

# The role of Ethiopia's public universities in achieving the United Nations Sustainable Development Goals

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**Abstract** In recent years, the Ethiopian government has embarked on an ambitious agriculture development strategy aimed at raising Ethiopia to the status of a middle-income-level country by 2025. Encouraged by the international development push behind the United Nations Sustainable Development Goals (SDGs), the rapid expansion of public universities has taken centre stage in facilitating the country's aim of equipping a new generation with the expertise needed to fuel the country's economic development. While impressive strides have been made over the last two decades, various development challenges threaten to derail this promising progress. This article examines three of the main challenges – urbanisation, climate change and food security – and the potential for universities to address them. Based on a study using key informant analysis research with 50 experts in Ethiopian education and development, the author concludes that the developing public university system offers promising capabilities to assist the country on its developmental path despite many inherent problems.

**Keywords** universities · Sustainable Development Goals (SDGs) · Agriculture Development-Led Industrialisation (ADLI) · urbanisation · climate change · food security

**Résumé** Rôle des universités publiques d'Éthiopie dans la réalisation des Objectifs de développement durable des Nations Unies – Au cours des dernières années, le gouvernement éthiopien a lancé une stratégie ambitieuse de développement agricole visant à hausser l'Éthiopie au rang de pays à revenu intermédiaire d'ici à 2025. Favorisée par l'élan international de développement insufflé par les Objectifs de développement durable (ODD) des Nations Unies, l'expansion rapide des

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universités publiques est d'une importance centrale pour servir l'ambition du pays de doter une nouvelle génération de l'expertise nécessaire pour alimenter le développement économique du pays. Si des progrès impressionnants ont été réalisés au cours des deux dernières décennies, divers défis au développement menacent de faire échouer ces avancées encourageantes. Le présent article analyse trois des défis majeurs – urbanisation, changement climatique et sécurité alimentaire – ainsi que le potentiel des universités de s'y atteler. À partir d'une étude fondée sur l'analyse scientifique des intervenants clés impliquant 50 experts éthiopiens en éducation et développement, l'auteur conclut que le système universitaire public en expansion possède des capacités prometteuses de soutenir le pays sur la voie de son développement, en dépit de nombreux problèmes intrinsèques.

## Introduction: Ethiopia's economic development

Ethiopia has one of the fastest-growing populations in the world. Home to an estimated 102 million people (UNDATA 2016), the population has doubled since 1984 and is projected to more than double again by 2050 (UNOCHA 2014). With over 85 per cent of Ethiopians living in rural areas, increased reliance on rain-fed agriculture and increasingly smaller plots of land available to Ethiopian farmers (Irish Aid 2014), the country is faced with ongoing threats of drought and famine. To overcome this, the Ethiopian government has set its sights on lifting the country to the status of a middle-income-level country by 2025 through its strategy of Agriculture Development-Led Industrialisation (ADLI) (World Bank 2013a). Central to ADLI is the Growth and Transformation Plan (GTP) for the agriculture sector for 2011–2015. This plan aims to enhance the productivity of smallholder farmers and pastoralists, strengthen marketing systems, improve participation and engagement of the private sector, expand the amount of land under irrigation and reduce the number of chronically food-insecure households (ATA 2014).

As one of the successful countries in striving to achieve the United Nations Millennium Development Goals (MDGs) targeting 2015,<sup>1</sup> Ethiopia's development efforts thus far have been widely commended (UNDP 2015a). As we move forward to embrace the United Nations Sustainable Development Goals (SDGs) targeting 2030,<sup>2</sup> Ethiopia's ADLI is once again being scrutinised. The SDGs present the more

<sup>1</sup> The eight MDGs were adopted in 2000 at the UN Millennium Development Summit with the aim of achieving the following by 2015: Goal 1 – eradicating extreme poverty and hunger; Goal 2 – achieving universal primary education; Goal 3 – promoting gender equality and empowering women; Goal 4 – reducing child mortality; Goal 5 – improving maternal health; Goal 6 – combating HIV/AIDS, malaria and other diseases; Goal 7 – ensuring environmental sustainability; and Goal 8 – developing a global partnership for development. The *Millennium Development Goals report 2014 Ethiopia* commended Ethiopia for being on track to achieving Goals 1, 2, and 6. It noted that while efforts have been made, the country is far from achieving Goals 3 and 5 (NPC and UN 2015).

<sup>2</sup> The United Nations Sustainable Development Summit on 25 September 2015 adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030. The goals are outlined on the United Nations' online "Sustainable development knowledge platform" at <https://sustainabledevelopment.un.org/sdgs> [accessed 7 September 2016].

ambitious challenge of achieving integrated sustainable development success across sectors, thus surmounting one of the biggest pitfalls of the MDGs – the lack of synergy and diverging outcomes in strategy, policy and implementation (Le Blanc 2015). Achieving integrated sustainable development outcomes in Ethiopia hinges on the approach taken towards ADLI.

Education for All (EFA) has long been an integral part of sustainable development (UN DESA 2016), but with the advent of the SGDs, the role played by higher education has begun to receive more attention. For example, SDG 4 aims to “promote lifelong learning opportunities for all”. If we consider the integrated approach to achieving the SDGs, we can appreciate how universities fit into to the overall approach to achieve sustainable development. In connection with facilitating ADLI and steering the country towards more coherent sustainable development, the university system is being promoted as a tool for equipping the country with the modern expertise it needs to realise this ambition. Heavy investment in building 29 universities across the country over the past two decades, instituting agricultural faculties and training experts in agricultural biotechnology, plant and animal breeding and other modern agricultural methods has seen emphasis being placed on the nexus between higher education, agriculture development and prosperity.

As Ethiopia experiences a rapid change in its development trajectory, various challenges present themselves as obstacles to achieving the SDGs. Chief amongst these challenges is the issue of feeding its increasing population. The rapid population growth experienced in recent years, along with the adverse effects of climate change on agricultural production, puts added strain on the country's development prospects. As ADLI attempts to power the future of the country, these challenges are further heightened as development initiatives encourage socio-demographic changes such as urbanisation to meet the needs of a newly industrialising country. Using key informant interview analysis of 50 experts on Ethiopian development and education, this article explores how the challenges of urbanisation, climate change and food security are being addressed by Ethiopia's public universities in their efforts to contribute to achieving the SDGs.

## Methodology

Key informant interviews were used as the primary research method since they reveal in-depth first-hand knowledge of the issues being addressed. In total, 50 key informant experts in Ethiopian development and education were interviewed between September 2013 and January 2015 and came from six categories of actors: (1) Government bodies and agencies; (2) Academics at Ethiopian universities; (3) International academics; (4) Representatives from international governmental organisations; (5) Representatives from non-governmental organisations; and (6) Individuals with direct experience of higher education in Ethiopia. These categories were chosen since they represent the six main actors in determining the course of university development in Ethiopia. The individual experts were chosen through a policy, media and development strategy analysis carried out prior to the interview process, which looked at the previous 15 years of Ethiopian university

development. In this analysis, individuals and organisations who had played a part assessing Ethiopian university development, actively contributed to its development and/or influenced the public discourse around its trajectory were identified as potential interviewees.

A mixture of face-to-face, telephone and internet-based English-language interviews were used to gather opinions on the public universities and their impact on development from the key informants. The experts were asked for their opinions on the development of the Ethiopian public university system, its function and its potential to assist the country's development. The interviews took on average one hour each to conduct and were subsequently transcribed, collated and analysed using Nvivo 7 software for qualitative data analysis. For the sake of brevity, the key informant opinions used to illustrate the following narrative analysis are non-exhaustive and represent the overall viewpoints gathered in the research. Key informants are labelled 1–50 and a cursory explanation given for their respective professional role.

### **Analysis: Ethiopian development and the challenges of urbanisation, climate change and food security**

The theoretical framework which guided this research is the “Education for Sustainable Development (ESD)” model which formed the basis of the United Nation's Decade for Sustainable Development (2005–14). The model was first emphasised by the United Nations' General Assembly in 2002 when it declared that “education is an indispensable element for achieving sustainable development” and designated UNESCO as the body in charge of promoting and implementing the decade (UNDESD 2016). Through its influence, ESD has become one of the linchpins of international development policies and strategies over the last decade, with its pedagogic emphasis on the roles of poverty reduction, sustainable livelihoods, climate change, gender equality, corporate social responsibility and the protection of indigenous cultures in achieving sustainable development. The experience of the Decade for Sustainable Development has further laid the foundation for developing programmes to meet the educational needs required to achieve the SDGs (Sarabhai 2015).

Education for Sustainable Development has the goal of allowing every human being to develop the knowledge, skills, attitudes and values necessary to shape a sustainable future (Gebremeden 2016). Ethiopia's drive towards ADLI is, on the face of it, powered by this very goal. Therefore, understanding the intricacies of ESD's effects on shaping development should yield a clearer understanding of the role universities in Ethiopia can play in achieving the SDGs. Being the main global guiding force influencing education for development, ESD is a critical component of a theoretical framework which guides an understanding of the role education institutions play in reaching development goals.

Due to its position as a dominant force in development, the thinking of the key informants in this research will have been informed and shaped by ESD, whether in their training, working practices or in the issues which impact on their work. ESD is

also likely to have guided the analysis of their opinions, in that ESD is the driving force behind the push for university development, and as such provides the framework for understanding the impact of the new universities in Ethiopia. Therefore, ESD, as a guiding principle in the theoretical framework of this study, is a fundamental consideration when analysing key informant responses for gaining insight into the role that universities play in achieving the SDGs.

According to the United Nations, the academic and education community will have a major role in the implementation of the SDGs. Science provides the basis for new and sustainable approaches, solutions and technologies to meet the challenges of sustainable development (UN DESA 2015). Universities, in their capacity as education facilities, hold a particular responsibility as engines of ESD for achieving the SDGs. They lay the foundations for development strategies by delivering knowledge, competences and values through teaching and learning, and by engaging in research they generate the knowledge and innovations needed for shaping sustainable development (HRK 2009). Despite its infancy, the Ethiopian university system plays an active role in influencing policy and educating the generation that will drive its progress towards reaching the SDGs. To better understand this role, and its potential to further contribute to achieving the SDGs on its path to ADLI, this section explores Ethiopia's recent development history and the challenges it faces.

The origins of Ethiopia's current development ambitions can be traced back to the late Prime Minister Meles Zenawi (in office 1995–2012), whose Ethiopian People's Revolutionary Democratic Front (EPRDF) regime attempted to steer Ethiopia away from famine and drought. Following Zenawi's death in 2012 and the subsequent appointment of current Prime Minister Hailemariam Desalegn, Zenawi's vision for a food-secure Ethiopia is still the main driving force in the EPRDF's development policy. Despite criticism, the EPRDF has achieved some undeniable successes in trying to realise the MDGs, with most indicators of development suggesting that the food situation in the country has improved. For example, the economy has experienced strong and broad-based growth over the past decade, averaging 10.6 per cent per year from 2004/05 to 2011/12 (World Bank 2013b). The "African Lion", as Ethiopia is sometimes referred to, is now home to Africa's fastest-growing number of millionaires<sup>3</sup> (Buerk 2013). With ADLI taking shape, Ethiopia is primed to be a leading light in African efforts towards achieving the SDGs. According to Key Informant 2 (EPRDF Representative) "education is the biggest motor in this. Our agricultural policies are enabling this. Production is growing 30 per cent per year".

Despite improving fortunes, Ethiopia is vulnerable to many challenges which may impede its progress towards the SDGs. The main challenges explored in this article are urbanisation, climate change and food security.

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<sup>3</sup> A study conducted by the consultancy firm New World Wealth found that between 2007 and 2013 the number of dollar millionaires in the country grew from 1,300 to 2,700 (New World Wealth 2014).

## Urbanisation

Goal 11 of the SDGs is to “make cities and settlements inclusive, safe, resilient and sustainable”. As Ethiopia experiences unprecedented economic growth, coupled with the increasing population growth pressure on rural livelihoods, many Ethiopians are leaving rural areas for urban centres to claim their share of the “African Lion”. With just 19.5 per cent of the population living in urban areas in 2015, the existing scope of services and facilities to accommodate an increasing rate of urbanisation (4.89% [2010–2015 est.]) (CIA 2016) presents various problems. For example, the EPRDF has been orchestrating a “Villagisation” programme to entice pastoralists in the fertile southern regions of the country off their lands to make way for large-scale agricultural projects. These programmes have become the epicentre of human rights concerns as many observers note the wide-scale abuses which occur in these programmes. For example, Key Informant 21 (Former Law Lecturer at Addis Ababa University) said:

“they promised to give them education, health and other services if they come to one place. But it was false. There wasn’t any kind of services. They got money from the World Bank and they used it for other purposes. It was corruption”.

In addition to the problems associated with “Villagisation” and providing the associated housing and services for an increasing urban population, urbanisation presents further socio-political challenges. This came to prominence in April 2014 when protests erupted in Oromia State at the government’s plans to extend the city limits of Addis Ababa into the surrounding Oromia region. On 25 April 2014, protests against government plans to bring parts of Ambo town under the administrative jurisdiction of Addis Ababa began at Ambo University. As protests spread to Ambo town and other areas of Oromia, dozens of demonstrators were killed in clashes with government forces. Although dismissed by the EPRDF as the result of “a few rogue elements stirring up violence” (O’Keeffe 2014), Key Informant 9 (Lecturer at Ambo University), who witnessed the massacre, related how he “was rescued from live ammunition of the ‘vampires’ [the so-called Federal Police] by the almighty God. But the horrific scene is still haunting me”.

## Climate change

Goal 13 of the SDGs calls for “urgent action to combat climate change and its impacts”. With many people relying on agriculture for their livelihoods and the ever-present threat of food insecurity, climate change is an immediate threat to Ethiopia’s development. The country is faced with increasingly unpredictable rains, and sometimes the complete absence of seasonal rains – these problems are linked to climate change (IIED 2013). Over the last decade, temperatures in Ethiopia increased by about 0.2°C (Keller 2009). Temperatures are expected to rise further in the coming years, and according to various international climate change models, precipitation is also expected to increase during the dry and wet seasons (Schneider et al. 2008; Brohan et al. 2006; IPCC 2007; Keller 2009). Increased inter-annual

variability of precipitation in combination with rising temperatures could lead to increases in the occurrence of droughts. In addition, occurrences of heavy rains and floods are also projected to increase (Keller 2009). Climate change could affect agricultural production negatively, impacting on the availability of clean drinking water and proving detrimental to health care with increased risk of malaria and other infectious diseases. Ecosystems and infrastructure could also be affected, further impacting on environmental degradation and threatening the country's progress.

A major impact of the pressures associated with climate change is the drive to cultivate land in the Southern Lowlands. According to Key Informant 47 (Ethiopian Development Specialist),

“the region is probably the only remaining rainfall region in Ethiopia where land is fertile, green. The Indians, the Chinese and Saudis have literally bought the entire region. This is the irony of Ethiopia. Year after year we have food shortages but what is happening now is they are producing food and shipping it out.”

### **Food insecurity**

Goal 2 of the SDGs aims to “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”. While Ethiopia's fortunes appear to be improving, it still ranks low on the United Nations Human Development Index (HDI) scale, coming in at 175 out of 188 countries ranked (UNDP 2015b, p. 214, Table 2), with the World Food Programme estimating that it helped to feed 6.5 million Ethiopians in 2014.<sup>4</sup> Successful ADLI may have the potential to achieve the goal of ending hunger. Key Informant 27 (Director at the Food and Agriculture Organization of the United Nations, UNFAO) pointed out that

“one of the pathways out of poverty, one of the pathways towards increasing the availability of food, is to sustainably intensify agriculture in a broader sense. It's about increasing value in the food-chain; it's also about educating consumers so they demand availability of access to diverse food.”

## **Approaching the challenges of urbanisation, climate change and food security**

### **Urbanisation**

In relation to Goal 11 of the SDGs, the EPRDF has initiated various projects which aim to address some of the issues urbanisation presents. Most projects are concentrated in the Addis Ababa region, as it comprises a quarter of the country's

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<sup>4</sup> Speaking at a UN briefing in Geneva on 13 May 2014, World Food Programme Spokeswoman Elizabeth Byrs expressed concern about the growing need to help feed nearly 6.5 million people in 2014 due to an influx of refugees from South Sudan, droughts in the north of the country and a potentially devastating locust invasion in the east (Reuters 2014).

urban population,<sup>5</sup> but are beginning to be rolled out in other parts of the country. For example, the government's Urban Development Policy (GoFDRE 2005a) and the strategy behind the Plan for Accelerated and Sustainable Development to End Poverty (GoFDRE 2005b) have the objective of promoting the role of urban areas in the overall development of the country. The policy is further articulated in the Integrated Housing Development Programme (GoFDRE 2006) which aims to provide affordable and low-cost housing, empower urban residents through property ownership, job creation and income generation, and improve the quality of the urban environmental and infrastructure development (Addis Ababa Chamber of Commerce 2011). Another concern for Ethiopian urbanisation is the country's socio-political environment with all the associated inter-ethnic cleavages that entails.<sup>6</sup> As mentioned above, the EPRDF's response to dissent over its expansion of the Addis Ababa urban area into the Oromia region looms somewhat ominously over the future prospects for urbanisation in the country.

### Climate change

In step with SDG 13, Prime Minister Zenawi issued the Ethiopian Climate-Resilient Green Economy Strategy (CRGE)<sup>7</sup> in 2011 as an integral part of the country's national five-year Growth and Transformation Plan (GTP) for 2010–2015 (MoFED and FDRE 2010). This strategy set out a vision which aimed to transform the country's development model by following a modern energy-efficient development pathway. Ethiopia has formally merged its aims of developing a green economy and greater resilience to climate change under a single policy framework in support of its national development objectives. While the government is still preparing its climate resilience objective, the Green Economy component of the CRGE has been developed (IIED 2013). It sets out Ethiopia's economic development goals with the aims of

- improving crop and livestock production practices to improve food security and increase farmer's incomes while reducing emissions;
- protecting and re-establishing forests for their economic and ecosystem services, including as carbon stocks;
- expanding electricity generation from renewable energy sources for domestic and regional markets; and
- leapfrogging to modern and energy-efficient technologies in transport, industrial sectors and buildings (ibid.).

Despite its vision for environmental protection, the EPRDF has been criticised for ignoring other environmental concerns in its ADLI strategy which have the capacity to derail efforts to achieve Goal 13. One concern is the construction of the Gibe III dam on the Omo River. A study carried out by the University of Oxford's African

<sup>5</sup> Roughly 3.2 million people live in Addis Ababa (UNDATA 2016).

<sup>6</sup> There are at least 80 different ethnic and linguistic groups in the country (GoFDRE 2016).

<sup>7</sup> The CRGE aims for Ethiopia to achieve carbon-neutral and climate-resilient middle-income status before 2025. These goals are far from being achieved, but at least a vision has been set out (GoFDRE 2011).



Studies Centre predicts that the 6,400 km<sup>2</sup> Lake Turkana could be reduced to two small lakes when water levels fall by as much as 20 meters (Guardian 2014). This could herald massive ecological and human disaster around the lake and has the potential to stoke further political tensions in the region.<sup>8</sup> Key Informant 45 (former Urban Planning Lecturer at Addis Ababa University) carried out an environmental assessment impact report on the Gibe III project and found that

“the proposal for the dam was actually done one year after the project was started. So from the very beginning the assessment was a fail. Even if everything was in order I couldn't give a positive assessment of the project.”

### **Food security**

Despite the pressures on agricultural production and a rapidly increasing population, Ethiopia has successfully brought down the percentage of its population living in extreme poverty from 55 per cent in 2000 to 29.6 per cent in 2011 (Bomba and Glickman 2014). More recently the country has reduced the number of its population below the global poverty line down from 77.6 per cent in 2012 to 66 per cent in 2013, with the average food supply improving by 117 kcals per day during the same period (Bomba and Glickman 2014). This indication that achieving Goal 2 of the SDGs is a priority for the EPRDF is questioned by Key Informant 39 (Director of an agriculture development programme in Ethiopia) who wonders whether

“the priority of government and agriculture officers is development of the people. There are lots of people certainly [who have that priority]. It's not the worst country in Africa, but it's certainly not the best either.”

Regardless of the long-term priorities of the EPRDF in reaching SDG 2, efforts to feed the current population are marred by accusations of politicising food aid. In March 2010 non-governmental organisation Human Rights Watch (HRW) reported that the EPRDF was withholding food aid from those it felt were in opposition to it. In its report, HRW stated that food aid distributions in Ethiopia are “tools used to discourage opposition to government policies, deny the opposition political space, and punish those who do not follow the party line” (HRW 2010, p. 24). In addition, HRW reported that farmers were being denied food subsidies until after elections on the condition that a preferred EPRDF candidate was elected. This was vehemently denied by the EPRDF who labelled the HRW report as the “same old junk” (IRIN NEWS 2010). A subsequent investigation carried out by the World Bank found no evidence of withholding food aid. However, opposition figures and rights campaigners stand firmly behind the accusations. Ben Rawlence, a researcher with HRW, questioned the legitimacy of the World Bank investigation, saying “when all of the World Bank's development programmes are being administered by the Ethiopian government, there is a structural incentive to underplay the human rights

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<sup>8</sup> The effects of this project on indigenous communities in the Omo valley are indeed devastating, as Sandra Postel (2015) reports.

situation and to believe what the Ethiopian government tells them”, (IRIN NEWS 2010).<sup>9</sup> Key Informant 38 (Africa Researcher at HRW) disputes

“the figures that are coming out. I just don't see where that kind of growth is happening. You know you can play with numbers. If your GDP [gross domestic product] is low anyway, a 10% increase isn't as incredible as that sounds. And all of the MDG progress, it is evident when you dig down a bit, all of the evidence is gathered by the Ethiopian government. There are some checks and balances that the donors put in place, but they are very weak.”

Key Informant 42 (Policy and Advocacy Officer at the international non-profit organisation CIVICUS World Alliance for Citizen Participation) agrees that

“those numbers are completely fabricated. They are not invented by anyone except the Ethiopian government. They are then sent to the World Bank and of course the World Bank accepts them because that is what they want to hear. There is no independent vetting system of those statistics by any means. Those numbers are completely overblown and fabricated.”

## University development as a way forward

Proclamations of progress in the country are most evident when considering the education system. Between 1995 and 2009 there was a 500 per cent increase in primary education attendance in the country – bringing participation up from 3 million to 15.5 million. Secondary education enrolment also increased by 500 per cent in the same time period (One Organization 2011). In line with the international push for ESD, this is championed by the EPRDF and its overseas development aid (ODA) donors.<sup>10</sup> Education achievement can also be seen in the rapid expansion of the country's public university system. Considering SDG 4's call for the “promotion of lifelong learning for all”, Ethiopia is making efforts to achieve this goal. From a starting point of just 2 public universities in the 1990s, the government has since built 29 institutions across the country in an effort to utilise higher education as a tool to assist ADLI (World Bank 2013b). Courses designed to improve existing knowledge of animal husbandry, horticulture and agri-biotechnology, as well as training marketing and management personnel, are central to the new universities' plans to reinforce, promote and expand Ethiopia's chief economic sector. According to Key Informant 2 (EPRDF Representative) “We have started, but we are not middle ways yet.”

<sup>9</sup> Development programmes in Ethiopia which receive more than 10 per cent of their funding from international bodies and non-governmental organisations are required to be government-run according to Ethiopia's 2009 Proclamation to provide for the registration and regulation of charities and societies (CSP) (GoFDRE 2009). The law has been accused of prohibiting non-governmental organisations (NGOs) from carrying out independent human rights and advocacy work within Ethiopia. For a critical analysis of the law see ICNL 2016.

<sup>10</sup> The Organisation for Economic Co-operation and Development (OECD) estimates that Ethiopia received USD 3.681 billion in overseas development aid in 2014 (OECD 2016).

## The challenge of rapid expansion of the public university system for development

The rapid expansion of the public university system in Ethiopia represents an 800 per cent increase in enrolments and accounts for the increase from 9,000 new enrolments in 1996/1997 to 94,000 enrolments in 2011/2012 (MoE 2013). The initial drive to develop the system came when the EPRDF first came to power and saw the need for strengthened, re-oriented and revitalised human resource development as a key to the success of its socio-economic policies and strategies. Reform of the education system became the way forward for the new government to address the serious shortage of a trained, able and adaptable workforce and leaders at different levels within the new government structure (Yizengaw 2003). Recently, university development, in step with ESD and SDG 4, has become premised on assisting the country's ADLI strategy. Key Informant 30 (Africa Union Representative) summarises it thus:

“Higher education is key to attaining Africa's collective vision of peace, integration and prosperity by developing intellectual capital in Science and Technology; engendering positive attitudes among young people towards being proudly African.”

The creation of many new universities in a short space of time has created a dilemma. On the one hand higher education is a necessary step for ESD to be successful. On the other hand, it is expensive and takes available revenue away from other pressing causes. With only 3 per cent of the relevant cohort of young people in higher education, the government is spending up to 40 per cent of the public revenue available for the entire education sector on higher education (Raynor and Ashcroft 2012). The rapid expansion of the sector may thus come at a cost to the need for primary and secondary education – Ethiopia has a literacy rate of 49 per cent, which falls behind many African countries (UIS 2016). In short, many believe that the EPRDF's prioritisation of education in its development strategy, while being very welcome, needs to focus more on reducing the rural–urban education divide, increasing primary school attendance and improving literacy rates (One Organization 2011). Key Informant 49 (Director of The Create Trust, a UK-registered NGO) sums up that

“There is obviously an improvement in the number attending, but the dropout is really high. The quality of education is dreadful. The schools are appalling. There is nothing in the classrooms. One textbook maybe, 60–70 students per class.”

While many applaud the development of the education sector, dissenting voices have drawn attention to the fact that this rapid expansion may come at the expense of quality. Key Informant 40 (Lecturer at Woldia University) asserts that

“The single biggest problem facing the development of higher education in Ethiopia is poor quality, which is linked in no small way to the rapid expansion. I feel as if the country is trying to run before it can walk.”

In addition to the rapid expansion, the government decreed in 2008 that all universities should follow the “70/30” model. This model requires universities to modify their curricula so that 70 per cent of intake is in the Science and Technology fields and 30 per cent is in the Arts and Humanities (Raynor and Ashcroft 2012). Given a two-year deadline to implement the policy, fears of lack of resources and teaching know-how to cope with such a dramatic change have generally been validated by the resulting lack of qualified staff and resources to cope with such a drastic change. Key Informant 46 (Former Lecturer at Haramaya University, one of Ethiopia's older tertiary institutions, founded in 1954) explains that

“There are many universities and many graduates, but the quality of education has deteriorated. We have a few qualified professors; many of the other lecturers are graduate assistants and a few Masters holders.”

Key Informant 3 (Representative of the Higher Education Relevance and Quality Authority [HERQA]) further explains that

“Materials are often out of date. Books, access to books, is a major issue. Primarily that is because of the priorities of some of the people who are in charge of the universities. In Gondar for example. The priority seems to have been to build big impressive buildings, have as much marble in evidence as possible and then a library which doesn't seem to have any kind of acceptable level of stock.”

Notwithstanding the concerns about teaching, resource capacity and the employability of graduates, the main criticism levelled at Ethiopian higher education concerns quality. To counteract these concerns, the Ministry of Education set up the Higher Education Relevance and Quality Authority (HERQA) in 2003. HERQA was initially set up as the government realised it lacked the capacity to micro-manage universities. By devolving freedoms and responsibilities to HERQA, the government shifted the quality burden to the agency and away from the Ministry of Education. When establishing itself, HERQA looked towards international organisations, such as the World Bank, the Netherlands Universities Foundation for International Cooperation (NUFFIC) and Voluntary Service Overseas (VSO), to define its models for concepts and quality control (Raynor and Ashcroft 2012). By applying the methods encouraged by international organisations, HERQA aims to standardise Ethiopian education.<sup>11</sup>

While the standardisation and quality assessment practices of HERQA are welcome, there have been a lot of criticisms of it. It has been accused of operating a double standard where public universities are not expected to comply with its demands and private universities have to follow the rules. For example, a

<sup>11</sup> Initially HERQA's methods relied heavily on quantitative data for assessing courses, curricula and institutions. By looking at student numbers, course completion, numbers of teaching staff etc. HERQA could easily compare data with international standards in a way that made assessment easily understandable for bureaucrats. The major criticisms for the methods employed revolved around a lack of in-depth appreciation of the actual courses students studied. In recent years there has been a move away from these crude quantitative methods to a more sophisticated qualitative approach where subject level assessments are looked at against benchmarks (Raynor and Ashcroft 2012).

government edict that teaching staff should be comprised of 20 per cent Bachelor degree holders, 50 per cent Masters' degree holders and 30 per cent PhD holders (Van Deuren et al. 2013) only applies to private universities. In addition, HERQA's management board is chaired by the Minister for Education, a fact which calls the authority's autonomy into question. However, despite these criticisms, the overall system evaluation of Key Informant 26 (Ethiopian Human Rights Fellow at the London School of Economics) is that

“while there are problems without having the resources, the teaching staff etc. ... to deliver appropriate education, I also think it has provided opportunities for students to somehow learn something. Despite all the concerns about quality, I think the expansion is not necessarily problematic. For example, the opportunities for girls are just one of the best transformations in Ethiopia over the last 10 years.”

## Meeting the key challenges of urbanisation, climate change and food security with public university development

### Urbanisation

In addition to calling attention to urbanisation, the SDGs also address gender equality and empowering women and girls (in SDG 5). Over the last two decades many more women have been brought into higher education, which goes some way towards achieving that goal. In total it was estimated by the Ministry of Education that 24 per cent of students enrolled in higher education in Ethiopia in 2011/2012 (MoE 2013) were female. This represents an increase from 16 per cent in 2001/2002 (Lestrade 2012). This rise enables a crossover between SDG 5 and SDG 11, where increases in enrolment at universities mean that more young people, and increasingly females, are moving to urban areas.

Due to the patriarchal nature of Ethiopian society, girls are generally socialised from an early age to defer to male authority. This puts female students at a disadvantage throughout their schooling, especially female students from rural areas who often do not have the self-assurance to succeed in education and drop out due to lack of facilities<sup>12</sup> and confidence. Key Informant 19 (Lecturer at Sekota College of Teacher Education) believes that

“Gender inequality is such that drastic measures are needed. In all developing countries gender balance and equality is very slow to develop. Girls are starting at such a low base in Ethiopia in the family. How are you going to see yourself as equal to your male counterparts if you are not even equal in your own family?”

<sup>12</sup> The lack of female-only bathrooms is one major facility problem which has contributed to lower female education levels. Due to social embarrassment, many girls, particularly in secondary school, take days off to avoid using communal bathrooms when they are menstruating, thus affecting their educational attendance.

To reduce gender imbalance, the government has instituted an affirmative action policy which assists female students who have lower grades than male students. At the same time, the government assigns applicants to government-owned universities throughout the country. This means that females can be sent from one side of the country to another, away from their community and family support systems. Many have no experience of independent living, and lack assertiveness and study skills, which results in high dropout rates of female students (Lestrade 2012). The affirmative action programme causes some problems within the education system; Key Informant 40 (Lecturer at Wollida University) thinks that

“this is a double-edged sword and does not necessarily empower those students. When weaker academic female students enter university, females are seen as weaker by their male counterparts and in need of help. If they do not receive extra help when they get in, then they will drop out. Many teachers here are suspicious of affirmative action for females as they think it does not work and also creates a more challenging workplace environment for them. Affirmative action does mean, however, that many rural girls from the countryside get to experience university, if only for a short while.”

To further compound the difficulties females face at Ethiopian universities, the urban–rural divide complicates the matter. Key Informant 46 (Former Lecturer at Haramaya University) elaborates that

“One of the main issues I always felt at the universities wasn't the male–female divide, but the urban–rural divide. You see girls coming from Addis or Dire Dawa and they were the most confident girls you could imagine. Then you would have the girls and boys coming from the villages and they were blown away. They didn't know what to do in class.”

Moving to unfamiliar urban areas and the pressures of a patriarchal society create a difficult education environment for females at universities. Consequently, over 50 per cent of females drop out in their first year. Insufficient financial support, lack of confidence, poor knowledge about reproductive health issues and sexual harassment lead to poor academic performance and keep female students from participating optimally in university and community life (IIE 2014). Key Informant 4 (HERQA Representative) puts this down to it being

“hard for female students to first of all get in and secondly to be heard. It is not culturally acceptable for them to speak out. I think their education is very much hampered by not being able to speak out for cultural reasons.”

Haramaya University has begun to address these issues. In 2000, it established a Gender Director and an Assistant Dean of Female Students. It employs seven gender expert and support staff to provide pastoral care to female students. With the support of Voluntary Services Overseas (VSO), it offers the following services.

- training for newly admitted female students on assertiveness and study skills;
- establishment of a “Gender Awareness, Leadership and Club Management for Girls' Union and Forum”;

- training in gender-sensitive leadership skills;
- provision of guidance and consultation services;
- economic support for needy students; and
- tutorial support for newly admitted students as well as students with poor performance (VSO 2011).

Key Informant 11 (Haramaya Gender Office Representative) recounted that

“We have female dormitories and male dormitories. We also have a female-only library – we have so many issues and we also have conservative Muslim students who can't be around students of the opposite sex. The female library is more of reading room where the students go to study. We have a good counselling service, especially for the first semester for new students. Most of them drop out in the first semester. It's very difficult for them. We do a week or 3 or 4 days' training for the female students in the first semester. You have to realise that it's a huge sacrifice for their families to send them to university. Some of the families even sell a cow or what little they have to send the daughters to university.”

While no data are available, anecdotally Haramaya University is succeeding in assisting female students adjust to university and is making efforts to reduce female attrition. Key Informant 44 (Life peer in the House of Lords, Former UK Minister of Higher Education), after visiting the university, stated that

“Haramaya is doing very good things. They are very committed to that. The government is also very committed to that but they have all sorts of cultural practices that make it very unlikely that that will happen any time soon.”

## Climate change

As recognised in SDG 13, climate change is inextricably intertwined with the challenges of development. Although high-income countries first created the problem, some developing countries are now major emitters and the developing world accounts for more than half of all greenhouse gases (CGD 2014). Ethiopia, with its dependence on rain-fed agriculture, geographical location and topography, as well as its low adaptive capacity, has a high vulnerability to the adverse impacts of climate change (Willenbockel et al. 2008).

While many studies have been carried out investigating the threats of climate change in developing countries, and some empirical studies on climate change impacts in Ethiopia already exist (Deressa 2007; Deressa et al. 2008; Deressa and Hassan 2009; Yesuf et al. 2008), they have significant limitations. Most of these studies emphasise crop production at the expense of the impact climate change will have on livestock production (Gebreegziabher et al. 2011). Livestock production is a major growth area in Ethiopia, as the country wishes to capitalise on its connections with extensive meat and dairy markets in the Middle East and further afield. With Africa's largest cattle population,<sup>13</sup> Ethiopia is one of the top eight

<sup>13</sup> Ethiopia has 52 million cattle, including 10.5 million dairy cattle (USAID 2013).

livestock-producing countries in the world (USAID 2013). Despite this, Ethiopia accounts for less than one per cent of total world meat exports<sup>14</sup> and is a net importer of dairy products (CNFA 2014). The increased risk of drought and flooding due to climate change bears the latent threat of derailing future plans to capitalise on developing this sector.

Various universities have established climate change research centres to assist Ethiopia in addressing the potential problems of climate change. Addis Ababa University has established the Horn of Africa Regional Environment Centre & Network (HoA-REC&N) which “aims to both increase the adaptive capacity of the most vulnerable communities in the Horn of Africa to the shocks of climate change, and mitigate its impacts” (HoA-REC&N 2014). The centre runs various programmes dealing with sustainable and participatory interventions, capacity building and research which aim to tackle climate change. It also runs various projects with pastoralist communities in South Omo, the Central Rift Valley and Gambella which depend on livestock production for their livelihoods.

Through research and partnering with local organisations, the Climate Change Programme at HoA-REC&N further aims to promote “sustainable and participatory interventions, building capacity and investing in research, thus improving livelihoods and food security across the Horn of Africa, and support environmental conservation” (ibid.).

A recent climate change initiative has also been set up at the University of Gondar. The Climate Change Research Centre (CCRC)<sup>15</sup> aims to empower local communities to improve their living prospects and works under the following five thematic areas

- Vulnerability and impacts of climate change;
- Mitigation and adaptation to climate change;
- Institutional framework for climate change mitigation and technology transfer;
- Finance, investment and capacity building in climate change; and
- Education and awareness.

It works with various partners and collaborators to introduce programmes designed to assist in tackling climate change, build capacity for local projects, help to attain funding for various climate-change-related programmes, boost skills and knowledge, raise climate change awareness etc. The CCRC Coordinator, Key Informant 20, stated

“The CCRC plays an important role in promoting climate change awareness through implementing projects in rural communities through conferences, trainings, workshops, focus group discussions, and establishing environmental clubs. The CCRC also provides research funding opportunities to the research

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<sup>14</sup> Ethiopia's annual meat exports amount to USD 79 million out of a world total of USD 105 billion (USAID 2013).

<sup>15</sup> The University of Gondar gained formal university status in 2003. More information about its Climate Change Research Centre is available at <http://www.uog.edu.et/research/research-centers/climate-change-research-center/> [accessed 23 September 2016].



teams and we have also youth groups which will make climate change negotiations in the future.”

The CCRC, established in 2012, is still in its development stage and does not yet have the ability to influence policy at a national level. However, it does play an increasingly prominent role in influencing life around the University of Gondar and illustrates the possibility of universities helping to achieve Goal 13. Key Informant 20 expressed that

“We are strengthening the CCRC with both finance and materials to support climate change research teams. In this regard we will develop proposals, and will conduct a national conference and implement different projects in climate change for vulnerable communities located in close proximity to the University of Gondar. We will assist development by creating community awareness on climate change and smart agriculture, conducting research and providing communities services in the field of climate change to achieve ADLI. We also support other universities by giving our documentation and lessons learned to them.”

Various other climate change projects are being run at universities around the country. An interesting development, which incorporates other international mechanisms to fight climate change, is the development of partnerships with overseas universities to gain best-practice experience. For example, CCRC is supported by the University of Maryland in the United States, and HoA-REC&N works with the Wageningen University in the Netherlands to exchange expertise and deliver workshops, training courses and design curricula.

## Food security

According to the World Food Programme, some 10.2 million people need emergency food assistance in 2016 (WFP 2016). Despite the successes of bringing extreme poverty down<sup>16</sup> and reducing the population below the global poverty line<sup>17</sup> (Bomba and Glickman 2014), roughly 1 in 10 Ethiopians still do not have access to sufficient and nutritious food – making SDG 2 a fundamental goal. Universities provide valuable platforms from which food insecurity can be addressed. Various universities throughout the country have instituted agricultural biotechnology faculties and invested heavily in promoting horticulture and livestock production methods.

One initiative which aims to reduce food insecurity is the Potato Centre of Excellence at Arba Minch University. The Centre is a collaborative effort set up by Vita Ireland, Gama Gofa Zonal Administration, the International Potato Centre, Arba Minch University, Teagasc, Wageningen University and the Irish Potato Federation. Speaking about the project, Key Informant 36 described the function of the Centre as

<sup>16</sup> Extreme poverty went down from 55% in 2000 to 29.6% in 2011 (Bomba and Glickman 2014).

<sup>17</sup> The population below the poverty line was down from 77.6% in 2012 to 66% in 2013 (Bomba and Glickman 2014).

“a whole new system as the potato is not a staple food in Ethiopia, because it simply isn't grown in sufficient quantities to be. It is a potential staple food. Unlike other crops where improved seed and practice might give you incremental improvements up to 50, 70, 80, 90 per cent yield improvements, the potato can give you 400 per cent.”

The Centre aims to develop the potato as an alternative to the teff grain as a staple in the region. Teff is the single-most important staple in urban areas, accounting for 30 per cent per capital calorie intake in 2001/07 (Demeke and Di Marcantonio 2013). In recent years, Teff has gained notoriety as a “super food” in the West, driving its value on international and local markets up. This has made it more difficult for Ethiopians to rely on their favoured staple for sustenance.<sup>18</sup> The potato is easier to grow and provides more nutrition than Teff, and as an adaptive species it can cope better with climate change (Vita 2013). The Centre aims to equip local farmers to grow high-quality potatoes suitable to local growing conditions and to work with the entire potato value chain. Primarily it uses its research function at Arba Minch University to transfer knowledge to local communities in order to try to ensure food security.

Despite the benefits of introducing a crop to Ethiopia which has the potential to be grown in difficult conditions and feed millions, the Centre is not without its critics. Key Informant 47 (Ethiopian Development Specialist) views such initiatives as

“hegemonic thinking, this notion that you can tell Africans what to eat instead of helping them in what they have is one of the disturbing trends you see in the so-called NGOs, CSOs [Civil Society Organisations] and the United Nations. It's coming from the continuation of the colonial thinking. It's a pattern, the same people, the same organisations, the same communities. If they have enough to eat, they will never open their mouths in terms of human rights, in terms of democracy, in terms of justice.”

Another critic of the Centre is Key Informant 34 (Food Security Manager of the Catholic relief organisation Caritas International) who echoes that

“The food system as it exists is under-researched, and exactly what the results are for local food security, nutrition etc. ... is, I think, relatively unknown. It seems to be the case; what I expect they are trying to do is displace the local ensete crop. The potato is seen as more productive, allowing more harvests per year, whereas the ensete is seen as not very nutritious, not very productive, not very suitable to commercialise, even not on national markets. So I am a bit suspicious about this programme. I think they are more and more uncritical with what they are doing, with regard to the technology that they are propagating. I find it very ironic that an Irish organisation is propagating the potato so much. They know the risks; they should know the risks of this

<sup>18</sup> Teff [*eragrostis tef*] grain is indigenous to Ethiopia and is a main ingredient for baking Ethiopian bread. Despite its small size, its nutritional value is high; it provides carbohydrates, protein, iron and dietary fibre. Moreover, the fine stalks of teff are mixed with mud for building purposes.

technology focus. I suspect that there are private interests involved. Plus, the fact that these potato programmes are also linked to credit programmes, fertiliser credit programmes. It all fits the main transition – the agriculturally led industrialisation.”<sup>19</sup>

Another example of how universities are attempting to address SDG 2 comes from a cooperation project between the University of Ghent in Belgium and Jimma University. This project, entitled “Animal Health and Zoonotic Diseases”, aims to alleviate food insecurity and poverty by increasing animal productivity and reducing the impact of animal and zoonotic diseases.<sup>20</sup> The project investigates and develops measures for the control of various diseases in the Jimma zone and Gilgel Gibe area in the southwest of Ethiopia. It inspects quality and quantity of livestock and aims to strengthen capacity in veterinary medicine and animal science (IUC-JU 2014). The programme provides support for PhD students and has an overall aim of building a core of academic researchers and teachers, with well-developed and high-quality research expertise and research management skills, capable of running and expanding postgraduate programmes and overseeing undergraduate teaching at Jimma University (Carpenter and Kebede 2011).

## Conclusion

Ethiopia is not immune to the key development challenges the SDGs aim to combat. Urbanisation, climate change and food security impact on all Ethiopians, irrespective of whether they live in a sprawling Addis Ababa suburb or a *kebele*<sup>21</sup> in Gambela. As the country moves ahead with its ADLI strategy, these challenges present obstacles which will have to be surmounted if success is to be achieved. To its credit, the EPRDF, with added emphasis from the international development community, is aware of these obstacles and is beginning to address them. The developing public university system is a fundamental resource at their disposal.

While university development may be in its infancy in Ethiopia, it offers a guiding light to follow in addressing the key challenges of the future. The efforts made by universities to address some of these challenges attest to the ability of ESD to provide a sustainable future, not just for Ethiopia but for the wider world, and adds to the growing body of research which confirms the power of ESD to make real and lasting positive changes to the lives of people around the world. Urbanisation, climate change and food security are but three of the challenges which can be met by universities striving for ESD, but these three set an example for solving other challenges. While there are pros and cons with most development policies and practices, universities can help to ensure that the pros outweigh the cons and that a balance is met between realising the SDGs and achieving ADLI success.

<sup>19</sup> Ensete, [*ensete ventricosum*], also known as “Ethiopian banana”, is a traditional local root crop (the fruit do not taste of much). The leaves are used to make rope etc.

<sup>20</sup> A zoonotic disease can spread from animals to humans. It can be caused by viruses, bacteria, parasites or fungi.

<sup>21</sup> A *kebele* (the Amharic term for neighbourhood or ward) is the smallest administrative unit in Ethiopia.

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