Morka 12 kms, Sawla 88 kms, Arba Minch 220 kms	New road & bridges to main road almost finished; new unreliable occasional transport	Vegetables, fruit, fattened livestock, wood, charcoal	Motor-bikes, carpenters, potters	Trade, delala, petty trade, daily labour, 3 Park guards,	HC & G6-8 5 kms; G9-10 near kebele; G11-12 12 kms; hospital 88 kms
Gelcha, pastoralist, drought-prone, aid-dependent, flat lowland, bordering **Metahara,** East Shewa, Oromia, late 2011	Harro Adi 6 kms, Metahara 6 kms Sugar factory 6 kms	Highway transport; allweather road horsecarts	Livestock, some fattened, milk & butter, stones	Stone collection, horsecarts,	Stone sale sugar factory, petty trade in towns, urban migration	HC 2kms, G1-8 in kebele, hospital & G9-12 6 kms

*Not including agricultural and international migration

Rural-urban linkages in the communities adjacent or near to cities

Map 10: Rural-urban linkages in communities bordering cities



The WIDE communities near or with part-borders with cities were *Sirba* on the 40 km urban-industrial corridor developing between Bishoftu (population about 147,000) and Mojo (population about 43,000), *Kormargefia*, bordering Debre Berhan (about 102,000), *Turufe*, bordering Shashemene (about 148,000), and *Somodo*, bordering Jimma (about 177,900). All the communities were economically self-sufficient, although *Turufe* had needed aid in 1984 and 2008 following droughts.

External roads from the communities near to cities

The long-standing main highway from Addis Ababa to Adama (Route 1) passed through *Sirba* sub-kebele; it had been upgraded fifteen years before the fieldwork and regularly maintained. There were frequent minibuses to Bishoftu (20 kms), Mojo (20 kms) and Addis Ababa (80kms). Lorries and buses created air pollution. A new multi-lane toll road from Addis Ababa to Adama was under construction in a neighbouring kebele in 2013.

Kormargefia straddled Route 2 from Debre Berhan (10 kms centre to centre) to Addis Ababa (126 kms), which it part-bordered. The road had been upgraded and widened to allow people to walk with their pack animals by a Chinese company in 2012. In 2011 an inter-wereda road crossing the south-west of the community had been constructed. For those living near these roads there was improved access to fertiliser, consumption goods and milk sale. There was public transport to Debre Berhan and Chacha (2 hours walk from kebele centre) but minibuses were usually full and did not stop. Many people walked to Debre Berhan (2.5 hours from centre) but faced problems as investors had fenced off long-used paths to the market.

The *Turufe* border was 3 kms from Route 7 from Shashemene to Mojo where it joined Route 1 to Addis Ababa (229 kms). Journeys were hampered by the poor state of the dryweather road from the centre to the road. Most transport was via horse and donkey carts; bajaj came sometimes but some refused due to the poor state of the road. Traders came to transport potatoes to Addis Ababa.

Somodo was divided by a gravel road from Limu Genet, through Belida (4 kms) and Somodo to Mazoria, which was on the tarred road between Yebu and Jimma (17 kms); the distance to Addis Ababa was 369 kms. It had been improved in 2008 and minibuses and trucks passed through, as did a city bus from Jimma to Belida. (See Table A37 for more details).

Accessing urban health and education services from the communities near to cities

None of these communities had a Health Centre within its borders. The centre for *Kormargefia* was in Debre Berhan, 10 kms from the kebele centre, as was the hospital. In *Somodo* the centre was in Belida 4 kms distant and the hospital in Jimma (17 kms). *Turufe*'s health centre was in adjacent Kuyera town which had become a suburb of Shashemene; the hospital was also in Kuyera but

bordered the kebele. *Sirba*'s health centre was in the adjacent sub-kebele and the nearest hospital in Bishoftu (20 kms).

G1-8 students did not need to leave the kebele to attend school in three communities, but G8 students in Kormargefia had to travel 6 kms to Tebase town. There was a G9-10 school in a sub-kebele bordering Sirba but in the Somodo and Turufe students had journeys of 3-4 kms, while those in Kormargefia were 10 kms from the school in Debre Berhan. There was a G11-12 school in commuting distance of Turufe; elsewhere the distances ranged from 10 – 20 kms. (See Table A38 for more details).

Rural exports to urban areas from the communities near to cities

Kormargefia's livelihood system was led by livestock; the farmers provided breed cattle to others in the area, sold milk to a dairy co-operative, and fattened cattle and shoats and butter and eggs to sell in Debre Berhan market. Small surpluses of lentils, wheat, linseed and fava beans from rainfed production were sold in Debre Berhan. A few years previously most farmers had planted the staples of barley and fava beans on irrigated land but this had changed by 2013; potatoes were the main crop and carrots, garlic, cabbage and sugar beet was also grown for sale to incoming traders and in Debre Berhan. Most farmers had a small eucalyptus plantation for eventual sale.

The main export from *Somodo* was coffee, followed by *chat* and avocado. Irrigated production was still small but growing; farmers sold vegetables and fruit locally and a pair of investors working together grew tomatoes which were exported to Jimma. A few cattle were sold to an abattoir enterprise in Jimma. Eucalyptus was grown for sale.

Sirba was famous for its *tef* production, and also sold wheat and chickpeas in the market in the kebele, in Bishoftu, and increasingly to wholesale traders. A few households were involved in small-scale production of garden vegetables and spices using drip irrigation and sold some in local markets. Fattened bulls and eggs were sold and milk was collected daily by a co-operative. Eucalyptus was sold and there was a stone quarry worked and managed by a co-operative.

Potatoes and maize grown in *Turufe* was exported to Addis Ababa but there was no significant sale of irrigated products or natural resources. A few farmers sold milk directly to cafés in Kuyera. (See Table A39 for more details).

Non-farm business and employment opportunities for residents of the communities near to cities

There was some non-farm work based inside all the kebeles. In the small ribbon development along Route 2 in *Kormargefia* there was house construction for renting to shop owners and alcohol sellers and a grain mill. At the time of fieldwork there was temporary construction work for 30 labourers at the dairy investment in the kebele. There were increasing employment opportunities further along the road towards Debre Berhan and in the town itself and those living near allweather roads or the border with the town could commute. There had been a great increase in seasonal and longer-term migration to Debre Berhan and Addis Ababa.

In *Somodo* there were some full-time businessmen based in the ribbon development along the road who rented out their farmland. People in this emerging town were involved in trading of coffee, *chat*, and consumption goods and petty business including shop-keeping and hospitality services. More women were more active than in the past. There were 30 carpenters, 10 full-time, working mainly on house construction, 27 in regular employment and 26 in manual daily labour. A few males and females commuted to Jimma to work on construction sites and a few stayed in the town while working.

Inside *Turufe* there was petty trading, some small shops and *areke* production. There were opportunities for seasonal brokers between farmers and traders transporting potatoes to Addis Ababa. Many young males commuted to Kuyera and Shashemene for daily labour; some stayed in

Shashemene. Some skilled men migrated temporarily to towns in the area. Young women migrated to Ziway to work in the flower farms.

There were many opportunities for non-farm work for people living in *Sirba* sub-kebele. In the kebele there was a brick factory, a cupboard factory, a flower farm, two hotels, and a petrol station under construction and there were plans for a weedkiller factory and a large eggfarm. In Denkaka town there were metal and woodwork businesses and minibuses. About 300 people from the whole kebele were employed within its borders. Both males and females commuted for non-farm work along the road between Mojo and Bishoftu. Males and females migrated to nearby towns (e.g. Bishoftu) or industrial areas (e.g. Dukem) for non-farm work, including laying cobblestones, factory and flower-farm work, and work as drivers and mechanics. (See Table A40 for more details).

Rural-urban linkages in the communities adjacent or near to cities

Table 12 summarises the rural-urban linkage data for the communities near to cities.

Table 12: Thickening rural-urban linkages in the communities adjacent or near to cities

	Distance to centre	External roads & transport	Exports to urban areas	Non-farm opportunities*		Distance to urban services
				Internal	In linked towns	
Kormargefia, flat with small hills part **bordering Debre Berhan**, export of eucalyptus + irrigated vegetables, North Shewa, Amhara, 2013	Tebase, 6 kms Debre Berhan 10 kms	Highway, transport inadequate, a few used new road	Fattened livestock, milk, eggs, butter, crop surpluses, vegetables, wood	Construction, shop, café, grainmill	Commuting for employment in new businesses on road to Debre Berhan, trade and work in Debre Berhan, increasing urban migration	G8 6 kms, HC G9-12, hospital 10 kms,
Sirba sub-kebele, mostly flat, small hill, **near to Bishoftu**, export of grain +chickpeas, East Shewa, Oromia, 2013	Denkaka, 4 kms, Bishoftu 20 kms	Highway, transport good, nearby multi-lane toll road being constructed	*Tef*, wheat, chickpeas, fattened bulls, eggs, milk, few vegetables, wood, stone	In kebele factories, flower farm, hotels, petrol station under construction	Commuting and migration to further factories, flower farms etc, trade and work in Denkaka and Debre Berhan	HC, G5-10 near sub-kebele, G11-12 & hospital 20 kms
Turufe sub-kebele, flat, adjacent to Kuyera recently incorporated into **Shashemene,** exports of potatoes and grain, West Arssi, Oromia, early 2010	Kuyera 4 kms, Shashemene 12kms	3 kms from highway, feeder road poor, carts, bajaj if road OK, traders trucks	Potatoes, maize, a few sold milk	Petty trading, small shops, areke production, seasonal trade brokers	Commuting & migrating to Shashemene for work; migration to Ziway flower farms	G1-8 in Turufe; HC, G9-12, hospital in Kuyera
Somodo, more or less flat with some slopes, border with **Jimma,** export of coffee and *chat*, Oromia 2013	Belida 4 kms, Jimma 17 kms, Yebu 20 kms	Gravel road to tarred road; transport including city buses	Coffee, *chat*, avocado, vegetables, fruit, wood	Full-time businessmen, coffee trade, business, trade, labour in urban ribbon,	A few commuting/ migrating to Jimma	G1-8 in Somodo, HC, G9-10 4 kms, hospital 17 kms, G11-12 20 kms

*Not including agricultural and international migration

The links of *Kormargefia* (Debre Berhan), *Sirba* (Bishoftu), and *Turufe* (Shashemene) with their nearby cities were strong, particularly in terms of commuting and migrating for non-farm work, and accessing hospital and higher education services. Most farming and natural resource exports also went to the cities in the first instance, except that Turufe's potatoes were exported directly to Addis Ababa. The links between *Somodo* and Jimma were less strong. There were also trade, work and

service links with other smaller towns in the vicinities of the communities, especially Tebase for Kormargefia, Denkaka for Sirba, Kuyera for Turufe and Belida for Somodo and some urban migration to other towns, including Addis Ababa.

Well-maintained roads eased the passage of goods and people in both directions, and transport was good in Sirba and Somodo, where city buses passed. A poor access road to Turufe sometimes caused problems for bajaj and during the rains for all transport. Minibuses heading for Debre Berhan were usually full when they reached Kormargefia. While most inhabitants of Turufe and Sirba lived in the centralised village settlements in Kormargefia and Somodo were scattered meaning that some people had long journeys to the kebele centres. For one community the Health centre was more than 10 kms away, and for another the hospital was more than 20 kms.

Urban expansion into rural areas – the WIDE 3 evidence

Six communities had no border with an urban area. Tables 13-15 show how the communities bordering municipalities, larger towns and cities had been affected by recent urban creep.

Expansion of the municipalities into rural areas

Map 11: Expansion of municipalities into rural areas

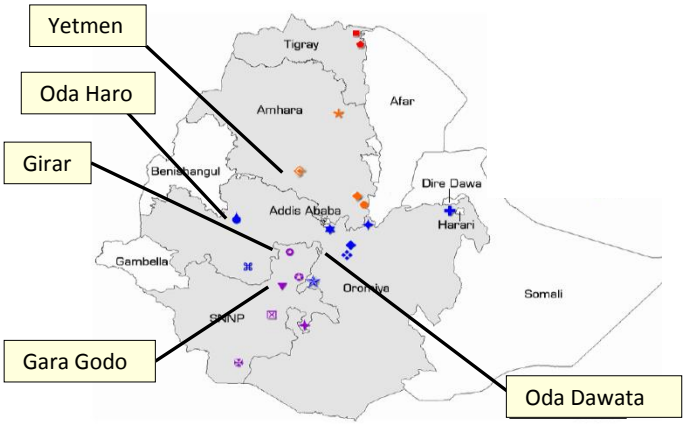


Table 13 describes land losses by the communities to the municipalities they bordered. Three of the communities had already lost land and all five were at risk of losing some/more in the future. The table has a column containing references to policy issues raised by community respondents which are taken up in the conclusion.

Table 13: Urban expansion into rural parts of the communities bordering municipalities

Community	Loss of land to bordering town	Future	Policy issues
Yetmen early 2010	**Yetmen municipality** took rural land to build secondary school – led to riot and death	Expansion of Yetmen town	Bad relations between urban and rural Yetmen following siting of secondary school on rural land affected rural access to water (from points on rural land adjacent to the town) and informal electricity connections
Gara Godo late 2011	**Gara Godo new municipality**: Gara Godo kebele smaller since the centre became a municipality and one sub-kebele became an independent kebele. Collection of contributions and tax shifted to the municipality and the kebele now has no means of income	Expansion of GG municipality	Transition period – no kebele offices, no Health Post
Girar early 2010	**Imdibir wereda town (population 2005 – 4,057):** Parts of Imdibir Haya Gasha kebele (1995) gradually incorporated in Imdibir which became a municipality between 2003 and 2009. Remainder merged with other areas to form Girar. Some villages adjacent to Imdibir town are as urbanised as the town itself.	Further expansion of Imdibir	Drinking water issue; land from Girar spring piped to the town; no safe water in rural Girar.
Oda Dawata 2013	In 2003 **Gonde municipality** was the urban *got* at the centre of Oda Dawata kebele; no land had been lost recently	Parts of Bejego-Mecro almost part of Gonde town. Agreement to give some land to the municipality as it has nowhere else to expand.	Kebele youth complained that some land in the rural part designated for expansion had temporarily been given to youth from Gonde town to farm rather than to them
Oda Haro 2013	NONE YET	In 10-year plan – incorporation of the Ebicho communal grazing land into Tibe.	Farmers concern about losing communal grazing land

Expansion of the larger towns into rural areas

Map 12: Expansion of larger towns into rural areas

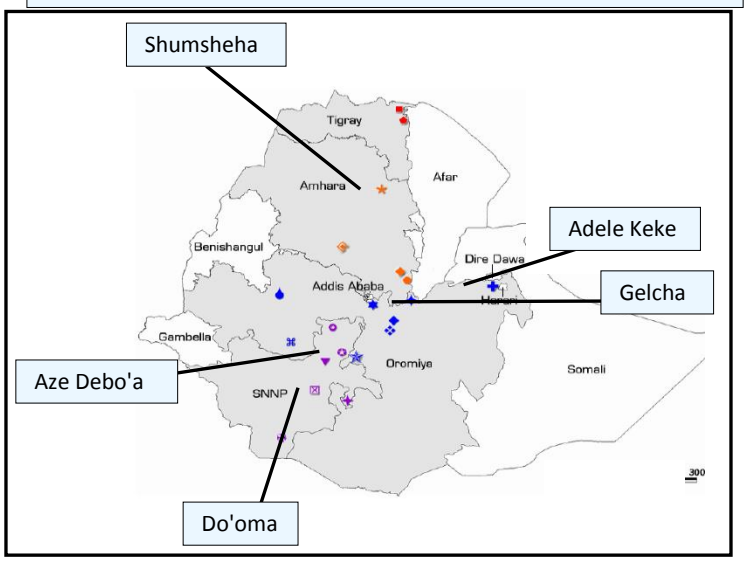


Table 14 shows that only Do'oma had lost land to its bordering town by the time of fieldwork. Shumsheha had been part of the Lalibela City Administration between 2007 and 2012 but had been moved to a rural wereda in 2012 at the community's request since the city administration was not providing good rural services. Looking to the future it seemed likely that fairly soon Do'oma would lose more land to Wacha, that Gelcha might be incorporated into the Metahara city administration, and that Haramaya would take some land from Adele Keke. The policy issues raised in column four are taken up in the conclusion.

Table 14: Urban expansion into rural parts of the communities bordering larger towns

Community	Loss of land to bordering town	Future possibilities	Policy issues
Do'oma, late 2011	**Wacha wereda town (estimated population 2015 - 20,100):** Expansion of Wacha into Do'oma is an ongoing process. Part was transferred in 2008. Late 2011 it had been decided that more of the kebele should be included in the town boundary though no measures had been taken.	Further expansion of Wacha	No concerns about Wacha's expansion expressed by residents of Do'oma kebele.
Shumsheha late 2011	NONE YET **Lalibela (estimated population 27,200 – 2015):** Was part of Lalibela City Administration 2007-12; moved to Basona Werena rural wereda at the community's request.	Expansion of Lalibela	City administration did not provide good rural services
Gelcha late 2011	NONE YET **Metahara (estimated population <u>2005</u> - 23,148)**	Stated intention that Metahara will incorporate Gelcha in the near future	Two plans for the same land? WB PCDP had a plan to bring a big irrigation project
Adele Keke late 2011	NONE YET but request for incorporation of a few villages in Adele Keke into Adele 01 in Haramaya wereda – which is 'part of Haramaya's urban sprawl' **Haramaya (estimated population 45,200);** request turned down	Expansion of Haramaya	Has been some disagreement between Haramaya wereda and Kersa wereda over transfer of some of Adele Keke's land.
Aze Debo'a late 2011	NONE YET but 4 kms from **Durame (estimated population 2015 46,800)**	Expansion of Durame	None raised

Expansion of the cities into rural areas

Map 13: Expansion of cities into rural areas

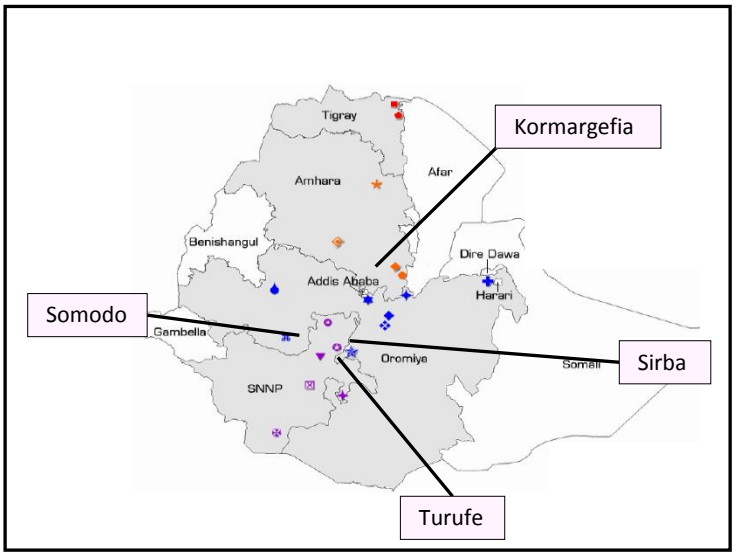


Table 15 shows that the three rural communities adjacent to cities were under increasing pressure for land near their borders with those cities. Somodo had lost land to Jimma, Turufe had lost land to Shashemene and Kormargefia was a kebele re- constructed from parts of other kebeles after Debre Berhan had taken land from them. Sirba was not adjacent to Bishoftu but was under pressure from the rapid expansion of the urban-industrial corridor from Bishoftu towards Mojo. This pressure was reflected in an increase in prices of land next to the road being leased to business investors, and the plan to incorporate much of Sirba village into rapidly expanding Denkaka town.

Table 15: Urban expansion into rural parts of the communities adjacent or near to cities

Community	Loss of land to bordering town	Future	Policy issues
Somodo 2013	**Jimma (estimated population 177,943- 2015:** The kebele recently lost some land as Jimma is steadily expanding. Households living on the land allowed to continue to farm the land but would eventually lose it. No indication of when.	Continued expansion of Jimma	Uncertainty
Turufe 2010	**Shashemene – Kuyera (estimated population 147,774 - 2015):** In 2009 a small part of the rural kebele was added to Kebele 01 of Kuyera town which itself was placed under Shashemene town.	Continued expansion of Shashemene	Part of the Turufe dirt road near to the main road was moved into Kuyera and is no longer maintained by public works causing access problems during the rainy season
Sirba 2013	**Denkaka – 20 kms from Bishoftu (estimated population 146,064 -2015):** Master plan: Denkaka town included some parts of Sirba. Areas given new identification codes indicating they were part of the town. Kebele officials told community not to build new houses – if they did they may be destroyed. Some marks indicating a new road would be constructed.	Accelerating industrialis-ation & urbanisation	Two plans for the same land? Large irrigation project Land prices & sales
Kormargefia 2013	**Debre Berhan (estimated population 102,114 – 2015):** In 2005 the kebele was reconstructed and most of the *gots* of Faji, Bokafia and Kara Fino and all Tebase were transferred to Debre Berhan's town administration. After the split new offices constructed in Kormargefia. Investment process in urbanised land slow.	Continued expansion of Debre Berhan	Land fenced off for investors not being used but blocked the regular walking paths to Debre Berhan

The different experiences of urbanisation among the twenty WIDE3 communities

In each community the modernisation of the rural place and its surrounding area and thickening urban linkages co-evolved with other co-evolving processes: agricultural modernisation; industrialisation; servicisation, and consumerisation. The urbanisation trajectory of each community depended on the *local configuration* of location, terrain, soil fertility, climate, settlement, ecology, and the legacies of past human activities and, in some cases the expansion of adjacent towns, and in others Government plans for the wider area.

Potential urbanisation trajectories of the six communities some distance from any town

Table 16 describes internal urbanisation in the six communities some distance from any town at the time of fieldwork and suggests potential trajectories to 2020, assuming political stability is

maintained. It seems likely that there will not have been much change in Dinki, Harresaw, Geblen and Adado. Given Government development plans for South Omo very remote and pastoralist Luqa might have developed a roadside town, and/or some irrigation infrastructure, and/or been affected by conflict with new investors in Weyto valley. Korodegaga bordering the river Awash is the community with the most unpredictable uncertain future; (some of) the land might have been given for a large irrigated plantation, the large government pump might be working for smallholders, and/or more small investors might have leased land. Or there may have been little change.

Table 16: Potential urbanisation trajectories of the six communities some distance from any town

Community	Internal urbanisation	Loss of land to external urbanisation	By 2020
Korodegaga, early 2010	No urban centre	None	Large irrigated plantation with farmers evicted? Large government infrastructure for smallholders mixed with small private investors? Little change?
Dinki, early 2010	Urban centre in another sub-kebele	None	Much the same?
Harresaw, late 2011	Small urban centre	None	Much the same – 51% female-headed households
Geblen, early 2010	Very small urban centre	None	Much the same? De-population? Increase in female-headed households from 42%?
Luqa, late 2011	Tiny ribbon development	None	Roadside town? Irrigation? Conflict with new investors in Weyto valley?
Adado, 2013	Small town; slow-growing	None	Much the same?

Potential urbanisation trajectories of the five communities bordering municipalities

Table 17 describes the internal urbanisation and recent loss of land to municipalities in these communities at the time of fieldwork, and suggests potential trajectories to 2020. Four communities with municipalities at their centres had already lost some land to them. There were no other centres of urban expansion in these communities. Oda Haro which part-bordered Tibe town had not lost land but ribbon development of businesses along the highway going through Oda Haro had just started.

Looking to the future municipality expansion was included in the 10-year plans of Oda Haro and Oda Dawata and in the others, even if the official borders were not changed, it seems likely that border areas will become increasingly urbanised.

Table 17: Potential urbanisation trajectories of the five communities bordering municipalities

Community	Internal urbanisation	Municipality	Loss of land to external urbanisation	By 2020
Yetmen	Only Yetmen municipality	Yetmen town at centre	Land taken for secondary school	Municipality expansion and sub-kebele re-organisation?
Gara Godo	Only new Gara Godo municipality	Gara Godo town at centre	Lost the urban centre 2009?	Municipality expansion?
Oda Dawata	Around Gonde municipality	Gonde town at centre	Lost the urban centre since 2003	Municipality expansion in plan
Oda Haro	Ribbon development started	Part-bordering Tibe town	None	Municipality expansion in 2013 10 year plan Further ribbon development along highway?
Girar	Around Imdibir municipality	Imdibir at centre	Re-organisation since 2003	Municipality expansion?

Potential urbanisation trajectories of the five communities bordering larger towns

Table 18 describes the internal urbanisation and recent loss of land to larger towns in these communities at the time of fieldwork, and suggests potential trajectories to 2020. Only *Shumsheha* had an urban centre, and only in *Adele Keke* were there signs of urban business ribbon development.

Some of *Do'oma's* land had been incorporated in Wacha, but a request for some of *Adele Keke's* villages to be transferred to a neighbouring kebele which was part of Haramaya, had been refused. *Gelcha, Shumsheha* and *Aze Debo's* had not lost any land.

Looking to 2020 the targeted *Adele Keke* villages may be part of Haramaya and the ribbon development may have grown more urban. Part or all of *Gelcha* might be incorporated in Metahara. *Shumsheha got* might be a municipality and some land bordering Lalibela might be transferred to the town. Ribbon development on the road by *Aze Debo'a* may have started and Durame may have taken some bordering land. It had already been decided that Wacha would take more bordering land from *Do'oma* in 2011 and more may have gone by 2020.

Table 18: Potential urbanisation trajectories of the five communities bordering larger towns

Community	Internal urbanisation	Larger town	Loss of land to external urbanisation	By 2020
Adele Keke	New ribbon development along highway late 2011	Haramaya	Attempt by urbanised Adele 01 officials to take some land	Further ribbon development? Loss of villages adjacent to Adele 01
Aze Debo'a	None late 2011	Durame	None	Much the same? Ribbon development on road to Durame?
Shumsheha	Shumsheha *got* inside kebele late 2011	Lalibela	None	Much the same? Loss of land bordering Lalibela? Shumsheha *got* becomes a municipality?
Do'oma	None late 2011	Wacha	Some taken	Further expansion of Wacha (planned in 2011)
Gelcha	None late 2011	Metahara	None	Long-term plan to include Gelcha in Metahara town? Though also a plan for a large irrigation project? (Incompatible?)

Potential urbanisation trajectories of the four communities bordering or near to cities

Table 19 describes the internal urbanisation and recent loss of land to cities in these communities at the time of fieldwork, and suggests potential trajectories to 2020. In three communities urban business development was taking place along roads. In *Kormargefia*, on the road from Addis Ababa to Debre Berhan, the process had only just started, but, given the rapid development along this road, it was likely to accelerate, and eventually attract outside business investors, probably before 2020. Debre Berhan might also start incorporating land from the border with Kormargefia. *Somodo's* ribbon development was more substantial but as it straddled a smaller gravel road and was led by community members it was unlikely to attract inward business investors. *Sirba* was on the urban-industrial corridor spreading along the road from Bishoftu to Mojo; already 'urban' Sirba had been designated part of adjacent and rapidly growing Denkaka town, and investors were trying to negotiate leases on land next to the road. The urban-style part *Turufe* was mainly residential; some Turufe land had already been incorporated in Shashemene and by 2020 it seems likely that the villagised part would have been added, maybe as a residential suburb.

Table 19: Potential urbanisation trajectories of the four communities bordering or near to cities

Community	Internal urbanisation	City	Loss of land to external urbanisation	By 2020
Sirba	Residential in village; new ribbon business development by investors on highway 2013	Urban-industrial corridor from Bishoftu to Mojo	Much of Sirba village being incorporated into Denkaka at the time of fieldwork	Re-organisation of rural Sirba? Large irrigation project in rural Sirba? More industries?
Kormargefia	New small ribbon business development by local people on highway 2013	Debre Berhan	Expansion of Debre Berhan incorporated land from previous bordering kebeles leading to re-organisation and establishment of Kormargefia	Small roadside town? Investors constructing roadside industries?

Community	Internal urbanisation	City	Loss of land to external urbanisation	By 2020
Somodo	Ribbon business development on gravel road by local people 2013	Jimma	Land recently taken by Jimma not developed yet	More land lost to Jimma? Small roadside town around kebele buildings
Turufe	Residential only	Shashemene	Land bordering highway taken by Kuyera recently incorporated into Shashemene	More land lost to Kuyera – including villagised Turufe?

Conclusions and policy discussion

This section begins with some broader conclusions about urbanisation in Ethiopia emerging from the WIDE3 data, which is followed by short policy-focused sections on rurbanisation, rural-urban links, and managing urban expansion.

Patterns of accelerating urbanisation in Ethiopia

The WIDE3 communities were differentially caught up in accelerating urbanising processes at the time of fieldwork (2010-13) which, in conjunction with other modernisation processes, were bringing changes to rural economies, cultures, social relations, lifestyles, and aspirations. As Table 20 shows internal rurbanisation was much more advanced in some communities than others, the density and reach of rural-urban links varied considerably, and while there was pressure from urban expansion on the land of most of the communities bordering towns, in most places those not living near the borders were unaffected. Continuation of these processes is likely to bring more changes to most of the communities in the future.

Young people[14] were much more caught up in the urbanisation process than most other community members as they hung around urban centres in those kebeles that had them, pursued education[15] in nearby towns, migrated[16] for temporary or longer-term work at various skill levels, sometimes to more distant towns, or just visited. They picked up new skills, attitudes and networks, and adopted urban clothing styles. Richer farmers, traders, businessmen and kebele officials had links with traders and officials in towns, with many of them obtaining land and building houses for their student offspring or for renting out, or for both. People of all ages migrated for work. There were more economic opportunities in towns for women of all ages[17]. Sick people and children sought treatment at urban health centres and hospitals.

These opportunities were more accessible to some people than others. The biggest barriers were remoteness and poverty. People living in remoter parts inside communities often faced difficult journeys to kebele centres and external roads, while everyone living in remoter communities found it hard to travel to nearer and further towns, particularly if there was no regular and frequent public transport, which was usually the case. Many poor people could not afford transport or urban health or education service costs. In the following sections I consider some possible measures which would improve access to some of the advantages associated with urban living for people of different genderages living in remoter areas and/or poverty.

[14] See chapter on youth transitions
[15] See chapter on education
[16] See chapter on migration
[17] See chapter on women's economic participation

Table 20: : Urbanisation and the WIDE 3 communities – a summary

		Rurbanisation									Rural-urban links					Urban creep	
Community	**Location**	**Inside urban centre**	**Ribbon develop ment**	**Cars on internal roads***	**Elect-ricity**	**Mobile phones**	**Drink-ing water**	**Irrig-ation**	**Health Post /CENTRE**	**G1-8 school**	**External road quality**	**Urban exports**	**Non-farm work**	**HC < 10 kms**	**Hospital < 20 kms**		**Region**
Harresaw	Remote	X*		x	X	x	X	x	x	X	x	x	x	X			Tigray
Geblen	Remote	x		x	X		x	x	x	X	x		x	X	X		Tigray
Adado	Remote	X			X	x	X		/X	X	x	X	x	X			SNNP
Luqa	Remote		X	x		x	X	x	x		X	x	x				SNNP
Korodegaga	Remote			x		X		X	x		x	x	x	X			Oromia
Dinki	Remote					x		X	x	X	x	x	x	X			Amhara
Oda Haro	Municipality		x	x		X	x	X	x	X	X	X	x	X			Oromia
Oda Dawata	Municipality			x	X	X	x	X	x/X	X	X	X	X	X	X	X	Oromia
Yetmen	Municipality			x	x	X	X	X	x	X	X	X	x	X		X	Amhara
Girar	Municipality			x	x	X			x	X	x	x	x	X	X	X	SNNP
Gara Godo	Municipality			x		X	X			X	x	x	x	X	X	X	SNNP
Shumsheha	Larger town	X		X	x	X	x	X	x/X	X	x	x	x	X	X		Amhara
Adele Keke	Larger town		x	X	X	X	X	X			X	X	x	X	X		Oromia
Aze Debo'a	Larger town			X	x	X	X	x	x	X	x	x	x	X	X		SNNP
Do'oma	Larger town			x		X	X	X			x	x	x	X		X	SNNP
Gelcha	Larger town			X		X		x	x	X	X	x	x	X	X		Oromia
Somodo	City		X	x	x	X	X	x	X	X	X	x	X	X	X	X	Oromia
Kormargefia	City		x	x	x	x	X	X	x		X	X	X		X	X	Amhara
Turufe	City			x	x	X	X	x	x	X	X	X	X	X	X	X	Oromia
Sirba	City		X	X	X	X	X	x	/X	X	X	X	X	X		X	Oromia

* The size of the X reflects the magnitude of the particular urbanisation feature

Rurbanisation

Settlement patterns and health and education services

Households in those communities where most people lived in a single village at the centre of the kebele had much better access to internal services and external roads than households in communities with scattered settlements. However, the terrains and farming systems in most communities were not suitable for centralisation, making a general single central villagisation policy infeasible. In terms of access to services in 2010-13 four communities had health centres, 15 had G1-8 schools, and some had one or more satellite schools for younger pupils (see chapter on education). Sick people and children in remoter areas still had difficult journeys to seek health treatment or go to school, and many poor people could not afford the costs associated with going to Health Centres (transport, drugs, time off work) or attending schools (uniforms, books, pens etc)[18] . The lives of those not living centrally would be improved by institutionalised out-reach services involving new technologies to generate non-grid electricity, and information and communications technologies to provide people in remote settlements with links to the internet, advice services and specially designed apps, for example to improve the safety of home deliveries (see chapter on maternal and infant well-being). The problem of how to improve access of poor people and children to health and education services is considered in the chapter on inequality.

Internal roads and paths

The fact that internal roads were almost completely dryweather in all communities prohibited the internal use of vehicles everywhere during rainy seasons; walking was also difficult on muddy roads and paths. This caused particular problems for people in urgent need of getting to health centres or hospitals, including pregnant women about to give birth who needed skilled assistance (see chapter on maternal and infant health and well-being). PSNP, EFA and community Public Works had contributed to improvements in, and maintenance of, dryweather roads; however without wereda technical and financial assistance the communities could not deal with difficult terrains. Wider implementation of the URRAP programme, especially in hilly areas, would improve intra-kebele connectivity considerably. A second feature in the data was that people in richer busier communities were increasingly reluctant to engage in Public Works; in such communities where people are increasingly economically active throughout the year, and if funding can be raised[19], there may be a case for paying people to work on roads rather than relying on voluntary work.

Electricity and mobile phones

Mobile phone reception of varying qualities was available in all but one community and greatly appreciated. Communities and households without electricity faced problems charging the phones. Seven communities had no grid electricity and in only one were almost all households connected. Ten households in one community had bought solar panels which provided light, and the kebele centre and school in remote Luqa had solar panels and one borehole pump was wind-powered. Electricity out-reach to remote communities and remote areas within communities might be achieved through the development and promotion of household or hamlet level solar, wind and/or micro-hydel[20]energy sources as appropriate to the terrain and climate. Non-grid electricity in remoter areas would facilitate the charging of mobile phones providing regular access to advice, apps downloads, and the internet more broadly.

[18] See chapter on inequality for more.
[19] Land taxes in many places appear to be hugely lower than rents; there is also a case for encouraging local communities to contribute to local road funds to be used to improve internal and external connectivity.
[20] Short for *micro-hyd*ro- *el*ectricity – involving small-scale power plants which convert the energy of flowing water into electricity.

Drinking water and irrigation structures

Sixteen communities had some safe water infrastructures including eight which were drought-prone: many of the waterpoints had been provided with help from donors, NGOs and/or churches. In a number of communities there had been long delays in getting non-functioning waterpoints mended by the wereda due to shortages of plumbers and spare parts. There were also issues related to routine maintenance including lack of training for local people and problems raising money to pay for repairs. People in two communities were not happy about the construction of waterpoints on their land which piped water to nearby towns. There was no safe water in rural Girar, while piped water in Shumsheha *got* was heavily rationed.

Thirteen of the WIDE sites had significant irrigated production but only in four had the wereda been involved in assisting to construct structures, and in Korodegaga the large Government project had only worked for one year. The large gravity canal project in Do'oma needed repairing with machinery that kebele farmers did not have but there was no help from the wereda. In most places the motivation to irrigate was coming from farmers, spurred on by good prices for vegetables and fruit in accessible urban areas.

The planning and implementation of safe drinking water and irrigation infrastructures in kebeles did not receive much government attention in comparison with the wereda and kebele energy and investment which went into health, education and agriculture programmes. This may have been because there were no paid kebele officials with responsibility for these infrastructures, which was also true for internal roads, and this might be something the Government should consider.

Corruption related to community infrastructures

There were traces of corrupt behaviour in the WIDE3 data. In a number of places household contributions for safe water and electricity, of the order of 30-40 *birr* per household, did not result in the promised infrastructures. When talking about the cases people seemed resigned to the loss of the funds and did not expect any action to be taken to identify and charge the embezzlers. On the other hand there were many examples of successful contribution campaigns, which may have been why those who had lost funds in the past seemed prepared to contribute again.

Rural-urban linkages

The Government's investment in highways and other main roads was a major contributor to the growing density and reach of the links between the WIDE3 communities and municipalities, larger towns and cities in 2010-13. They were particularly important for export to towns of staples, irrigated vegetables and fruit, livestock, livestock products, and wood, stones and sand for construction.

There had been an increase in non-farm business and employment opportunities in many of the communities, in urbanising centres in four communities, in ribbon developments in six and to varying degrees in nearby towns. There had also been increases in urban migration and international migration[21] which is not covered in this chapter. Even so these communities were annually producing many more post-education young people than there were local opportunities for work (see chapter on youth transitions). The problem of partially-educated unemployed and under-employed young men, and to a lesser extent women, is widespread in Africa and beyond, and there are no easy answers. However, as the chapter on success shows, there were young people who had independently set up thriving businesses. Other WIDE 3 evidence showed that there was considerable scope for improvements in the government interventions aimed at young people, including reducing the focus on co-operatives and allowing young people, individually or in groups of

[21] For more see the chapter on migration

friends, to come up with their own schemes, and making packages of training, credit and land, if necessary, available to those with promising projects with likely markets.

The good quality external roads had made it easier for people to travel to health centres and hospitals for treatment and in some places to use public transport to get to higher-level schools. However, internal and external remoteness and poverty were barriers limiting access to both kinds of service. The provision of appropriate and tested technologically advanced out-reach health and education services, a fleet of school buses, and G9-12 scholarships for poor highly-achieving students would be good investments.

Managing urban expansion

Nine communities had already lost land to a neighbouring town and were at risk of losing more in the not-too-distant future; a further six are also likely to lose land. While many people in the WIDE communities were not opposed to the inclusion of parts of their communities in adjacent towns a number of different issues relating to the process were raised which could have been better managed.

1. In two communities there were conflicting plans for the same piece of land.
2. In two other communities the journey from the kebele centre to the neighbouring city had been made worse as a result of land taken; in one the road was not being maintained and in the other investors had fenced off the long-standing paths to the market in the city.
3. Another community had been included in a city administration in 2007 but remained rural, and had received poor rural services; they had returned to a rural wereda in 2012 following a petition.
4. When the wereda decided to build a secondary school in urban Yetmen, but on rural land, there was a demonstration which ended in violence; relations between the rural and urban parts continued to be tense.
5. Farmers in Oda Haro were very worried about the planned inclusion of all the grazing land from one sub-kebele in Tibe town.
6. In two communities there was concern about the uncertainties attached to plans designating pieces of rural land for inclusion in adjacent towns; in one there was no information about compensation for those losing land, and in the other farmers with land already included in the city did not know when they would have to stop farming.
7. Officials from a neighbouring town had requested the transfer of a few villages in rural Adele Keke to one of its urban kebeles which was adjacent to Adele Keke; this had been refused by Adele Keke's wereda but had left a legacy of bad feeling.

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